

planning for sustainable tourism on tasmania's east coast



component 2 - preliminary
biodiversity and heritage evaluation

prepared by context and coliban ecology

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contents

Introduction	5	Section 2: cultural heritage	
Executive summary	8		
Section 1: biodiversity			
1 Introduction	13	1 Approach	59
2 Approach	14	1.1 Preliminary Cultural Heritage Assessment	59
2.1 Preliminary Biodiversity Assessment	14	1.2 Protecting Biodiversity and Cultural Heritage	59
2.2 Protecting Biodiversity and Cultural Heritage	14	1.3 Case study areas	59
2.3 Case study areas	15	1.4 Information sources	60
2.4 Information sources	16	1.5 Stakeholder consultation	60
3 Current biodiversity protection	18	2 Current heritage protection	62
3.1 Commonwealth Environment Protection & Biodiversity Conservation Act 1999	18	2.1 Heritage listings	62
3.2 Tasmanian Nature Conservation Act 2002	18	2.2 Other relevant heritage lists	64
3.3 Tasmanian Threatened Species Protection Act 1995	18	2.3 Other management guidance	65
4 Biodiversity and natural values	19	2.4 Strategic context	66
4.1 TASVEG ground-truthing	19	3 Known cultural heritage	67
4.2 Matters of National Environmental Significance	19	3.1 Matters of National Environmental Significance	67
4.3 DoE modelling of High Conservation Significance in Eastern Tasmania	22	3.2 Other cultural heritage - Aboriginal	67
4.4 Species distribution modelling (SDM) – threatened species	24	3.3 Other cultural heritage - non-Indigenous	71
4.5 Important Bird Areas (IBAs)	26	3.4 Knowledge gaps	72
4.6 Known biodiversity by case study areas	27	3.5 Known cultural heritage by case study area	73
5 Biodiversity issues	46	4 Cultural heritage issues	108
5.1 Data gaps	46	4.1 Aboriginal heritage management process issues	108
5.2 Environmental weeds	46	4.2 Non-Indigenous heritage	110
5.3 Cinnamon Fungus <i>Phytophthora cinnamomi</i>	48	4.3 Legislative changes	110
5.4 Wildlife road mortality—‘roadkill’	48	5 Current approvals process	111
5.5 Environmental degradation around campsites	50	5.1 Managing cultural heritage during development	111
5.6 Disturbance to significant shorebird and seabird sites	50	6 Impacts and opportunities	115
6 Current approval processes	52	6.1 Managing Aboriginal cultural heritage	115
6.1 Development planning approvals	52	6.2 Impacts and opportunities by option for development	116
6.2 EPBC referrals	54	Section 3: case studies	
6.3 Proposed policy and regulation changes	55	1 Biodiversity and cultural heritage by landscape type	120
7 Impacts and opportunities	56	1.1 Coastal dune systems	120
7.1 Option 1 – Business as usual	56	1.2 River mouths	120
7.2 Option 2 – East Coast Blossoms	56	1.3 Wetlands	120
7.3 Option 3 – String of Pearls	57	2 Anticipated impacts and process by landscape type	122
		2.1 Coastal dune systems	122
		2.2 River mouths	124
		2.3 Wetlands	125



Section 4: recommendations

1	Biodiversity	128
2	Cultural heritage	129
	references	130
	appendix 1	133
	Example THPI sites	



Introduction

Project background

This project is undertaken as part of the Sustainable Regional Development Programme (SRD) funded by the Australian Government Department of the Environment (DoE) through a local government grant to Break O'Day Shire Council. The objectives of the Sustainable Regional Development program are to assist Local and State government authorities to:

- Provide greater opportunities for protecting and enhancing the environment, especially the protection and recovery of Matters of National Environmental Significance (MNES);
- Increase long term regional sustainability and community liveability;
- Reduce regulatory burdens on business and governments; and
- Provide certainty for developers, stakeholders and the general community about the future of development and achievement of long-term conservation outcomes.

Following discussions with key state agencies, industry and environment NGOs, sustainable tourism development was identified by DoE as a key planning issue for Tasmania, and in particular the North-East and East Coast. The North East Coast Alliance of local councils was identified by the Tasmanian Government as a suitable body to engage local government in sustainability planning. Break O'Day Council was nominated, and submitted a successful grant application under the SRD program.

The regional sustainability planning project for East Coast Tasmania is comprised of the municipalities of Dorset, Break O'Day and Glamorgan Spring Bay (the project area). The project area contains a variety of MNES, including:

- Three Ramsar wetlands, notably Apsley Marshes, Jocks Lagoon and Moulting Lagoon; and
- Numerous threatened ecological communities and species (e.g. Lowland Native Grasslands of Tasmania, birds, mammals, migratory species).

It is envisaged that this project will assist Break O'Day, Dorset and Glamorgan Spring Bay councils to deliver sustainable tourism outcomes through improved heritage protection and economic development strategies, policies and plans. The project will complement the current land use and development strategies and improve planning for Matters of National Environmental Significance.

Component 1 of the project

An initial assessment of the environmental and cultural constraints on development in the study area was undertaken as part of the Sustainable Tourism Options Report (Component 1) through desk-top research and initial consultation with stakeholders. Desktop research focussed on high-level designations, including MNES covered by the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act); such as threatened and migratory species, Ramsar sites, etc.

This report (component 2)

This assessment resulted in broad constraints mapping which incorporated a collation of the relevant mapping layers which had been previously obtained. The results of this task were sufficient to provide an understanding of the key issues and the likely 'no go' areas for development.

Component 3 of the project

Component 3 is the final part of this project. The purpose of Component 3 is to bring together the two earlier components of the project, to provide a clear direction for sustainable tourism along the East Coast of Tasmania. It will include recommendations to improve the planning and approvals process, particularly in relation managing the impacts of tourism development on the environmental and cultural heritage values of the region, especially in relation to Matters of National Environmental Significance (MNES).



Biodiversity (natural heritage) setting

Tasmania's East Coast supports important habitats and a diversity of flora and fauna. Many species are listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the Tasmanian Threatened Species Act 1995 (TSP Act). Threatened vegetation communities are listed and protected under the EPBC Act or listed under the Tasmanian Nature Conservation Act 2002 (NC Act).

The native vegetation of the East Coast is somewhat less fragmented than more modified urban and agricultural landscapes elsewhere in Tasmania. In contrast though, some sections of the study area have been subjected to intensive clearing and fragmentation; noteworthy examples include the Great Northern Plain and basalt country around Scottsdale in Dorset Shire, and major river valleys in the south such as the South Esk (Glamorgan/Spring Bay). The coastal ranges and some infertile lowland areas retain native vegetation. Large tree plantations (both Eucalyptus and softwood) have been established in parts of the Northeast.

Clearing of native vegetation is one of the main threatening processes for the region's biodiversity. As the region's population and commercial developments (such as tourism infrastructure and activity), the challenge will be to ensure that such activity does not compromise the natural values of the area that tourists come to see. Locating development activity in low impact areas, including those already cleared, will be important so as not to compromise these biodiversity values. Weeds, diseases and pest animals can also pose threats to native flora and fauna if land uses are not appropriately managed. Water and soil quality are also issues which need to be considered in any assessment of biodiversity, and their relationships with MNES matters such as Ramsar wetlands and Phytophthora, are discussed further on.

Cultural heritage setting

Although there are no World Heritage Properties (which would qualify as MNES), or parts of such properties, within the study area, the study area is known to contain sites relating to Tasmania's convict heritage. It is possible that these sites – such as those relating to coal mining around Bicheno could be included in the Australian Convict Sites serial World Heritage listing in the future.

In general, recorded non-Indigenous heritage places in the study area are confined to the settlements, or to isolated historic farmsteads in the wider pastoral hinterland. Archaeological remains relating to mining and other industry are known to survive in non-agricultural areas, as are remains relating to maritime activities along the coastline.

Data informing the assessment of Aboriginal heritage is the study area that comes from different areas of formal and informal knowledge and study. Ethnohistory is the study of the lifestyle of Aboriginal people at the time of first European contact through the use of contemporary ethnohistorical accounts that can provide some insight into the nature of pre-contact culture, including population groupings, concepts of land ownership, and the relationship of both these to pre-contact Aboriginal land use. Archaeological data allow the possibility of adding considerably to the picture and understanding of Aboriginal society in eastern Tasmania at the time of, and prior to, European settlement. The archaeological data can in some cases be used to gauge the reliability of the ethnohistorical observations and, conversely, ethnohistorical information is able to provide analogies which may be of use in the interpretation of archaeological remains. Generally speaking, archaeological research is the primary means by which information on Aboriginal lifestyles in eastern Tasmania prior to the invasion by Europeans must now be reconstructed. The contemporary Aboriginal community continue to be the guardians of traditional cultural knowledge relating to their Country. This traditional knowledge could be supplementary to the information about pre- and post-contact Aboriginal activity which can be gained from the ethnographic and archaeological sources described above.

The pattern of Aboriginal site distribution found in both inland and coastal regions of the study area has been one of high numbers of shell middens and open artefact sites along the coastal fringe, extending up to 100 metres inland. Further inland, a rapid decline in site density was observed. This is especially notable one kilometre and more from the coast.



In addition to physical heritage material, both the Aboriginal and wider communities maintain intangible associations with landscapes and particular places with the study area.

It should be noted that the available sources provide an incomplete picture of the cultural heritage - both Aboriginal and non-Indigenous, in the study area, and this obviously has implications for its effective management.

This report

This report examines the potential impacts of tourism development in a series of case study areas. These case study areas have been selected on the basis that they represent the areas most likely to accommodate future development through the options identified in the Sustainable Tourism Options Report - in line with the findings of the report they are all located near to or on the coast. Together however, they also provide a good cross section of the various types of cultural heritage that exist in the study area and that should be taken into account in planning for any such development.

Running north to south through the study area, the case study areas are as follows: Musselroe Bay, Stumpys Bay camping ground, Stumpys Bay (near Boulder Point), Deep Creek campsite, Ansons Bay, Cosy Corner and Swimcart Beaches campsites, Binalong Bay, St Helens, Diana's Basin, Scamander, St. Marys, Falmouth, McIntyre's Beach, Chain of Lagoons, Bicheno, Isaacs Point campsite (The Friendly Beaches), Coles Bay, Swanwick, and Swansea.

The study area and precincts mentioned in this report are illustrated in Figure 1 to the right.



Figure 1: East Coast Study Area



Executive summary

Biodiversity

The biodiversity section of the report includes a description of the protection measures relevant to the study area and an account of the biodiversity within the study area, generally and in relation to a number of case study areas. Also described are approval pathways and the extent to which they are articulated. Informed by consultation with the relevant state agencies, council officers and Non-government Organisations (NGOs), this section assesses the data gaps, the means to overcome them, and biodiversity constraints and opportunities presented by the three options identified in the Sustainable Tourism Options Report. It concludes with recommendations for the support and improvement of decision-making and management.

Matters of National Environmental Significance (MNES) are widespread and prominent in the study area, and to a large extent define aspects of its natural character. Deficiencies in data have mainly to do with a lack of uniform survey effort for flora and fauna within the study area, but sufficient data exist to permit relatively accurate species distribution modelling to make predictive maps for threatened species. The quality of state vegetation mapping is generally high.

Identified 'no go' zones from a biodiversity perspective are driven by nationally significant foraging and nesting areas for migratory and sedentary shorebirds and seabirds, as well as occurrences of nationally threatened mammals, frogs and landbirds, as well as internationally significant wetlands (Ramsar sites). Typical scenarios for development in coastal areas will be constrained at ecological 'pinch points' such as estuaries (river mouths), and dune systems including those on isthmuses between the sea and wetlands or embayments.

Projected changes to both the administration of national biodiversity law and the Tasmanian planning approvals system may swing the pendulum in favour of in-principle approval for major projects, but they also may permit a closer harmonisation between approval processes at the three levels of government.

Some of the recommendations to improve biodiversity outcomes and processes in the study area are as follows:

- Pre-submission meetings for local planning approval is the time to suggest an EPBC referral if appropriate. The clock does not stop for long enough to allow an EPBC Act referral to be processed (20 working days) once formal local planning application has been made, leading almost inevitably to a refusal.

- Approved developments need comprehensive weed and *Phytophthora* management provisions mandated as part of any Environmental Management Plan documentation.
- A program of encouraging slower driving (65km/h) between dusk and dawn has been introduced in parts of Tasmania where wildlife roadkill rates are high. Such a program would be important to consider in parts of the study area where tourism development would increase traffic levels, and where sealing currently unsealed roads may lead both to increased levels of traffic and to higher driving speed throughout the day and at night.
- Establishing new sites for camping or other development would best be attempted in areas where vegetation is already degraded by weeds, stock grazing, or similar. The process of setting up new site boundaries and infrastructure could be accompanied by rehabilitation of parts of the site not needed for development.
- The nationally significant shorebird sites, as well as the three Ramsar sites, are a potential starting point for a list of 'no go' zones for further beach-access developments.
- A more definitive list is a gap in current knowledge, to the extent that other sites are known, but a prioritisation is necessary to refine a stakeholder-agreed list of constrained sites.
- Modelled probability mapping for threatened species, using a proven environmental niche modelling technique such as MaxEnt, should be conducted for all MNES species for which existing data sources are sparse or uninformative. Further 'no go' zones may be identified by individual or assemblage modelling of MNES threatened species.
- Use of decision support modelling software will also be important aids to the making of objective decisions about siting tourism infrastructure and activities. Such aids to optimisation of conservation outcomes assist in filtering the difficult decision-making about conservation trade-offs for development gains.

It is acknowledged that these recommendations must be balanced with other outcomes in planning for sustainable tourism but they represent important considerations for the later stages of the Planning for Sustainable Tourism on Tasmania's East Coast project.



Cultural heritage

The cultural heritage section of the report includes a description of the cultural heritage protection measures relevant to the study area and an account of the cultural heritage within the study area, generally and in relation to a number of case study areas. Informed by consultation with the relevant state agencies, Aboriginal Groups and Tasmanian Parks and Wildlife Service (PWS) officers, it goes on to assess the cultural heritage constraints and opportunities presented by the three options identified in the Sustainable Tourism Options Report. It concludes with a discussion of existing cultural heritage management processes, current issues with these processes and recommendations for their improvement.

There are no currently designated cultural heritage MNES within the study area - either relating to Indigenous or non-Indigenous heritage.

Individual heritage buildings and archaeological sites are recorded throughout the study area, and there is a presumption that development will seek to avoid impacting upon these places, although none is protected by legislation which absolutely precludes this. No concentrations of heritage places would be expressly considered as 'no-go' zones. However specific sites, such as individually listed heritage buildings or specific places (such as shell middens for example) should not be developed. In most cases relatively minor impacts on individual places are likely to be mitigated through existing mechanisms - e.g. altering designs or undertaking archaeological works. However, there are a number of gaps in the available knowledge concerning the cultural heritage of the study area which can be attributed to two main reasons. Firstly the lack of previous investigation means that there may be a large number of places, probably mostly archaeological sites, that have yet to be recorded. As with the known sites, these places are unlikely to be of sufficient significance on an individual level to completely preclude their development, although it is possible that large concentrations of sites may exist that could be. Secondly, and more crucially, there is a large amount of information concerning places of Aboriginal heritage significance that is retained by the Aboriginal community alone and, whilst this is unlikely to be common, there have been occasions in the study area where development proposals have had to be altered in recognition of intangible Aboriginal cultural heritage of which only the Aboriginal community is aware.

Mitigation measures employed by PWS have generally centred on avoidance of impact, but this may become less possible with increased visitation and thus land pressure.

Generally speaking, existing heritage management mechanisms are deemed adequate, both for the assessment of heritage and the mitigation of impacts. However, there are currently a number of issues with their functionality in the context of the study area. In the main these concern the management of Aboriginal heritage, with issues including that there is a lack of communication between state agencies and the Aboriginal community and that there has historically been a focus on archaeological sites and a lack of consultation on other cultural values. These and other factors have resulted in a community imposed moratorium on Aboriginal heritage work that was spurred by what was perceived as an inadequate focus on Aboriginal heritage in relation to the Brighton Bypass development and is currently still in force. As regards non-Indigenous cultural heritage, existing mechanisms and approach are deemed sufficient in relation to state significant heritage on the Tasmanian Heritage Register (THR), and on Crown land impacts to places of lesser significance are currently managed reasonably well through PWS protocols.

There is currently no process for the management of places of less than state level significance aside from local council heritage lists, and these are currently largely repetitive of the THR and fairly building-centric at the expense of other places such as archaeological sites. Recommendations made by the cultural heritage section include that Aboriginal cultural heritage should be taken into account early in the development process, that the Aboriginal community should be consulted at the first available opportunity and that an effective and representative Aboriginal body (or bodies) needs to be identified or established to respond to proposals. In addition, consultation both with the Aboriginal and wider communities should be undertaken in relation to intangible heritage considerations. Other recommendations are designed to address the gaps in knowledge of cultural heritage in the study area described above.



Development and approval case studies

The final section of this report identified three 'landscape types' that are most likely to be the focus of potential tourist developments, and which are the most sensitive from a biodiversity and cultural heritage perspective.

The landscape types identified include:

- Coastal dune systems;
- Wetlands; and
- River mouths

Coast dune systems:

Coastal dune systems are significant from a number of different perspectives:

- Although not recorded everywhere, it is probable that Aboriginal midden deposits occur fairly continuously along the entire coast;
- Specific locations along the coast have accommodated historical activities such as whaling, sealing and various industrial practices;
- In places, the coastal dune vegetation is all that remains of the former native vegetation that covered much of the study area; and
- In many places the coastal dune system contains coastal lagoons. The dunes and lagoons are part of a system that contains coastal scrub and heathland vegetation that provides important habitat for fauna species of National significance, including the New Holland Mouse. It also supports ocean beach shorebirds such as the Hooded Plover, and possibly provides nesting habitat for Little Penguins and Short-tailed Shearwaters.

River mouths:

- Are a focus for Aboriginal archaeological sites and also intangible Aboriginal values;
- Are closely associated with the coastal dune system and share many of the biodiversity values of the dune system; and
- Some of the shorebird species are more likely to be found in muddy areas of the river mouths that are exposed at low tide.

Other species nest in such locations.

Wetlands:

- Are known to have been a focal point for Aboriginal subsistence activities and are likely to be of enduring cultural significance to the Aboriginal community;
- The fertile land around wetlands due to seasonal inundation and sediment deposits would have been the focus of early agricultural activity; and
- Most of the wetlands on the coastal plain are either permanently or occasionally connected to the ocean. As such they are part of an interdependent coastal dune and river mouth system and share many of the biodiversity values of those systems.
- As a general principle, development should largely be avoided in these critical areas. If development is proposed it should be subject to a thorough environmental and cultural heritage assessment, to determine potential impacts and mitigation measures, before development proceeds.



section 1 - biodiversity





1 Introduction

Tasmania's East Coast supports important habitats and a diversity of flora and fauna. Many species are listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *Tasmanian Threatened Species Act 1995* (TSP Act). Threatened vegetation communities are listed and protected under the EPBC Act or listed under the *Tasmanian Nature Conservation Act 2002* (NC Act).

The native vegetation of the East Coast is somewhat less fragmented than more modified urban and agricultural landscapes elsewhere in Tasmania. In contrast however, some sections of the study area have been subjected to intensive clearing and fragmentation. Noteworthy examples include the Great Northern Plain and basalt country around Scottsdale in Dorset Shire, and major river valleys in the south such as the South Esk (Glamorgan/Spring Bay). The coastal ranges and some infertile lowland areas retain native vegetation. Large tree plantations (both Eucalyptus and softwood) have been established in parts of the Northeast.

Clearing of native vegetation is one of the main threatening processes for the region's biodiversity. As the region's population and commercial developments (such as tourism infrastructure and activity) expand, the challenge will be to ensure that such activity does not compromise the natural values of the area that tourists come to see. Locating new or upgraded development activity in low impact areas, including those already cleared, will be important so as not to compromise these biodiversity values. Weeds, diseases and pest animals can also pose threats to native flora and fauna if land uses are not appropriately managed. While water and soil quality are also issues which need to be considered in any assessment of biodiversity impacts, their direct relationship with many of the MNES matters addressed here are tangential, the exception being *Phytophthora*, discussed further on page 48.



2 Approach

2.1 Preliminary Biodiversity Assessment

A preliminary assessment of the environmental and cultural constraints on development in the study area was undertaken as part of the Sustainable Tourism Options Report (Component 1 of the broader Planning for Sustainable Tourism on Tasmania's East Coast project) through desktop research and initial consultation with stakeholders.

No detailed surveys involving flora quadrats, animal trapping or survey by remotely operated cameras or DNA sample collection were included in the scope of this study.

Desktop research focussed on a high-level assessment of the known or likely presence of Matters of National Environmental Significance (MNES) covered by the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act); such as threatened species and communities, migratory and marine schedule species, and Ramsar sites.

This assessment resulted in generalised constraint mapping, which were mapped using Department of the Environment modelled data for areas of high conservation significance. The results of this task were sufficient to provide an understanding of the broad key issues and the likely 'no go' areas for development.

This assessment has resulted in broad, modelled constraints mapping, which is discussed below. This incorporates a collation of the relevant mapping layers that have been obtained to date. The results provide an understanding of the key constraints for development, but also point to opportunities.

2.2 Protecting Biodiversity and Cultural Heritage (this report)

The assessment presented in this report supplements that undertaken in Component 1 by providing additional information on the known and projected biodiversity values of the study area, a discussion on the existing processes that are in place to manage it, a gap analysis, and recommendations for future targeted research.

2.2.1 Report format and rationale

The biodiversity section of this report comprises the following:

- Description of the biodiversity protection measures relevant to the study area.
- An account of the biodiversity within the study area, including:
 - General account of the biodiversity of the study area (Matters of National Environmental Significance, state-listed matters of significance);
 - Discussion of existing knowledge gaps; and
 - Examination of the biodiversity of the case study areas.
- Discussion of biodiversity constraints and opportunities presented by the three options identified in the Sustainable Tourism Options Report.
- Discussion of existing biodiversity management processes, approval pathways, current issues with these processes and recommendations for their improvement.

2.2.2 Biodiversity

In Figures 80 and 81, examples of the intertwined coastal dune systems, river mouth and wetlands are shown at Policemans Point (Ansons Bay) and Templestowe Lagoon (near Seymour). Though these are specific examples rather than generic ones, they are typical of many sites along the length of the study area.

The way in which these site complexes act as biodiversity 'pinch points' is clear from the mapped values. In both cases there are High Conservation Significance (HCS) values at the upper end of the scale clustered along the coastal dune system of the barrier dune or isthmus. Habitat on the isthmus is well suited to the New Holland Mouse, and the river mouth concentrates shorebird activity (roosting, foraging, nesting).



A coastal walking trail, new or expanded camping area, would directly encounter some of these high profile values, and would likely be shown to have impacts on MNES that would trigger a controlled action under the EPBC Act. In other examples similar to this, but where a Ramsar site exists, expansion or creation of tourism infrastructure within the site or in close enough proximity to allow the possibility of impacts, a referral under the EPBC Act would likely be required.

Neither a golf course, nor campground nor an eco-resort are likely to be located entirely on top of narrow stretches of naturally vegetated coastal dunes, such as on a barrier isthmus to an estuary, due to spatial constraints. However, any of these developments could feasibly be located partly on the dune system or directly adjacent in purely engineering terms, but the principles recommended here are to prioritise the siting of such developments in already degraded land, and not either on a barrier dune or within the margins of a wetland.

Some low-lying areas within the coastal zone will have a higher probability of increasing frequency of inundation (flooding) according to current predictions of future sea level rise (see DPIPW Tasmania coastal vulnerability project in References).

These factors should also militate against placing tourism infrastructure in areas which are close to the current king tide level (plus a buffer).

Increased visitation by tourists, often to a relatively small area, can have a significant impact on both supply of potable water and disposal of waste water. Tourists can add significant seasonal peaks to the pollution, waste, and water needs of a smaller local population, and thereby put local infrastructure and aquatic habitats under unsustainable pressure. Selection of appropriate sites for development must include land capability considerations, such that waste water can be safely and efficiently be dealt with (and contained) on site wherever possible. Potential for wastewater impacts in a Ramsar site would trigger the need for a referral under the EPBC Act

2.3 Case study areas

This report examines the biodiversity values of a series of case study areas. As described in the introduction to this report, these have been selected on the basis that they represent the areas most likely to accommodate future development through the options identified in the Sustainable Tourism Options Report - in line with the findings of the report they are all located near to or on the coast. But together they also provide a good cross section of the various types of flora and fauna habitats and communities that exist in the study area and that should be taken into account in planning for any such development. Running north to south through the study area, the case study areas are as follows:

- Musselroe Bay
- Stumpys Bay camping ground, Stumpys Bay (near Boulder Point)
- Deep Creek campsite
- Ansons Bay
- Cosy Corner and Swimcart Beaches campsites
- Binalong Bay
- St Helens
- Diana's Basin
- Scamander
- St. Marys
- Falmouth
- McIntyre's Beach
- Chain of Lagoons
- Bicheno
- Isaacs Point campsite (The Friendly Beaches)
- Coles Bay
- Swanwick
- Swansea

For each case study area known and projected biodiversity values within a radius of 2km were identified and presented. The data sets were also analysed to identify important information gaps, and potential impacts on biodiversity values that could arise from tourism development within the study area.



2.4 Information sources

The information on natural heritage (flora and fauna, biodiversity) presented below has been gathered from the following sources:

- The Commonwealth Department of the Environment 'Protected Matters Search Tool'
- The Tasmanian Natural Values Atlas—Department of Primary Industries, Parks, Water and Environment (DPIPWE)
- Atlas of Living Australia

This was refined and supplemented by information obtained from each of the municipalities in the study area—Dorset, Break O'Day and Glamorgan Spring Bay—as well as by the results of fieldwork and further consultation.

Detailed spatial modelling and mapping of the cover of different vegetation types and cover has been carried out by the Tasmanian DPIPWE, and is available on such public online data portals as the Tasmanian Natural Values Atlas and The List. The vegetation mapping in its current incarnation is known as TASVEG 3.0 (2013).

As discussed later in the report, gaps exist in coverage of the study area's biodiversity in both national and state databases. There is a bias towards better coverage of public land than freehold, and to more visible parts of the biota, such as birds and large vascular plants. One means of dealing with patchiness in survey coverage is to generate probabilistic modelling of the distribution of species based on available records and environmental data.

In the sections that follow, two modelling approaches are described that give a better understanding of the likely distribution of biodiversity values in the study area.

2.4.1 MaxEnt and the Atlas of Living Australia

MaxEnt (maximum entropy) is a widely used environmental niche modelling method, uses presence-only data, and performs well when the available data are sparse (Elith et al. 2011). MaxEnt takes spatial data about where species are known to occur, and also where the species appears to be absent, and relates that to environmental data (data about rainfall, topography, soil type, etc.). The model that MaxEnt builds uses these available data and creates maps of probability values—showing where the model suggests the species could occur (probability between 0 and 1 at specific locations). These probability values can be mapped in a GIS.

Government and non-government organizations have adopted MaxEnt for large-scale, biodiversity mapping applications, including the Atlas of Living Australia (ALA) (<http://www.ala.org.au/>).

For this study a small sample of threatened species occurring in East Coast Tasmania were selected, and via the MaxEnt predictive module in the ALA, probabilistic mapping for those species was produced.

Consistent with the fact that grassy and heathy woodland and forest ecosystems are widespread in the coastal zone of the study area, two representative species were chosen as surrogates for these systems. The Eastern Barred Bandicoot was chosen as surrogate for grassy ecosystems and New Holland Mouse for heathy/scrub understorey ecosystems. Neither species is necessarily a reliable indicator in all cases of all the values for which it serves as a surrogate, but short of detailed ensemble modelling, it provides indicative indications of the class of values which may be present at a site.



2.4.2 Department of the Environment spatial modelling

The Commonwealth Department of the Environment (DoE) has carried out spatial modelling of areas of High Conservation Significance (HCS) for MNES over parts of Tasmania that include the local government areas within this study area.

For the overview study, a GIS analysis that clipped areas of HCS mapping within the study area, was used as a proxy for constraint mapping with respect to MNES.

In this report the DoE's HCS modelled mapping is reviewed by LGA and precinct, to identify areas of constraint and opportunity—viewed in tandem with species and assemblage modelled mapping and TASVEG vegetation mapping (see next section).

2.4.3 TASVEG

The Tasmanian Vegetation Monitoring and Mapping Program (TVMMP) forms part of the Biodiversity Conservation Branch within the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and is composed of a small team of professionals with skills in vegetation science, ecology, GIS and research. The TVMMP is the authoritative source of digital vegetation community information in Tasmania, and TASVEG is a comprehensive digital map of Tasmania's vegetation; including sub Antarctic Macquarie Island.

TASVEG mapping and modelling was used to determine the vegetation communities likely to be present at case study sites in East Coast Tasmania, and these values were ground-truthed during field visits.

2.4.4 Stakeholder consultation

Stakeholder consultation was undertaken during production of the Sustainable Tourism Options Report (Component 1), and more recently, to introduce the project, gain an initial impression of each stakeholder group's concerns and aspirations and determine how best to proceed with further consultation during the preparation of this report.

We consulted the following stakeholders:

- Allison Woolley, Louise Gilfedder, Karen Bridges, Wendy Potts; Biodiversity Conservation Branch, Department of Primary Industries, Parks, Water and Environment (DPIPWE)
- Donna Stanley, Parks and Reserves Manager – North East Coast, Park and Wildlife Service.
- Chris Hughes (Community Services Manager), Polly Buchhorn (NRM Facilitator), and Chris Triebe (Planning Officer) at Break O'Day Council
- Melanie Kelly, Manager Natural Resources, and Winny Ennis, Manager Regulatory Services, Glamorgan/Spring Bay Council
- Dr Eric Woehler, Convenor, BirdLife Tasmania



3 Current biodiversity protection

3.1 Commonwealth Environment Protection & Biodiversity Conservation Act 1999

The objectives of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) most relevant to the natural heritage assessment presented here are to:

- Provide for the protection of the environment, especially Matters of National Environmental Significance
- Conserve Australian biodiversity
- Provide a streamlined national environmental assessment and approvals process
- Enhance the protection and management of important natural and cultural places
- Promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources
- Recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity
- Promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

Under the EPBC Act, actions that have, or are likely to have, a significant impact on a matter of national environmental significance require approval from the Australian Government Minister for the Environment (the Minister), or the Minister's departmental delegate.

There are nine matters of national environmental significance protected under the EPBC Act, but the MNES as they relate to natural heritage matters for this project are as follows:

- Wetlands of international importance (listed under the Ramsar Convention)
- Listed threatened species and ecological communities
- Migratory species protected under international agreements
 - CAMBA (China-Australia Migratory Bird Agreement)
 - JAMBA (Japan-Australia Migratory Bird Agreement)
 - ROKAMBA (Republic of Korea-Australia Migratory Bird Agreement)

3.2 Tasmanian Nature Conservation Act 2002

Reserves are declared under the *Nature Conservation Act 2002* (NC Act) that sets out the values and purposes of each reserve class and managed under the *National Parks and Reserves Management Act 2002* according to management objectives for each class. Together the NC Act and the *National Parks and Reserves Management Act 2002* replace the *National Parks and Wildlife Act 1970*.

Vegetation communities listed under the NC Act and protected by the Regional Forest Agreement (Commonwealth) are fully or partially outside the control of the Resource Management and Planning Appeal Tribunal (RMPAT) and/or local councils.

3.3 Tasmanian Threatened Species Protection Act 1995

The *Tasmanian threatened Species Act 1995* (TSP Act) provides statutory protection to flora and fauna within Tasmania. At the overview stage, species or communities listed under the TSP Act did not receive close attention, and the current report is focused on MNES as an overarching conservation of biodiversity framework, but also matters of State and local significance in Tasmania. Any future assessment of development proposals however, on a site-specific basis, will need to assess TSP Act listed biodiversity in conjunction with MNES.

The following section describes the natural heritage that has been identified in the study area. This account is not exhaustive, but reflects the findings of the earlier desktop study, a ground-truthing field trip, and some predictive modelling based on existing data. As stated, the sources presented above provide an incomplete picture of the natural heritage (of other than MNES status) in the study area.



4 Biodiversity and natural values

Both the High Conservation Significance (HCS) modelling and native/non-native vegetation modelling reflect a trend for the study area at large to contain more sensitive values on and within a kilometre or so of the coast (see Figures to follow). This is partly a reflection of the bias within the MNES/HCS modelling towards Ramsar sites (which in this area are all coastal) and for the well documented HCS values associated with the Ramsar sites and ocean beaches and estuaries—namely migratory and non-migratory shorebirds (waders) and waterbirds. The exception to this is in the area of St Marys and Douglas-Apsley National Park, where near coastal hills enter the study area, although it is noted these areas have significant biodiversity assets such as the Eucalypts in the St Marys area.

Tasmania is uniquely placed amongst Australian states in having very well documented natural values mapping relating to wetlands and coastlines, and for mapping of feeding, roosting and breeding sites for coastal shorebirds and waterbirds (Dr Eric Woehler pers. comm., April 2014). The level of documentation for the study area is high, and local government authorities have for example utilised shorebird mapping in evidence-based policy making with respect to ‘off leash’ zones for dogs on beaches. Although non-native vegetation in places follows river valleys up from population hubs on the coast, much of it in the study area is on the coastal plain and associated with townships. The data for other groups of biota are patchier, and there is a strong trend for better coverage on public land, roadsides, and conservation reserves in particular

4.1 TASVEG ground-truthing

Prior to making a field trip to the case study areas in July 2014, the TASVEG mapping was interrogated by compiling vegetation maps for each of the sites. These maps identified the broad vegetation groups in polygons overlaid on the locality maps, and provided the basis for ground-truthing during the site visit. Examples of case study site vegetation maps are provided later in the report.

Ground-truthing took the form of a site walkover and simple checking of vegetation type and boundaries from a non-quantitative, visual assessment. Vegetation categories were regarded as accurate if the vegetation structure and floristics accorded with the high level generalised descriptions from TASVEG.

Broad categorisation of vegetation from TASVEG mapping at the case study sites was found to be accurate. Non-native vegetation (cleared land or plantation) was correctly identified. TASVEG data were utilised in several GIS analyses presented later in this report.

4.2 Matters of National Environmental Significance

Matters of National Environmental Significance (MNES) are distributed uniformly throughout the study area from Dorset in the north to Coles Bay – Swansea and surrounds in the south.

There are three Ramsar (Wetlands of International Significance) sites within the study area (Jocks Lagoon in Break O’Day; Moulting Lagoon and Apsley Marshes in Glamorgan/Spring Bay- see Figure 1) totalling 5,406ha and also several wetlands of national significance. These wetlands are important for supporting terrestrial fauna, feeding and breeding sites for both migratory and non-migratory sea birds, and nurseries for fish. The following table (Table 1) summarises the threatened ecological communities and species, and migratory species, listed under schedules of the Environment Protection and Biodiversity Act (EPBC Act), and which are either known or regarded as likely to occur within the study area.

Four EPBC listed threatened communities have modelled or mapped distributions in the study area:

- Eucalyptus ovata–Callitris oblonga Forest (EPBC Vulnerable) (Black Gum–South Esk Pine) has a mapped distribution in Break O’Day and Glamorgan/Spring Bay LGAs.
- Alpine Sphagnum Bogs and Associated Fens (Endangered) approaches the coast in Break O’Day LGA, but is confined to higher elevation areas and not the coastal plain.
- Giant Kelp Marine Forests of South East Australia (Endangered) occurs along most of the study area coastline.
- Lowland Native Grasslands of Tasmania (Critically Endangered) occurs to the west of Moulting Lagoon in Glamorgan/Spring Bay LGA, and up into Break O’Day LGA towards St Marys. It is present in both Tussock Grass *Poa labillardierii* and Kangaroo Grass *Themeda triandra* variants.



EPBC listed threatened species and migratory/marine schedule species are distributed throughout the length of the study area. Whilst some occur in specific locations (e.g. St Helens Phebalium *Phebalium daviesii*), most are widespread and either occur in pockets across the landscape, or sparsely distributed over the whole area (e.g. Tasmanian Devil).

The *Tasmanian Threatened Species Protection Act* (TSP Act) listed threatened species are distributed throughout the study area. DPIPWVE provides detailed lists of plants (flora) by Local Government Area but not fauna. A list of TSP Act threatened fauna occurring in Eastern Tasmania is provided by Fitzgerald (2012), and a subset relevant to the study area is provided at table 2. Some TSP Act threatened species are also EPBC listed (and therefore MNES).

The precincts identified in the table to the right are shown in Component 1: Sustainable Tourism Options Report- Appendix 1, and are outlined below:

- Precinct 1: Musselroe Bay Precinct.
- Precinct 2: Ansons Bay Precinct.
- Precinct 3: St Helens Precinct.
- Precinct 4: Scamander Precinct.
- Precinct 5: Douglas Apsley Precinct.
- Precinct 6: Moulting Lagoon Precinct.
- Precinct 7: Freycinet National Park Precinct.



Matters of National Environmental Significance (MNES)		Dorset		Break O'Day		Glamorgan/Spring Bay		
		Precinct 1	Precinct 2	Precinct 3	Precinct 4	Precinct 5	Precinct 6	Precinct 7
Ramsar sites	Jocks Lagoon			+				
	Mouling Lagoon						+	
	Apsley Marshes						+	
Threatened Communities	<i>Eucalyptus ovata</i> - <i>Callitris oblonga</i> Forest (Vulnerable)	-	L	L	L	L	L	L
	Alpine Sphagnum Bogs and Associated Fens (Endangered)	L	L	L	L	L	L	L
	Giant Kelp Marine Forests of South East Australia (Endangered)	L	L	L	L	L	L	L
	Lowland Native Grasslands of Tasmania (Critically Endangered)	+	-	+	+	+	+	-
Threatened Species	Birds	25	27	27	27	27	27	27
	Crustaceans	3	1	1	1	0	0	0
	Fish	3	5	5	5	4	4	4
	Frogs	1	1	1	1	1	1	1
	Insects	2	5	5	5	3	3	3
	Mammals	6	7	7	7	6	6	6
	Plants	19	35	35	35	39	39	39
	Reptiles	2	1	1	1	1	1	1
	Sharks	1	1	1	1	1	1	1
	Other	0	2	2	2	1	1	1
Migratory Species		51	47	47	47	43	43	43

Table 1: Tally of MNES values by LGA and precinct. (L = Listed, + = present, - = absent)

Common name	Scientific name	TSP status	EPBC status	Notes
Grey Goshawk	<i>Accipiter novaehollandiae</i>	e		
Swift Parrot	<i>Lathamus discolor</i>	e	EN	Two key breeding areas located in the study area at Binalong Bay and near St Marys
Masked Owl	<i>Tyto novaehollandiae castanops</i>	e	VU	
Wedge-tailed Eagle	<i>Aquila audax fleayi</i>	e	EN	
Tasmanian Devil	<i>Sarcophilus harrisii</i>	e	EN	
Spot-tailed Quoll	<i>Dasyurus maculatus</i>	v	VU	
New Holland Mouse	<i>Pseudomys novaehollandiae</i>	e	VU	
Glossy Grass-skink	<i>Pseudemoia rawlinsoni</i>	r		
Green and Gold Frog	<i>Litoria raniformis</i>	v	VU	Coastal wetlands
Swan Galaxias	<i>Galaxias fontanus</i>	e	EN	
Dwarf Galaxias	<i>Galaxiella pusilla</i>	v	VU	
Giant Freshwater Crayfish	<i>Astacopsis gouldi</i>	v	VU	Musselroe River
Scottsdale Burrowing Crayfish	<i>Engaeus spinicaudatus</i>	e	EN	East of Scottsdale
Blind Velvet Worm	<i>Tasmanipatus anophthalmus</i>	e	EN	St Marys
Giant Velvet Worm	<i>Tasmanipatus barretti</i>	e	EN	Scamander catchment
Bornemissza's Stag Beetle	<i>Hoplogonus bornemisszae</i>	e	CR	
Simson's Stag Beetle	<i>Hoplogonus simsoni</i>	v	VU	Blue Tier

Table 1: TSP-listed fauna species known from the East Coast study area (CR = Critically Endangered, e/EN = Endangered, v/VU = Vulnerable, r = Rare)



4.3 DoE modelling of High Conservation Significance in Eastern Tasmania

The Australian Government Department of the Environment (DoE) has carried out preliminary spatial modelling of areas of High Conservation Significance (HCS) for Matters of National Environmental Significance (MNES) listed under the Environment Protection and Biodiversity Conservation Act (EPBC Act) over parts of Eastern Tasmania. Modelling was undertaken at a regional scale that includes the local government areas within this study area. The overall regional map is shown in Figure 2. More details maps follow, which are sections of the regional modelling, clipped to those parts of the three municipalities that make up the East Coast Tasmania study area.

Spatial analysis was undertaken using DoE modelled distributions of listed threatened species and threatened ecological communities using Zonation software (Moilanen et al. 2009) resulting in a gridded, indicative 'conservation ranking' product. Weightings have been applied to species and ecological communities to reflect levels of endemism and conservation status.

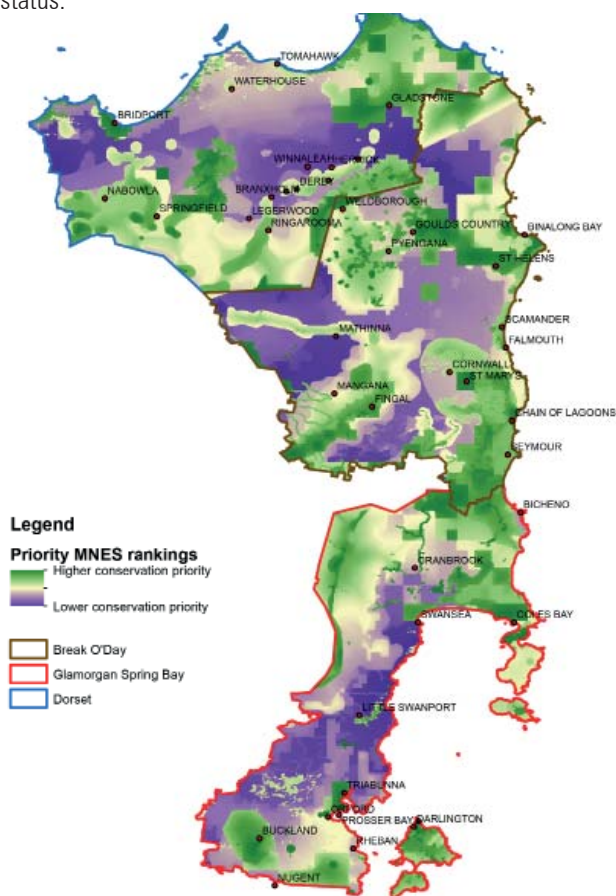


Figure 2: Northeast Tasmania High Conservation Values for Matters of National Environmental Significance

However, the model presented is based on a limited and generalised national set of assumptions and is not intended to take into account local and regional limiting factors such as inter-taxa dependencies, minimum range and population sizes, threats or land use. These factors need to be identified and fed into subsequent models where it is intended to use this sort of information for on-ground conservation planning. Given that this is preliminary HCS data supplied by DoE for demonstration purposes, the information displayed should be regarded as indicative only.

For this study, a GIS analysis that clipped areas of HCS mapping within the study area, was used to identify zones within precincts that had higher likelihoods of supporting MNES (see Figures 3 - 6). Areas shown in dark red represent higher rankings of HCS, and therefore probable greater constraint for matters of MNES. As the colour grades to pale pink, lower HCS ranking is indicated, and probable lower constraint for MNES.

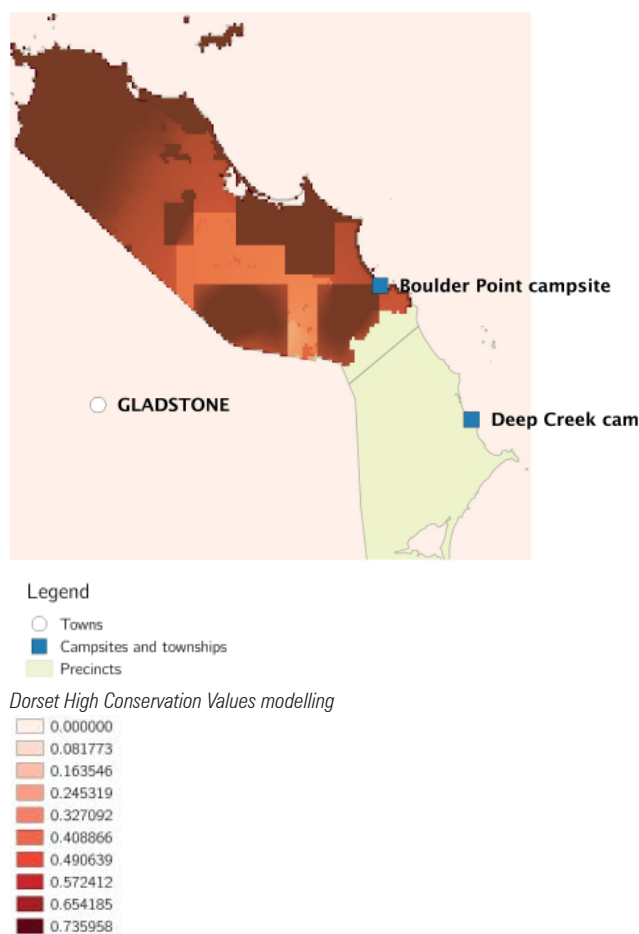


Figure 3: DoE modelled High Conservation Significance within Dorset Shire (Precinct 1)



Later in this report HCS mapping has been combined with native vegetation and shorebird mapping to highlight issues or constraints in particular geographical locations (wetlands, estuaries and coastal dunes).

Zones of higher HCS are prevalent in Precinct 1 within Dorset Shire (Figure 3), and reflect both importance for migratory shorebirds around Cape Portland and Musselroe Bay, as well as habitat suitable for the New Holland Mouse in remnant vegetation and along the coast.

Between Deep Creek, in Mount William National Park, and St Helens (Figure 4; Precincts 2 and 3), HCS values are in the mid range but show hotspots around lagoons and wetlands, as well as in forest just north of St Helens.

HCS values in the high range are distributed both in the hills between St Marys and around Douglas-Apsley National Park, as well as on the coast from Dianas Beach down to Falmouth (Figure 5; Precincts 4 and 5).

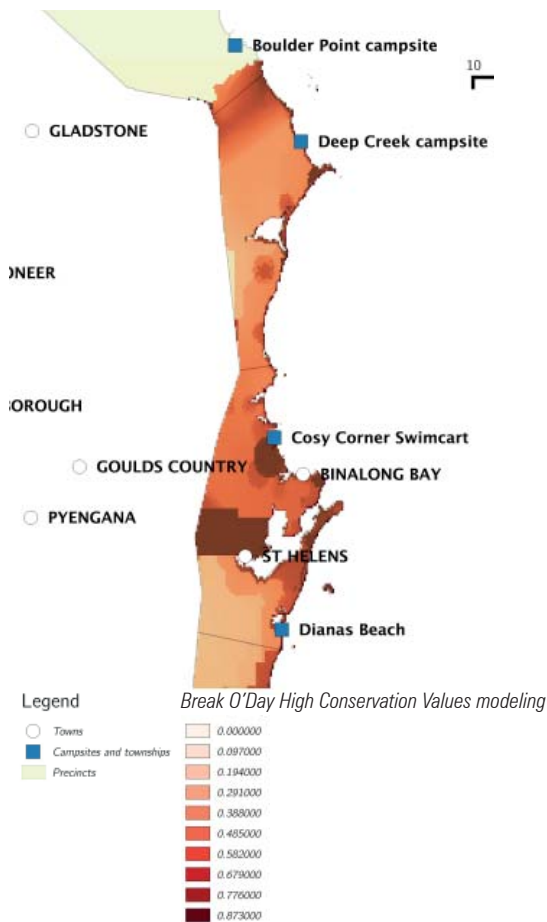


Figure 4: DoE modelled High Conservation Significance within Break O'Day Shire (north) (Precincts 2 & 3)

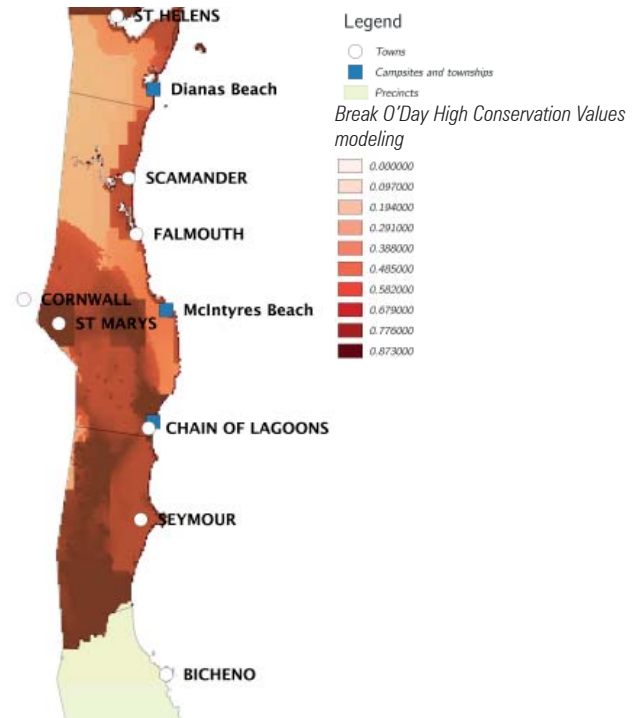


Figure 5: DoE modelled High Conservation Significance within Break O'Day Shire (south) (Precincts 4 & 5)

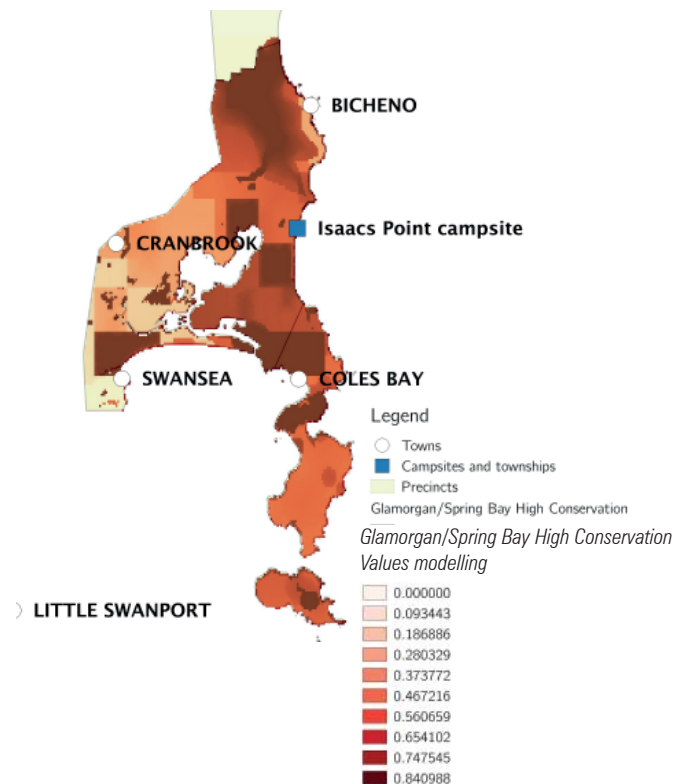


Figure 6: DoE modelled High Conservation Significance within Glamorgan/Spring Bay Shire (south) (Precinct 7)



4.4 Species distribution modelling (SDM) – threatened species

A sample of MNES species was chosen for MaxEnt species distribution modelling (SDM). The purpose of the exercise was to demonstrate the possibility of overcoming some basic data gaps in biodiversity mapping of the study area. Even though there are relatively sparse data points for some species, or they are artificially constrained (biased) to roadside sightings (e.g. Eastern Barred Bandicoot (*Perameles gunnii gunnii*), a modelling process such as MaxEnt can provide quite accurate estimates of where species may be expected to occur (Elith et al. 2011). These modelled probabilities can be used to inform decision making rather than relying on conjecture alone.

The examples provided in mapping here (Figures 7[a-d] and 8[a-c]) show the modelled extent of occurrence in the study area, as well as the known data points. MaxEnt probability values range between 0 and 1, with 0 representing the lowest probability of occurrence and 1 the highest. Values between about 0.5-0.9 in these examples indicate a very high likelihood of occurrence.

The New Holland Mouse (*Pseudomys novaehollandiae*) is known from a series of heathland and heathy woodland coastal and near-coastal sites widely separated in the study area – from around Swanwick and Coles Bay up to Friendly Beaches, and otherwise north of St Helens. The MaxEnt modelling reflects the known distribution, and shows where else in the region the species may occur. The heavy concentration of modelled suitable habitat within Dorset and down the East Coast to near St Helens reflects the sensitivity of coastal vegetation for the continued existence of this MNES into the future.

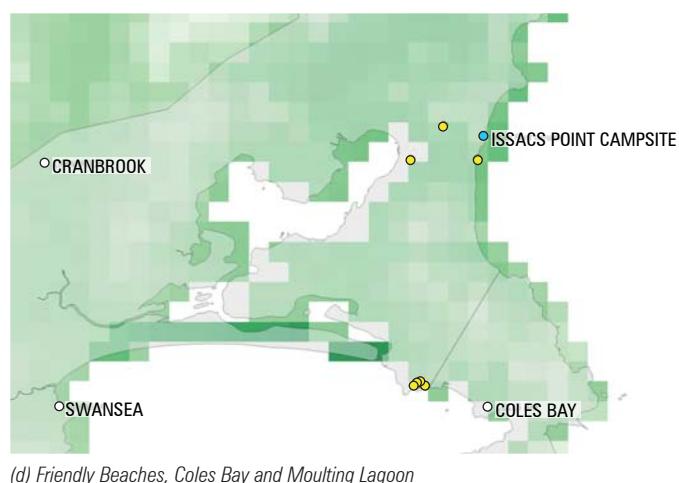
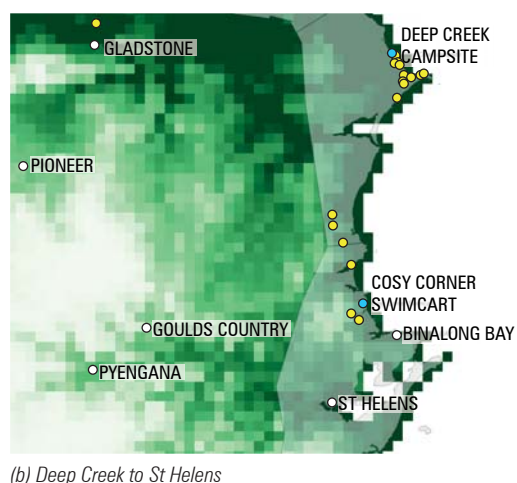
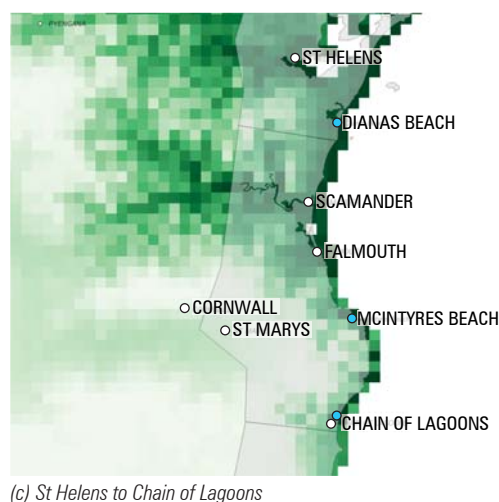
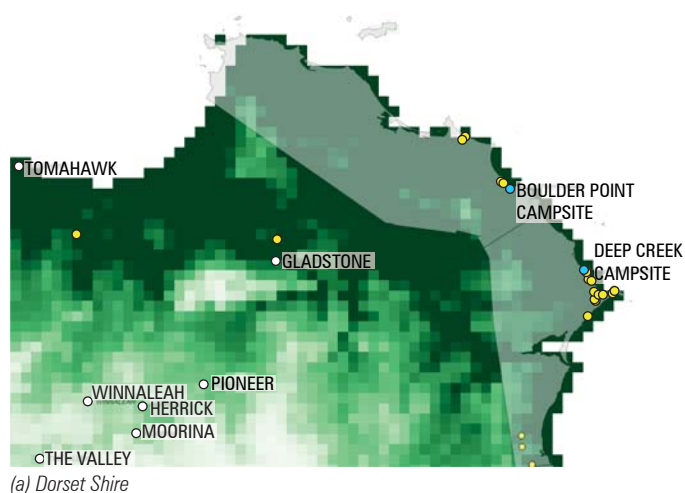


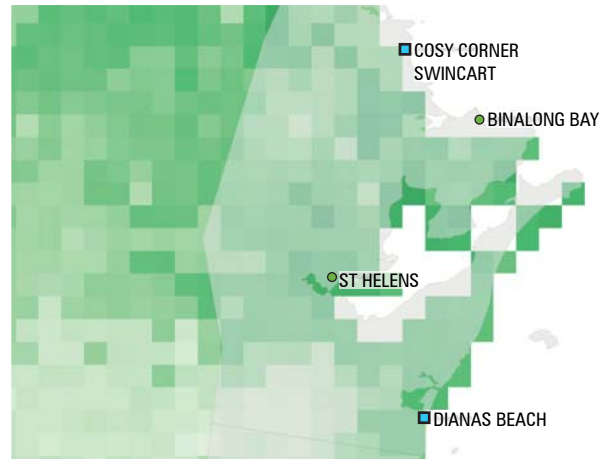
Figure 7: MaxEnt probability surfaces – hotspots in the study area for the New Holland Mouse. MaxEnt probability of occurrence ranges 0 – 1, indicated by white to dark green. Yellow circles are known records of the species. Source: Atlas of Living Australia



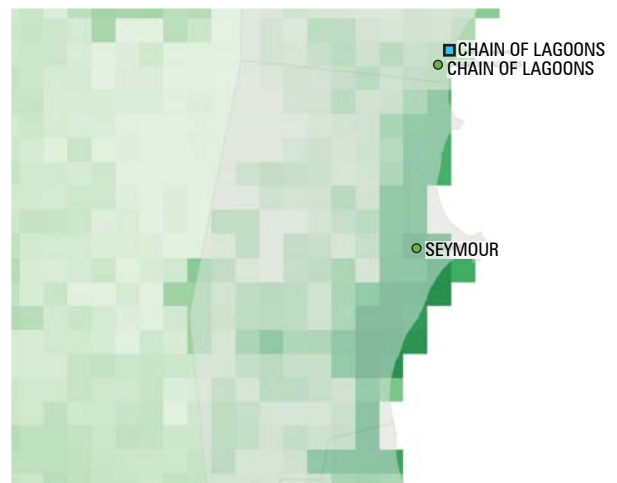
The Eastern Barred Bandicoot is predicted to occur across the north of the study area above St Helens (where it was observed during our July 2014 field trip), and to the west of Moulting Lagoon. This species is a useful marker of dry grassy forests and woodlands in near coastal parts of the study area.

In conjunction with the DoE modelling of High Conservation Significance, individual or ensemble modelling of MNES species' distributions assist in identifying areas of constraint for development in the study area.

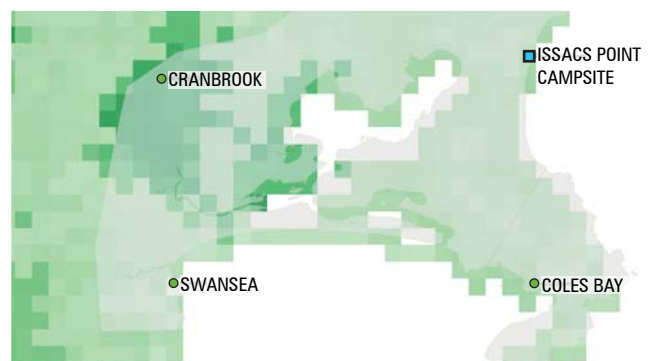
Use of decision support modelling software such as MARXAN (Ball et al. 2009) or ZONATION (Molainen et al. 2009) will also be important future aids to the objective decision-making about the location of tourism infrastructure and activities. Such aids to optimisation of conservation outcome assist in filtering the difficult decision-making considerations about balancing conservation trade-offs for development gains.



(a) St Helens area



(b) Chain of Lagoons to Seymour



(c) Cranbrook – Moulting Lagoon – Coles Bay – Friendly Beaches

Figure 8: MaxEnt probability surfaces – hotspots in the study area for the Eastern Barred Bandicoot. MaxEnt probability of occurrence ranges 0 – 1, indicated by white to dark green.



4.5 Important Bird Areas (IBAs)

Important Bird Areas (IBAs) are sites of global bird conservation importance, rated by the non-government organisation (NGO) BirdLife International. IBAs are selected on the basis of meeting criteria that draw on the kinds of criteria used to recognise Ramsar sites and Red List threatened species. IBAs have no legal standing, but act as an independent set of significant sites which overlap and complement those nominated by national and state governments and agencies of the United Nations.

Each IBA meets one of four global criteria used by BirdLife International (<http://www.birdlife.org/datazone/info/ibacritglob>). IBAs are priority areas for bird conservation, and BirdLife or its partners aim to monitor birds at IBAs, advocate their importance to government, and work with landholders and other local people to conserve them.

To be listed as an IBA, a site must satisfy at least one of the following rating criteria:

A1. Globally threatened species.

The site qualifies if it is known, estimated or thought to hold a population of a species categorized by the IUCN Red List as Critically Endangered, Endangered or Vulnerable. In general, the regular presence of a Critical or Endangered species, irrespective of population size, at a site may be sufficient for a site to qualify as an IBA. For Vulnerable species, the presence of more than threshold numbers at a site is necessary to trigger selection.

A2. Restricted-range species.

The site forms one of a set selected to ensure that all restricted-range species are present in significant numbers in at least one site and preferably more.

A3. Biome-restricted species.

The site forms one of a set selected to ensure adequate representation of all species restricted to a given biome, both across the biome as a whole and for all of its species in each range state.

A4. Congregations

This applies to 'waterbird' species and is modelled on criterion 6 of the Ramsar Convention for identifying wetlands of international importance. This includes seabird species. Quantitative data are taken from a variety of published and unpublished sources.

This is modelled on Criterion 5 of the Ramsar Convention for identifying wetlands of international importance. The use of this criterion is discouraged where quantitative data are good enough to permit the application of A4i and A4ii. It also applies to sites known or thought to exceed thresholds set for migratory species at bottleneck sites.

The Australian IBA program, led by BirdLife Australia, is planned to help protect a network of sites critical for the conservation of Australia's birds by:

- Promoting IBAs as a tool for biodiversity conservation planning
- Encouraging government to prioritise conservation at IBAs (e.g. in grant-giving schemes)
- Encouraging and facilitating local community-based groups and land-owners to manage land sustainably, and
- Conserve key bird species.

There are four Important Bird Areas (IBAs) in the study area:

Cape Portland IBA (Precinct 1 – Dorset Shire)

This 6,708ha stretch of coast supports over 1% of the world population of Cape Barren Geese (*Cereopsis novaehollandiae*), Chestnut Teal (*Anas castanea*) and the near threatened Hooded Plover (*Thinornis rubricollis*). It has occasionally supported large numbers of Double-banded Plover and Australian Pied Oystercatcher and breeding Fairy Terns.

St Helens IBA (Precinct 3 – Break O'Day Shire)

This IBA includes Jocks Lagoon Ramsar site. The IBA of 2,366ha supports more than 1% of the world population of Pacific Gull (*Larus pacificus*) (Paddys Island), Little Penguin (*Eudyptula minor*) (St Helens Island), Australian Pied Oystercatcher (*Haematopus longirostris*) (Georges Bay) and significant numbers of the vulnerable Australian Fairy Tern (*Sternula nereis*) and near threatened Hooded Plover (Maurouard Beach). One Swift Parrot important breeding area (Binalong Bay) known from this IBA.

Douglas-Apsley IBA (Precinct 5 – Break O'Day Shire)

The IBA supports one near threatened, 11 restricted-range (endemic) and one biome-restricted species over 16,086ha. It is an important representative protected area for these species in lowland eastern Tasmania. The endangered Swift Parrot (*Lathamus discolor*) is probably an occasional visitor to the IBA depending on flowering conditions at the south of its range.

Moultin Lagoon IBA (Precinct 6 – Glamorgan/Spring Bay Shire)

This IBA is also a Ramsar site. Moultin Lagoon regularly supports over 1% of the world's Black Swan (*Cygnus atratus*) and Australian Pied Oystercatcher and is an area of over 6,319 ha.



4.6 Known biodiversity by case study areas

The case study areas are described in Section 2 of this report in terms of cultural heritage values. In this section they are elaborated on with respect to their biodiversity (flora and fauna) values and physical geography.

4.6.1 Musselroe Bay

The Musselroe Bay Precinct is located on the northeastern most edge of Tasmanian coast, to the northeast of Launceston. Access to the township is only available via unsealed roads, with the closest town being Gladstone to the southwest.

Native vegetation within the settlement is modified and includes garden plantings, but the shoreline and bay include largely natural areas of dune vegetation. In the region of the settlement, native vegetation where it occurs on the coastal strip is predominantly composed of a mosaic of coastal scrub types ('Scrub, heathland and coastal complexes' in TASVEG mapping). On wetter substrates inland, scrub complexes tend towards closed-canopy relatives of rainforest ('Rainforest and related scrubs' in TASVEG mapping); typically dominated by *Melaleuca* species. A band of 'Dry eucalypt forest and woodland' extends in an easterly direction from the coast south of town. Musselroe Bay has shell beaches and areas of 'Saltmarsh and wetland' vegetation.

The coastal areas of Dorset Shire within the study area, and particularly around Musselroe Bay, are modelled as having High Conservation Significance at the upper end of the range, reflecting in part rich shorebird habitats and terrestrial vegetation suitable for the New Holland Mouse (*Pseudomys novaehollandiae*). The Cape Portland Important Bird Area (IBA) is nearby to the west.

Significant views are also available from Musselroe Bay to Flinders and Cape Barren Islands in Bass Strait to the north. The Cape Portland windfarm forms a significant element of the viewshed from the township.



Figure 9: Musselroe Bay (Coliban Ecology, April 2014)

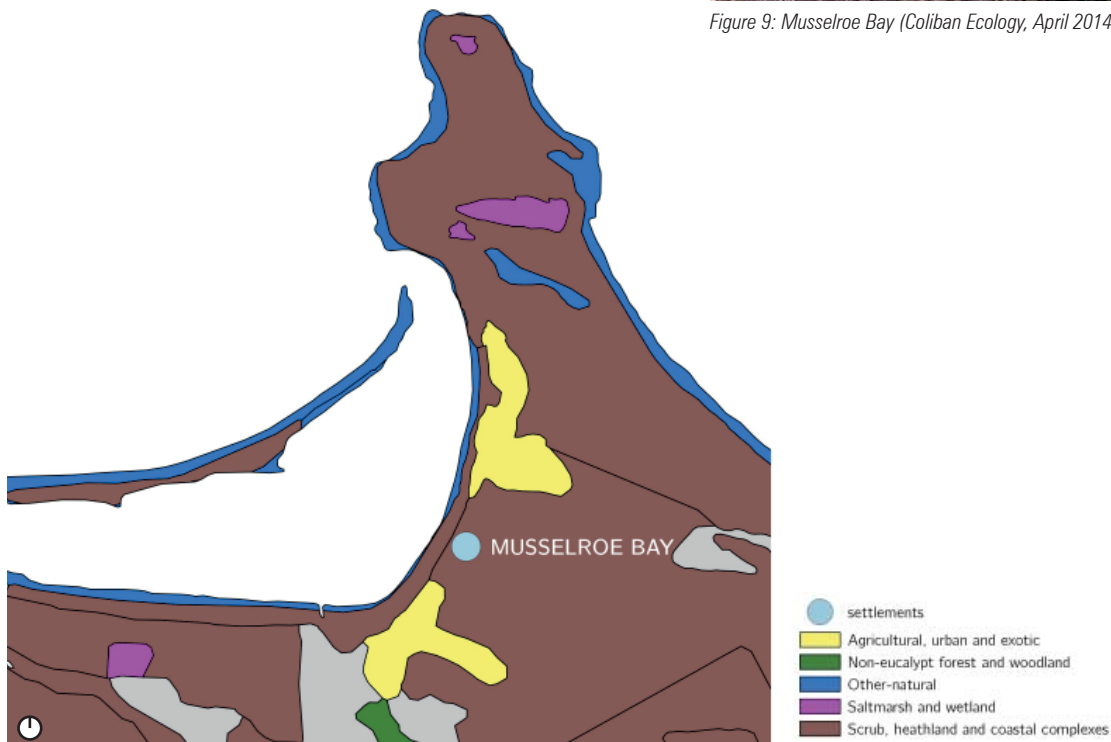


Figure 10: Musselroe Bay – vegetation types (Coliban Ecology)



4.6.2 Stumpys Bay camping ground (near Boulder Point)

Stumpys Bay and Deep Creek are camping sites within Mount William National Park.

Native vegetation at these sites are broadly similar to that found in the township of Musselroe Bay, except that 'Scrub, heathland and coastal complexes' and 'Dry eucalypt forest and woodland' are jointly prominent.

Modelled values for conservation significance and New Holland Mouse are similarly high, but shorebirds are a less prominent attribute at this site.

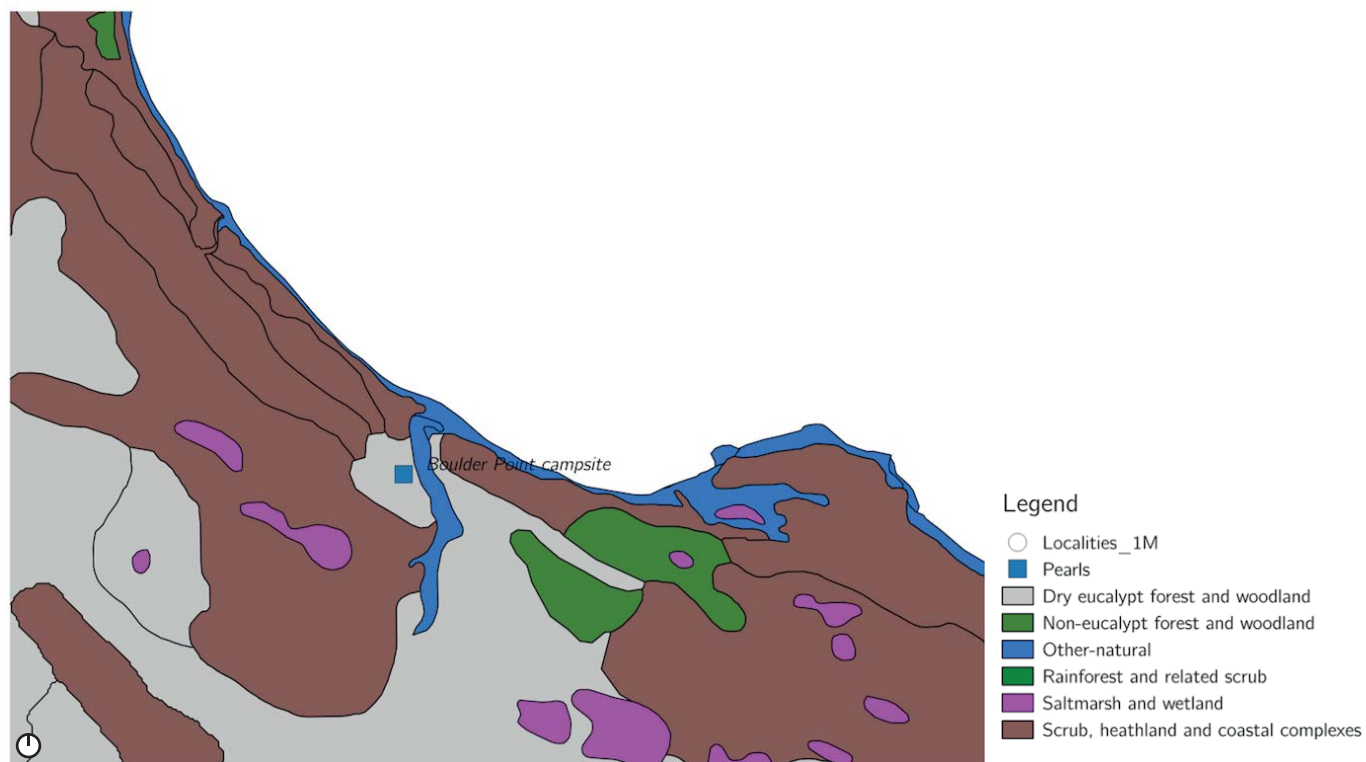


Figure 11: Boulder Point – vegetation types (Coliban Ecology 2014)



4.6.3 Deep Creek

Vegetation at Deep Creek includes 'Scrub, heathland and coastal complexes', 'Rainforest and related scrubs' dominated by several *Melaleuca* species and 'Dry eucalypt forest and woodland'. Patches of 'Non-eucalypt forest and woodland' feature large old veteran Silver Banksia (*Banksia marginata*) trees.

Values at Deep Creek are very similar to that found at Stumpys Bay, with the exception that the cleared areas with shacks is slightly larger (and mapped accordingly) at Deep Creek.

Modelled values for conservation significance and New Holland Mouse are similarly high, but shorebirds are a less prominent attribute at this site.



Figure 12: Deep Creek campsite (Coliban Ecology, July 2014)

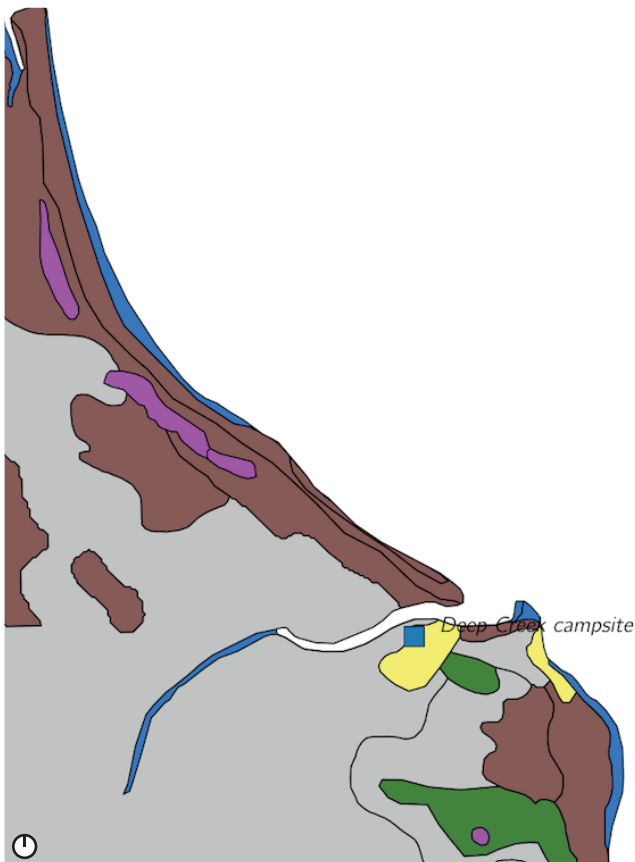


Figure 14: Deep Creek – vegetation types (Coliban Ecology 2014)



Figure 13: Beach access, Bay of Fires near Deep Creek (Coliban Ecology, July 2014)



4.6.4 Ansons Bay

Ansons Bay is a formalised shack settlement on the northern shore of a sheltered embayment – one of the largest on this coastline. Running from the north down to the entrance to the sea at Policemans Point is a sandy isthmus well vegetated with ‘Scrub, heathland and coastal complexes’ vegetation. Policemans Point, the site of an existing campsite at the mouth of Ansons Bay is a nationally significant site for shorebirds (see Figure 81), and vegetation in the coastal zone is modelled as having High Conservation Significance and likely to support the New Holland Mouse.



Figure 15: Anson's Bay (Coliban Ecology, July 2014)

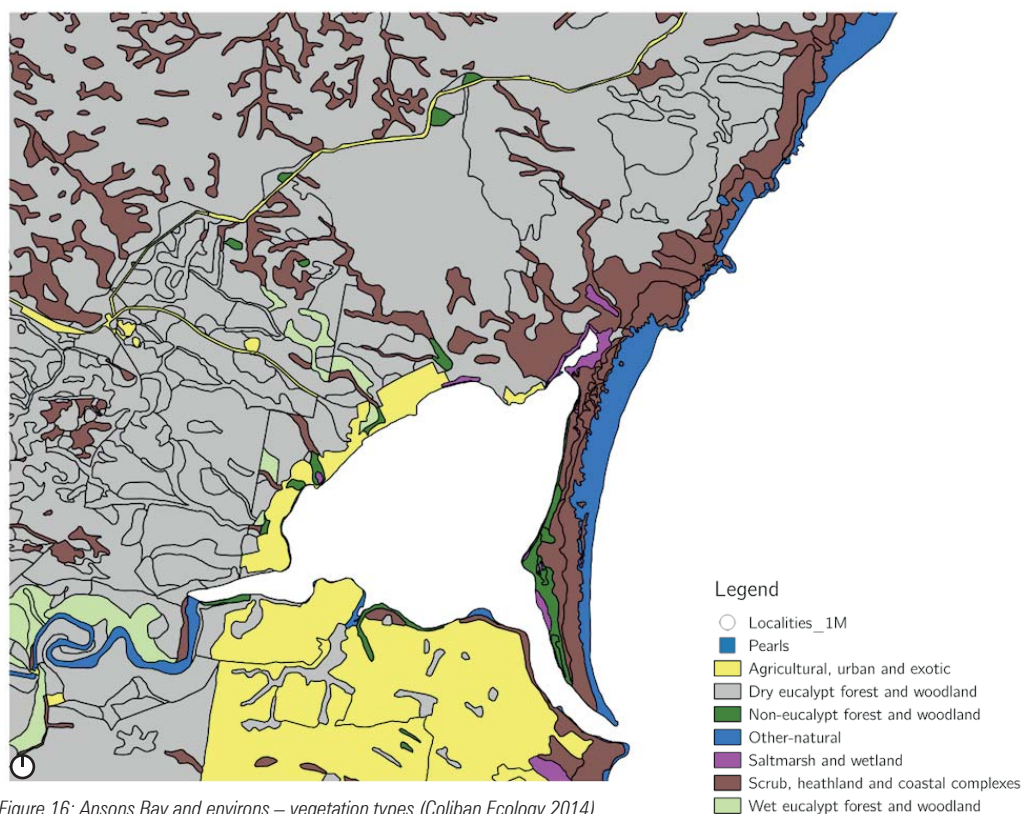


Figure 16: Ansons Bay and environs – vegetation types (Coliban Ecology 2014)



4.6.5 Cosy Corner and Swimcart Beaches campsites

In contrast to the more northerly beach camping sites, Cosy Corner campsites are nestled amongst 'Dry eucalypt forest and woodland' (Figure 18), with lesser areas of 'Scrub, heathland and coastal complexes'. Coastal dunes complexes are more prominent at Swimcart, but 'Dry eucalypt forest and woodland' exists in the swale behind the main dune.

Habitat in the Cosy Corner – Swimcart area is modelled as suitable for the New Holland Mouse, and there is a cluster of sites used by a range of shorebirds – particularly in the south around Swimcart.



Figure 17: Cosy Corner campsite (Coliban Ecology, July 2014)

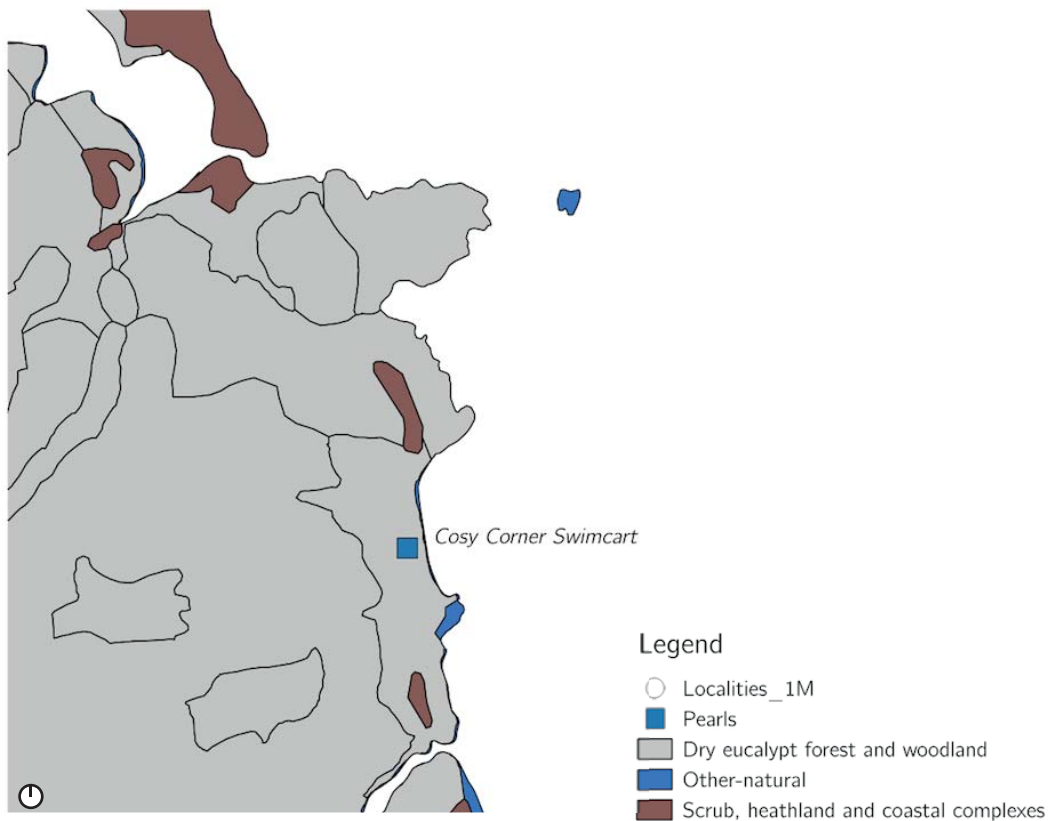


Figure 18: Cosy Corner–Swimcart beaches (Coliban Ecology 2014)



4.6.6 Binalong Bay

Similar to Ansons Bay, Binalong Bay is a substantial formalised shack settlement, but on a rocky headland and sloping up into forest – in parts ‘Wet eucalypt forest and woodland’. There is a band of ‘Dry eucalypt forest and woodland’ wrapped around the headland, with some substantial stands of sheoaks (*Allocasuarina verticillata*), and back inland some substantial cleared areas.

Habitat in the Binalong Bay area is modelled as suitable for the New Holland Mouse. Binalong Bay is also listed as an Important Breeding Area for the Swift Parrot (Fitzgerald 2012).

Legend

- Campsites and townships
- Towns
- Agricultural, urban and exotic
- Dry eucalypt forest and woodland
- Other-natural
- Scrub, heathland and coastal complexes
- Wet eucalypt forest and woodland

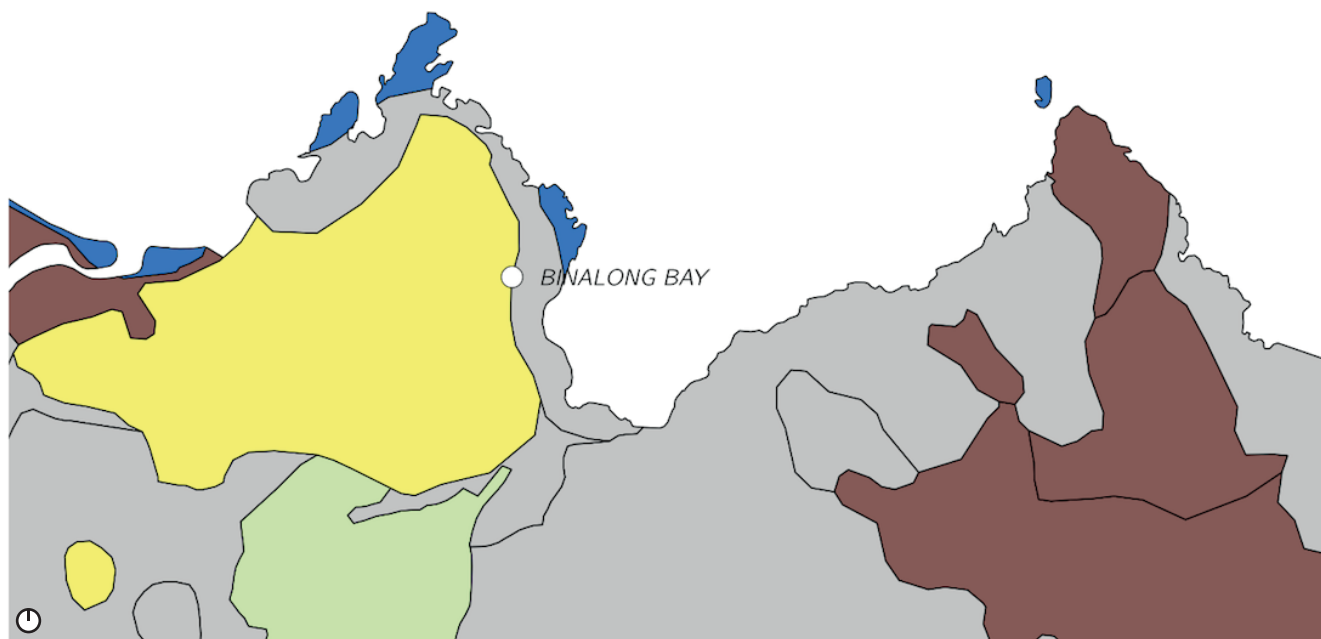


Figure 19: Binalong Bay – vegetation types (Coliban Ecology 2014)



4.6.7 St Helens

St Helens is the main town on the upper East Coast, and is long established.

Dryland areas in and about the town have long been cleared, but relatively high conservation values can be found in St Georges Bay, Medeas Cove, and Jocks Lagoon Ramsar site is situated between St Helens township and St Helens Point. Extensive areas of native vegetation remain on St Helens Point and contiguously along the coast to the south.

Both the New Holland Mouse and Eastern Barred Bandicoot are predicted as likely to occur in coastal habitats around St Helens. An Eastern Barred Bandicoot was observed on the inland side of town during the site visit.

St Helens and Binalong Bay fall within the St Helens IBA. There are many shorebird sites inside the bay and out on the ocean beach of St Helens Point.



Figure 20: Swimcart beach (Coliban Ecology, July 2014)

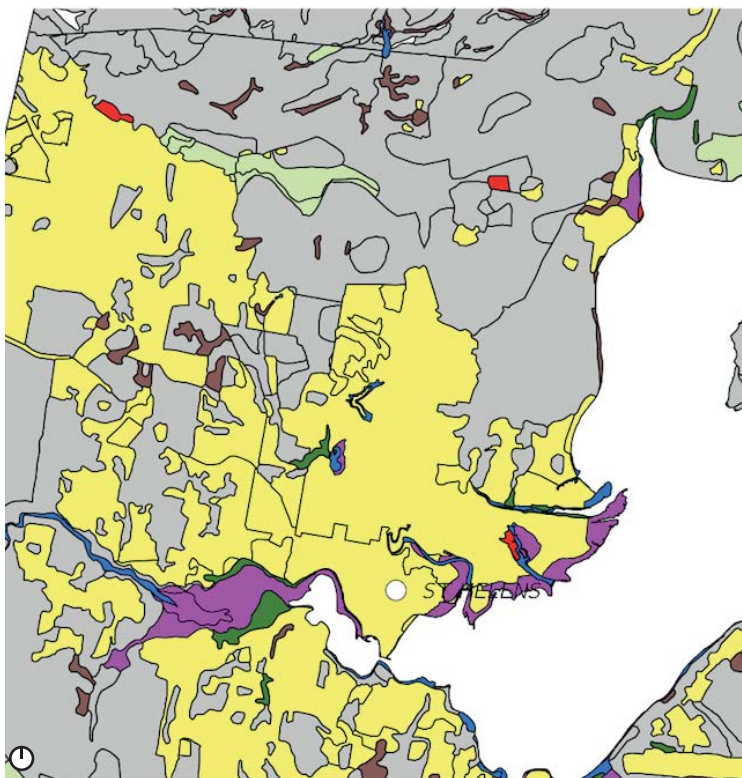


Figure 21: St Helens and environs – vegetation types (Coliban Ecology 2014)

Legend

- Campsites and townships
- Towns
- Agricultural, urban and exotic
- Dry eucalypt forest and woodland
- Native grassland
- Non-eucalypt forest and woodland
- Other-natural
- Saltmarsh and wetland
- Scrub, heathland and coastal complexes
- Wet eucalypt forest and woodland



4.6.8 Diana's Basin

A short distance south from St Helens, Diana's Basin includes a lagoon and ocean beach, with areas of fringing 'Scrub, heathland and coastal complexes', 'Saltmarsh and wetland' and 'Dry eucalypt forest and woodland'. Camping infrastructure is basic, but the amenity of St Helens is relatively close to hand.

There are many shorebird sites inside the basin and out on the ocean beach. The margins of Dianas Basin have HCS at the upper end of the scale, and the habitat is modelled as suitable for New Holland Mouse.



Figure 22: Diana's Basin (Coliban Ecology, July 2014)

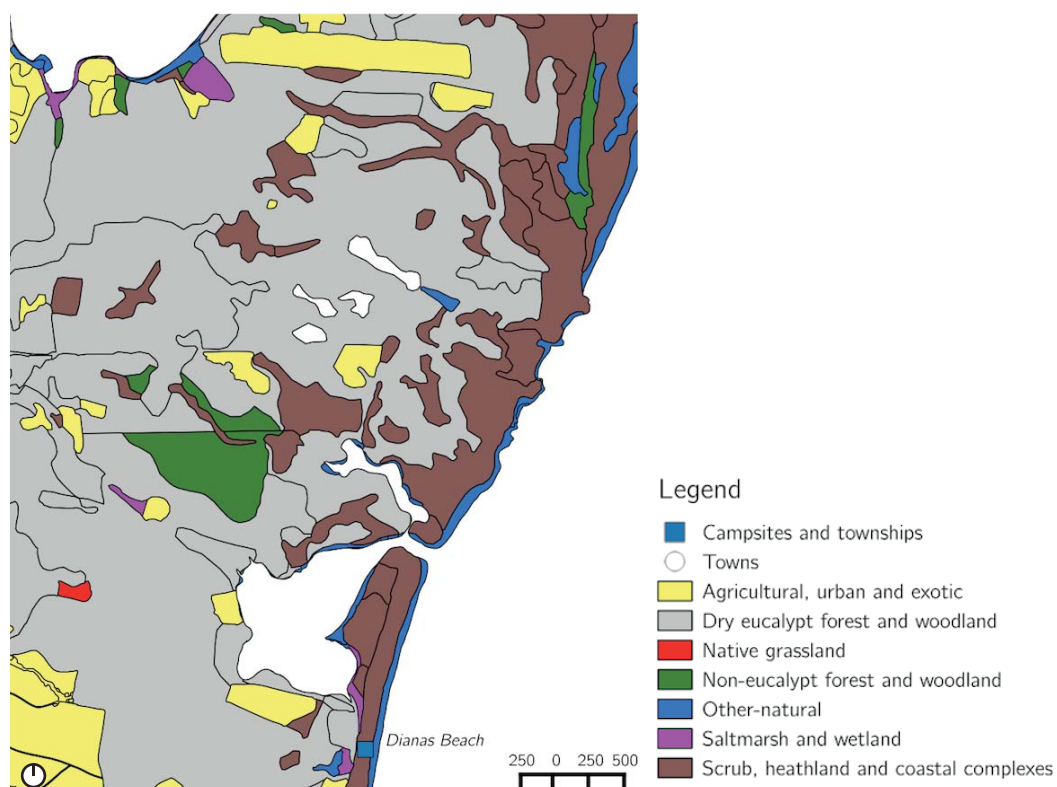


Figure 23: Dianas Beach and Dianas Basin – vegetation types (Coliban Ecology 2014)



4.6.9 St Marys

In contrast to all the other case study sites which are either right on the coast, or on the coastal plain, St Marys is perched at 260m above sea level up on the inland side of the Eastern Tiers—the coast is reached either through St Marys Pass or Elephant Pass down to Scamander or Bicheno. The rocky outcrop of St Patricks Head dominates the town skyline, and is also visible from points along the coast, only 10km to the east.

To the west of St Marys, the countryside is largely cleared for agriculture—reflected in the large yellow expanse mapped in Figure 24. Most of the native vegetation close to town (north, east and south) is 'Dry eucalypt forest and woodland', but there are pockets of 'Non-eucalypt forest and woodland'. In gullies and on the lower slopes towards the coast 'Wet eucalypt forest and woodland' occurs. Blue polygons in Figure 24 ('Other-natural') are rock outcrops with sparse or no vegetation. There are only scattered small patches of 'Native grassland' within 2–3km of town.

St Marys' position on the edge of a cleared expanse of farmland and forest areas on the coastal escarpment means that it supports fauna habitats for a range of species typical of both degraded and intact vegetation within close proximity to town.

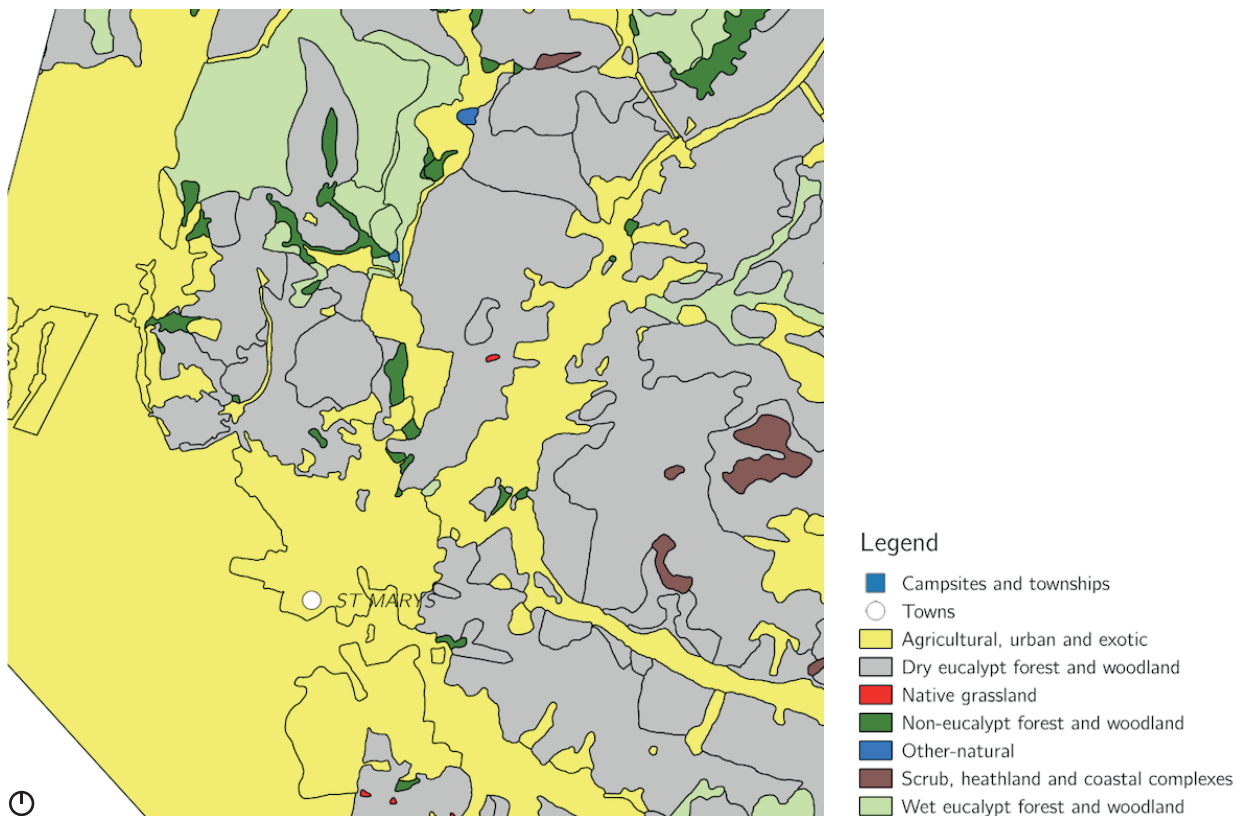


Figure 24: St Marys and environs – vegetation types (Coliban Ecology 2014)



4.6.10 Scamander

Scamander is positioned centrally along the East Coast. Habitats within the town area include 'Scrub, heathland and coastal complexes', 'Native grassland' and 'Dry eucalypt forest and woodland', and is well suited to the New Holland Mouse. Numerous shorebird sites are dotted along the beach around Scamander. The Giant Velvet Worm (*Tasmanipatus barretti*) is known from the upper reaches of the Scamander catchment. While the Giant Velvet Worm is not an MNES, it is listed as rare under State listings.

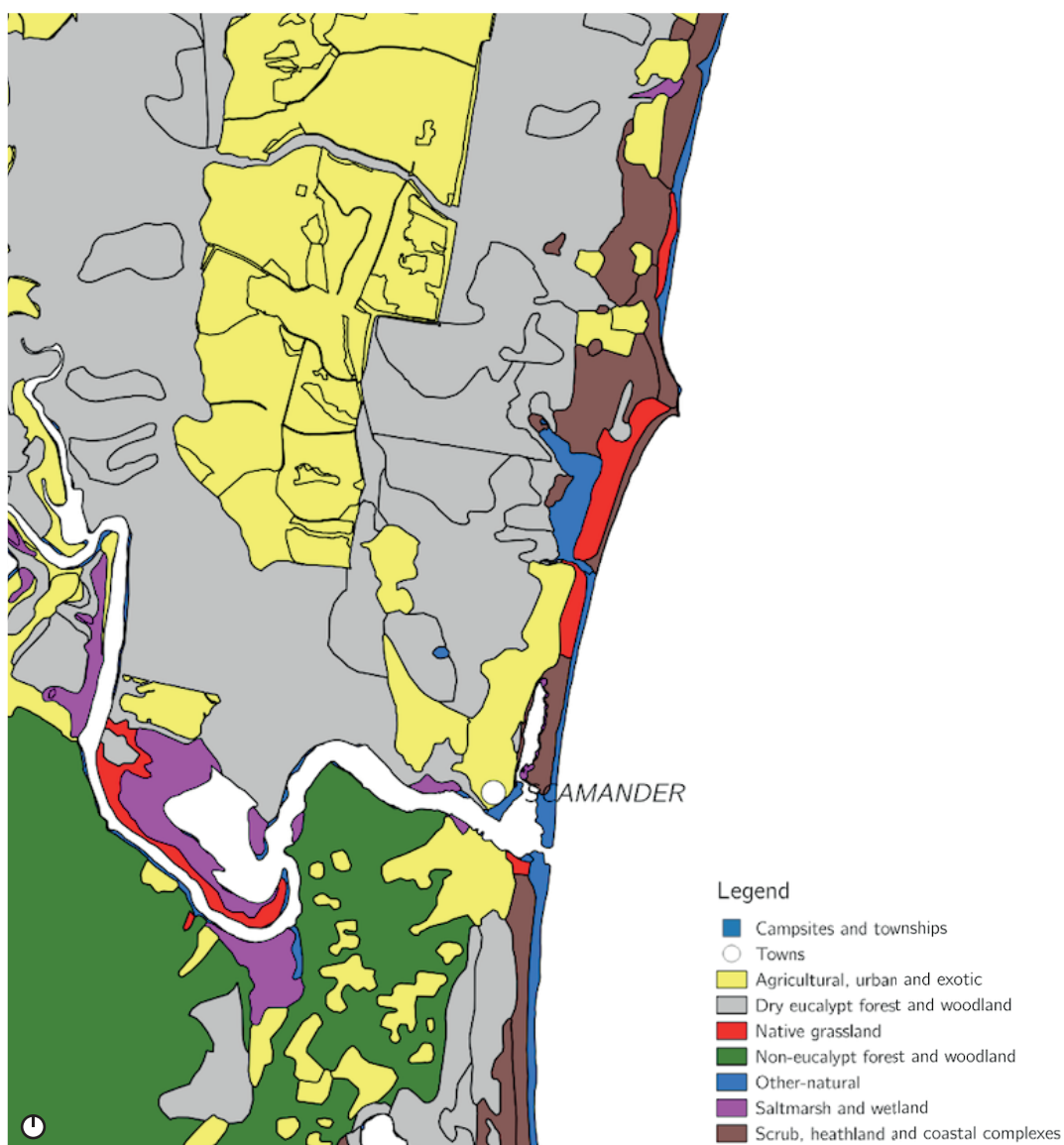


Figure 25: Scamander and environs – vegetation types (Coliban Ecology 2014)



4.6.10.1 Winifred Curtis Scamander Reserve

The 75ha Winifred Curtis Scamander Reserve (WCSR), south of the river in Scamander, is protected under a Protected Areas on Private Land (PAPL) conservation covenant. WCSR is managed by a private trust.

Much the forest in WCSR is coastal Black Peppermint (*Eucalyptus amygdalina*) forest or woodland. This is dominated by Black Peppermints, but may include other eucalypts such as White Gums (*E. viminalis*), Black Gums (*E. ovata*), Blue Gums (*E. globulus*) and Ironbark (*E. sieberi*) plus Black Sheokes (*Allocasuarina littoralis*). It is mapped overwhelmingly as 'Dry eucalypt forest and woodland' in TASVEG, with 'Saltmarsh and wetland' vegetation along the margins of Henderson Lagoon.

The soil is sandy and low in nutrients, and the understorey is heathy, with a high diversity of legumes, heaths and shrubs such as wattles (*Acacia* spp.). There are also Grasstrees (*Xanthorrhoea*), many herbs, sedges (such as sword-sedge *Lepidosperma* spp.), some native grasses and lilies, as well as Austral Bracken (*Pteridium esculentum*).

WCSR shows a mosaic of patches of Cinnamon Fungus (*Phytophthora cinnamomi*) symptoms (see discussion on page X), with grastrees slowly dying over some years even before the severe fire of 2006 (Morgan & Povey 2009). Other parts of the reserve are still free of *Phytophthora* symptoms, evidenced by the large number of grastrees and other susceptible species, but are vulnerable to infection. Although spread of *Phytophthora* is slow in deep, well-drained sands, it will continue to reduce the populations of susceptible species in the reserve (Morgan & Povey 2009).



26: Winifred Curtis Scamander Reserve—front gate to Tasman Highway (Coliban Ecology, July 2014)



4.6.11 Falmouth

The township of Falmouth is well established and highly developed, such that very little native vegetation persists within the town except as scattered canopy trees and a degraded (highly weed invaded) coastal scrub.

Immediately north of Falmouth, over the estuary, exists a sandy isthmus with well developed 'Scrub, heathland and coastal complexes' vegetation, which like most such areas along the coast is well suited to the New Holland Mouse. There are also numerous shorebird sites along the ocean beach and inside the estuary.

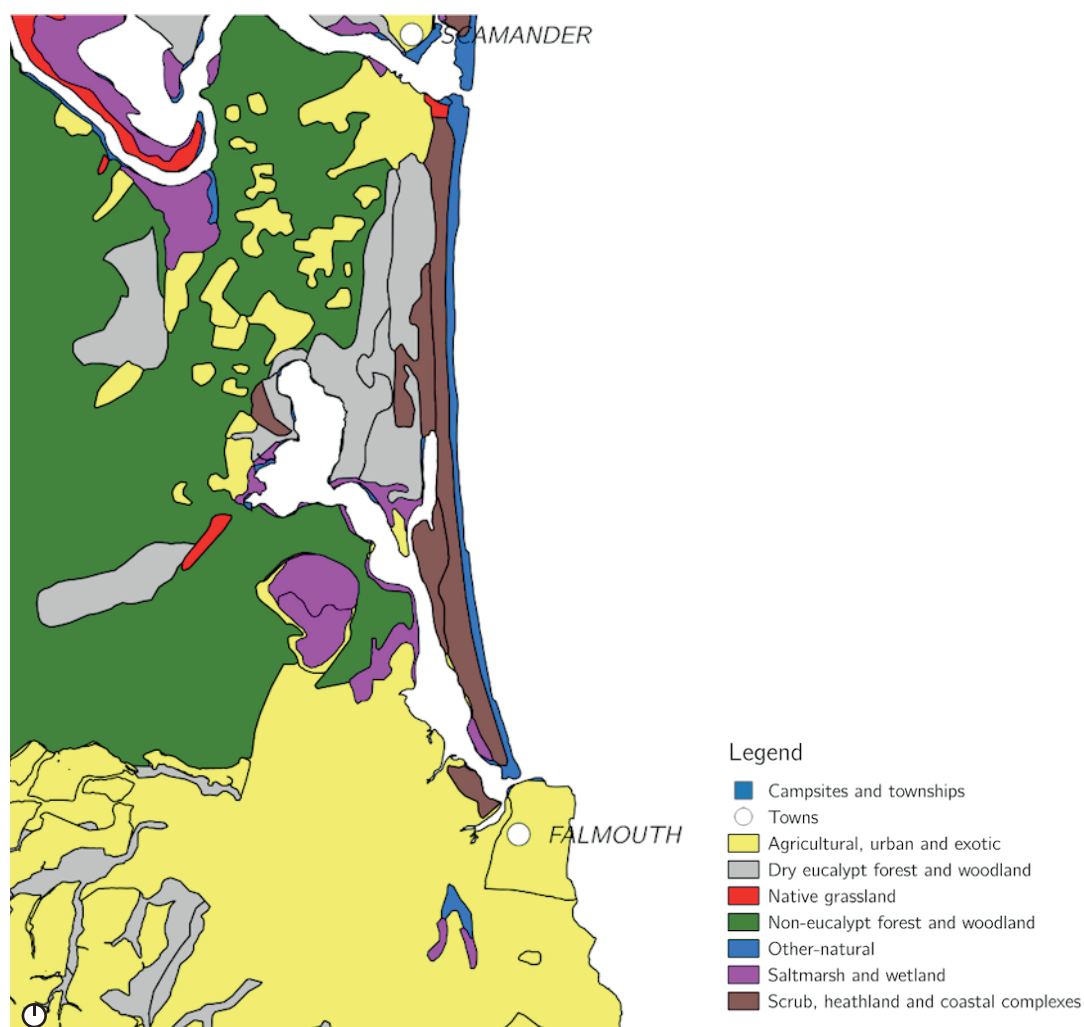


Figure 27: Falmouth and environs – vegetation types (Coliban Ecology 2014)



4.6.12 McIntyres Beach

McIntyres Beach has similar attributes to some of the sites just north of St Helens (e.g. Cosy Corner), with 'Dry eucalypt forest and woodland' inland backing up 'Scrub, heathland and coastal complexes' on the foredune. There are several cleared areas to the west and south of the site with some development potential. Comments about New Holland Mouse and shorebirds are similar to the other sites it resembles.

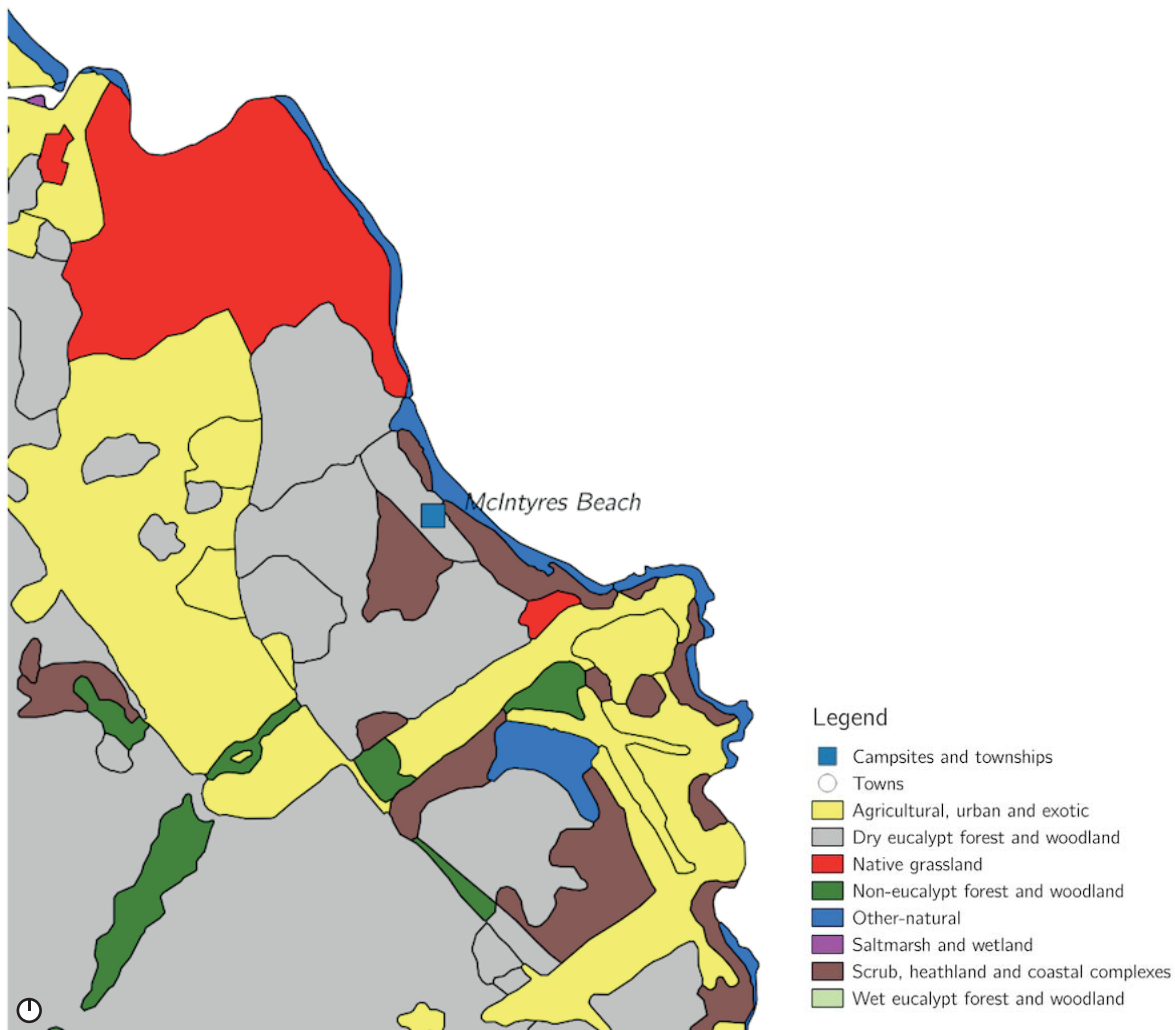


Figure 28: McIntyres Beach – vegetation types (Coliban Ecology 2014)



4.6.13 Chain of Lagoons

Chain of Lagoons represents a mosaic of remnant and developed vegetation. Whilst the coastline is vegetated on the dune with 'Scrub, heathland and coastal complexes' running to 'Non-eucalypt forest and woodland' and 'Dry eucalypt forest and woodland' inland, there are also extensive areas of farmland relatively close to the coast. Habitat for New Holland Mouse and Eastern Barred Bandicoot exists within the area, as well as shorebird communities along the shore and in the lagoons.

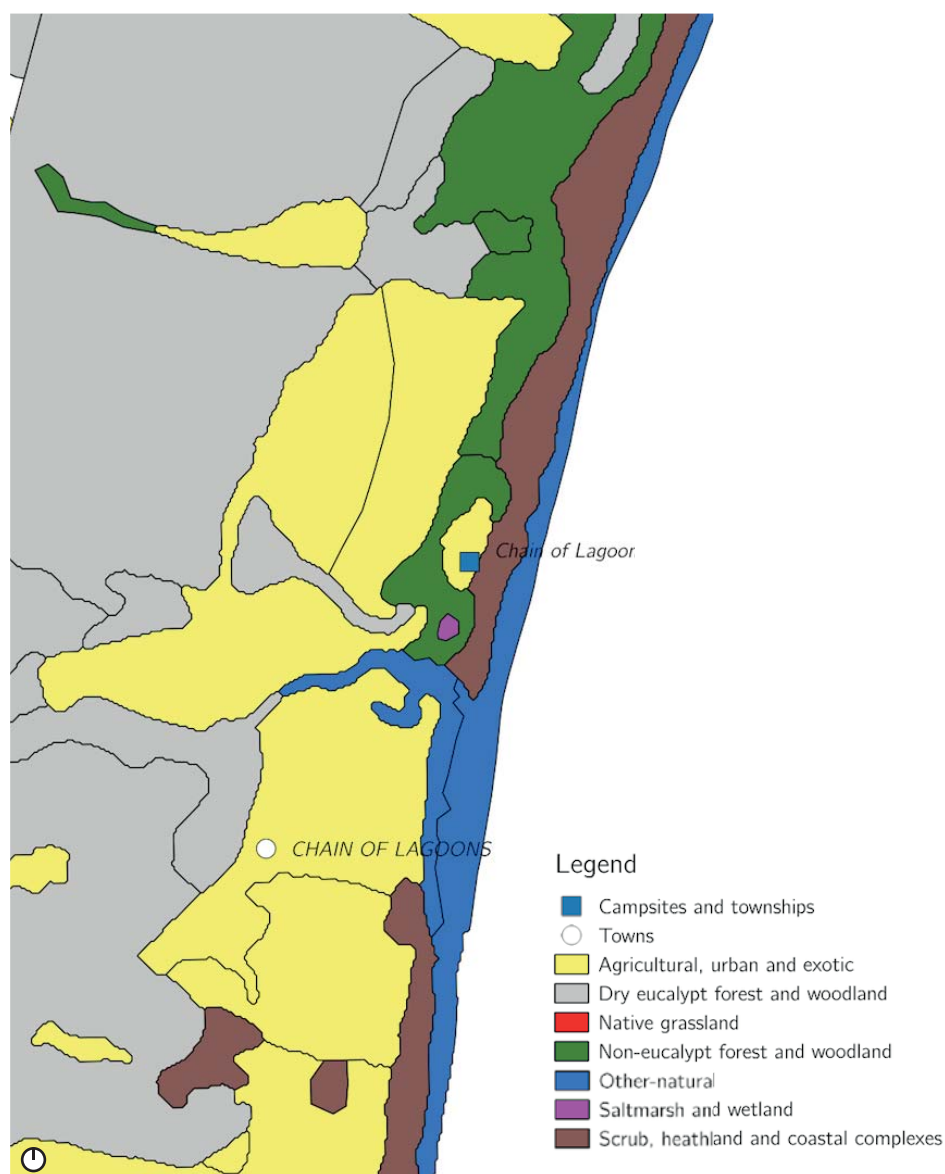


Figure 29: Chain of Lagoons – vegetation types (Coliban Ecology 2014)



4.6.14 Bicheno

Bicheno is the second largest town on the East Coast. Within the town precinct most native vegetation has been removed by long occupation. Degraded remnants of coastal vegetation occur along the sandy shore and on the rocky headland.

Bicheno is well known for the widespread and nesting Little Penguins that can be heard at night from most parts of the town's ocean shoreline, and penguins support at least one local tourism enterprise.

Modelled or mapped habitat values for New Holland Mouse, Eastern Barred Bandicoot and shorebirds are at the low end of the scale in Bicheno. Higher HCS values are mapped inland on hills associated with the Douglas-Apsley National Park and its noted biodiversity values.

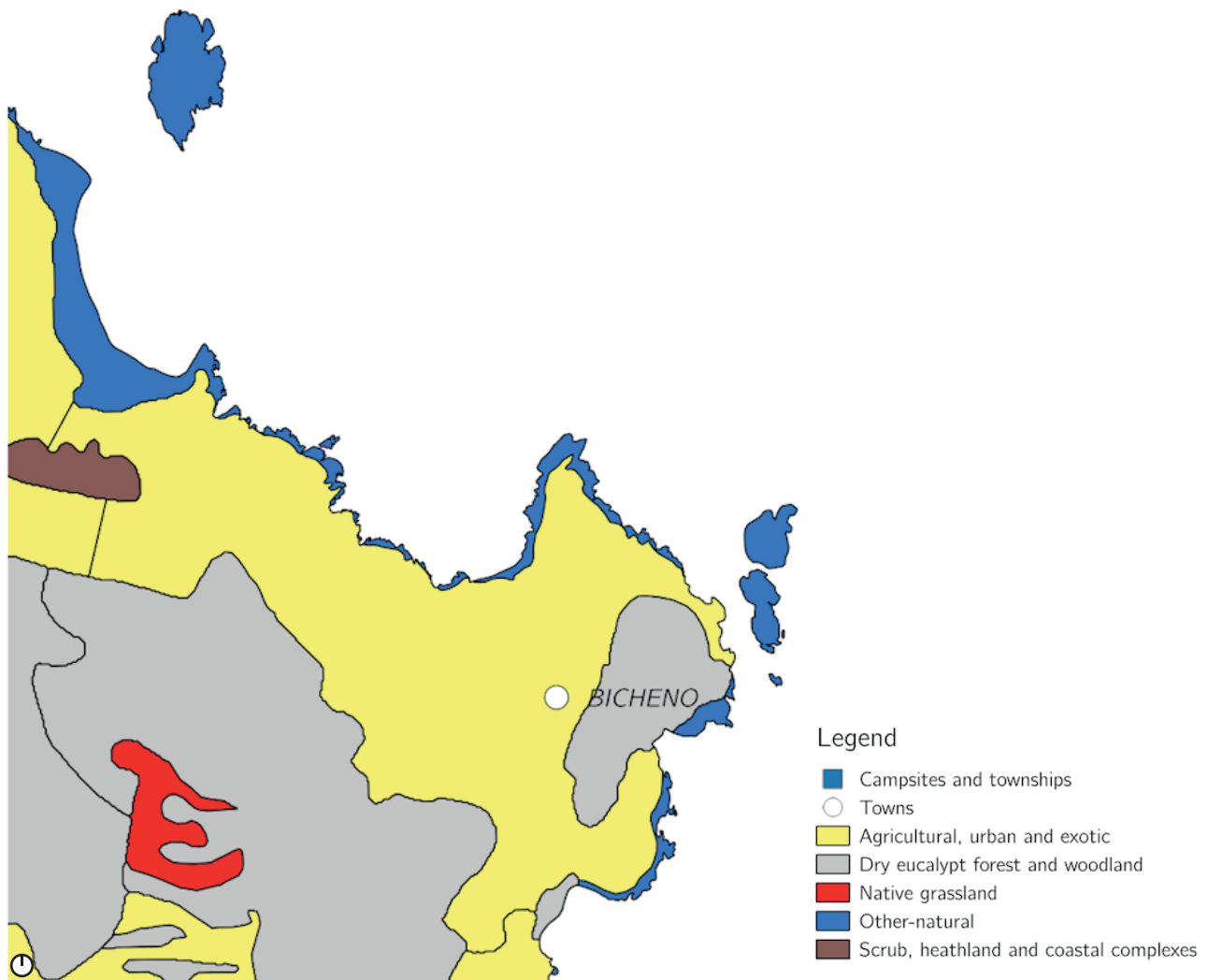


Figure 30: Bicheno and environs – vegetation types (Coliban Ecology 2014)



4.6.15 Isaacs Point (The Friendly Beaches)

Situated alongside Moulting Lagoon and in a narrow coastal continuum with the main body of Freycinet National Park, The Friendly Beaches support coastal heathland, scrub and dry forest communities. There are established campsites, and minimal camping infrastructure in place. Coles Bay is a short drive to the south, and Bichenog to the north.

A freshly roadkilled adult female Spot-tailed Quoll was found just the turn-off to Isaacs Point during the July 2014 fieldtrip (see Figure 38c).

The New Holland Mouse was recorded in the area around Isaacs Point in the 1970s, and habitat there is modelled as moderately suitable.

A large cluster of shorebird sites on the coast immediately south of Isaacs Point reflect important shorebird values in a less disturbed site than elsewhere further north on the East Coast.



Figure 31: Isaacs Point beach, northern Friendly Beaches (Coliban Ecology, July 2014)

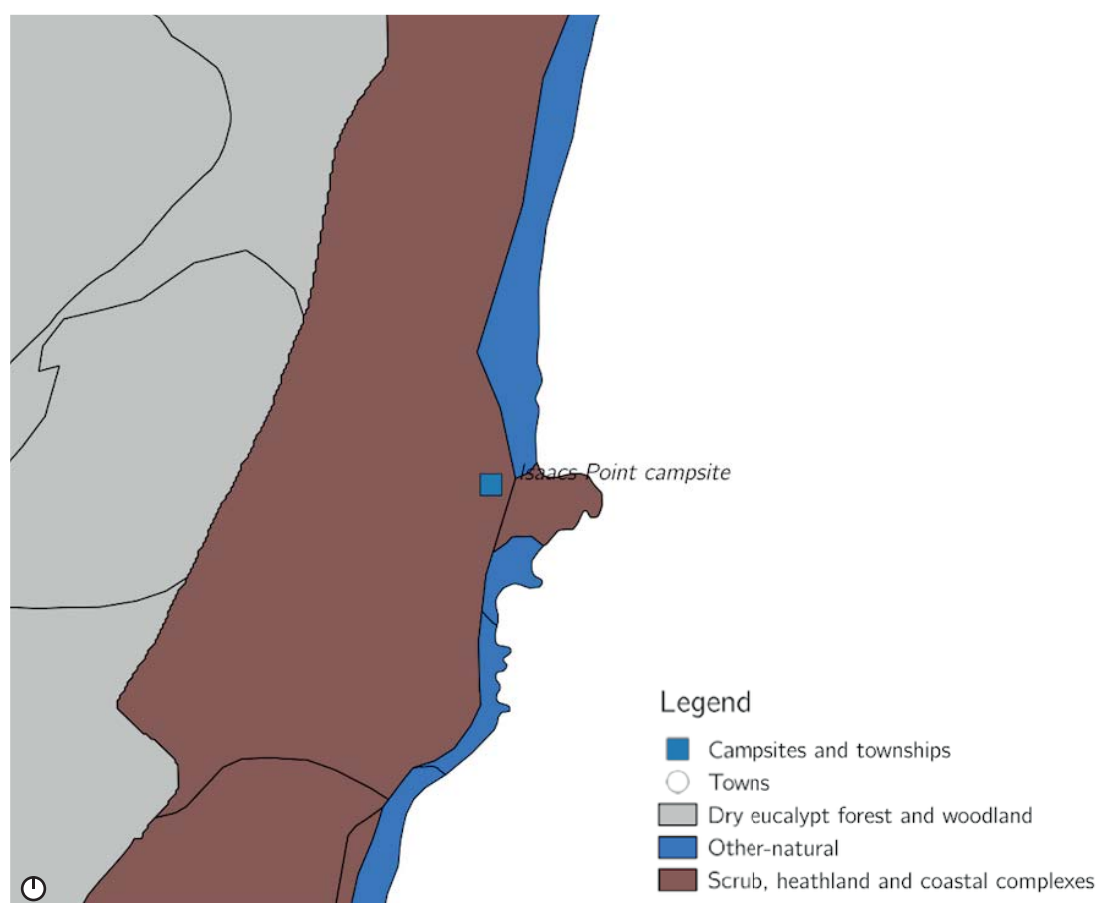


Figure 32: Isaacs Point (Friendly Beaches) – vegetation types (Coliban Ecology 2014)



4.6.16 Coles Bay

Freycinet National Park is the southern most point of this study, positioned on the eastern coastline of Tasmania. Coles Bay is the nearest service centre to the main national park entrance.

Areas around Coles Bay, including quite close in to town, are at the higher end of HCS values. New Holland Mouse has historically been recorded at sites around the town and close by, and habitat in the area is still modelled as moderately suitable.

There are extensive areas of 'Dry eucalypt forest and woodland' surrounding Coles Bay, with 'Non-eucalypt forest and woodland' of Drooping Sheoak (*Allocasuarina verticillata*) lining the shore in parts.



Figure 33: The Hazards Range in Freycinet National Park viewed from Coles Bay (Coliban Ecology, April 2014)

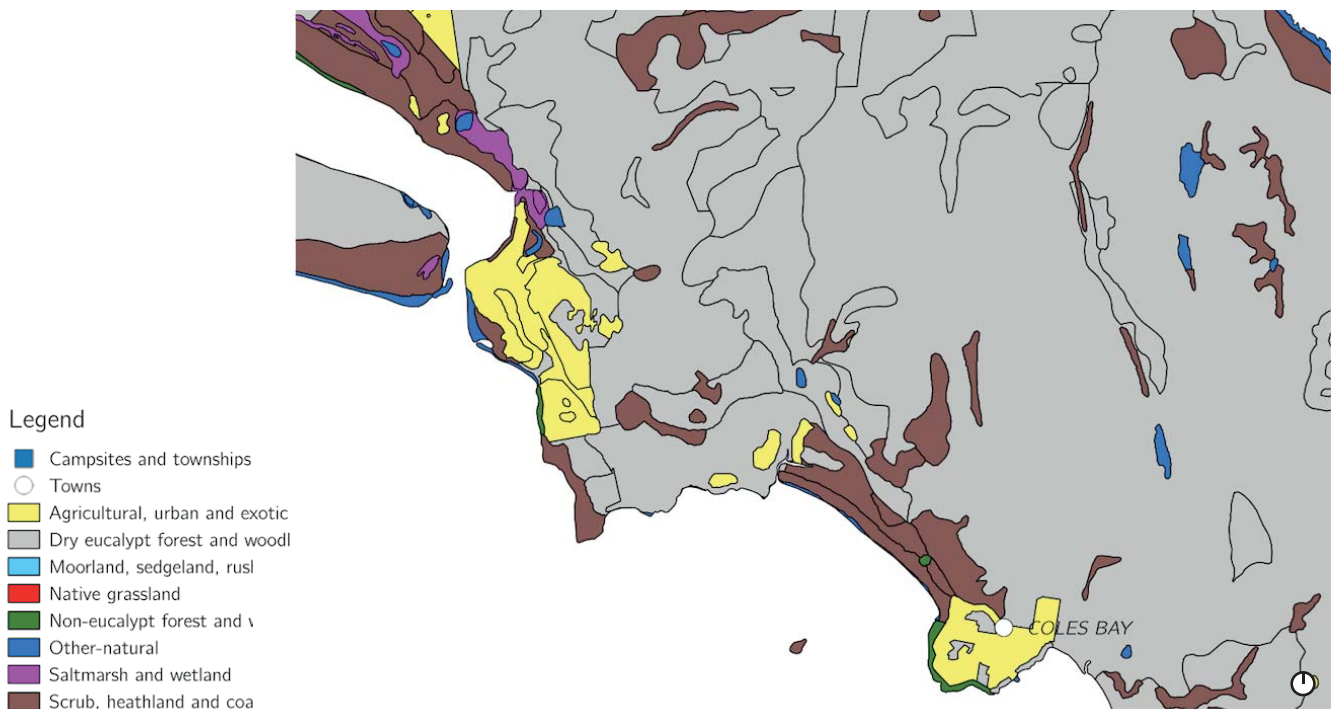


Figure 34: Swanwick to Coles Bay – vegetation types (Coliban Ecology 2014)



4.6.17 Swanwick

Swanwick is at the mouth of Swan River and on the banks of the lower section of the Moulting Lagoon Ramsar site, downstream from Apsley Marshes Ramsar site.

Elevated HCS scores at Swanwick reflect the Ramsar, shorebird and waterbird values of Moulting Lagoon, but also nearby habitat for the New Holland Mouse. North-west of Swanwick towards Cranbrook, the Eastern Barred Bandicoot is modelled as likely to occur.



Figure 35: Moulting Lagoon at Swanwick (Coliban Ecology, July 2014)



4.6.18 Swansea

Swansea is an established township and service centre on the far margins of the study area, with relatively few intact natural areas within its hinterland. No mapped terrestrial native vegetation remains.

Nonetheless, relatively high shorebird values remain in nearby areas such as the Meredith River which is nationally significant for the Common Greenshank (*Tringa nebularia*).

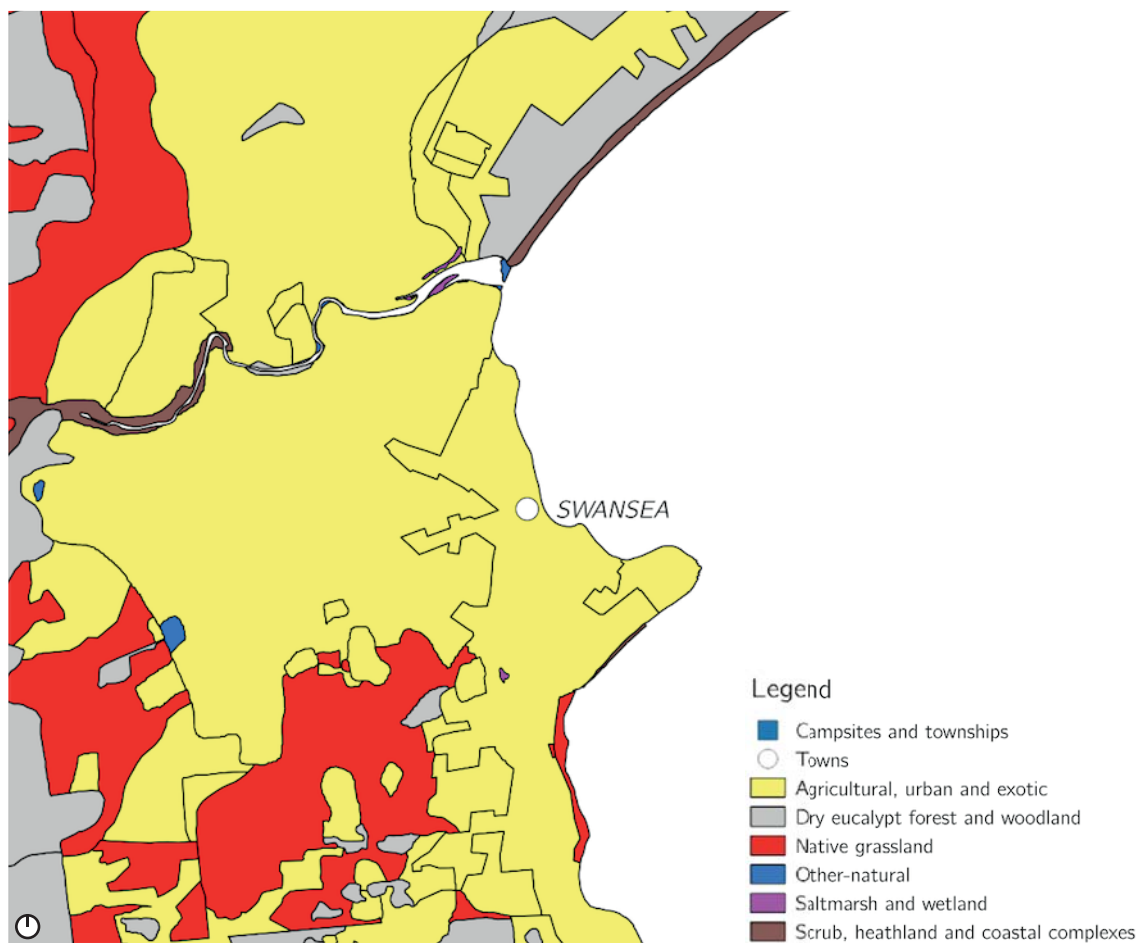


Figure 36: Swansea and environs – vegetation types (Coliban Ecology 2014)



5 Biodiversity issues

5.1 Data gaps

A large amount of good data exists for the study area that capture aspects such as the distribution of native vegetation (TASVEG from DPIPW), localized endemic plant species, threatened plant communities, or significant shorebird sites (Woehler & Park 2006; Woehler & Ruoppolo 2013). Equally, the broad distribution of many higher vertebrate animals (mammals, birds, reptiles, frogs, fish) is well documented.

At the scale of precincts and development sites it is, however, the case that such fine-grained distributional data is not available for many individual species. The distribution of some animals is known to have declined (e.g. Tasmanian Devil) while others respond to post-fire (or post-disturbance) successional dynamics of vegetation (e.g. New Holland Mouse) and are difficult to map when population levels are low. The broad niche of other species is relatively simple to map predictively, e.g. nesting or food resources required by the Swift Parrot, as the relevant broad vegetation types are well mapped.

Even a cursory examination of mapped records for species such as the Eastern Barred Bandicoot shows a close association with major arterial roads through the East Coast. Clearly the species is not logically constrained by the occurrence of roads—many of the logged records would have been made by driving at night through the study area. This example points to a potential weakness in data quality—in this case representativeness.

The point of making these observations is to highlight the importance firstly of scale in assessing data quality and quantity. At the scale of Eastern Tasmania the data is sufficient to show broad patterns of distribution, and associations with broad vegetation types. For the more fine-grained scale at which development applications are assessed, data are often lacking from significant sectors of the landscape.

Secondly, after scale, the issue of data quality has a bearing on how useful existing data sets are for informing decision-making about changes in land use.

Elsewhere in this document we have utilised distribution modelling software applications, in an attempt to show how some of the gaps in data coverage and quality can be compensated for, with appropriate caveats. In making assessments of the suitability of various landscapes for development, such modelling approaches are a useful aid to objective decision-making. They are however no substitute for site-specific, on-ground assessments.

5.2 Environmental weeds

A number of plant species, either completely exotic or native to other parts of Australia, have established and become serious environmental weeds in the study area. Some of these species are easily spread by human activities, which may include seeds being transported on walkers clothing or on motor vehicles, or in soil adhering to heavy machinery used in construction or road making.

The main weed species of concern in the region include:

High Priority

- Boneseed - *Chrysanthemoides monilifera* ssp. *monilifera*
- Bridal Creeper - *Asparagus asparagoides*
- English Broom - *Cytisus scoparius*
- Montpellier Broom - *Genista monspessulana*
- Crack Willow - *Salix fragilis*
- Gorse - *Ulex europaeus*
- Pampas Grass - *Cortaderia* spp.
- Paterson's Curse - *Echium plantagineum*
- Serrated Tussock - *Nassella trichotoma*
- Spanish Heath - *Erica lusitanica*

Priority

- Blackberry - *Rubus fruticosus*
- Blue Butterfly Bush - *Psoralea pinnata*
- African Boxthorn - *Lycium ferocissimum*
- Cape Wattle - *Paraserianthes lophantha*
- Cotton Thistle - *Onopordum acanthium*
- Elisha's Tears - *Leycesteria formosa*
- Mirror Bush - *Coprosma repens*
- Parrots Feather - *Myriophyllum aquaticum* (aquatic)
- Sweet Pittosporum - *Pittosporum undulatum*
- Ragwort - *Senecio jacobaea*
- Rice grass - *Spartina anglica*
- Sea Spurge - *Euphorbia paralias*
- Thorn Apple - *Datura* spp.

Construction/environmental management plans for any new developments in the study area should take account of best practice, and avoid spreading environmental weeds into areas where they either do not currently occur, or are being controlled.



The *Tasmanian Weed Management Act 1999* regulates the management of pest plants in Tasmania, and where Statutory Weed Management Plans under the Act are in place, activities which may spread weeds are controlled.

5.2.1 Case study—Spanish Heath *Erica lusitanica*

Spanish Heath (*Erica lusitanica*) is a declared weed under the *Tasmanian Weed Management Act 1999*, and its importation, sale or distribution is prohibited in Tasmania.

Spanish Heath occurs in many areas of Tasmania, with significant infestations evident on the East Coast along the Tasman Highway and surrounds between Coles Bay and Ansons Bay. Spanish Heath occurs on farmland and roadsides, but also invades native vegetation, particularly where there has been some soil disturbance. In native vegetation, dense infestations of Spanish Heath can displace native species, and it also increases the fire hazard because of its high combustibility.

The shires of Dorset and Glamorgan/Spring Bay are Zone A municipalities in the 'Spanish Heath Statutory Weed Management Plan' (under the *Tasmanian Weed Management Act 1999*), which mandates eradication (DPIPWE 2011). Break O'Day is a Zone 2 municipality where containment within Council boundaries, and prevention of spread into areas considered important habitat for EPBC Act (i.e. MNES) or TSP Act listed threatened species is required.

Road improvements and infrastructure building processes can contribute significantly to its spread. Construction management plans (CMPs) associated with future tourism development on the East Coast must include provisions to prevent spreading Spanish Heath into significant areas of natural vegetation, including those where:

- Spanish Heath is not yet present; or
- The vegetation forms habitat for EPBC-listed MNES—species such as the New Holland Mouse (*Pseudomys novaehollandiae*).



(a) Spanish Heath (*Erica lusitanica*) infestation at Ansons Bay (Coliban Ecology, July 2014)



(b) Blue Periwinkle (*Vinca major*) invading coastal vegetation at Eddystone Point (Coliban Ecology, July 2014)

Figure 37: Environmental weeds already problematic in the study area include these species



5.3 Cinnamon Fungus *Phytophthora cinnamomi*

Cinnamon Fungus (*Phytophthora cinnamomi*) may have been introduced from Southeast Asia to Tasmania following European settlement. It is now well established in many natural areas of the State, and modifies native vegetation by selectively killing susceptible plant species. Dieback caused by *Phytophthora* is listed as a 'key threatening process' under the EPBC Act. The Australian government has also prepared a Threat Abatement Plan in response to the threat to native species posed by this fungus (*Threat Abatement Plan for Disease in Natural Ecosystems caused by Phytophthora Cinnamomi* (2009)).

Vegetation types that are susceptible to *Phytophthora* include moorland, heathland, dry Eucalyptus forest and scrub such as swamps, heaths, sedgeland, dry lowland forest on sandy or poorly drained soils, and low altitude rainforest on infertile soils. *Phytophthora* requires relatively warm moist soils to thrive, and therefore tends to be confined in Tasmania to areas that are below circa 700m altitude (Alenson 2001). Within Tasmania 181 plant species have so far been recorded as hosts for *Phytophthora* (DPIPWE 2014). There is considerable variation in response to infection by *Phytophthora* among these host species. Some hosts can be resistant, or show no signs of disease, such as Buttongrass (*Gymnoschoenus sphaerocephalus*). At the other extreme species such as White Waratah (*Agastachys odorata*), are rapidly killed and may not regenerate in infected areas (DPIPWE 2014).

Significantly, this pathogen may spread with the movement of infected soil or plant material by people or animals. For example, the challenging Leeaberra Track must only be walked from North to South, to prevent the spread of *Phytophthora* to northern sections of Douglas Apsley National Park on walkers' boots. In the interests of containing the spread of *Phytophthora* in Douglas Apsley National Park and beyond, Parks & Wildlife also encourage walkers to start their walk with clean gear (boots, gaiters and tent pegs), stay on marked tracks and use official campsites, and wash gear afterwards before starting a walk in another area.

Dealing with *Phytophthora cinnamomi* in the study area includes promoting and implementing a program for 'Hygiene Practices for Weed and Disease Control' in the civil infrastructure and building industries to reduce the spread and cost of *Phytophthora*. The highest priority is in dry forests and non-forest native vegetation types, and targeting earthmoving and vegetation management works. The direction of travel for walkers in Douglas Apsley National Park is confined to a north-south pattern in order to minimise the spread of *Phytophthora* within the park and surrounding landscape.

Management of construction and other activities associated with any future tourism expansion in the region will require detailed planning and monitoring to prevent the acceleration of the spread of this disease into new areas, and from threatening the landscape and biodiversity values that people are coming to see.

5.4 Wildlife road mortality—'roadkill'

An unfortunate feature of driving in Tasmania is the vision of large number of native animals killed on the roads (Hobday & Minstrell 2008, 2010). Many species of mammals and birds have difficulty in detecting, interpreting and avoiding speeding cars—particularly at night—and a combination of weather, road and habitat conditions mean that there are obvious 'black spots' where elevated road mortality consistently occurs (Hobday & Minstrell 2008, 2010).

Whilst many of the commonly roadkilled species are quite abundant, such as the Red-necked Wallaby (*Macropus rufogriseus*) (see Figure 38a), it is also the case that some nationally threatened species such as the Tasmanian Devil (*Sarcophilus harissii*) and Spot-tailed Quoll (*Dasyurus maculatus*) (see Figure 38c) are prone to being killed on roads. When coupled with the fatal Devil Facial Tumour Disease (DFTD), high rates of roadkill can contribute to a significant decrease in Tasmanian Devil numbers in more densely human populated parts of the island.

The negative impact of high rates of roadkill on the tourism experience have been documented and investigated. Parks and Wildlife (2014) identify the potentially negative consequences for tourism based on tourist attitudes to the perceived carnage on Tasmanian roads—though the irony of the contribution of tourist traffic to roadkill rates may be lost on some who are distressed about the visual impacts of high rates of roadkill.

A program of encouraging drivers to slow down between dusk and dawn has been introduced in parts of Tasmania where roadkill rates are high (see <http://roadkilltas.com>). A discretionary overnight speed limit of 65km/h is being signed and encouraged in some 'black spots' (see Figure 38b taken near Cosy Corner), which already include parts of the study area north of St Helens and down around the Friendly Beaches, Moulting Lagoon and Coles Bay.

The efficacy of this voluntary speed limit has yet to be tested over time, but such a program would be important to consider in parts of the study area where tourism development would increase traffic levels, and where sealing currently unsealed roads may lead both to increased levels of traffic and to higher driving speed throughout the day and at night.



(a) Red-necked Wallaby—one of the more abundant species commonly seen as roadkill. (Coliban Ecology, July 2014)



(c) Adult female Spot-tailed Quoll—road killed near The Friendly Beaches. Nationally threatened species, and a listed Matter of National Environmental Significance. (Coliban Ecology, July 2014)



(b) Signs like these may be helpful in lowering roadkill impacts. However, so long as the speed limits they promote are discretionary, they have limited mitigation utility. (Coliban Ecology, July 2014)

Figure 38: Roadkill of national and state significant wildlife—an issue for future tourism expansion in East Coast Tasmania.



5.5 Environmental degradation around campsites

Some traditional campsites have been in use for many years, and they generally have higher levels than intact vegetation of exotic plant invasion, trampling and breakage of vegetation, informal tracks being eroded, etc.

Setting boundaries to informal campsite enlargement can be challenging, and often can be best managed by a combination of setting aside adequate capacity and infrastructure to meet moderate demand whilst also monitoring site usage.

Establishing new sites for camping would best be attempted in areas where vegetation is already degraded by weeds, stock grazing, and other destructive use-history. Several such sites exist in the southern part of the study area, such as at McIntyres Beach and Chain of Lagoons.

The process of setting up new campsite boundaries and infrastructure could be accompanied by rehabilitation of parts of the site not needed for campsites.

5.6 Disturbance to significant shorebird and sea bird sites

The East Coast is home to a number of sites of national significance for migratory and resident shorebirds. Woehler & Park (2006) identified the following nationally significant sites for sedentary and migratory shorebirds (species in brackets) within the study area:

Glamorgan/Spring Bay LGA

- Meredith River, Swansea: Common Greenshank (*Tringa nebularia*)
- Little Swanport: Double-banded Plover (*Charadrius bicinctus*)
- Moulting Lagoon: Double-banded Plover, Common Greenshank, Pacific Golden Plover (*Pluvialis fulva*), Red-necked Stint (*Calidris ruficollis*)

Break O'Day LGA

- St Helens/Georges Bay/Maurouard Beach: Double-banded Plover, Red-necked Stint, Sanderling (*Calidris alba*)
- Policemans Pt, Ansons Bay: Ruddy Turnstone (*Arenaria interpres*), Sanderling
- Beerbarrel Beach: Ruddy Turnstone

Dorset LGA

- Little Musselroe Bay: Red-necked Stint, Ruddy Turnstone
- Cape Portland: Curlew Sandpiper (*Calidris ferruginea*) Pacific Golden Plover, Red-necked Stint, Ruddy Turnstone
- Great Musselroe Bay: Red-necked Stint, Ruddy Turnstone.

Figure 39 illustrates sites within the study area for which members of an assemblage of shorebirds (for which nationally significant sites are found in the study area), and related species (Hooded Plover *Thinornis rubricollis*, Pacific Golden Plover, Double-banded Plover, Little Tern *Sternula albifrons*, Red-necked Stint, Curlew Sandpiper, Sanderling, Ruddy Turnstone, Common Greenshank, Australian Fairy Tern *Sternula nereis*) are known to occur.

There are only a few breaks along the entire coastline, rocky areas, where the suitability for this shorebird assemblage is low. In those gaps, other species such as the Australian Pied Oystercatcher and Sooty Oystercatcher can be found. The whole coastline of the study area where sandy beaches occur is important for the near threatened Hooded Plover, and selected sites along the coast are important for threatened Fairy and Little Terns (Woehler & Ruoppolo 2013).



While most migratory shorebirds occur in the area between Spring and late Summer (overlapping with peak tourism season), Double-banded Plovers are winter migrants from New Zealand, and other species such as Australian Pied and Sooty Oystercatchers, Hooded and Red-capped Plovers are sedentary. During Spring and Summer, sedentary shorebirds and terns breed on beaches and islands along the East Coast. At the same time vast numbers of Short-tailed Shearwaters (Muttonbirds) breed on islands and a few mainland Tasmanian locations during the summer, and Little Penguins generally in Spring, also on offshore islands and many mainland Tasmanian beach areas.

The potential for conflict between beach users (some with dogs) and birds, which either feed or breed on the beach and nearby, is high. As many of the resident birds typically breed above the high tide mark of the beach (e.g. Hooded Plover), the nests (with eggs or young) are typically trampled by people, dogs and vehicles, or the parents are unable to incubate eggs or feed young adequately due to frequent disturbance. Off-leash dogs in proximity to penguin and muttonbird rookeries can lead to significant mortalities of birds in burrows (incubating adults, or young).

The sites listed above by Woehler & Park (2006) are a potential starting point for a list of 'no go' zones for further beach-access developments. A more definitive list is an identified gap in current knowledge, to the extent that other sites are known, but a prioritisation is necessary to refine the list.

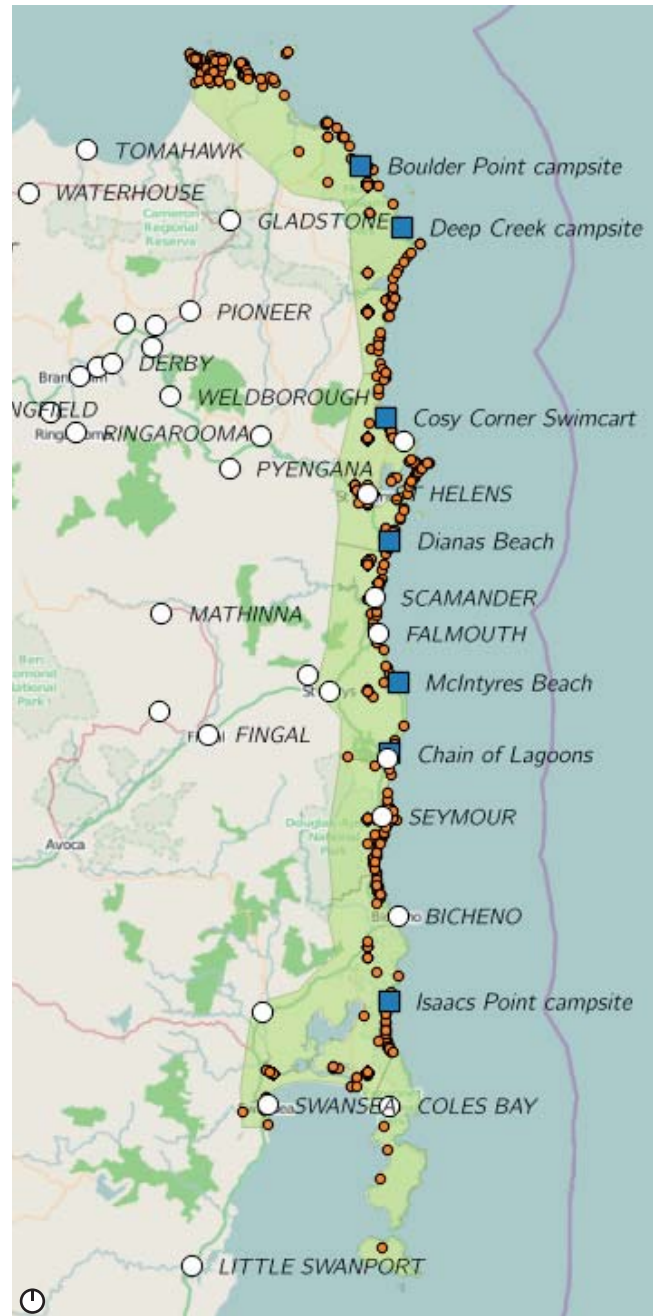


Figure 39: Shorebird assemblage sites within the study area, East Coast Tasmania (source: Atlas of Living Australia)



6 Current approval process

6.1 Development planning approvals

Planning and development in Tasmania is regulated by a series of acts that are known collectively as the Resource Management and Planning System (the RMPS). The mechanism for council approval of development applications exists under the *Tasmanian Land Use Planning and Approvals Act 1993* (LUPAA). Typical approval processes are described below for Break O'Day Shire, but the enacting legislation and processes are relatively uniform across municipalities.

Whereas formerly an Environmental Zone functioned as a default biodiversity protection area within 1km of the coast, this zone no longer exists. Some of the former functionality now exists in the Biodiversity Code of the transitional planning scheme, but it is focused more on riparian corridors than the coast per se.

Council has 21 days after receipt of a 'valid application' to request further information. A valid application is defined in Section 51 of LUPAA, and requires payment of fees, provision of all relevant information required by the planning scheme under Section 8.1 of the Break O'Day Interim Planning Scheme 2013, and a declaration by the owner or a declaration from the applicant that the owner has been notified of submitting the application.

The assessment/approval process pauses (usually expressed as 'the clock stops') when Council makes a request for further information within the initial 21 days. Regarding biodiversity and habitats, such information may include, but not be limited to:

- A site Natural Values (flora and fauna) Assessment compliant with the Department of Primary Industries, Parks, Water & Environment (DPIPWE) guidelines, including a plan for offsetting unavoidable impacts
- A Reserve Activity Assessment (RAA) if the site is within or directly adjacent to a gazetted reserve under Parks & Wildlife jurisdiction
- Consultation with Forestry Tasmania if the proposal is likely to have impacts on forestry operations or FT land management obligations
- Consultation with Transport/Department of State Growth regarding state-owned roads such as the Tasman Highway
- Satisfactory completion of the process of referral under the Commonwealth EPBC Act (see below).
- Reference to coastal inundation mapping with respect to projected sea level rise projections

Council then has 14 days to confirm that the received information adequately addresses the request. LUPAA doesn't allow for

the initial 21 days to be extended. That is, if Council sends the request for further information out on day 23, the clock doesn't stop. It is then that Council may request an extension of time to complete the assessment. If the proponent declines the time extension, Council may issue a refusal.

All developments undertaken on Parks & Wildlife Service managed land require the preparation of an RAA. An RAA checklist is designed to identify and address the issues including social and environmental considerations, which may result from the proposed development. It also allows a process of identifying alternatives where impacts have been identified.

It is also worth noting here that a referral under the EPBC Act could not normally be concluded in less than 20 days and therefore could not be completed within Council's time frame for planning approval under LUPAA without the cooperation of the applicant. If there is a likelihood that an EPBC referral will be required (and this is usually evident at the overview stage of investigation for a new development), this should be identified and acted on in the pre-application period, to ensure that a time allowance can be made either (i) prior to submitting a planning permit application, or (ii) agreement obtained for stopping the clock for longer than the normal statutory period of 14 days.

If a planning permit or a refusal is issued, an applicant may appeal to the Resource Management Planning and Appeals Tribunal (RMPAT) within 14 days of issue.

Additional approvals over and above the council planning permit may be required to commence or complete the proposed development. These include:

- adhering to any conditions which may accompany either a controlled action or 'manner specified' decision under the EPBC Act, issued by the Commonwealth DoE (see below); and
- permit to 'take' protected flora or fauna under the NC Act, TSP Act, etc., issued by DPIPWE.

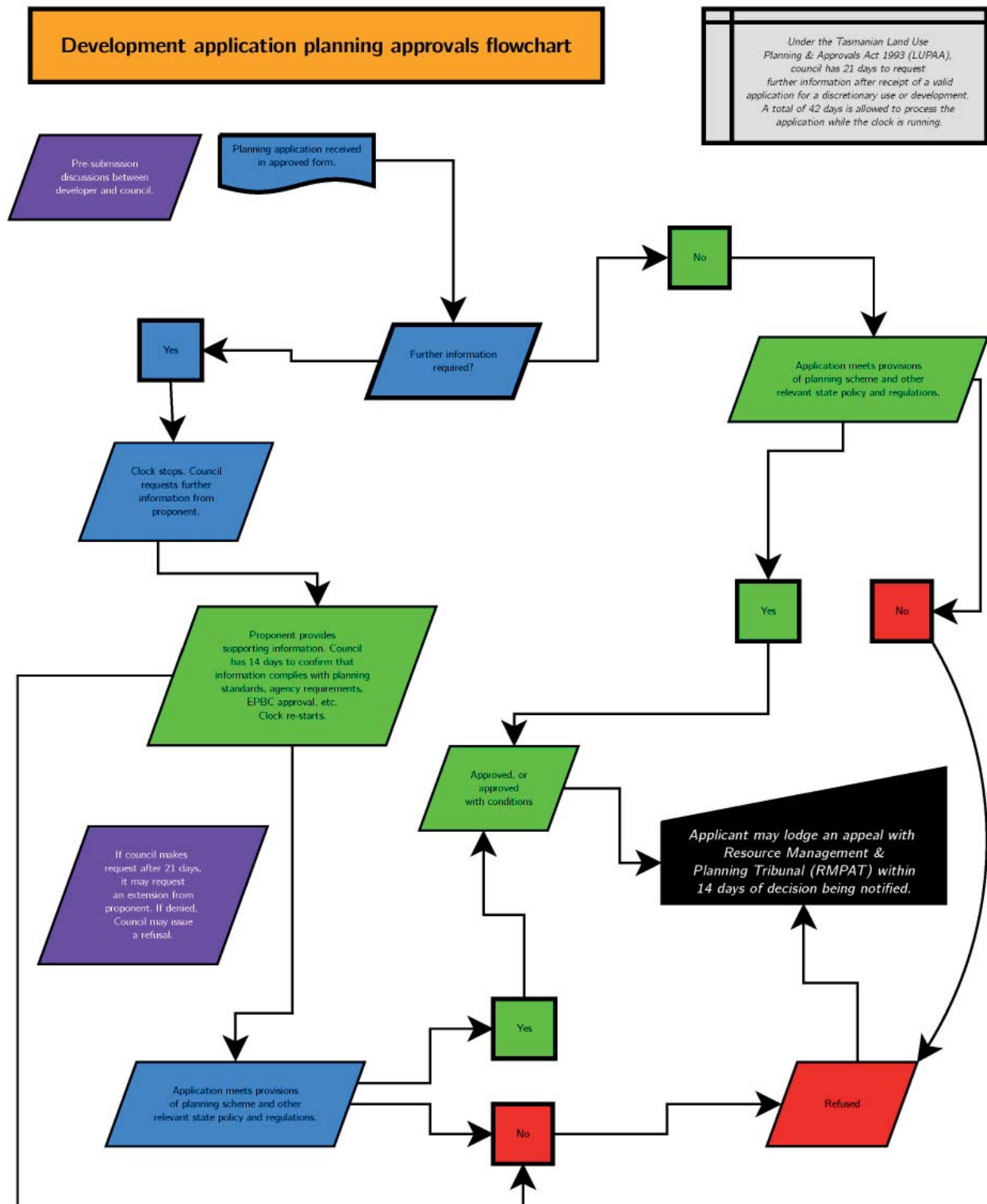


Figure 40: Approvals pathway—discretionary development applications—local government



6.2 EPBC referrals

To conserve and protect Matters of National Environmental Significance, an action that has, will have or is likely to have a significant impact on those values must be referred to the Australian Government Minister for the Environment (the Minister) for assessment. This process is known as an EPBC referral.

The Minister (more usually his delegate in the Department of the Environment) will decide whether assessment and approval is required under the EPBC Act. If the Minister decides that assessment/approval are required, this is known colloquially as a 'controlled action'. It is an offence under the EPBC Act to take an action that has, will have or is likely to have a significant impact on any of the matters of environmental significance without approval from the Minister. An action is defined for the purposes of the EPBC Act as a project, a development, an undertaking, an activity or a series of activities, or an alteration of any of these things.

Referrals are submitted to the Environment Assessment Branch in a pro forma available from the DoE web site, and must include information about the person proposing to take the action and the proposed action. This will include details of what is proposed, where and when, and a description of the likely impact on the MNES values of the place. Referrals are typically supported by an Impact Assessment Report, which can be the same document referred to in development approvals process (a site Natural Values Assessment), provided that the scope of the report adequately canvasses EPBC matters as well as those of state and local significance.

The EPBC Act requires a decision to be made within 20 business days from the date the Minister receives the referral. If the Minister believes that not enough information has been provided to make an informed decision, further information may be requested from the proponent. This 'stops the clock' in terms of the time in which the Minister must make a decision until sufficient information is received. Unlike the Council case above, the period for which the clock can be stopped is not constrained by legislation or regulation, and can be maintained until the applicant provides a satisfactory response.

Decisions on a referral can take several forms:

- A decision that further assessment and approval are required – known generally as a 'controlled action';
- A decision that no further assessment or approval is required providing that the action is carried out in a specified manner, according to listed conditions – known generally as a 'not a controlled action, manner specified' decision; and

- A decision that no further assessment or approval are required.

The assessment and approval process of a controlled action may result in either a refusal, or approval (usually with detailed conditions). The level of documentation required to support an assessment ranges from preliminary documentation through to an Environmental Impact Assessment, or in rare cases a commission of enquiry.



6.3 Proposed policy and regulation changes

Prior to the recent Tasmanian election, the Tasmanian Liberals policy was to put in place one single planning scheme for Tasmania, replacing the more than 30 planning schemes currently in existence (Liberal Party of Australia (Tasmanian Division) 2014).

The stated aims of the policy were to ensure that:

- The work already undertaken to create the three Regional Land Use Strategies is taken into account;
- All land uses are appropriately covered by the planning scheme;
- All special zones and overlays are dealt with by the scheme—such as specific heritage, rural or other unique attributes covered by the existing planning schemes;
- The single statewide planning scheme is aimed at encouraging appropriate investment and providing certainty for the community;
- Councils and industry have input into forming the new scheme.
- A single set of procedures and documents would be developed for all applications and permits;
- A test limiting those able to make a third party appeal to those directly affected by a proposed development or community groups with a longstanding interest—not groups expressly set up to oppose development—would be developed;

- Ministerial call-in powers will be available for projects that make a significant economic contribution, require significant capital investment, or if the project has been unreasonably delayed in the development assessment process;
- Development applications made for single residential dwellings in residential zones (pursuant to Planning Directive No 4), if compliant, will be granted approval in no more than 24 hours;
- For other applications for permitted use or development we will reduce the timeframe for assessment from 42 days to 21 days, and the timeframe for the request for further information from 21 days to 14 days; and
- A position of in-principle approval for major developments is instituted.

As far as the matters covered in this report are concerned, the overarching policy objectives will likely make a variety of differences to the approvals regime.

The projected faster turnaround times may exacerbate the existing incompatibility of the local and Commonwealth environmental assessment timelines (as discussed above), despite the stated objective to streamline documentation for approvals. The proposed new bilateral agreement between Tasmania and the Commonwealth under section 45 of the EPBC Act proposes to fast-track notification of the outcome of referrals to 10 days between ministers (Commonwealth of Australia & the State of Tasmania 2014), and this may assist in harmonising EPBC Act referrals with the state planning approvals process.

The combination of in-principle approval for major projects and the restriction of third party appeal rights may shift the balance of power closer towards developers in any approval process.



Figure 41: Tasmanian Pademelon footprints on a road, Deep Creek camping area (Coliban Ecology, July 2014)



7 Impacts and opportunities

The clustering of areas of High Conservation Significance for biodiversity of Matters of National Environmental Significance (MNES) status along the coastline and close environs needs to be taken into account in the identification of sustainable options for tourism development. Close involvement of stakeholders and technical experts within government (Tasmanian and local) and non-government organisations will be essential in finding a way forward, particularly in regard to a coastal walking trail which may notionally traverse sensitive areas now remote from human population centres. Refer to Component 1: Sustainable Tourism Options Report, Part B for explanation on the following three options.

7.1 Option 1 – Business as usual

Impacts

The 'do nothing' option may result in the lowest overall impact on existing natural heritage values within the study area, whilst also allowing the possibility that cumulative impacts or occasionally intense but localised impacts may occur from an ongoing tendency for case-by-case approvals of new developments.

The current heavy tourism focus on the narrow coastal strip is unlikely to change without an overarching strategic vision which ties the coast to the near coastal resources and attractions. It is also possible that continued low revenues associated with low overall and strongly seasonally skewed visitation may lock management authorities and regulatory frameworks into a long-term future with reduced capacity to plan and regulate tourism activities within the region.

7.2 Option 2 – East Coast Blossoms

Impacts

Increased development of the proposed hubs is likely to result in some potential for direct impacts on zones of High Conservation Significance for MNES, as these are strongly clustered in the coastal strip, and occasionally they coincide with population centres or popular campgrounds.

Development could also result in indirect impacts, for example increased rates of roadkill of wildlife (including MNES species) in areas where significant increases in traffic are brought about by the increased and intensified visitation. Improvement in road surfacing in some areas may for example lead to more night driving, and thereby a greater rate of roadkill for nationally and state significant native mammals (Tasmanian Devil *Sarcophilus harrisii*, Spot-tailed Quoll *Dasyurus maculatus*, Eastern Quoll *D. viverrinus*, Tasmanian Bettong *Bettongia gaimardi*, Eastern Barred Bandicoot *Perameles gunnii*, Eastern Grey Kangaroo [Forester] *Macropus giganteus*) and colonial birds (Short-tailed Shearwater *Ardenna tenuirostris*, Little Penguin *Eudyptula minor*) over and above abundant species (Tasmanian Pademelon *Thylogale billardierii*, Red-necked Wallaby *M. rufogriseus*, Common Brushtail Possum *Trichosurus vulpecula*) which currently dominate the roadkill complement.

Increased visitation may also exacerbate levels of disturbance for shorebirds at beach and wetland sites in the study area, including at sites of national and international significance for migratory species (MNES).

National legislation (EPBC Act) will be administered under bilateral arrangements to a larger extent locally, and proposed changes to planning approvals may fast-track development applications that are perceived as being economically important for Tasmania. More commercial developments in national parks have been mooted since the recent Tasmanian election. Such changes have the potential to weaken protection for threatened or high value biodiversity assets of national and State significance.



Opportunities

Under this option, short distance circuit trails could be focussed on natural heritage resources whilst encouraging safer practices such as mostly daytime driving and participation in organised eco-tourism experiences (penguins, muttonbirds, etc.) to prevent, or mitigate, undue disturbance.

Targeting areas of lesser conservation significance (already cleared land) in proximity to habitats and biodiversity of significance and tourism interest as a first order preference may allow for more sensitive development.

Whale watching and pelagic seabird watching (albatrosses, etc.) at sea both appear to be operating at very low levels in the East Coast tourism mix. Potential exists to piggyback on the established commercial and game fishing activity on the East Coast for these underdeveloped eco-tourism niche markets.

7.3 Option 3 – String of Pearls

Impacts

Impacts from this option on biodiversity values are likely to be similar to those for East Coast Blossoms. The main difference is likely to come from more small-scale developments in areas outside established medium-large hubs. The potential for significant direct impacts on some zones of High Conservation Significance for Matters of National Environmental Significance is increased when the potential for more greenfield development sites is increased.

Indirect impacts are likely to be similar to those for East Coast Blossoms. Development could result in indirect impacts, for example increased rates of roadkill of wildlife in areas where significant increases in traffic are brought about by the increased and intensified visitation. Improvement in road surfacing in some areas may for example lead to more night driving, and thereby a greater rate of roadkill for nationally and state significant native mammals and colonial birds over and above abundant species which currently dominate the roadkill complement.

Opportunities

Trails could be focussed on natural heritage resources whilst encouraging safer practices such as daytime driving by increasing driver awareness of the risks to wildlife from nighttime driving and participation in organised eco-tourism experiences to prevent, or mitigate, undue disturbance.

Targeting areas of lesser conservation significance (already cleared land) in proximity to habitats and biodiversity of significance and tourism interest as a first order preference for locating new or upgraded tourism infrastructure is even more important when the likelihood is increased that greenfield sites within areas of biodiversity significance may otherwise be targeted.

section 2 - cultural heritage





1 Approach

1.1 Preliminary Cultural Heritage Assessment

A preliminary assessment of the environmental and cultural constraints on development in the study area was undertaken as part of the Sustainable Tourism Options Report (Component 1) through desk-top research and initial consultation with stakeholders.

Desktop research focussed on high-level designations, including matters of national environmental significance (MNES) covered by the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), such as World Heritage Properties, National Heritage Places.

This assessment resulted in broad constraints mapping which incorporated a collation of the relevant mapping layers which had been obtained to that point. The results of this task were sufficient to provide an understanding of the key issues and the likely “danger” areas for development.

1.2 Protecting Biodiversity and Cultural Heritage (this report)

The assessment presented in this report supplements that undertaken in Report 1 by providing additional information on the known cultural heritage of the study area and a discussion on the existing processes which are in place to manage it.

1.2.1 Section format

The cultural heritage section of this report comprises the following:

- Description of the cultural heritage protection measures relevant to the study area
- An account of the cultural heritage within the study area, including:
 - General account of the cultural heritage of the study area (Matters of National Environmental Significance, other Aboriginal heritage and other non-Indigenous heritage);
 - Discussion of existing knowledge gaps; and
 - Examination of the cultural heritage of the case study areas.
- Discussion of cultural heritage constraints and opportunities presented by the three options identified in the Sustainable Tourism Options Report.
- Discussion of existing cultural heritage management processes, current issues with these processes and recommendations for their improvement.

1.3 Case study areas

This report examines the potential impacts of tourism development on a series of case study areas. As described in the introduction to this report, these have been selected on the basis that they represent the areas most likely to accommodate future development through the options identified in the Sustainable Tourism Options Report - in line with the findings of the report they are all located near to or on the coast. Together however, they also provide a good cross section of the various types of cultural heritage that exist in the study area and that should be taken into account in planning for any such development.

Running north to south through the study area, the case study areas are as follows:

- Musselroe Bay
- Stumpys Bay camping ground, Stumpys Bay (near Boulder Point)
- Deep Creek campsite
- Ansons Bay
- Cosy Corner and Swimcart Beaches campsites
- Binalong Bay
- St Helens
- Diana’s Basin
- Scamander
- St. Marys
- Falmouth
- McIntyre’s Beach
- Chain of Lagoons
- Bicheno
- Isaacs Point campsite (The Friendly Beaches)
- Coles Bay
- Swanwick
- Swansea

For each case study area, the known heritage places within a radius of 2km have been identified and presented in the context of the place’s historical development and resulting character. The resulting account has then been used to identify potential impacts on cultural heritage that could arise from tourism development within the study area.



1.4 Information sources

Information concerning known cultural heritage has been collated from the following sources:

- Australian Heritage Database (for information on places which are on the World Heritage list, National Heritage List, Commonwealth Heritage List and defunct Register of the National Estate)
- The Commonwealth Department of the Environment, via the Environmental Resources Information Network
- Tasmanian Heritage Register (THR) maintained by Heritage Tasmania
- Tasmanian Aboriginal Site Index (TASI) maintained by Aboriginal Heritage Tasmania
- Tasmanian Historic Places Inventory (THPI) maintained by the Tasmanian Parks and Wildlife Service
- Local heritage lists held by Dorset, Break O'Day and Glamorgan Spring Bay Councils.

1.4.1 Aboriginal heritage information

Aboriginal Heritage Tasmania's (AHT's) protocols in relation to the TASI system prevent the release of large amounts of data at one time, and it has thus not been possible to obtain detailed information concerning Aboriginal places recorded on this database for the whole study area. However, AHT have been able to supply a map showing the distribution of known sites across the study area, which is at a sufficiently large scale to avoid providing detailed locations. Also, it has been possible to obtain detailed information on TASI sites for a 2km radius search area in each case study area.

Some information regarding significant Aboriginal places which are not recorded on the TASI database has been obtained through consultation with members of the Aboriginal community. The information provided, and the level of detail, has been at their discretion in respect of cultural sensitivities concerning this knowledge.

The sensitivity of the information contained within this report should be considered in relation to the audience to which it will be available. The full report can be made available to government departments and agencies and Aboriginal organisations. However, if the report is for a wider readership (and especially if it is to be made public) the more detailed site information included in the map under 'Known cultural heritage by case study area' should be omitted.

1.5 Stakeholder consultation

Initial stakeholder consultation was undertaken during production of the Sustainable Tourism Options Report (Report 1) to introduce the project, gain an initial impression of each stakeholder group's concerns and aspirations and determine how best to proceed with further consultation during the preparation of this report.

Initial consultation was undertaken with the following:

- Chris Bonner, Regional Heritage Advisor at Heritage Tasmania
- Karen McFadden, Senior Archaeologist and Manager of Operations at Aboriginal Heritage Tasmania
- Two council people from Dorset
- Chris Hughes, Community Services Manager, and Polly Buchhorn, NRM Facilitator, at Break O'Day Council
- Melanie Kelly, Manager Natural Resources, and Winny Ennis, Manager Regulatory Services, Glamorgan Spring Bay Council

In addition, on the advice of Aboriginal Heritage Tasmania, Break O'Day Council was advised to approach the Tasmanian Aboriginal Heritage Council (Interim) (AHC) to introduce the project and open channels for consultation. A pro forma Briefing Form describing the project was duly submitted to the AHC, and this was followed by a presentation made to the Council by Chris Hughes of Break O'Day at their meeting on the 23rd May.

More substantive and specific consultation has been undertaken to inform preparation of this report, most of which occurred during the project team visit to the study area in the week from the 9th to the 13th June.

Most of those contacted were identified through discussion with the Council representatives, but the appropriate Aboriginal groups for consultation were confirmed through correspondence with the Chair of the AHC via the Executive Officer.

This additional consultation included the following:

- Meeting with Chris Colley, Parks and Wildlife Service (PWS - see overleaf) Regional Manager North, and Donna Stanley, Parks and Reserves Manager North East Coast at the PWS Launceston offices (10/06/14);
- Meeting with Graham Gardner, Manager, Aboriginal Land Council of Tasmania (ALCT - overleaf) at the Deep Creek campsite (11/06/14);
- Meeting with Garry Richardson, local historian/author and former long-term (c. 40 years) employee of Forestry Tasmania, at his home in St Helens (11/06/14);



- Meeting with Gloria Andrews, local Aboriginal Elder and tour provider, at her home in St Helens (11/06/14), and a subsequent telephone conversation (19/6/14);
- Meeting with Heather Sculthorpe, CEO of the Tasmanian Aboriginal Centre (TAC - see overleaf), and Sharnie Everett at the TAC offices in Hobart (12/06/14);
- A second meeting with Karen McFadden, Senior Archaeologist and Manager of Operations at Aboriginal Heritage Tasmania's Hobart offices; and
- Meeting with Peter Rigozzi, PWS Heritage Officer, at the PWS Hobart offices (13/06/14).

The Parks and Wildlife Service (PWS) operates as a unit within the Department of Primary Industries, Parks, Water and Environment. Its mission is to create and maintain a representative reserve system on Crown land in which to conserve the State's natural and cultural heritage while providing for sustainable use and economic opportunities for the Tasmanian community. On the ground management is apportioned among three regions; the Southern, Northwest and Northern regions - the whole of the study area lies within the latter.

The Aboriginal Land Council of Tasmania (ALCT) is a statutory authority which was established under the Aboriginal Lands Act 1995 (Tasmania) in order to act as a custodian of parcels of land returned to the Tasmanian Aboriginal community. The 1995 Act provides for the election of the ALCT to hold and manage lands vested by the Act on behalf of the Aboriginal people of Tasmania. The Council is comprised of 8 committee members elected for a 3 year term.

The Tasmanian Aboriginal Centre (TAC) was formerly known as the Tasmanian Aboriginal Information Service. Its 1977 petition to the Tasmanian Parliament asking for land rights became known as the Aboriginal Land Claim and led ultimately to legislation which returned 12 parcels of land to the Aboriginal community. TAC provides information, legal, health, counselling and recreation services to the Aboriginal community. It also works to repatriate cultural artefacts and human remains which are presently held in museums and international collections and encourages people to learn and preserve traditional skills.

Several additional organisations recommended by the AHC were also contacted. Of these, both the Aboriginal Elders Council of Tasmania and the South East Tasmania Aboriginal Corporation declined to comment on the grounds that the study area and subject matter fall outside their area of activity.



2 Current heritage protection

Heritage in Tasmania is recognised and, in some cases, protected through a variety of heritage listings.

2.1 Heritage listings

2.1.1 Places protected under the Commonwealth EPBC Act

The Environment Protection and Biodiversity Conservation Act 1999 enhances the management and protection of Australia's heritage places, and provides for the listing of natural, historic or Indigenous places that are of outstanding national heritage value to the Australian nation.

The National Heritage List (NHL) was established under the EPBC Act to include places that are of outstanding national heritage value, and the Act is also the primary legislative vehicle for the management of Australia's World Heritage Areas (WHAs). The Minister for the Environment is thus responsible for World Heritage properties and places on the National Heritage List (NHL).

The Act imposes requirements on place managers to avoid actions that will or could have a detrimental impact on the heritage values of WHA and NHL listed places without the approval of the Minister. The onus is on the manager to refer actions which are likely to impact on these values to the Minister, for assessment by the DoE, or alternatively the Minister could decide to 'call in' any application which he feels may present such an impact. Actions will only be approved following environmental assessment or in the event that some other provision in the EPBC Act allows the action to be taken.

Environmental assessments required by the Act can be based on a variety of sources including preliminary documentation, public environment reports, environmental impact assessments or public inquiries, depending on the scale of the project. Approvals can take the form of bilateral agreements and declarations, Ministerial declarations or permits.

The EPBC Act also protects places included on the Commonwealth Heritage List (CHL) which is a list of natural, Indigenous and historic heritage places owned or controlled by the Australian Government. These include places connected to defence, communications, customs and other government activities that also reflect Australia's development as a nation. However, the CHL is an inclusive list and, unlike WHAs and NHL places, inclusion on the CHL does not reflect a particular level of significance, although it is generally accepted that a place must be significant to at least a local level to warrant inclusion.

The Act also protects the wider environment when Commonwealth agencies are proposing to undertake an action that may affect it.

2.1.2 Tasmanian Heritage Register

The Tasmanian Heritage Register (THR) provides a listing of places or objects, including buildings, structures, areas/precincts and plantings/trees. Such places have been assessed as being of State Cultural Heritage Significance using assessment criteria established by the Tasmanian Heritage Council.

All places on the THR are legally protected under the Historic Cultural Heritage Act 1995. Penalties apply for actions that may damage a place listed on the THR.

The THR is administered by Heritage Tasmania, part of the State's Department of Primary Industries, Parks, Water and Environment (DPIPWE).

Works to a registered place require either a permit or certificate of exemption from the Tasmanian Heritage Council. Applications for a permit or exemption are made to the Tasmanian Heritage Council through Heritage Tasmania. Applications must be made on the prescribed form and must be supported by accompanying details and plans of the proposed works, an assessment of the heritage impacts and any other relevant supporting documentation. The form asks for details of the place, applicant details, description of the works, and owner consent.

Places are currently only added to the THR when they are brought to the attention of the Tasmanian Heritage Council for their consideration. When this heritage listing was first brought into effect in the state, a large number of places were listed quickly with little justification. Heritage Tasmania is now working through these places and revising listings with reference to established heritage criteria with the result that many of the places listed on the THR have been determined to be of local rather than State significance, and these places are being moved to local schedules.



2.1.3 Tasmanian Aboriginal Site Index (TASI)

The key Tasmanian legislation relating to Tasmanian Aboriginal heritage and culture is the Aboriginal Relics Act 1975 which provides blanket protection for Aboriginal objects and sites created prior to 1876. New legislation is currently being proposed to recognise more recent and continuing Aboriginal heritage matters.

Protected Aboriginal relics include:

- Any artefact, painting, carving, engraving, arrangement of stones, midden or other object made by Aboriginal persons prior to 1876; and
- Any object, site, or place that bears signs of the activities of Aboriginal people prior to 1876; and
- Certain remains of the body of Aboriginal persons who died prior to 1876.

The TASI is a database that contains location information on almost 12,000 recorded Aboriginal sites within Tasmania. The database contains information relating to these sites including site cards, photographs, slides, location data, site composition, and associated Aboriginal heritage assessment reports.

Places included Aboriginal heritage significance recorded on the TASI, are legally protected under the Aboriginal Relics Act 1975. Under the Act, no person is permitted to undertake works which will affect a TASI site, other than in accordance with the terms of a permit issued by the Minister on the recommendation of the Director.

The interim Aboriginal Heritage Council (AHC) was established by the Minister for Environment, Parks and Heritage in late 2012 to provide a consolidated view of the Aboriginal community to the Minister on new permit applications, development proposals and policies, as well as provide advice and recommendations on the protection and management of Aboriginal heritage in Tasmania.

The AHC meet at the end of each month to provide its advice on permit-related matters and development proposals. This is done within six weeks after receipt of the relevant papers.

2.1.4 Planning Scheme Heritage Schedules

Heritage schedules within Planning Schemes identify places of significance within a local municipality. This process is managed through the Planning Schemes by the Local Government Authority under the provisions of the Land Use Planning and Approvals Act 1993. If a property is heritage listed in the local council planning scheme, a planning approval will normally be required for any use or development of the site. Information provided by Dorset Council states that in most cases this will be a discretionary application (Dorset Council website 'planning & subdivision information').

Many of the municipalities in the State maintain a list of locally significant places which are then afforded protection through the planning process. The extent of these lists varies significantly by council, and many local listings duplicate existing THR designations. Heritage Tasmania may also look to comment on places on local lists.



2.2 Other relevant heritage lists

2.2.1 Tasmanian Heritage Place Inventory

The Tasmanian Heritage Place Inventory (THPI) is a database that details heritage sites recorded by the Tasmanian Parks and Wildlife Service, part of the State's Department of Primary Industries, Parks, Water and Environment (DPIPWE), in and around areas under that organisation's control. Places in the database may also be included on the THR, and these places are therefore afforded the same protection as places identified on either of these registers or indexes. However, listing on the THPI alone does not provide legislative protection.

Under the National Parks and Reserves Management Act 2002 PWS is statutorily obligated to identify and protect cultural heritage, and the THPI is used for due diligence in satisfying that responsibility. Every historic site of which PWS is aware is listed (Peter Rigozzi, PWS Heritage Officer, pers. comm.) and new sites continue to be recorded as operatives encounter sites by chance or actively seek them. Newly located sites are reported to the Heritage Officer who creates a new record and arranges for the place to be added to the PWS GIS and data management system. It is a reactive process, and one which is at least partly dependent on the individuals currently in these positions.

The THPI is not significance based, but a series of in-house categories from 1 to 6 are employed to determine the way places are managed. For example, Category 1 places are high profile and potentially contentious, whilst Category 6 is specific to mountain huts which are not subject to active management (other than listing). Places can move between categories depending on changes to their management situation. For example the Bruny Island Quarantine Station was Category 6, but now Category 1. In all cases, owing to restricted resources, management is more geared towards protecting places from threats than active management.

2.2.2 Register of the National Estate

The Register of the National Estate (RNE) was established under the Australian Heritage Commission Act 1975 (repealed), and then supported under by the EPBC Act and the Australian Heritage Council Act 2003. It was a national inventory of more than 13,000 natural and cultural heritage places, including many places of local or State significance, compiled by the now defunct Australian Heritage Commission and then kept by the Australian Heritage Council. The RNE was maintained until February 2012 but frozen in February 2007 and it is now no longer a statutory list. The intention was that it be superseded by other heritage lists – many (but not all) of the places included on the RNE are now included on the registers described above.

2.2.3 National Trust of Australia (Tasmania) Register

The National Trust of Australia (Tasmania) Register of Classified and Registered Buildings provides a list of places that are either recorded or classified by the Trust. Classification or listing by the Trust does not impose any legal restrictions on property owners or occupiers and the Trust does not have any statutory legal powers.

2.2.4 Australian Institute of Architects (Tasmanian Chapter) Register

The Australian Institute of Architects (Tasmanian Chapter) Twentieth Century Buildings for the National Estate Register is a register of notable buildings that were recommended for inclusion by the Institute on the now archived Register of the National Estate. While this parent register is no longer maintained, it is the intention of the Institute to maintain and further develop their register as part of their ongoing advocacy work.



2.3 Other management guidance

Other mechanisms are relevant to the management of heritage in the study area are as follows.

2.3.1 Vision East 2030 The East Coast Land Use Framework

The State Government in partnership with local government is working on a program of regional renewal of planning schemes based on comprehensive land use and infrastructure strategies for the three regions in the state. The Vision East 2030 Land Use Framework aims to provide information and direction for the preparation of new planning schemes to improve co-ordination of planning schemes across the four municipalities of Break O'Day, Glamorgan Spring Bay, Tasman and the eastern coastal and rural parts of Sorell. The aim of this Land Use Framework is to maintain the quality of life on the East Coast by enhancing the potential of the region whilst protecting its assets.

The framework recognises that the East Coast contains a number of heritage features which contribute to the unique character of the region. It lists sites of significance as including known Aboriginal heritage sites (the locations and features are not released to the general public) together with Aboriginal sites that may be uncovered during development works and highlights the importance of identifying areas likely to contain artefacts such as riparian and littoral margins. It also lists historic heritage sites listed on the Tasmanian Heritage Register and on council maintained lists of heritage sites.

The Framework also acknowledges that the region contains a number of iconic landscapes and landscape features which contribute significantly to the character of the East Coast, and that many of these landscape features, such as Freycinet Peninsula, are valued both by residents and visitors to the region, and provide tourism opportunities. It also notes that there are also areas of the landscape that are primarily valued for their low levels of human settlement, such as the areas between towns, and state that the protection of these areas from inappropriate development is both a matter for landscape protection and the maintenance of urban form.

To this end, the Framework provides for the following actions:

- Include provisions in the planning schemes to require development applications on areas of known archaeological sensitivity or known recorded sites to include an Aboriginal cultural heritage assessment which complies with the requirements of the Aboriginal Heritage Survey and Recording Tasmania Draft Consultancy Brief, Guidance for the Production of Aboriginal Survey Reports, the Aboriginal Relics Act 1975, and any other relevant state legislation.
- Include provisions in the planning schemes to protect significant historic heritage sites listed on the Tasmanian Heritage Register and to provide standards for appropriate developments on and surrounding these sites.
- Undertake a Landscape Assessment Study to identify significant landscapes and prominent viewpoints along the East Coast.
- Protect significant landscapes and significant view sheds to these in the planning schemes.

2.3.2 Place management plans

Some significant cultural heritage places are managed under dedicated individual management plans.

These include properties owned by the Crown and managed by PWS, and the Aboriginal Land Council of Tasmania (ALCT) has management plans in place for each of its properties (Graeme Gardner, Manager ALCT, pers. comm.), an example of which would be that for Larapuna (Eddystone Point) (Weaver 2012).



2.4 Strategic context

The State currently has two strategies in place for the development of cultural heritage tourism. Each aims to guide and develop the potential of the State's cultural heritage in order to increase Tasmania's appeal as a tourism destination, deliver benefits for local communities and contribute to the economic growth of the state.

It is within the context of these strategies that the potential impacts and opportunities should be considered.

2.4.1 Tourism Tasmania Historic Heritage Tourism Strategy 2012 - 2015

This strategy was developed by Tourism Tasmania in conjunction with Heritage Tasmania and a Reference Group comprising representatives of the tourism and heritage sectors and a broad range of interested stakeholders.

Citing the State's historic heritage of extant buildings, precincts and townships of different historic periods, together with strong traditions and stories from the past and collections of movable heritage in displays and museums, the strategy references market research which shows that this historic heritage is highly appealing to domestic travellers and likely to boost an intention to visit Tasmania. It does however also acknowledge that visitors' knowledge of Tasmania's historic heritage is limited and is overshadowed by the State's strong nature and adventure image. The strategy aims to respond by creating a planned, strategic approach that ensures the Tasmanian historic heritage offer successfully competes with other destinations and leisure preferences.

Whilst recognising that historic heritage tourism is a subset of cultural tourism, which also includes the arts and Aboriginal and contemporary culture, Tourism Tasmania has developed this dedicated historic heritage tourism strategy to specifically address Tasmania's positioning as a heritage destination. This strategy is though intended to sit alongside, and be supported by, the Tasmanian Government's Aboriginal Tourism Development Plan 2007.

2.4.2 Aboriginal Tourism Development Plan 2007

The potential for Aboriginal tourism in the State was acknowledged by Aboriginal organisations and individuals and Tasmanian Government agencies during a series of meetings that were conducted from 1999-2001 to consider cultural interpretation, Aboriginal heritage and natural and cultural resource management. At the same time, it was recognised that Tasmania had little Aboriginal tourism product that was market-ready.

The subsequent report 'Tasmania Together', released in 2000, set goals to:

- Acknowledge and respect the contribution that the Aboriginal community and its culture have made and continue to make to Tasmania and its identity; and
- Recognise, promote, share and celebrate Aboriginal culture and heritage, encouraging mutual respect between Aboriginal and non-Aboriginal people.

In November 2001, a report entitled 'Indigenous Themes' was completed on behalf of the Tasmanian Parks and Wildlife Service under an initiative of the Great Western Tiers/Kooparoona Niara Regional Forest Agreement (RFA) Interpretation Project. A three day conference was held as part of the consultation for the report, with the principal recommendation that the Tasmanian State Government, in consultation with the Aboriginal community, should proceed to create an Aboriginal Tourism Development Plan.

A steering committee was formed in late 2003 to advance the recommendation, with the Tasmanian Government's Office of Aboriginal Affairs as the lead agency, in conjunction with Tourism Tasmania. The resulting Aboriginal Tourism Plan was launched at the opening of Tulampanga (Alum Cliffs) State Reserve on 15 June 2007.



3 Known cultural heritage

The following describes the cultural heritage that has been identified in the study area.

3.1 Matters of National Environmental Significance

Under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), actions that have, or are likely to have, a significant impact on a matter of National Environmental Significance require approval from the Australian Government Minister for the Environment (the Minister). The Minister will decide whether assessment and approval is required under the EPBC Act.

The cultural heritage Matters of National Environmental Significance (MNES) protected under the EPBC Act are:

- World Heritage Properties
- National Heritage Places.

There are no places within the study area that are included on either of these lists, and thus no cultural heritage MNES within the study area.

NOTE: Notwithstanding the above, the following should be noted:

Although there are no World Heritage Properties, or parts of such properties, within the study area, the study area is known to contain sites relating to Tasmania's convict heritage. It is possible that these sites – such as those relating to coal mining around Bicheno (which are not included in the lists below) could be included in the Australian Convict Sites serial World Heritage listing.

The following places have previously been nominated for inclusion on the NHL but not subsequently included (these are not included in the lists and mapping below):

- Blue Tier Forest Reserve and Bay of Fires Conservation Area, Ansons Bay
- Four Shacks near Binalong Bay, Binalong Bay Road, Binalong Bay.

3.2 Other cultural heritage - Aboriginal

A picture of the Aboriginal cultural heritage surrounding a place must be determined through consideration of several different sources, as follows.

3.2.1 Ethnographic sources

Ethnohistory is the study of the lifestyle of Aboriginal people at the time of first European contact through the use of contemporary ethnohistorical accounts that can provide some insight into the nature of pre-contact culture, including population groupings, concepts of land ownership, and the relationship of both these to pre-contact Aboriginal land use.

The first recorded sighting of Aborigines in north east Tasmania occurred during Captain James Cook's second voyage in 1773, when Tobias Furneaux observed numerous fires along the shore of what he then named 'The Bay of Fires'. By the early nineteenth century sealers and whalers had established hunting grounds in the Bass Strait and inhabited islands and parts of the coast. The sealing industry effected severe and significant impacts upon the Aborigines as the sealers frequented the adjacent north and east Tasmanian coast. Although their initial interactions might have been cordial, by 1830 and 1831 when George Augustus Robinson met with the remaining Aborigines of the area, it was evident that there was considerable hostility. A major impact of sealing on the Aborigines in the area was that it undermined their population structure, largely because of the removal of Aboriginal women from their families to work for the sealers on the Bass Strait islands.

There is a meagre amount of reliable first hand information documenting the lifestyle of the Aborigines who occupied north east Tasmania prior to European settlement and the severe disruption of Aboriginal culture. Furthermore, since the ethnohistorical sources available for northern and eastern Tasmania were produced by Europeans, they are therefore couched in terms of European belief systems and consequently fail to illustrate fully the complex nature of traditional Aboriginal society and culture. It is the journal records of George Robinson for the period 1829-1834 which provide the major source of information about the pre-contact lifestyle of the Aborigines who occupied the north east of Tasmania, but after thirty years of conflict and consequent economic and social disruption, the Aboriginal people who provided Robinson with information about their culture may not have been in the best position to entrust Robinson with details of the complexity of their society.



This source must therefore be seen as providing only a partial insight into the traditional Aboriginal lifestyle, and it should be acknowledged that much of the detail on this way of life has been lost for all time. It is considered however that some elements of traditional Aboriginal lifestyle were partially intact, at least those relating to the exploitation of the resources of the environment and the material culture relating to this exploitation.

Despite these deficiencies, the available ethnographic accounts provide a tantalising glimpse into Aboriginal society in eastern Tasmania at the time of European contact. However, research through these means is generally limited to providing a broad regional account, rather than one specific to a particular location. This is not because the cultural heritage of the Aboriginal people who inhabited the region prior to European colonisation was necessarily any more uniform than that developed since, but rather because the small amount of available information makes the identification of what were probably quite subtle cultural variations across the study area almost impossible.

Aboriginal people in pre-contact north east Tasmania lived in a nomadic hunting and gathering society where individuals and groups appear to have belonged to recognised tracts of land or territories, although they interacted with each other in a variety of ways including through visitations, marriage, ceremonies and trade. A wide range of plant and animal resources was exploited from the sea, coast and inland areas for food and for use in constructing and maintaining material culture items. The landscape was managed, principally through the use of fire, to increase the availability of food resources and to maintain the open nature of the country that would otherwise have generally been densely vegetated.

The model of Aboriginal society being divided into a series of tribes is now generally considered to be defunct (Huys 2013) in that it does not account for the complexities of social interaction and organisation found in Aboriginal society, and there has been a shift to attempts to describe Aboriginal society as multi-layered and to explore interconnected relationships between broad social groups. It is worth noting however, that two tribal groups have previously been identified in the study area at the time of European contact; the North East Tribe and the Oyster Bay Tribe (Kee 1987). The Country of the North East Tribe encompassed territory along the coast from east of the Tamar to Cape Portland, and continued south to the Scamander River. The inland boundary extended along Mt. Young, Mt. Barrow, and then east to the Tamar Valley (Jones 1974). Anthropologists generally consider the basic social and economic unit in pre-contact Australian Aboriginal society to be the band, a small scale population comprised of between two to six extended family units, or about 14 – 33 people, who cooperate in subsistence activities (Service

1966; Keen 2004). Jones (1974) claims that the North East Tribe was comprised of ten bands with a population of approximately 400-500 people, whereas there were at least 15 bands making up the Oyster Bay tribe and estimates the population range of the tribe lay between about 600 and 800 people.

Unfortunately there is little information about the associated seasonal movements or the relative importance of particular food sources, and there is virtually no record of the artistic and religious aspects of traditional Aboriginal life in north east Tasmania. Instead inferences must be made from available ethnohistorical sources detailing these aspects of traditional Tasmanian Aboriginal culture for the southeast, Central Highlands and Midlands of Tasmania.

Ethnographic and anthropological research provides a context within which to view the archaeological record. It indicates the interrelated nature of the environment, religion and social structure in pre-contact Aboriginal societies, that is perhaps to a lesser extent continued in contemporary Aboriginal society, and which has implications for the assessment and management of this archaeological resource.

3.2.2 Archaeological information

From archaeological data collected to date, and through future archaeological research, it is possible to add considerably to the picture and understanding of Aboriginal society in eastern Tasmania at the time of, and prior to, European settlement. The information provided by archaeology can include data on economy and subsistence - for example on the types, range and relative importance of plant and animal resources in the Aboriginal diet. It can provide information on land use and comparative information on cultural variation within Tasmania, for instance in artistic traditions, burial practices and material culture forms which in turn may reflect band and tribal boundaries, and patterns of movement. The archaeological data can in some cases be used to gauge the reliability of the ethnohistorical observations and, conversely, ethnohistorical information is able to provide analogies which may be of use in the interpretation of archaeological remains. Generally speaking, archaeological research is the primary means by which information on Aboriginal lifestyles in eastern Tasmania prior to the settlement of Europeans must now be reconstructed.



Summary of recorded Aboriginal archaeological sites

The large-scale studies of the area undertaken by Brown (1991), for eastern Tasmania, and Kee (1991), for north eastern Tasmania, summarised the Aboriginal archaeological site types identified in the region as follows.

Coastal sites - predominantly, but not exclusively, related to the exploitation of stone, shellfish and possibly other marine resources:

- Coastal dunes sites, including shell middens in particular, located in the dunes fronting the foreshore, in proximity to littoral resources.
- Coastal plains sites, situated within an area up to one kilometre from the coast, with the highest distribution of sites generally confined to a narrow strip of plains, up to 100m away from the sea.
- Coastal low hill sites, the majority recorded in coastal low hills located less than 500m away from the shoreline.
- Offshore Islands.

Inland sites – reflecting exploitation of terrestrial resources, as evidenced by the composition of the artefact assemblages at inland sites:

- Plains sites, reflecting temporary campsites utilised by groups who were most likely also visiting and exploiting resources of the neighbouring sea shore
- Low hill sites, predominantly comprising isolated artefact finds which would appear to result from transient hunting and gathering expeditions by small (hearth) groups
- Hill sites - there is fairly sparse evidence for occupation of hills, consisting of an extensive camp and a few rock shelter sites. However, poor visibility made it difficult to assess the extent of archaeological evidence in this landform.

The pattern of site distribution found in both regions has been one of high numbers of shell middens and open artefact sites along the coastal fringe, extending up to 100m inland. Inland, a rapid decline in site density was observed, and this is especially notable from at least one kilometre from the coast.

All of the known Aboriginal archaeological sites in the State are recorded on the TASI database maintained by Aboriginal Heritage Tasmania (AHT). Figure 42 (overleaf), provided by AHT, shows the distribution of the sites recorded on the TASI database as within the study area.

3.2.3 Traditional knowledge

The contemporary Aboriginal community continue to be the guardians of traditional cultural knowledge relating to their Country. This is unfortunately often overlooked in contemporary Tasmania.

This traditional knowledge could be supplementary to the information about pre- and post-contact Aboriginal activity which can be gained from the ethnographic and archaeological sources described above, although the history of Aboriginal displacement is such that Aboriginal people in Tasmania, and in much of Australia as a whole, may often have to rely on these other information sources to a certain extent themselves.

The values of the contemporary Aboriginal community should be taken into account in assessing physical remains. For example, rather than simply being a residue of previous activity, it is a belief of Aboriginal people that shell midden sites are living places that show the story of Aboriginal people's lives (Gloria Andrews, Aboriginal elder, pers. comm.).

Traditional knowledge could relate to sensitive matters, places or practices about which the community choose to withhold information. It may also include knowledge of significant intangible associations with particular places or areas, for example in relation to particular traditional activities, which are not apparent from examinations of physical remains of the kind undertaken through standard archaeological assessment for example.

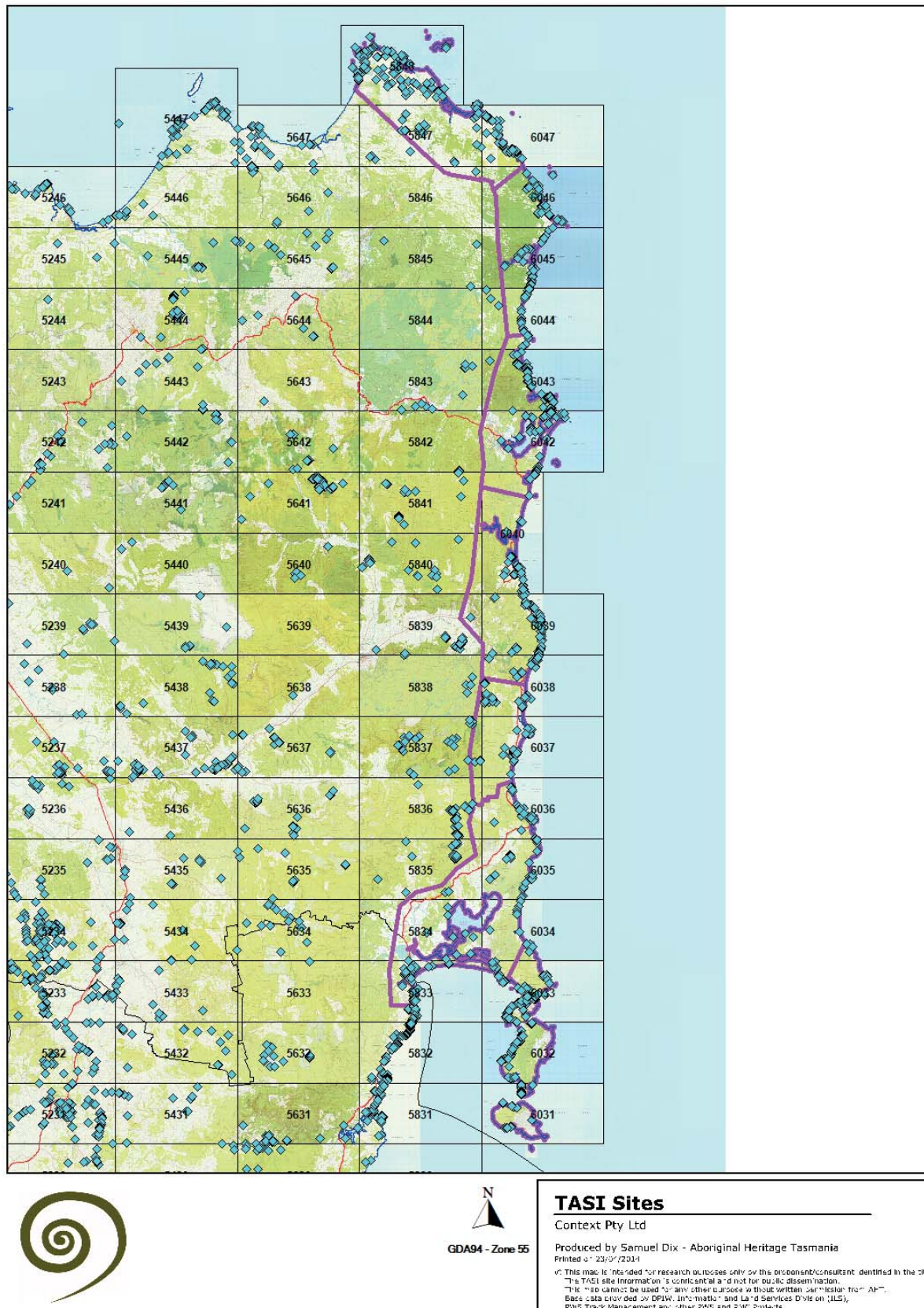


Figure 42: TASI sites within the study area, provided by AHT



3.3 Other cultural heritage - non-Indigenous

The following sets out the information relating to cultural heritage in the study area that has been obtained to date. Where available, information from each of these sources has been mapped for the case study areas discussed below.

3.3.1 The Commonwealth Heritage List (CHL)

Only two CHL places lie in the study area. Both of these are also on the below lists.

3.3.2 Tasmanian Heritage Register (THR)

A number of THR places are located in the study area. Almost all of these are historic buildings and the large majority of these are located in the settlements.

Currently available GIS mapping for THR places is limited to single point data. However, it is understood that Heritage Tasmania is currently engaged in a review of this mapping that will result in polygons for each place (Chris Bonner, Regional Heritage Advisor Heritage Tasmania, pers. comm.). This will enable the extent of these heritage places to be conveyed more accurately and this aid in their effective management.

3.3.3 Planning Scheme Heritage Schedules

Each of the municipalities within the study area; Dorset, Break O'Day and Glamorgan Spring Bay, maintains a list of locally significant places.

Perhaps owing to the interim status of the planning scheme, the list for Dorset currently contains only three archaeological sites, of which none is located in the study area.

The lists of the other two municipalities are more extensive. The majority of the places on the Break O'Day local list are also included on the THR with the remainder identified as of local significance. This information has been provided by the Council in the form of a GIS mapping layer and is included in the mapping of case study areas.

The list for Glamorgan Spring Bay comprises places included on the now defunct RNE (see below) and also places which are either recorded or classified on the National Trust of Australia (Tasmania) Register - thus lending some statutory weight to this otherwise non-statutory listing. Mapping of the places on this list is not currently available from Glamorgan Spring Bay Council, and it has thus not been possible to include these places in the mapping of case study areas.

3.3.4 Register of the National Estate (RNE)

The RNE is now frozen and no longer a statutory list, but in the current absence of alternative information it provides a good indication of the areas of the places possessing heritage values in the study area. The register contains places of 'historic' (i.e. non-Indigenous), 'Indigenous' and 'Natural' significance. The majority of the entries on the RNE, and by far the greater area covered by these entries, relate to natural significance. Although natural significance is covered in the first section of this report, these area have been included in recognition that natural values can also contribute to aesthetic and social cultural values, and that natural values are of cultural significance to Aboriginal people.

3.3.5 Tasmanian Historic Places Inventory (THPI) Sites

Numerous places are recorded on the PWS maintained THPI as within the study area. As would be expected, the majority of these are within Crown land managed by the PWS, and these mostly relate to previous ecumenic activities undertaken prior to these lands achieving park status, in particular mining and quarrying. A number of places are recorded within settlements, some of which replicate records on other lists, including the THR.

Probably owing to its non-statutory status, the THPI records contain a widely varying amount of information. The THPI data management system contains a paraphrased summary of this information though which to support decisions on their management.

In order to illustrate the nature of records on the THPI, and the level of information retained, a selection of sites within the study area was visited as a small part of this study. The places visited were selected on the advice of PWS for their accessibility, their location close to areas of likely future tourist development and thus their interpretation potential. The sites were surveyed in the company of PWS rangers.



3.4 Knowledge gaps

The sources presented above provide an incomplete picture of the cultural heritage in the study area, and this obviously has implications for its effective management.

These knowledge gaps arise for a number of reasons, including the following:

- Some information on known places is currently not recorded/available;
- Not all cultural heritage is known; and
- There is a lack of appropriate recognition for some types of cultural heritage.

These reasons are explained in greater detail below.

3.4.1 Information recording and availability

Some information on known places is currently not recorded or available.

As described above, the Aboriginal community holds Traditional knowledge, including information on significant places, which is culturally sensitive and therefore withheld, and this risks omission of this information from management decisions to which it is relevant. An example would be the proposed installation of a viewing platform at Sloop Rock Point in 2007 that was halted in recognition of Aboriginal heritage values - see below. These values could not be identified through standard searches of the available information and were only revealed through consultation with the community.

A similar situation apparently also exists in relation to certain non-Indigenous heritage resources - there being examples of forestry or parks operatives not reporting sites to protect them from vandalism, souveniring or other damage through visitation (Garry Richards, former long-term employee of Forestry Tasmania, pers. comm.).

The above circumstances are not really cases of knowledge 'gaps' per se, but rather they are situations in which the information necessary to inform a management decision may be known, but not amongst those making decisions. In this case the potential 'gap' is one of communication.

In these situations there may be areas which should be considered 'no-go', but where this is not apparent through standard due diligence procedures.

A more practical consideration is one of the transfer and update of information between organisations, particularly following the transfer of management responsibility. PWS has recently inherited control of large areas of forestry reserve within the study area from Forestry Tasmania. It is understood that as part of this arrangement PWS will inherit the corresponding heritage management records, but this has yet to occur (Peter Rigozzi, PWS Heritage Office, pers. comm.). There is also a need to ensure that known information on heritage lists is made available in a useable format to decision makers - as described above, this is currently not the case for the local heritage lists of Glamorgan Spring Bay Council for example.

3.4.2 Knowledge of cultural heritage

Not all of the cultural heritage in the study area is known.

There has been a lack of large scale studies in the region through which to identify heritage places, and there are thus geographical gaps away from population centres where places are more likely to be recorded in an ad hoc manner.

The only large-scale studies of the Aboriginal archaeology of the study area were undertaken as part of a state-wide program in the 1980s and early 1990s (Brown 1991 & Kee 1991). It should be noted that these studies relied almost entirely on surface surveys, with the majority of surveys conducted along the coast and the foothills of the highlands. The highlands were not surveyed in detail and the studies did not investigate the archaeological record of Aboriginal use of these forested highland areas. Site types nearer the coast are also generally more visible - for example midden deposits, especially where they have been subject to erosion. The much smaller numbers of artefacts recorded on inland sites may be attributable to a lack of surface visibility, and most of the findings have yet to be tested by subsurface examinations.

It was noted by the above mentioned Aboriginal archaeological studies that the majority of the Aboriginal sites in the region which were considered to be archaeologically significant are situated on land administered by the PWS.



As regards non-Indigenous places, the relatively low intensity of occupation and activity in the region since colonisation is such that non-Indigenous heritage places are likely to be fewer in number, and the majority will be located around existing settlements where they are more likely to already be known. However, activities relating to more isolated industrial, agricultural and transport activities are likely to have created places that have yet to be recorded. Many of these places will be located in the parks and reserves now under the management of PWS, in which case the THPI provides a mechanism for their recording. However, no such comparable list exists at a State level for places outside Crown land.

Some desktop studies were done for the region in the 1980s and specific thematic studies have been undertaken more recently, for example the Blue Tier Mining Heritage Study (Jackman 1998). But the latter was undertaken with the greater resources of Forestry Tasmania (before the Blue Tier passed into PWS control in December 2013) and generally PWS does not currently have the resources to undertake such studies (Peter Rigozzi, PWS Heritage Office, pers. comm.).

3.4.3 Lack of appropriate cultural heritage mechanisms

There is a lack of appropriate recognition for some types of cultural heritage.

The existing State legislation governing the management of Aboriginal heritage, the Aboriginal Relics Act 1975, makes no provision for intangible cultural heritage - defined by the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003) to include 'practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith'. There is thus no statutory mechanism through which to protect this major aspect of the cultural heritage values which Aboriginal people attribute to places in the study area.

The focus on relics asserted by the Aboriginal Relics Act 1975 is also not conducive to the recognition and protection of landscape values, and the recognition of these values is also impeded by the freezing of the RNE which recorded the aesthetic and social values of many of the places it recorded. The intention was that it would be superseded by other heritage statutory lists, but many of the places that it contained are not included on other lists, and where they are these values are not recognised.

3.5 Known cultural heritage by case study area

The following describes the post-contact history of the case study areas - ethnographic accounts of pre-contact Aboriginal society having been discussed above, and provides a brief account of the known cultural heritage in each area,

It should be recognised that although this cultural heritage is a resource that should be safeguarded, and is in this sense a 'constraint', in many cases it also presents possibilities for interpretation and presentation as part of tourism development of the study area, and is thus also an 'opportunity'.

Other than the inspection of some THPI sites described above, no ground-truthing of the following accounts has been undertaken within the confines of this study.



3.5.1 Musselroe Bay

Post-contact history and character

Musselroe Bay is located within one of the earliest areas to be settled within North East Tasmania. The region remained remote in the early nineteenth century, with early farming grants, particularly the Cape Portland property, only accessible via boat. This settlement by sea saw the creation of early pastoral properties surrounded by large tracts of Crown Land reserves which later had grazing leases extended over them by the state government. The granting of grazing leases in remote areas and the subsequent establishment of sparse farming communities saw telegraph and postal services undertaken under license on farms, and by 1883 'Mussel Roe' is listed as the location of a post office and telegraph station. With the establishment of communications within these areas, the attraction of large leases of unrealised land saw people flock to the area and extensive land clearing operations took place as part of the realisation of broad acre grazing properties across the coastal heath.

The period from the 1920s to the 1960s saw the development of a coastal fishing industry, and the local crayfish industry in particular. Seasonal communities of semi permanent fishermen's shacks were established in the region around sheltered estuaries with easy access to the open ocean, and with its access to Great Musselroe Bay the Musselroe Bay estuary provided such an environment. With the advances in motor travel into the 1940s, these settlements became more accessible via road and the shack communities quickly expanded along main access road to accommodate both fishermen and holiday makers. This historical pattern of development is reflected in the form of the town of Musselroe Bay today.

Concentrated along the single bitumen road on the southern approach to Musselroe Point, the settlement consists largely of seasonal holiday shacks, although most have been considerably enlarged and formalised in the past decades, but still with only a small permanent population. The town looks south across a coastal reserve of vegetation which shields much of the town from Musselroe Bay and thus also protects the visual amenity of the estuary's coastline. The seasonal occupation of the town is reflected in the provision of only basic services, including a local volunteer fire brigade and a boat ramp that is accommodated on the tidal beach of Musselroe Bay. The landmark mobile phone tower on the highest point of Musselroe Point references the importance of communications in the historical development of the town, but because of the town's remote nature there is a distinct lack of commercial holiday facilities such as motels, bed and breakfasts and private shack rentals, and this contributes to the aesthetic of a settlement which is relatively inconspicuous within the surrounding landscape.

Known cultural heritage and potential development impacts

As shown in Figure 43-4, this case study area is known to contain a number of Aboriginal archaeological sites which are recorded on the TASI database. Close to the coast, these comprise shell midden deposits, alone or in combination with stone artefacts, which reflect the harvesting and consumption of marine food resources, probably on a seasonal basis and almost certainly prior to colonisation. Further into the hinterland, several isolated artefacts and artefact scatters are also recorded which could relate to a much wider range of activities.

The majority of the settlement lies in what is listed as 'Mount William Area' on the now defunct Register of the National Estate (RNE). This listing was primarily based on its natural values, but also on its geoheritage values - that it contains features or processes which demonstrate the principal characteristics of the regional geodiversity (geology, landforms, soils). However the listing does include the Musselroe Point Area which is listed for its Aboriginal heritage values.

The case study area is not subject to any other heritage listings - there are no structures within it of recognised heritage significance. On the basis of the above, potential impacts to cultural heritage in this case study area could take two primary forms. Firstly, development could directly impact upon known or unknown archaeological deposits, and this would be a statutory consideration under the Aboriginal Relics Act 1975. Secondly, potential developments could impact upon less tangible heritage aspects of the area including likely Aboriginal associations with this prominent point on the coast and the aesthetic relationship between the low key settlement and the surrounding landscape.

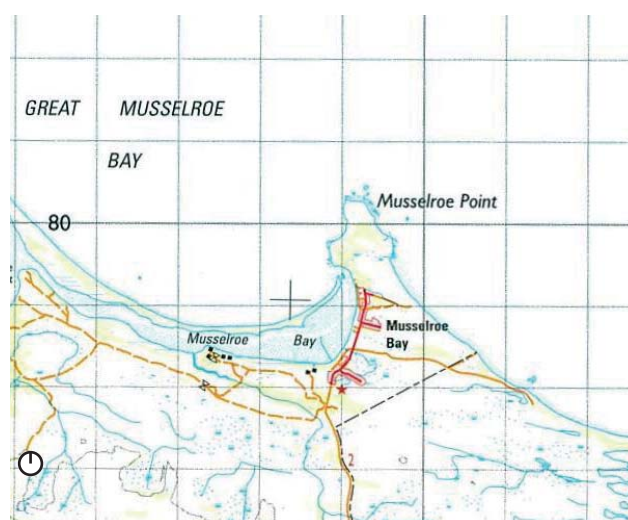


Figure 40: Extract from 1:100,000 TASMAP of Musselroe Bay case study area

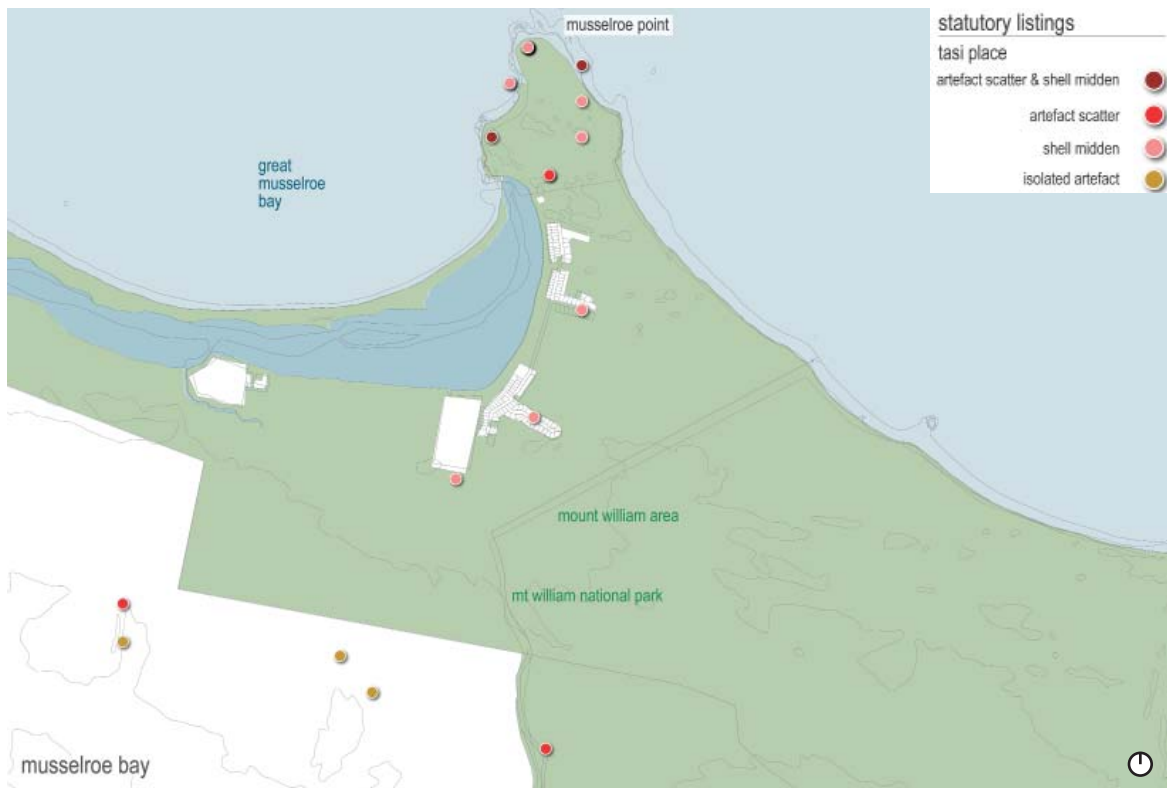


Figure 43: Known cultural heritage in the Musselroe Bay case study area

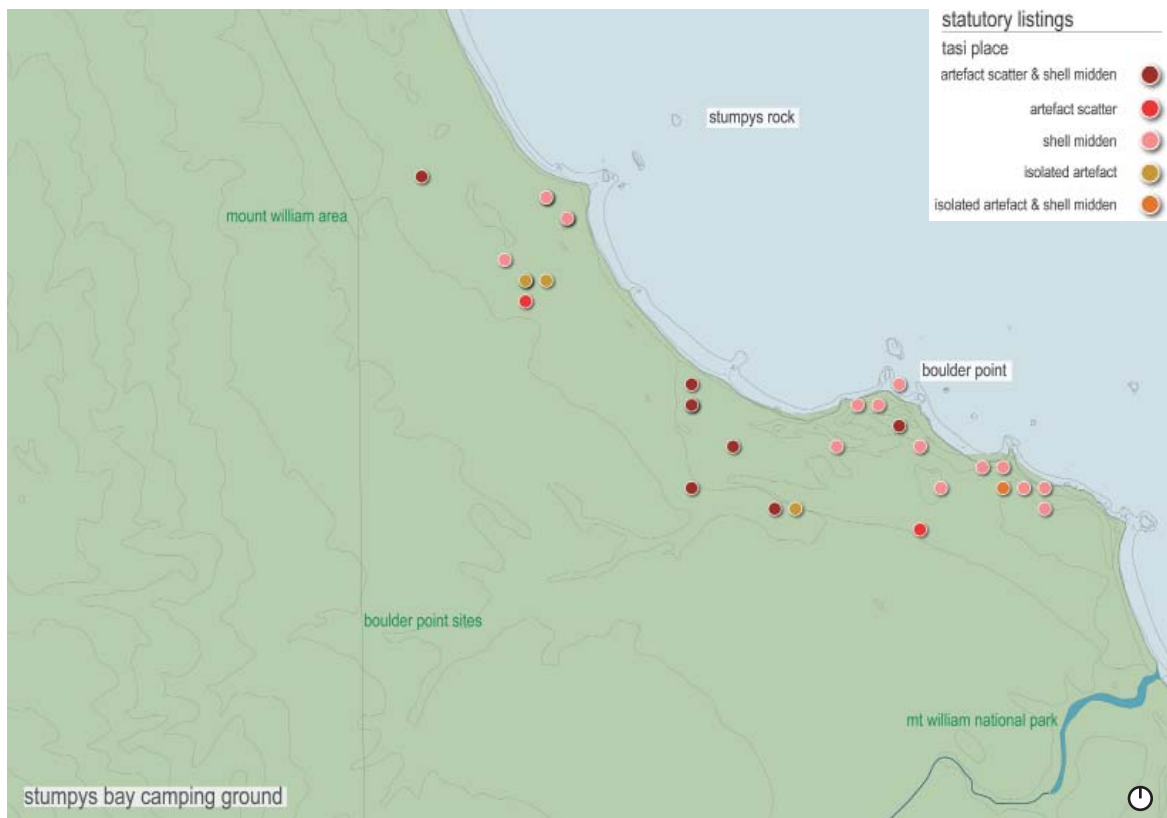


Figure 44: Known cultural heritage in the Stumpys Bay camping ground case study area



3.5.2 Stumpys Bay camping ground, Stumpys Bay (near Boulder Point)

Post-contact history and character

Located within Mt William National Park between Cape Naturaliste in the north and Boulder Point in the south, Stumpys Bay represents one of the most remote areas of the North East Coast. Charted as part of the 1802 French scientific expedition of Nicolas Baudin, Cape Naturaliste was named after one of Baudin's two ships; the 'Naturaliste' and 'Géographe', while Boulder Point apparently gained its name from the dominant granite coastal geology of the area, but the origin of 'Stumpys Bay' remains unknown. The surrounding area was not formally settled as part of the early colonial land grant system, and the majority remained Crown land until a series of large grazing leases began to be issued over the area from the late nineteenth century. Probably owing to this late development, and the series of temporary lease holds, the area never experienced the development of any permanent infrastructure. The lease holds were eventually forfeited to the government upon the creation of the Mt William National Park in the 1970s.

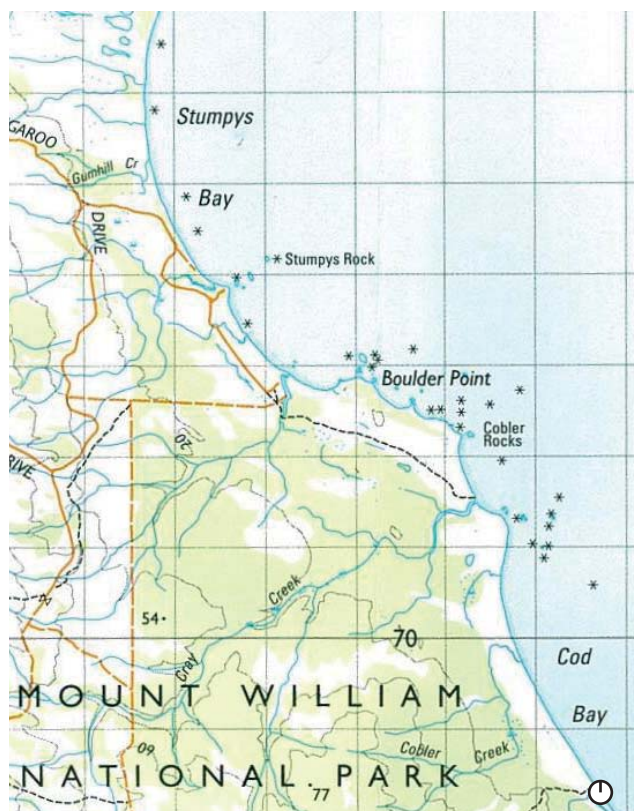


Figure 45: Extract from 1:100,000 TASMAP of Stumpys Bay camping ground case study area (asterisks are TASMAP convention for 'rock, bare or awash')

Current facilities include sheltered campgrounds amongst the coastal heath and shrubbery along the coastal reserve. These have been divided into four individual campsites accessed via narrow gravel driveways which are identified by the Parks and Wildlife Service as 'Stumpys 1, 2, 3 and 4'; 'Stumpys' 4 being located on the edge of the coastal lagoon at the Boulder Point end of Stumpys Bay. Each campsite offers similar facilities, including pit toilets, access to the beach and picnic tables. In addition, Stumpys 3 has a boat ramp into Stumpys Bay. All of the campgrounds support campers with tents, campervans, and motorhomes, except Stumpys 3 which only supports tent based campers.

Known cultural heritage and potential development impacts

A number of Aboriginal sites are recorded on the TASI database as within the case study area. These are almost all shell midden deposits, alone or in combination with stone artefacts, which reflect the harvesting and consumption of marine food resources, probably on a seasonal basis and almost certainly prior to colonisation.

The whole case study area lies within areas listed on the now defunct Register of the National Estate. These record the prevalence of Aboriginal sites under the heading 'Boulder Point Sites' and relate to the 'Mount William Area' which is listed predominantly for its natural heritage, but also for geoheritage and Aboriginal heritage values. Indeed, the case study area is within 5km of Mt William itself, which as a result of the State's dual naming policy has since March 2013 also been officially recognised under the Aboriginal name 'Wukalina', a place which is known to be of great significance to the Tasmanian Aboriginal community. For example, during consultation undertaken with members of the Aboriginal community to inform this report, mention was made of unmarked burials somewhere in the vicinity of Mt William (no specific locations were requested or provided).

As well as satisfying statutory requirements in relation to known Aboriginal archaeological sites, potential development in the area should be undertaken with very careful regard for the likelihood of as yet unrecorded places, and for the intangible Aboriginal heritage significance of the area.



3.5.3 Deep Creek

Post-contact history and character

Deep Creek, which represents the easternmost settlement in Tasmania, was most likely named for the depths of the waters in adjoining Groves Creek. The wider area is known as Eddystone, after nearby Eddystone Point which forms the northernmost point in the Bay of Fires. The Point was named in 1773 by Captain Tobias Furneaux as he sailed to re-join Captain James Cook's second Pacific expedition following his ships separation from Cook's fleet. Furneaux named the Point after the Eddystone Reef on the southern coast of England at which was constructed, in 1699, of the first lighthouse tower to be fully exposed to tidal surges of the open sea - previously, light houses had been located high on headlands or land masses and away from sea water. Appropriately Eddystone Point was to later provide the site for one of Tasmania's most prominent lighthouses, the Eddystone Lighthouse and its associated light station. The lighthouse, which was constructed between 1887 and 1889, had been proposed as early as 1879, and the Point and Deep Creek had been gazetted even earlier, by 1859, as the potential site of an Eddystone town. In May 2012, as part of reconciliation efforts, Eddystone Point, the Bay of Fires region known as 'Larapuna' in the local Aboriginal language, was returned to the Tasmanian Aboriginal community.

From the nineteenth century the area was extensively grazed under a series of leases over large tracts of land held by the Crown. One of the most notable and largest leases was held by the British Tobacco Company over the Deep Creek area. The area was incorporated into Mt William National Park when this was established in the 1970s in a bid to provide a refuge for the Tasmanian Forester kangaroo. Owing to its use for grazing and its subsequent incorporation into National Park, the area has not experienced the development along the coast associated with the East Coast's shack culture which stemmed from the creation of semi permanent coastal shack settlements by fishermen as part the local fishing industry. Today, Deep Creek is known for its popular coastal camp ground within the Mt William National Park. The camp ground accommodates campers with tents, camper vans and motorhomes and provides core services including a pit toilet, beach access, picnic tables and a bore providing clean water.

Known cultural heritage and potential development impacts

A number of Aboriginal sites are recorded on the TASI database along the line of Deep Creek and on the coastline between the creek mouth and Picnic Point, including shell midden deposits and stone artefacts further into the hinterland, and these are almost certainly only representative of a much larger number of unrecorded sites.

The whole case study area lies within the 'Mount William Area' listed on the now defunct Register of the National Estate (RNE) which is listed predominantly for its natural heritage, but also for geoheritage and Aboriginal heritage values. As well as satisfying statutory requirements in relation to Aboriginal archaeological sites, potential development in the area should be informed by consideration of potential intangible Aboriginal heritage associations with the area.

Further to the south east (not shown on Figure 47), Eddystone Point, which as a result of the State's dual naming policy has since March 2013 also been officially recognised under the Aboriginal name 'Larapuna', is included on the Commonwealth Heritage List and the Tasmanian Heritage Register, as well as the RNE. These designations are based on the built heritage of the site which contains a lighthouse and associated residences. But the Point also contains a number of recorded Aboriginal archaeological sites, probably reflecting a focus of pre- colonial activity at this prominent location, and since being leased to the Tasmanian Aboriginal Land Council in 2006 the site has once again become an important meeting place for the contemporary Aboriginal community. Planning for developments in this case study area should consider the potential for impacts on the setting of this important location and make reference to the management plan recently prepared for the place (Weaver 2012).

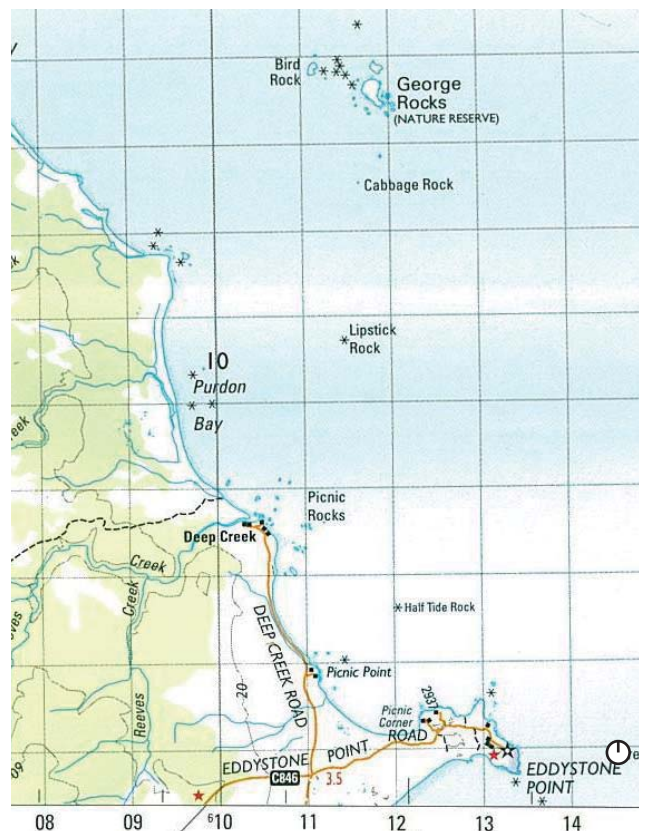


Figure 46: Extract from 1:100,000 TASMAP of Deep Creek case study area

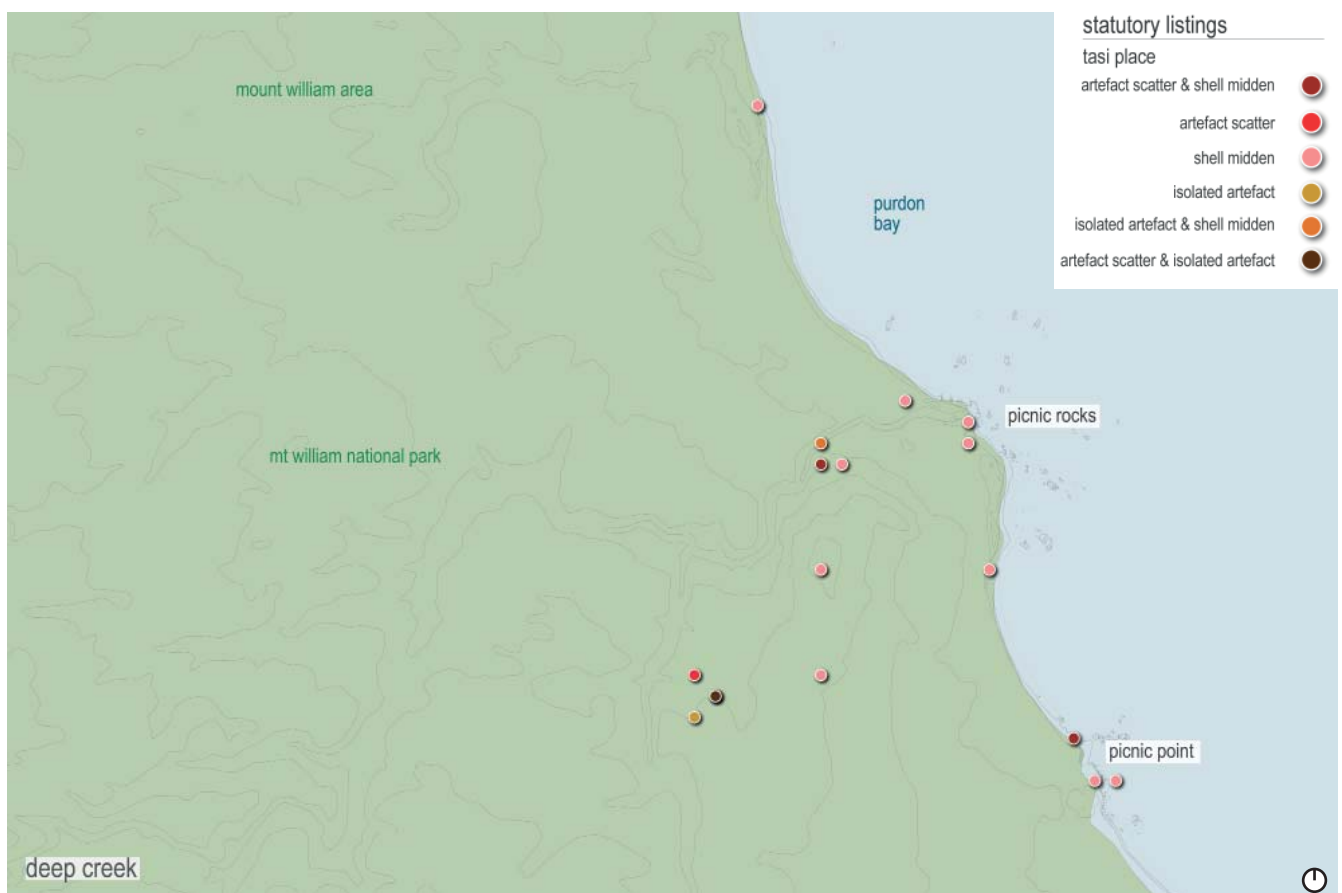


Figure 47: Known cultural heritage in the Deep Creek case study area



3.5.4 Ansons Bay

Post-contact history and character

Following its initial naming as early as 1812, the Ansons Bay area was explored in August 1827 and officially settled in approximately 1830 by settlers taking up grants of rural land in the area. The area was administered as part of the Georges Bay Police District, and a police barracks and associated reserve were established on the end of the peninsula which separates Ansons Bay from the Tasman Sea, subsequently giving the name 'Policemans Point' to the opposite bank of the river mouth. The peninsula was gazetted as the future site of the town of Abbotsbury by 1859, and the seaward beach of the peninsula, Abbotsbury Beach, takes its name from the proposed town. With the gradual growth of the local fishing industry north from St. Helens, a series of semi-permanent fishing villages consisting of fishermen's shacks were established along the coast to provide working accommodation during the fishing season. Locations included Boat Harbour (Binalong Bay) and The Gardens and a settlement was established along the sheltered north bank of

Ansons Bay, away from the nineteenth century site of Abbotsbury. From here, houses and shacks proliferated along the foreshore and into the bush hinterland above the bay as the fishing settlement was supplemented by holiday shacks and then more permanent holiday homes from the 1950s and 1960s.

Today, the core of the Ansons Bay settlement comprises the shack settlement established from the mid twentieth century around the boat ramp. These properties are serviced by a network of bitumen roads and a series of private jetties have been developed along the foreshore in addition to the public jetty in the town which has been recently renewed.

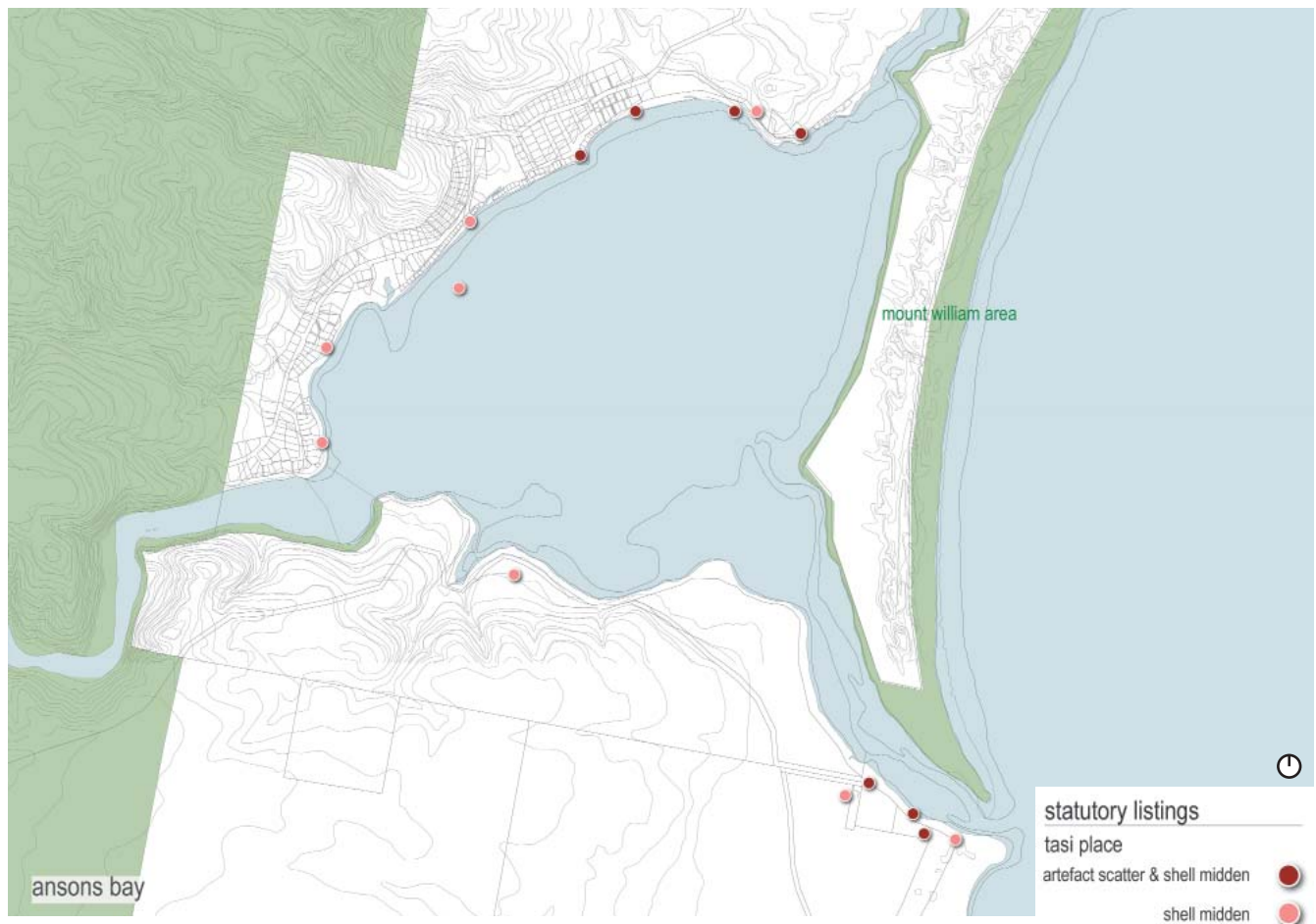


Figure 48: Known cultural heritage in the Ansons Bay case study area



Due to the seasonal nature of the settlement, the small permanent population is serviced by only core community facilities, including a local volunteer fire brigade, with all essential services located in St Helens approximately 45km to the south. The one local shop that did exist in Ansons Bay is currently closed but attempts are being investigated at re-establishing a shop within the community. Because of the isolation of the settlement it has not seen the same level of commercial tourism development as St. Helens, but the Bay of Fires Walk and associated Bay of Fires Lodge have been the successful to the north east of Ansons Bay. While this development has changed the traditional use of the area, it has had no great impact upon Ansons Bay as a settlement. Despite the not insignificant development that has occurred since the middle of the twentieth century, Ansons Bay retains its historic character, including its uninterrupted view south across the bay itself towards the open grazing land of the south east; the pursuit of which led to the area's original settlement.

Known cultural heritage and potential development impacts

As shown in Figure 48, this case study area is known to contain several Aboriginal archaeological sites recorded on the TASI database, and the topography of the area is such that these likely represent only a fraction of the actual resource. Lining the bay, these comprise shell midden deposits, alone or in combination with stone artefacts, which reflect the harvesting and consumption of marine food resources, probably on a seasonal basis and almost certainly prior to colonisation.

The settlement lies just to the east of the 'Mount William Area' listed on the now defunct Register of the National Estate (RNE). This listing was primarily based on its natural values, but also on its geoharitage values - that it contains features or processes which demonstrate the principal characteristics of the regional geodiversity (geology, landforms, soils). However the listing does include the Bayley Rock Site, to the east of the case study area, which is listed for its Aboriginal heritage values.

The case study area is not subject to any other heritage listings - there are no structures within Ansons Bay that are of recognised heritage significance. However, it is possible that as yet unknown archaeological deposits relating to the early 19th century occupation of the area survive within it.

On the basis of the above, potential impacts to cultural heritage in this case study area could directly impact upon known or unknown archaeological deposits, and this would be a statutory consideration under the Aboriginal Relics Act 1975. Potential development within the settlement could also impact upon its historic form and character.

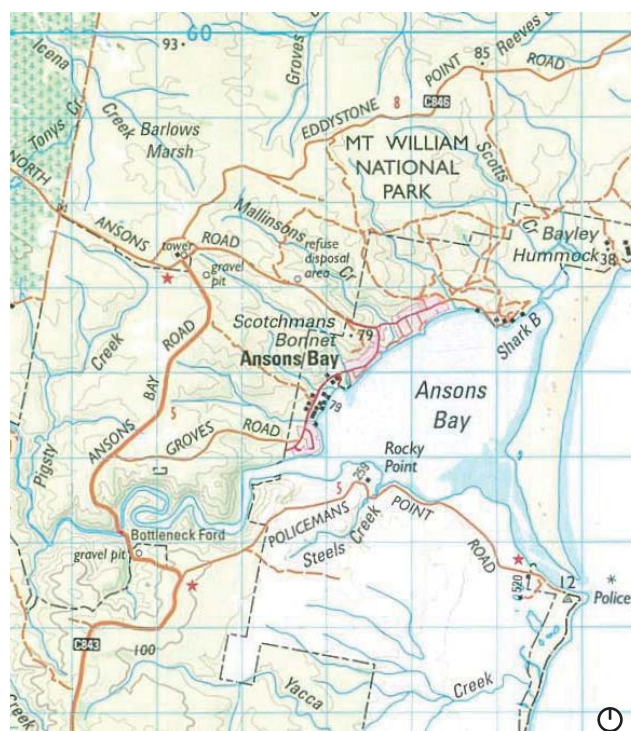


Figure 49: Extract from 1:100,000 TASMAP of Ansons Bay case study area



3.5.5 Cosy Corner and Swimcart Beaches campsites

Post-contact history and character

Surveyed during the early part of the nineteenth century, the area was gazetted as the location of the unrealised township of Seaton by 1859. From the early nineteenth century it formed part of the early route from the fledgling agricultural and maritime settlement of St. Helens to an early police barracks established at the mouth of Ansons Bay, that also serviced several remote farming properties along its route. Part of this early route involved floating carts and their supplies around the headlands at high tide, with the carts being literally swum around the points; this early method of transport giving name to Swimcart Beach. The origins behind the name of Cosy Corner Beach remain unknown. From 1925, the area north of Cosy

Corner, at Sloop Rock, became the location for timber exporting for the Ansons Bay Timber Company's mill that was located within the mountainous hinterland north east of St Helens; the wharf being serviced by a makeshift tramway. While the poor land quality and thick bush were to result in a hard subsistence for the early settlers of the area, it ensured that large tracts of uncleared land remained among the Crown Reserves that now constitute much of the area's coastline.

The area's location between the seasonal fishing settlements of The Gardens and Binalong Bay saw it develop periodically through the construction of remote fishermen's shacks and early holiday shacks. Today, these simple constructions have been replaced by larger holiday homes, but these still remain largely shielded from the main road, amongst coastal vegetation in the same way as did the earlier shacks they replaced.

The growing popularity of the vacant coastal Crown Reserves as a holiday destination saw the establishment of a surf fishing competition at Swim Cart Beach in the early 1960s, and a permanent pavilion was soon constructed. The Swim Cart Surf Fishing Competition, which is currently operating in its 52nd year, is now one of the East Coast's most popular traditions and a staple event on the Tasmanian sports calendar. Partly in relation to the popular surf competition, camping grounds established amongst the coastal vegetation from the mid twentieth century also became popular, and these are now regulated and administered by the State Government through the Tasmanian Parks and Wildlife Service.

Known cultural heritage and potential development impacts

The case study area is known to contain several Aboriginal archaeological sites recorded on the TASI database. These are focussed on the promontories around Seaton Cove and at Round Hill Point, but also extend along the intervening beaches. No sites are recorded further inland, but this is likely attributable to a lack of investigation (see above). The majority of the known sites comprise shell midden deposits, alone or in combination with stone artefacts, which reflect the harvesting and consumption of marine food resources.

Aboriginal community members consulted during the production of this report have alluded to the presence of significant places including women's sites and men's sites around The Gardens, and in 2007 the proposed installation of a viewing platform at Sloop Rock Point was halted because of the Aboriginal heritage significance of the place (see below). Apparently the high visitation of these areas has already damaged certain significant locations through erosion and unsympathetic management.

The majority of the case study area lies within an area listed on the RNE as 'Mount Pearson Area', although this listing is largely based on the significant flora and fauna within it. The citation recognises the

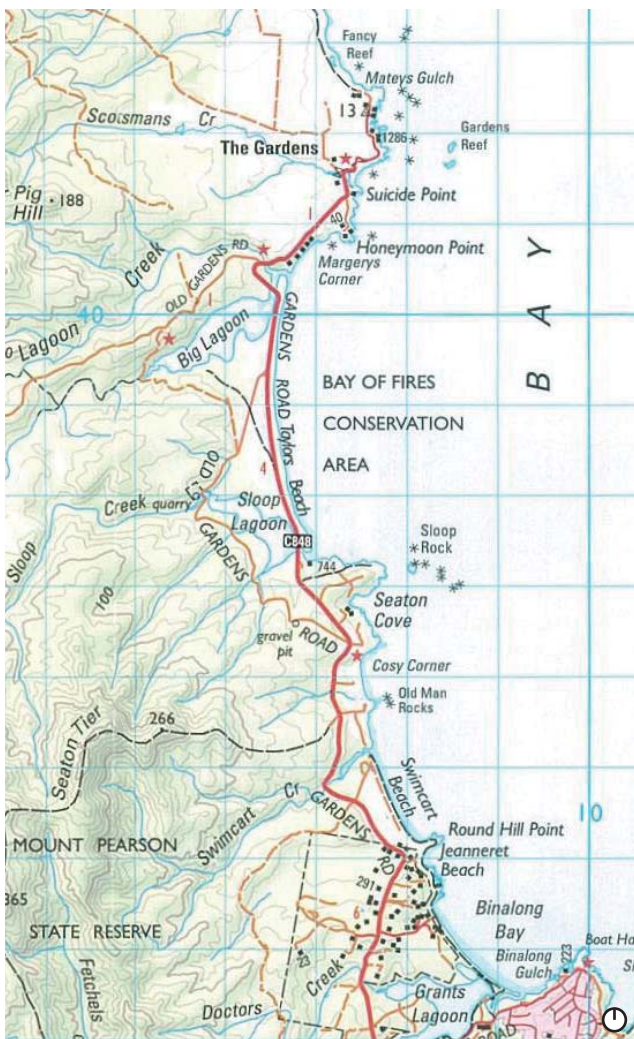


Figure 50: Extract from 1:100,000 TASMAP of Cosy Corner and Swimcart Beaches campsites case study area



possible existence of Indigenous cultural values in the place although these were not the focus of the Australian Heritage Commission's documentation in the mid 1990s.

A number of quarries and gravel pits are known in the area, and the presence of archaeological evidence relating to early industrial activity in the area is demonstrated by the THPI record for the site of the Ansons Bay Timber Tramway (THPI ref 8515.007) which ran from Wild Pig Hill to Sloop Rock Jetty.

Proposals for the case study area, which may well continue the extension of residential development north from Binalong Bay along Gardens Road to Jeanneret Beach, must take into account the high potential for archaeological remains, of both Aboriginal and non-Indigenous origin, and also of the associated intangible values. Increasing pressure on the Crown reserves should also be carefully monitored to prevent the aggravation of current impacts relating to high visitation.

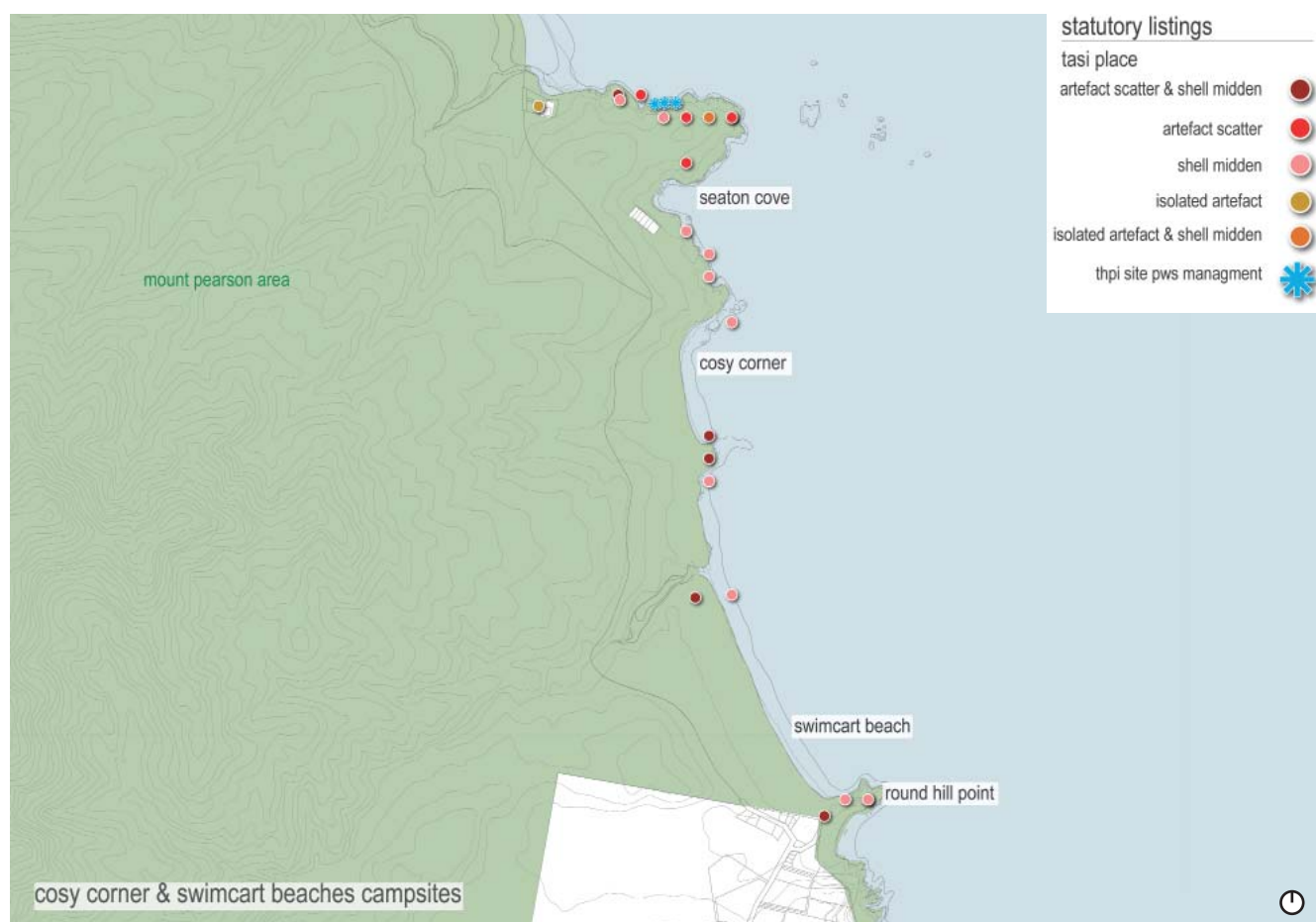


Figure 51: Known cultural heritage in the Cosy Corner and Swimcart Beaches campsites case study area



3.5.6 Binalong Bay

Post-contact history and character

Binalong Bay is the southernmost bay in the Bay of Fires which extend to Eddystone Point in the north. The chain of bays was named in 1773 by Captain Tobias Furneaux, as he sailed to re-join Captain James Cook's second Pacific expedition following his ships separation from Cook's fleet. Furneaux named the stretch of coastline after the fires he witnessed burning along the coast that had been lit by the areas Aboriginal people. Utilised from the early nineteenth century by fishermen sailing out of Georges Bay at nearby St. Helens, the settlement was originally known as 'Boat Harbour' due to the small fleet of fishermen who increasingly used the bay's safe anchorage, 'The Gulch', as a base. The settlement began as a small collection of fishermen's shacks which grew up on the Crown Reserves surrounding The Gulch to accommodate the semi-permanent population during their seasonal activities. A growing population, swelled by the promotion of the area to tourists for its fishing and natural beauty from as early as 1902, saw the expansion

of the settlement which was renamed Binalong Bay in the 1940s in order to avoid confusion with the town of Boat Harbour on the North West coast of Tasmania. The name was derived from a colloquial expression, coined as early as 1906, that a person had been 'Bin-a-long' way to reach the Bay's isolated location from the seat of early local government in the village of Goulds Country, nearly forty kilometres away through thick bush. In the early twentieth century the gradual development of the local fishing industry through to the 1950s and 1960s, combined with the establishment of additional local industries such as saw-milling, saw the development of a more permanent settlement involving the construction of cottages by retired fishermen and holiday makers which further enforced the town's shack aesthetic.

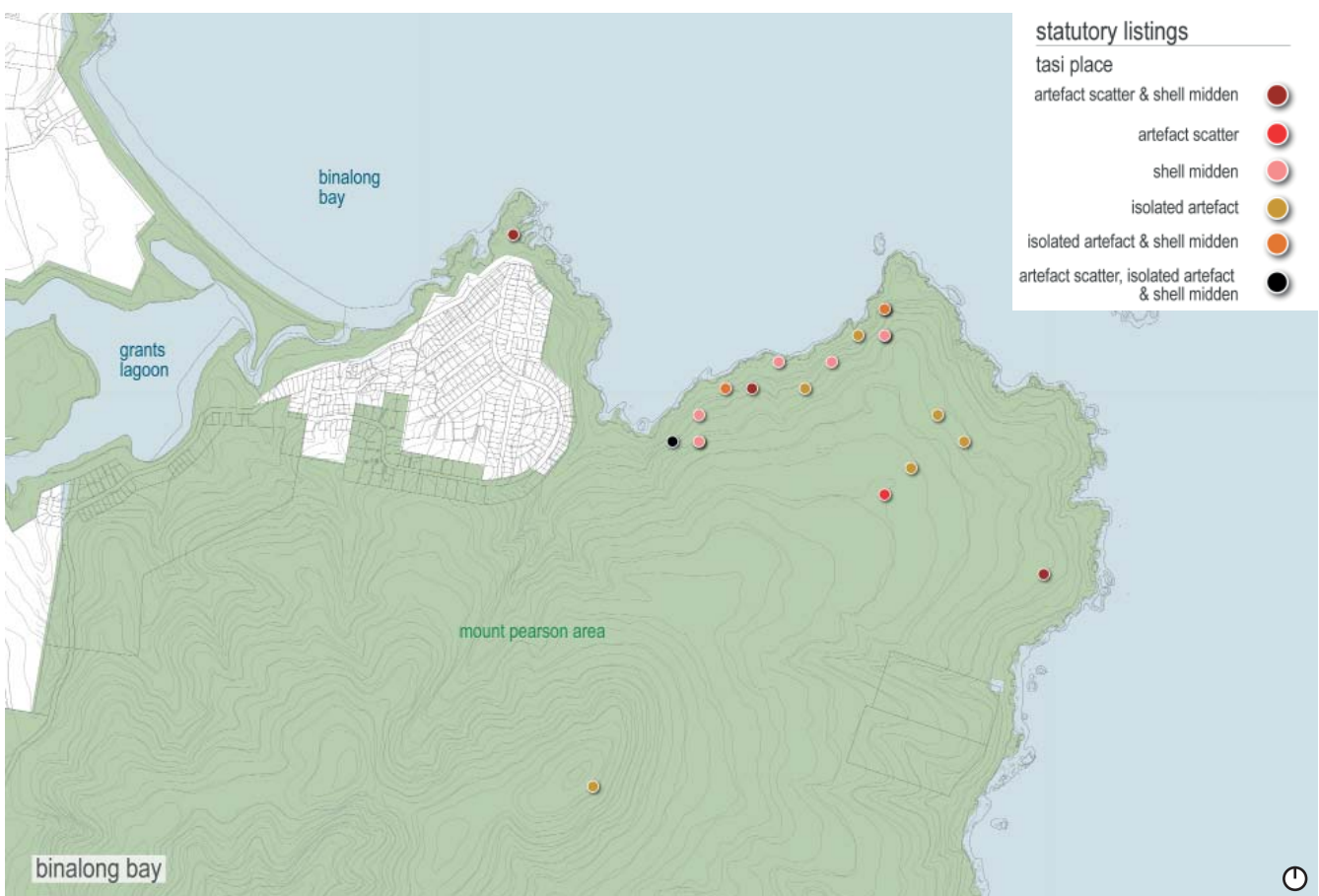


Figure 52: Known cultural heritage in the Binalong Bay case study area



The character of Binalong Bay has changed somewhat from a settlement of coastal shacks and cottages amongst coastal bush as a result of the areas popularity with holiday makers and retirees. This trend has contributed more sizeable and permanent homes and holidays houses in cul-de-sac subdivisions demonstrating a more suburban character located within the early town settlement area of the 1950s and 1960s that retains shack-style homes on larger blocks amongst old stands of Eucalypts. The town today has a permanent population of nearly 200 people, but local services, which include a volunteer fire brigade and community tennis courts, reflect its early subsistence character. A seasonal café, which closes during the traditionally quiet winter trade, accommodates the significant increase in the town's population during the warmer seasons, but all major services are located within nearby St. Helens.

Known cultural heritage and potential development impacts

Recorded Aboriginal sites in the case study area are clustered around Skeleton Bay, to the east of the township, although a single site is recorded at the northern point of the headland near the location of the recently installed Bay of Fires viewing platform (see below). Generally near the coast these sites comprise shell midden deposits relating to the exploitation of marine food resources, whilst sites further inland comprise stone artefact scatters or isolated finds. Given the prevalence of sites to the east, the absence of recorded sites within the settlement could be attributable to a lack of investigation, or to their destruction through previous development, but future developments should recognise the potential for archaeological deposits in the area.

Binnalong Bay is surrounded by the RNE listed 'Mount Pearson Area'. Although this listing is largely based on the significant flora and fauna within it, the citation recognises the likely existence of Indigenous cultural values in the place although none were identified by the Australian Heritage Commission during its documentation in the mid 1990s.

The case study area does not contain any other non-Indigenous heritage designations, although, as described above, four shacks on Binnalong Bay Road near Binnalong Gulch have previously been considered for inclusion on the National Heritage List (NHL). Three of these have been demolished in recent years when their leases expired, the logic of PWS, who are charged with managing several often conflicting values, in this situation being that the amenity value of the site was greater than the heritage value of the shacks (Peter Rigozzi, PWS Heritage Officer, pers. comm.). Whilst the surviving example is in the ownership of Council it is currently vacant and faces an uncertain future (Gary Richardson, a member of the advising committee, pers. comm.). Should future tourism developments in the area seek to utilise this structure, this could result in a positive impact on the heritage of the area.

A deal of controversy accompanied the 2013 installation of the Bay of Fires viewing platform overlooking Binnalong Gulch, on the seafront, with the 6m x 6m aluminium platform described as an 'eyesore' (The Mercury 3rd July 2013). The local community's desire to safeguard the existing landscape should be recognised in development planning.



Figure 53: Extract from 1:100,000 TASMAP of Binalong Bay case study area



3.5.7 St Helens

Post-contact history and character

Known initially as 'Georges Bay' by the areas first European settlers and Kunawra Kuna, or easy walking place, in the local Aboriginal language of the area's first inhabitants, the area was originally surveyed from December 1825 to January 1830 by Colonial Surveyor John Helder Wedge, and the first allocation of land was made in March 1830 to Wedge himself. Upon the instigation of his superior in Hobart, Surveyor General George Frankland, Wedge took inspiration in the naming of landmarks from Greek mythology. The myth of Jason, the Argonauts and the Golden Fleece provided the names for 'Medeas Cove', one of the eastern most estuaries of Georges Bay, after Jason's wife the sorceress Medeas, and the mouth of Medeas Cove passing into Georges Bay, became 'Jason's Gates'. Tributaries of Medeas Cove and Georges Bay include Golden Fleece Rivulet, Argo Creek and Colchis Creek. In antiquity Colchis was an Asian state south of the Caucasus that was visited by the Argonauts. In the late nineteenth century the theme was continued by the local community who named a new bridge across Jason's Gates the 'Golden Fleece Bridge'.

Gazetted as a town by 1859, St. Helens took its name from St. Helens Point, located at the mouth of Georges Bay, which had been named in 1773 by Captain Tobias Furneaux on the same trip that he named many notable bays and peaks along this part of the East Coast. In turn, St. Helens Point had taken its name from the village of St Helens on the Isle of Wight, located off the south coast of England. The area was later charted in 1798 – 1799 by Captain Matthew Flinders.

Large grants of land in the area were distributed early to prominent land owners, predominantly from the Fingal Valley west of St Marys, but permanent settlers did not begin to arrive until the late 1840s. These mainly consisted of early farmers and inn keepers servicing the sealers, whalers and swanning industry who exploited the Georges Bay area from the early nineteenth century. Seals were known to populate St. Helens Island, off the coast of St. Helens Point, while Moulting Bay in the larger Georges Bay estuary was populated with Black Swans which were killed for their feathers for use as down. Initially the town developed slowly as a minor coastal fishing port and agricultural centre. But in 1874 the discovery of alluvial tin ore on the Blue Tier mountain range inland from St. Helens prompted an influx of people and, together with the development of port facilities for the shipping of ore and related services, this created the large regional centre that exists today. In turn this spurred an expansion of already existing industries, including dairy, fishing and forestry, as the town's port provided access to associated external markets.

By the 1950s and 1960 the towns' role as a major service centre, combined with its scenery and attractions, had seen it develop as a major holiday destination with a concentrated construction of holiday shacks, houses and hotels. Guesthouses were a staple in the area, and one - the Warrawee Guesthouse, has been operating since 1934. The level of services available in St Helens also created a large service based industry for retirees that were attracted to the area. The attraction of Georges Bay as a holiday destination began as early as 1836, when nine allotments along the shoreline of O'Connors Beach were surveyed and taken up by prominent Fingal Valley landowners, probably as holiday blocks on the basis of their size. This early tradition resulted in the formation of several small coastal estates as holiday destinations, with comfortable houses featuring interesting architecture established on these properties including 'The Glen', 'Fairlea' and 'Queechy' in the early twentieth century. Many of these properties were subdivided during the influx of retirees in the 1970s (Fairlea) whilst others were converted into hotels (Queechy), but several are still maintained by these early families as holiday homes. Georges Bay became a popular holiday destination for Governor, Charles DuCane who became the first 'tourist' to the area in the 1870s, when he journeyed from Hobart to holiday at Georges Bay in the 1870s and was delighted with its fishing and shooting.

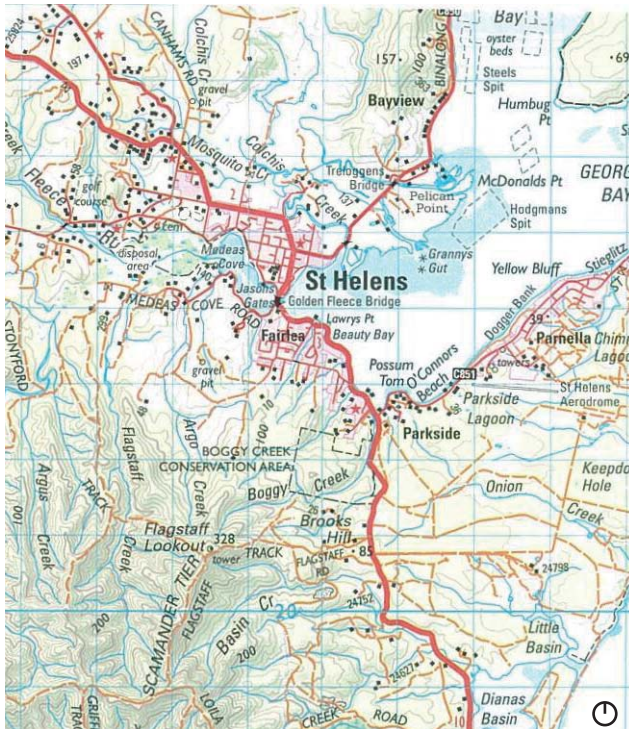


Figure 54: Extract from 1:100,000 TASMAP of St Helens case study area



St Helens remains a large service centre with its staple industries consisting of a commercial fishing industry and local and interstate based tourism. The town's early development is represented by its many surviving nineteenth century community buildings, including the local Anglican church, the early state school building and the former post and telegraph office, and a number of structures reflecting the shack culture of the 1950s and 1960s remain within the area. These are now accompanied by more recent buildings providing core services including several bank branches, independent supermarkets, chain variety stores, clothing stores, a newsagent, a pharmacy and cafes and restaurants. A significant number of holiday shack rentals exist within the great St. Helens area, which includes Fairlea, Parkside, Parnella, Stieglitz and Akaroa, and extends to the Binalong Bay and The Gardens areas.

Known cultural heritage and potential development impacts

Only two Aboriginal sites, both stone artefact deposits, are recorded on the TASI database as lying in the case study area. Given the prevalence of Aboriginal sites along the coast, demonstrated in other case study areas, this can be attributed to a lack of investigation in urban areas, and perhaps in part to the destruction of deposits during the town's development. Consideration should therefore be given to the potential for Aboriginal archaeological sites in the area, particularly beyond the edges of the town.

The Medeas Cove Conservation Area listed on the now defunct RNE is based on its being a significant wetland and habitat for waterfowl, and the citation makes no reference to cultural heritage.

A number of significant places are recorded in the historic centre of the town, and to the south of the cove in Fairlea, on local and state level heritage registers. The former include some of the earliest structures in the settlement whilst the latter comprise some of the early homestead properties mentioned above. These places are unlikely to be subject to negative impacts arising from tourist development in the area, except in the improbable event that physical alterations to them are required, or that development is of a scale and nature that is particularly unsympathetic to their setting. It is more likely that, with appropriate management, increased visitation, and an accompanying increase in resources, will help to safeguard these historic structures.

statutory listings

tasi place

artefact scatter & shell midden

isolated artefact

tasmanian heritage register
(thr) place

locally listed heritage places

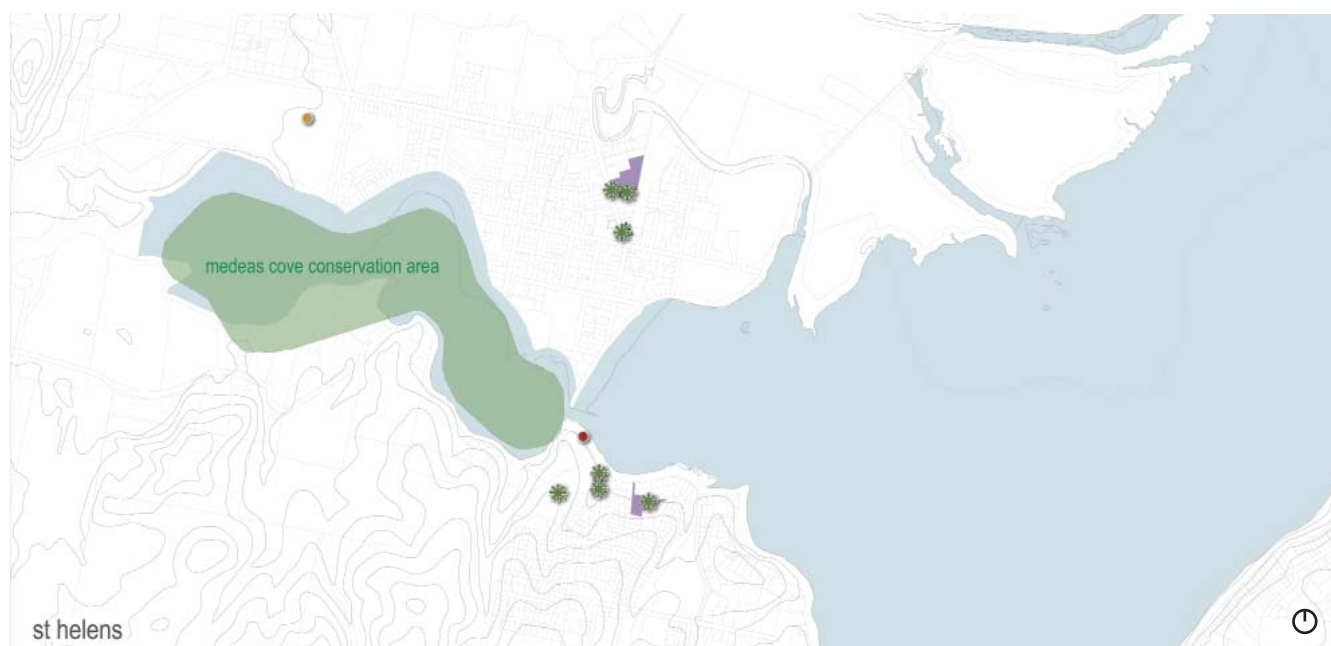


Figure 55: Known cultural heritage in the St Helens case study area



3.5.8 Diana's Basin

Post-contact history and character

Like St Helens, this tidal lagoon was also surveyed by Colonial Surveyor John Helder Wedge from December 1825 to January 1830 and, as with the landmarks of that locale, its naming was also inspired by Greek mythology. At the mouth of the lagoon, Dianias Beach shares this name, whilst to the north Maurouard Beach stretches nearly 10km north to St. Helens Point. In January 1831, during the early exploration of the area, the Aboriginal conciliator George Augustus Robertson made camp at a small lagoon near the Basin after walking down Maurouard Beach from Georges Bay during his attempts to direct the tribes in the area away from increasing European settlement in the Georges Bay area.

Dianas Basin forms part of the St. Point Conservation Area, a 1066 hectare coastal reserve that stretches from Dianias Basin in the south to St. Helens Point in the north. Coastal sand dunes covered in a combination of coastal shrubs and Marram grass protect the Basin from Dianias Beach and the prevailing winds. A series of day use car parks and a popular camping area have been established amongst the small button grass plain between the dunes, with views towards the dense Eucalypt forest of the St Helens Point Conservation Area on the opposite shore.

Known cultural heritage and potential development impacts

Only two Aboriginal heritage sites are recorded on the TASI database as within this case study area, both of which comprise shell midden deposits with associated stone artefacts. However, given the prevalence of these sites along the coast, as demonstrated in the nearby case study areas, development proposals should recognise the high potential for as yet unrecorded places to exist along the coastline.

No other heritage designations exist within this case study area.

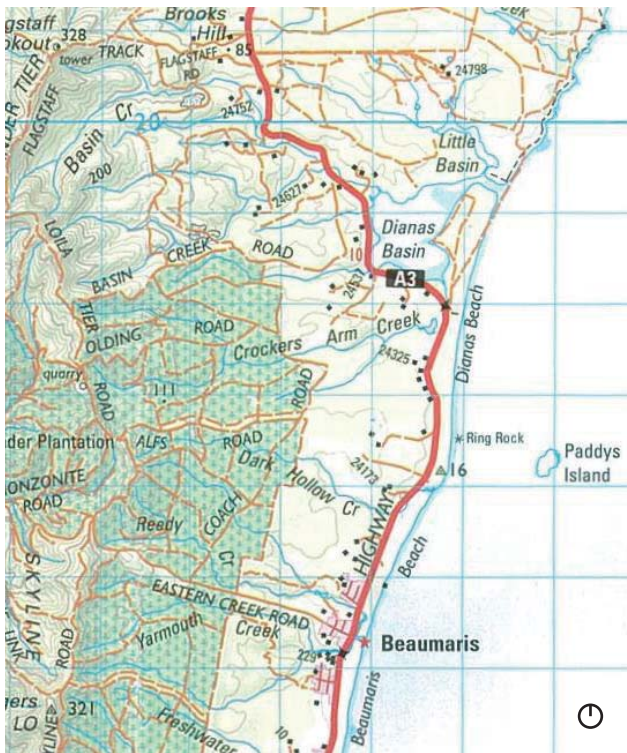


Figure 56: Extract from 1:100,000 TASMAP of Diana's Basin case study area

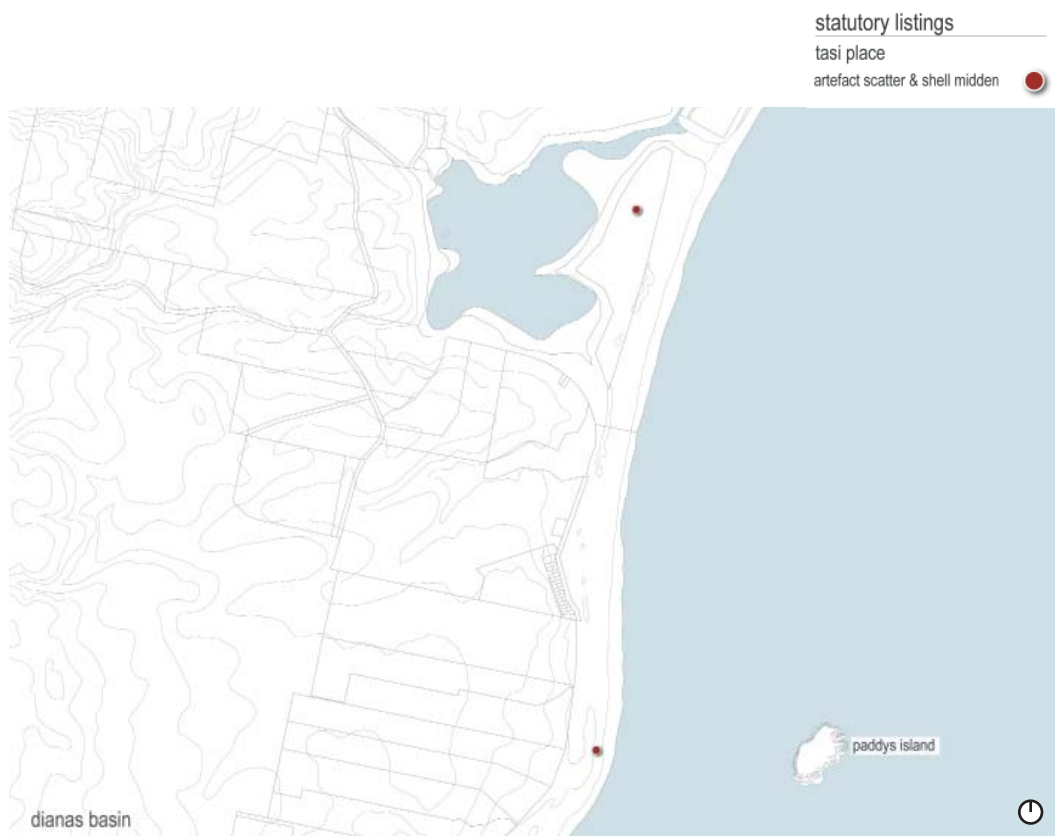


Figure 57: Known cultural heritage in the Diana's Basin case study area



Figure 58: Known cultural heritage in the Scamander case study area



3.5.9 Scamander

Post-contact history and character

Initially established as a bridged river crossing in 1865, the future town of Scamander was gazetted in 1883 as the town of Yarmouth before eventually adopting the name of the Scamander River. The river had been named by the Colonial Surveyor John Helder Wedge following the theme he had employed in the surveying and naming of Georges Bay and Dianas Basin from late 1829 to early 1830 in taking inspiration from Greek mythology - the Scamander River took its name from the river of the same name that flowed across the Trojan Plains and into The Dardanelles, near the ancient City of Troy. Following the closure of a series of short-lived silver and tin mining operations along the river corridor in the 1880s, the river crossing expanded as tourism developed in the area, encouraged by the opening of the Scamander Hotel on the northern side of the Scamander River in 1896 followed by the Ocean Beach Hotel on its southern banks. The Ocean Beach was eventually replaced in 1967 by the current Scamander Beach Resort during the more recent growth in the tourism sector from the 1950s through to the 1980s. The river crossing was the site of several bridges, including

the initial bridge of 1865 and replacements constructed in 1889 and 1911, each following damage to the previous structure by severe flooding. A succession of several others culminated in 1934 with the construction of the existing, now decommissioned, truss bridge designed by the noted Tasmanian engineer, Sir Allan Knight - one of the last he completed before his appointment as Commissioner of the Hydro Electric Commission in 1946.

Scamander represents one of the more permanent communities on the upper East Coast, located between the major centres of St Helens and St Marys. Its population comprises permanent retirees and young families and it lacks the migratory population associated with the communities of Binalong Bay, The Gardens, Falmouth and the multiple shack communities contained within greater St Helens. Several large farms are located immediately south of Scamander, and it has become a service centre for the agricultural community and the shack communities of Falmouth and Four Mile Creek further to the south. Scamander had retained the hotels, motels and guesthouses which reflect its tourism based roots despite its majority permanent population.

Known cultural heritage and potential development impacts

Only a single Aboriginal site is recorded on the TASI database as within this case study area. This probably reflects a lack of investigation, especially given the heavily forested nature of the undeveloped land in the area, but it is also perhaps attributable to the extension of historic development north and south along the coastline, most likely destroying shell midden deposits which are characteristic of this part of the coast.

Two RNE listed areas lie within the case study area. The Skyline Tier Area to the west is listed on the basis of endemic fauna and geoheritage values whilst the Henderson Lagoon Coastal Area comprising the coastline to the south is listed for its geomorphological features and vegetation communities. Both citations recognise the possible existence of Indigenous cultural values although these were not the focus of the Australian Heritage Commission's documentation in the mid to late 1990s.

The THPI contains five records relating to silver and tin mining sites along the Scamander River, representative of the role this short-lived industry played in the place's development (See THPI site 8515.064 in Appendix 1). Given the expansive nature of mining ventures in this period, it is likely that additional related remains are located throughout the area, presenting both heritage management considerations and the potential for interpretation.

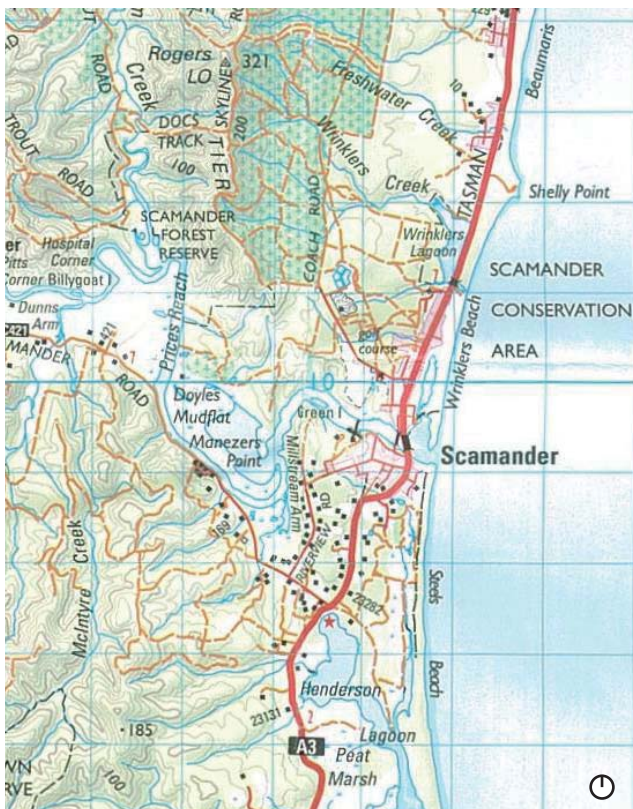


Figure 59: Extract from 1:100,000 TASMAP of Scamander case study area



3.5.10 Falmouth

Post-contact history and character

The town of Falmouth was initially known as ‘St Patricks Point’, due to its proximity to that nearby peak which was named in 1773, before being changed to ‘Henderson Point’ after one of the early settlers who established a farm nearby. Surveyed from 1825 by the prolific Colonial Surveyor John Helder Wedge, who surveyed the majority of that part of the East Coast, Henderson Point was referred to as Falmouth township in maps by 1830 and the town was gazetted by May 1833. It grew around the port facilities that were established to service several early farming properties in the area, notably the Enstone Park (formerly Thomsonville) and Glencoe estates. Agitation by landowners in the Fingal Valley, who wished to have improved access to the port, saw the clearing of St Marys Pass through the Eastern Highlands to improve access to the Port. As part of these clearing works, a probation station to hold over 150 convicts was established at Falmouth who were assigned to commence work on the Pass road.

Following completion of the pass in 1845 formal moves were made to survey the town, and its unrealised lots became popular as seaside properties for the prosperous business communities within the Fingal Valley. The access to the coast provided by St Marys Pass saw a rise in Falmouth’s popularity as a holiday resort and the establishment of a family hotel, the Falmouth Hotel, in 1849, which also served as a vital link and stopover in the transportation network to Georges Bay. Use of the port eventually declined and in the associated economic downturn development in the town waned. Agriculture became the base of the local economy although it continued to be supplemented by the town’s ongoing popularity as a holiday village, and holiday shacks became a significant component of its housing stock.

Today Falmouth retains a permanent population that accounts for at least half of the total, with the remainder consisting of seasonal residents in holiday homes. The housing stock in the village consists of a mix of sizeable permanent homes and shacks built during the late nineteenth and early twentieth century, amongst which several associated with the initial settlement of the village from 1846 remain. These remnant early buildings are set amongst a network of gravel lanes and later modern buildings surrounded by large gardens and stands of old trees, and this creates an established and tactile aesthetic that has contributed to its development as a coastal holiday town. The desire on the part of the local residents to protect this aesthetic has restricted commercial development to the private holiday rental of some of the holiday shacks in the village, and attempts to seal the lanes within the town have been quashed in favour of retaining gravel laneways to maintain low speed limits. All services for Falmouth are currently provided by nearby Scamander.

Known cultural heritage and potential development impacts

A relatively large number of Aboriginal sites on the TASI database are recorded in this case study area and, unusually for a developed area, the township contains a number of recorded Aboriginal sites, both along the coastline and within the settlement. This may be attributable to the large house plots and the retention of patches of woodland within which sites could survive development. As is generally the case throughout the study area, the recorded sites comprise shell midden and artefact deposits along the coast, giving way to isolated artefacts and scatters in the hinterland. The whole of the case study area can be assumed to have potential for Aboriginal archaeological deposits, as would be expected at a confluence of several watercourses such as that occupied by Falmouth.

The Henderson Lagoon Coastal Area, to the north of the township, is listed on the now defunct RNE for its geomorphological features and vegetation communities, rather than for any cultural heritage consideration. The citation recognises the possible existence of Indigenous cultural values although these were not the focus of the Australian Heritage Commission’s documentation in the late 1990s.

Non-Indigenous heritage sites are limited to the site of the probation station and the local cemetery (on the THPI and locally listed respectively) and the Enstone Park and Glencoe homesteads to the west of the main settlement. The latter are also both locally listed, with the latter also listed on the THR at a state level. The current town is a fairly discrete and well defined entity on a grid plan, and large scale development beyond this grid could undermine this character. The strong local desire to protect the town’s aesthetic should be taken into account in planning for development in the area, especially if in-fill development is proposed.



Figure 60: Extract from 1:100,000 TASMAP of Falmouth case study area

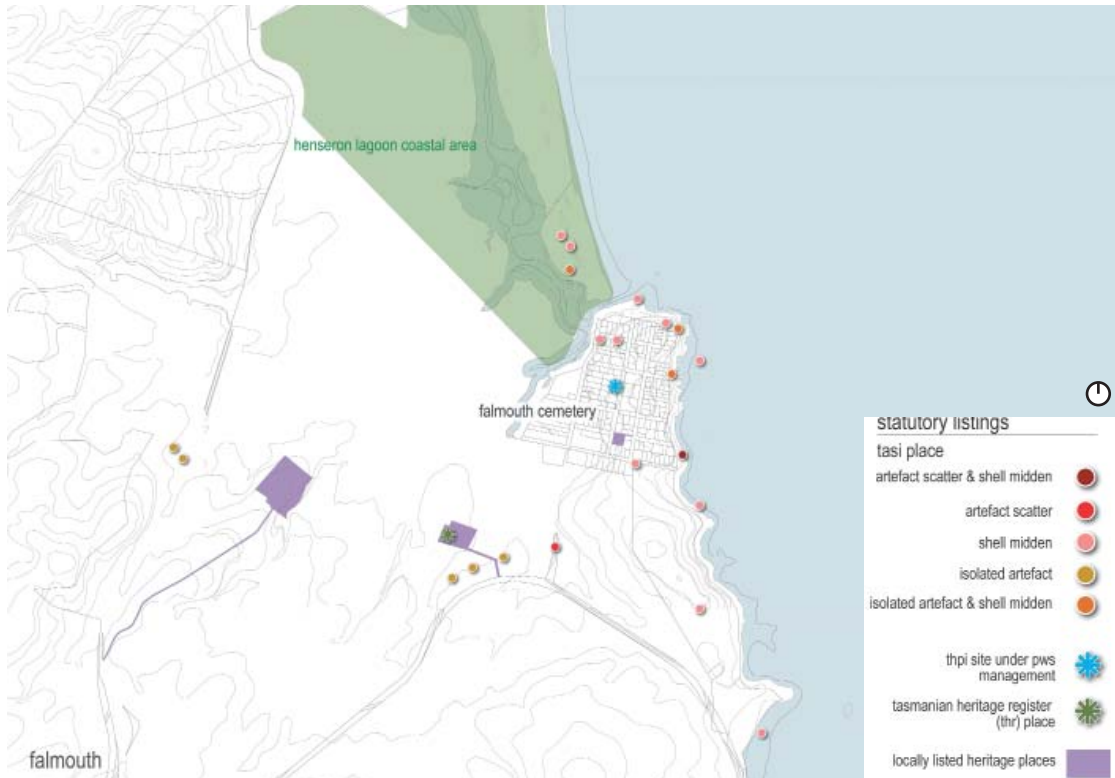


Figure 61: Known cultural heritage in the Falmouth case study area

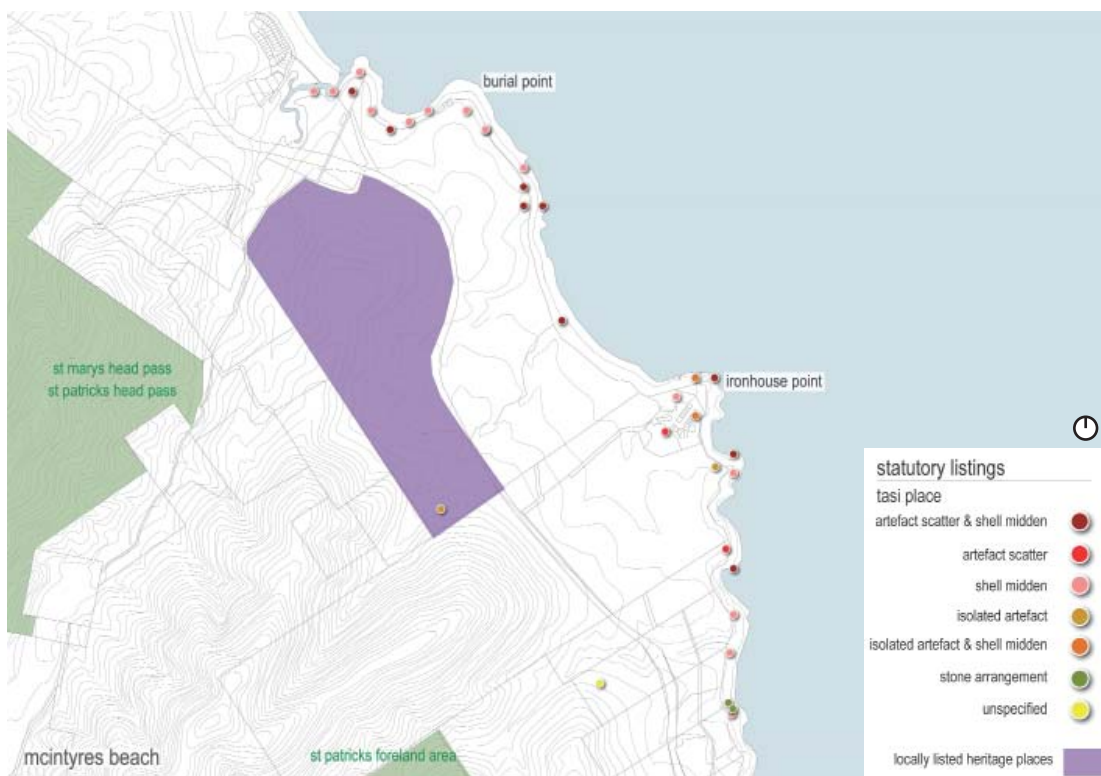


Figure 62: Known cultural heritage in the McIntyre's Beach case study area



3.5.11 McIntyre's Beach

Post-contact history and character

McIntyre's Beach is located between Burial Point and Ironhouse Point to the south of the shack village of Four Mile Creek. The latter took its name from its location, approximately four miles south of Falmouth, and initially consisted of open grazing land associated with the large farming properties of Enstone Park and Glencoe around the perimeter of that settlement. From 1841 Glencoe was the property of Archibald McIntyre, after whom McIntyre's Beach is named, and with whom the history of whom the Four Mile Creek area is closely entwined. McIntyre purchased a further 600 acres of land, which included what became Ironhouse Point, in 1856 and immediately set about building a cottage on the property from the stone on the foreshore which he roofed with corrugated iron sheeting. This was a new building product at the time and apparently the first such roof in the area, and the cottage was coined 'The Ironhouse' by the local community, giving its name in turn to the promontory. Three years earlier in August 1853, Burial Point had earned its name (initially as Burying Point) following the wreck of the coastal trading vessel, the Swan River Packet, on Paddy's Island off Diana's Basin. Three survivors made it ashore from the wreck but they were mistaken by a roving police hunting party for a group of escaped convicts and shot. Two of the survivors were killed in the process, whilst the third died from his wounds at the McIntyre families homestead at Glencoe several months later. The three were interred on the 'Burying Point', their graves being marked with stone cairns behind the sand dunes. The 1950s and 1960s, saw the development of a shack community around the crossing over the Four Mile Creek which also included the Cray Drop Inn, a self contained holiday village on Ironhouse Point which was later redeveloped into the current White Sands Resort in the early 2000s.

McIntyre's Beach remains a popular destination in which the majority of development has occurred at the village of Four Mile Creek and at the White Sands Resort. The majority of the surrounding land consists of cleared grazing land ascending away from the shoreline and into the hinterland. Four Mile Creek retains a variety of holiday shacks dating from the 1950s thorough to the 1960s. As part of the redevelopment of the former holiday village, White Sands developed a new visitor's centre on the site which accommodates a micro brewery, restaurant and conference facility, and the resort has recently extended over Ironhouse Point to include a vineyard and conference facilities.

Known cultural heritage and potential development impacts

This case study area contains a large number of Aboriginal sites recorded on the TASI database which continue along the full length of its coastline. In reality these individual records probably represent a contiguous band of cultural heritage material deposits, and this

should be recognised in planning for any development on the coastline. Far fewer sites are recorded in the hinterland, and this is almost certainly attributable in part to a lack of visibility amongst the dense forest in these areas, but it probably also reflects an actually lower density of previous human activity in these areas. The Glencoe estate is included on the local list of heritage places maintained by Break O'Day Council, but the majority of the large area listed (which presumably reflects the historic or current extent of the property) is removed from the homestead itself by forest, such that development within, or around, the property would have little impact upon its setting.

The St Marys Pass-St Patricks Head Area, to the west of the case study area, and the Little Beach Creek-Lower Marsh Creek Area, to the south, are both listed on the now defunct RNE for their biogeographic and geoheritage values. However, both are also recognised as of cultural heritage significance as forest places important for aesthetic characteristics, in particular spectacular views and landmark qualities, and of social significance to the St Marys community in that St Marys Pass and Elephant Pass (within the Little Beach Creek-Lower Marsh Creek Area) symbolise the separation of coastal and inland communities. Tourism development in these areas would benefit from these values, but should be undertaken in a manner which is sympathetic to their conservation.

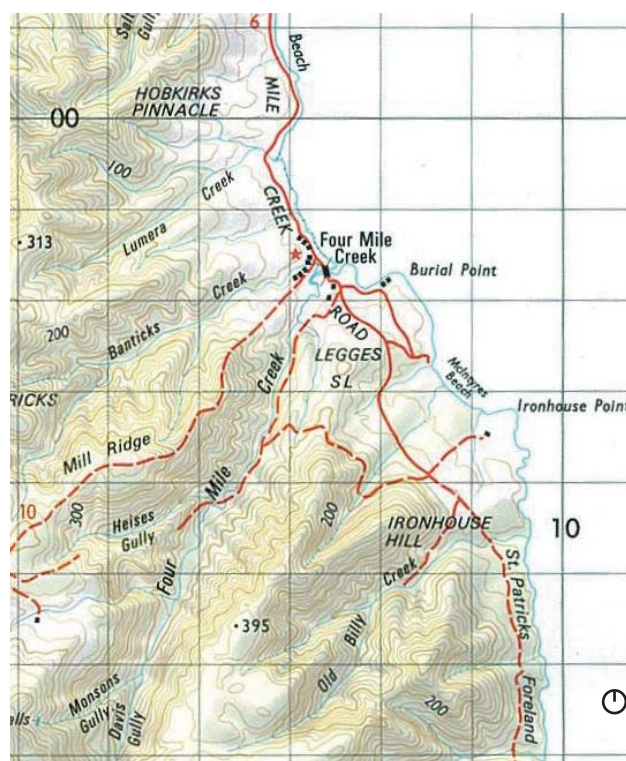


Figure 63: Extract from 1:100,000 TASMAP of McIntyre's Beach case study area



3.5.12 St. Marys

Post-contact history and character

The St Marys area was originally known as the St. Patricks Head District, after the peak under which St. Marys is located which was named on St. Patrick's Day (17th March) 1773 by Captain Tobias Furneaux as he sailed to re-join Captain James Cook's second Pacific expedition following his ships separation from Cook's fleet. St Marys developed as a regional agricultural centre to several large estates, which had been established by landed families from the 1820s, and their respective satellite communities of tenant farmers. The settlement took its current name from St Marys Pass which was cleared over the Eastern Highlands to the port and village of Falmouth following agitation by landowners in the Fingal Valley who wished to have improved access to the port. As part of these clearing works a probation station was built at Grassy Bottom between the town and St Marys Pass assigned to house 300 convicts to work on the road. The probation station was closed on completion of the Pass in 1845.

The character of the town was defined by a period of rapid development from the late nineteenth century up until to World War I which spanned the discovery of coal in the late nineteenth century, the establishment of the Cornwall and Mt Nicholas Collieries outside the town and the construction of a branch of the Tasmanian Mainline Railway terminating at St. Marys in 1886.

This late developmental character is today represented in the towns heritage of late nineteenth century commercial buildings along the towns commercial street, Main Street, and their concentration around the towns largest building, the St. Marys Hotel which was constructed at a cross roads in the centre of the town from 1910-1917. The town's stock of residential housing consists of detached late nineteenth century miners cottages and understated late Victorian (1886 – 1901) and Federation era (1890-1915) villas. Economically, the town remains an important local service centre to the surrounding agricultural industry and the still active, yet significantly reduced, coal mining industry. It includes a hotel, local library, service station, independent supermarket, bakery, butchery, news agency, pharmacy, postal office, hairdresser, community health centre, child care centre, district high school, golf club and two churches. Located on a major arterial route that connects the national Midlands Highway with the state Tasman Highway, the town acts as a gateway to the St. Patricks Head and St Marys Pass State Reserves and accommodates tourists at the St. Marys Hotel and several smaller bed and breakfasts.

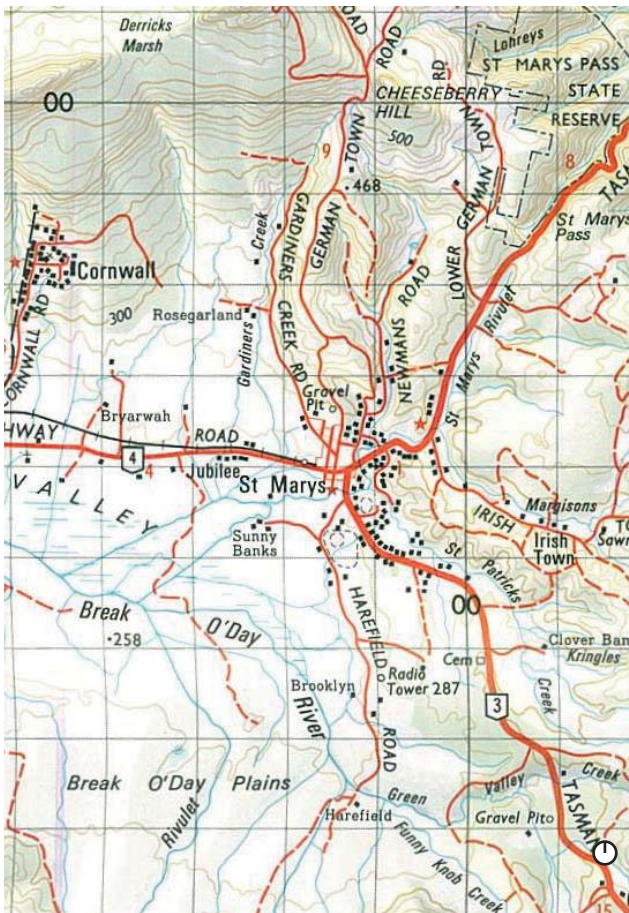


Figure 64: Extract from 1:100,000 TASMAP of St. Marys case study area



Known cultural heritage and potential development impacts

Only a single Aboriginal heritage site on the TASI database is recorded in this case study area. Compared to those nearer to the coast, the archaeological potential of this case study area is likely to be lower in reality, but the lack of recorded sites probably also reflects a combination of a lack of investigation of inland areas, a lack of surface visibility in the forest and pasture surrounding the town and the destruction of sites within the town area through historic development.

A number of historic buildings lining the Esk Highway as it runs through the historic centre of the town are recorded on the THR. Each is also recorded on the local heritage list, which generally also includes the land parcel around the building, but no additional non-THR places are included on the local list. The listings include several outlying historic properties that relate to agricultural industries - for example the St Marys Cheese factory and Slab Slaughterhouse sites. The historic places in the centre of town are unlikely to be subject to negative impacts arising from tourist development in the area, except in the improbable event that physical alterations to them

are required, or that development is of a scale and nature that is particularly unsympathetic to their setting. Impacts to outlying places may be more likely, but all of these historic places could provide, or contribute to, a tourist attraction, and it is more likely that appropriate management, increased visitation and an accompanying increase in resources will help to safeguard the historic structures.

The THPI records the location of the St Marys Probation Station in the hills to the north east of the town, and it is likely that St Marys Pass contains a large number of as yet unrecorded historic sites relating to its construction and historic use. The pass itself is an attraction, for its history and particularly its aesthetic qualities, but these could be threatened by any development within the tight confines of the landscape, especially if associated infrastructure projects are required.



Figure 65: Known cultural heritage in the St. Marys case study area



3.5.13 Chain of Lagoons

Post-contact history and character

The Chain of Lagoons area consists of open farmland behind a coastal reserve of heath and shrubbery which extends from Four Mile Creek in the north to the Denison River in the south. The majority of this farmland belonged to the Chain of Lagoons estate which began in 1856 with a 286 acre grant to settler Robert Wardlaw who later extended the estate with a 500 acre lease over land from the Crown. The Chain of Lagoons homestead which still stands near Wardlaw's Creek is representative of the conservative Georgian style which was still used during the mid Victorian period in remote parts of Tasmania. Throughout its history the Chain of Lagoons property has been notable for its fine wool production, and this reputation led to its purchase from the Wardlaws by a notable Hobart stockbroker in the late twentieth century.

The inclusion of much of this stretch of coastline in the Chain of Lagoons estate has resulted in a lack of development, but the good fishing, swimming and surfing in the Lagoons Beach Coastal Reserve has seen a popular camp site develop at Lagoons Beach. This is administered by the Parks and Wildlife Service who have established WC facilities at the site, and represents one of the only major coastal campsites along this section of the East Coast.

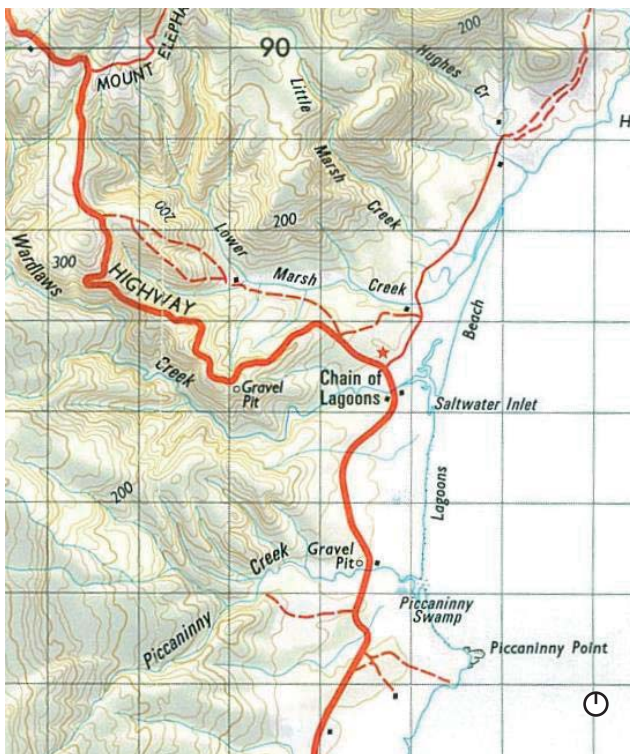


Figure 66: Extract from 1:100,000 TASMAP of Chain of Lagoons case study area

Known cultural heritage and potential development impacts

The Lower March Creek Area to the north west of this case study area is listed on the now defunct RNE primarily as rare faunal habitat, and, as the name suggests, the 'Mount Elephant Velvet Worm Habitat' area is also based on its natural values. But the accompanying citation for the former does also recognise the aesthetic value of the steeply sloping landscape. The Little Beach Creek-Lower Marsh Creek Area to the west is listed on the RNE for its biogeographic and geoheritage values, but also its cultural heritage significance as a forest place important for aesthetic characteristics, in particular its spectacular views and landmark qualities, and of social significance to the local community. The citation states that Elephant Pass to the north west provides a vital link between the hinterland and the coast, but that it also represents a geographical and social barrier that separates communities of the Fingal Valley from those of the East Coast. The Pass is therefore integral to the identity of the area and as having been in constant use by locals and tourists since the 1880s. Tourism in these areas would benefit from these cultural heritage values, but any related development should be undertaken in a manner which is sympathetic to their conservation.

The RNE citations recognise the possible existence of Indigenous cultural values although these were not the focus of their documentation. Unusually for the study area, this case study area contains relatively few recorded coastal Aboriginal sites, which generally comprise shell middens, but several sites characterised by artefact scatters or isolated finds are recorded inland. Given the high archaeological potential of the coastline demonstrated in other case study areas, it should be assumed that this lack of recorded sites is attributable to a lack of investigation rather than an absence of cultural heritage material, and this should be borne in mind in planning for any intrusive development.



Figure 67: Known cultural heritage in the Chain of Lagoons case study area

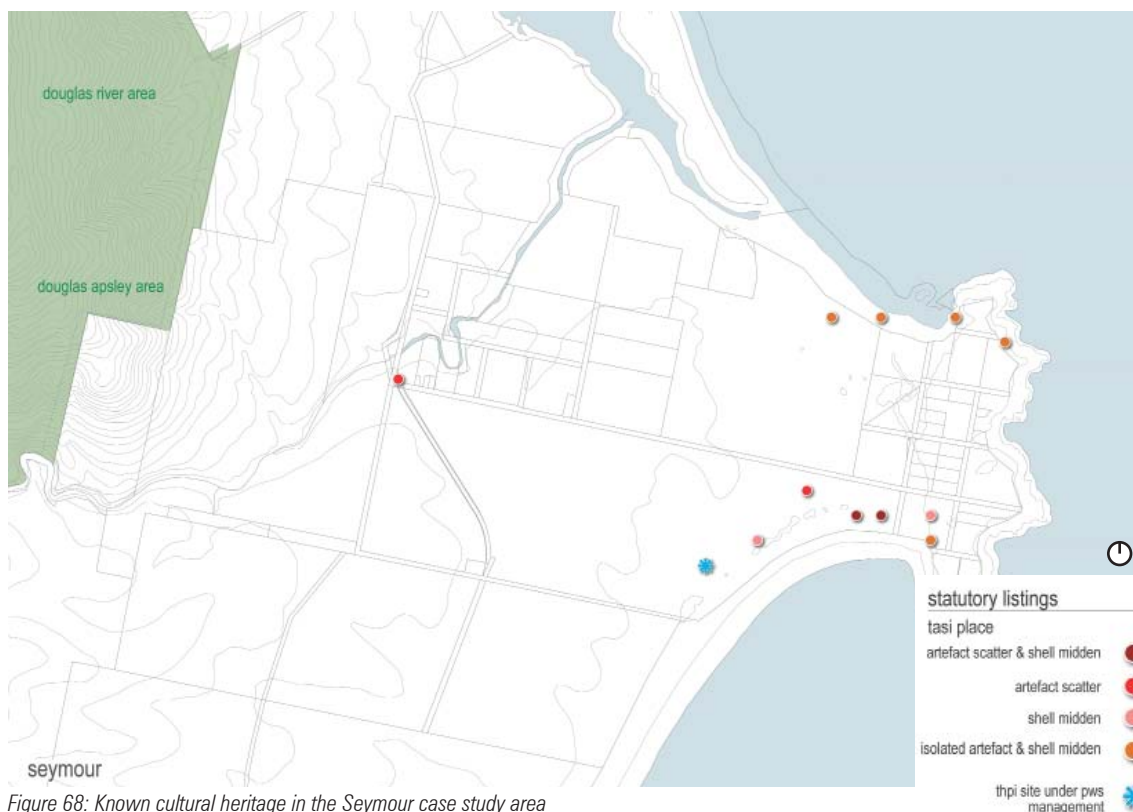


Figure 68: Known cultural heritage in the Seymour case study area



3.5.14 Seymour

Post-contact history and character

Located on the exposed outcrop of Long Point, Seymour was initially established as an isolated farming settlement, but by 1859 the town was gazetted with a grid of named streets emanating from a town centre on Long Point. The settlement developed along much the same lines as other coastal settlements in the region, such as Falmouth, being primarily serviced by sea, initially having no road link to the developing centres of Bicheno or St Marys with and then only rudimentary tracks connecting it to these more established inland and coastal settlements. By 1877, the fledgling settlement consisted of a total population of 33, benefitting from a twice weekly mail service, which arrived via rough coastal track from Falmouth.

Coal mines were established at Seymour from 1861, together with a brick works and associated shipping facilities such as piers, and this saw the local postmaster assume the role of a customs clearing officer. Multiple mines were developed across the area by a number of companies, each with their own piers and coal bins, and these came to extend across the grazing land surrounding Long Point and the township reserve.

Today, Seymour appears as something of a makeshift settlement with a small permanent population occupying late twentieth and early twenty first century homes and holiday houses scattered across the undulating landscape of Long Point. A combination of the disturbed mining landscape and coastal heath, including mature introduced pine trees and an abundance of gorse, spreads across the surrounding farmland and hugs the single lane running into Long Point, this ensuring the privacy of the hamlet. This sense of privacy has resulted in several of these modern homes becoming sought-after guest houses with the summer holiday trade. While Seymour seems very much a modern settlement, the remains of the former town grid, with street names including Champ and Pedder Streets, the districts small cemetery and late nineteenth and early twentieth century mining artefacts represent its early past.

Known cultural heritage and potential development impacts

Two listings on the now defunct RNE - the Douglas River Area and Douglas Apsley Area, are located at the western edge of this case study area. Both are listed for their natural, rather than cultural, heritage values.

The TASI database records a number of Aboriginal sites around Long Point, to the east of Seymour. These are probably representative of similar, as yet unidentified, sites along the coast, although the rocky headland was probably a focus for previous human activity. A single artefact scatter is recorded in Seymour itself, reflecting a lower archaeological potential in the inland areas.

The THPI records the site of the Seymour Coal Mines Long Point mine, which was in use from the 1860s, but no other non-Indigenous heritage places are recorded in the case study area. However, the sleepy character of the town is vulnerable to development that might greatly increase visitation and the associated requirement for additional infrastructure.

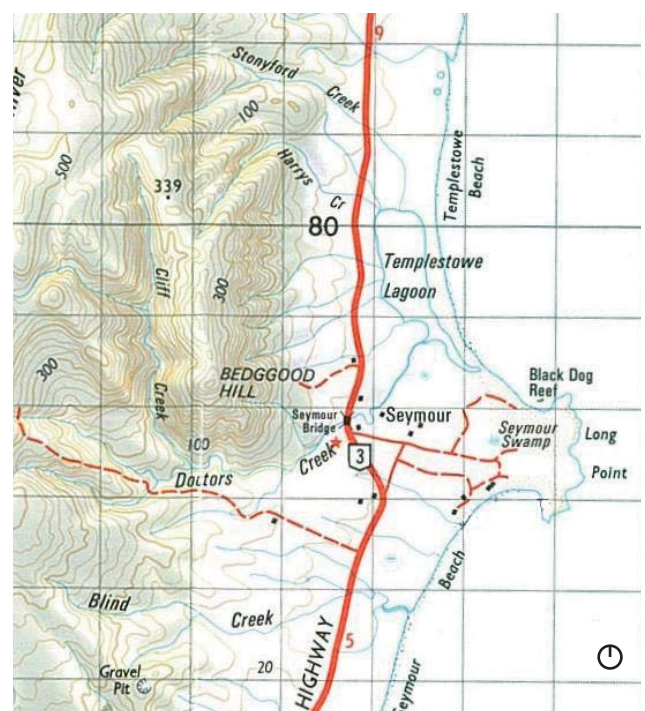


Figure 69: Extract from 1:100,000 TASMAP of Seymour case study area



3.5.15 Bicheno

Post-contact history and character

A seasonal whaling station known as ‘the Old Fishery’ was established in the early days of the colony at the small coastal granite peak known as Whalers Lookout, which now forms part of the Lookout Rock State Reserve. This rudimentary settlement and its protected harbour, initially called ‘Waubs Boat Harbour’, later acted as a maritime trading centre for the early agricultural properties that were established in the area from 1826 and the short lived on-shore whaling stations that were established along this section of the East Coast throughout the 1830s and 1840s. The discovery of coal to the north of the settlement in the 1840s saw the formal gazettement of the town of Bicheno, which was named after the Colonial Secretary of then Van Diemen’s Land, James Ebenezer Bicheno, in 1845 and the proclamation of the town in 1866. The early coal discoveries were developed by the Douglas River Coal Company, and the use of convict labour in its mines created Bicheno as the administrative centre of the Greater Douglas River Probation Station. A court house and watch house were thus established in the settlement, in addition to the Douglas River Coal Company’s

coal loading infrastructure at Waubs Boat Harbour. Constructed in November 1854, the latter included a masonry coal bin constructed from coastal foreshore stone which was linked to the early mines via a horse drawn tramway constructed using convict labour. With the decline and eventual closure, in 1858, of the mine workings farming began to take over as the staple industry along this part of the coastline, and Bicheno was relegated to a regional centre in which its wharf continued to serve as a receiving point for the agricultural properties in the area. The town itself only supported a police officer, shop keeper and a handful of families, and the local church, the lynch pin in so many small and remote communities, was not constructed until 1882.

In the late nineteenth century the realisation of the rich fishing grounds along this part of the East Coast saw Bicheno develop significantly. A strong fishing industry had developed by the 1930s and a series of small guesthouses also serviced an infant tourism industry during the early twentieth century. Following the Second World War, and with the proliferation of motor transport, Bicheno became a burgeoning centre for tourism on the East Coast from the late 1950s through to the 1970s. Advertised as the ‘Gold Coast of Tasmania’ by the 1960s, the area’s reputation as Tasmania’s playground was spearheaded by several key developments, many of which were constructed by the same entrepreneur, Brian Winspear, individually and in partnerships. These developments, which included the Silver Sands Motel (1959), the Midway Motel (1964), and the Bicheno Holiday Village (1975), catered for different levels in the market ranging from coach based tours at the Midway to luxury based tourism at the Silver Sands. Bicheno’s rich fishing heritage was portrayed at the Sea Life Centre (1979) which combined an aquarium and seafood restaurant to promote the Tasmanian seafood industry.

Bicheno is one of the largest towns and service centres on the East Coast, retaining a significant fishing industry alongside a large retiree and shack population. The relatively large permanent population supports several services within the town, including several small independent supermarkets, a butcher, bakery, newsagents, service station, bank, several cafes and a local surf lifesaving club. Several small resorts remain in the town also, including those developed during the town’s initial major tourism development period from the 1950s to the 1970s.

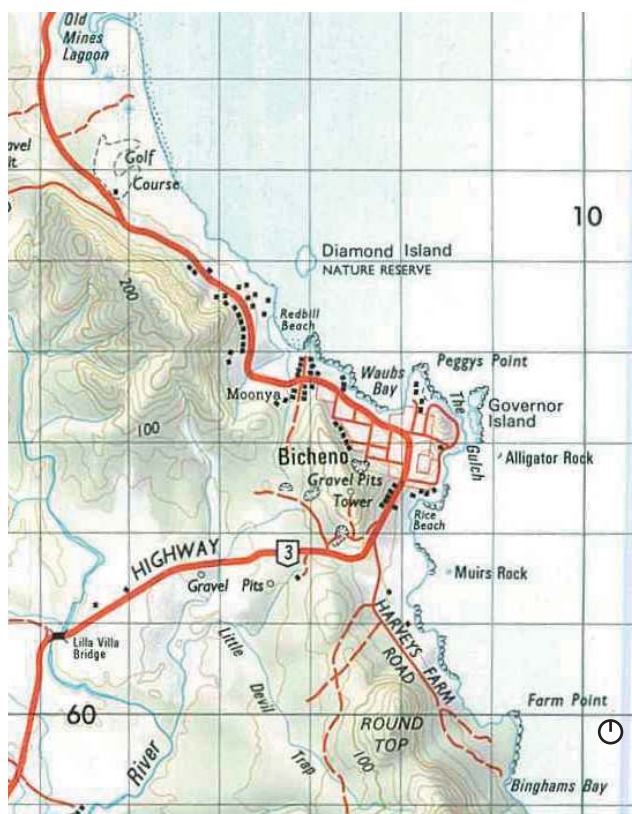


Figure 70: Extract from 1:100,000 TASMAP of Bicheno case study area



Known cultural heritage and potential development impacts

Several historic structures in the centre of the town or included on the THR. These are unlikely to be subject to negative impacts arising from tourist development in the area, except in the improbable event that physical alterations to them are required, or that development is of a scale and nature that is particularly unsympathetic to their setting.

A number of known non-Indigenous archaeological places recorded on the THPI and other lists lie in the coastal reserve, including the site of the Douglas River probation station and the Bichenó Coal jetty and associated ruins. These sites could provide attractions for tourist visitation, although any developments on this basis should prioritise the conservation of the sites, and recognise that related elements, perhaps sub-surface, may exist beyond the locations recorded. In addition, a site of 'shared value' in the form of the grave of Wauba Debar an Aboriginal woman who was memorialised for her heroism in rescuing two sealers during a storm, is located in the reserve, and this site will be a focus for intangible associations held by the Tasmanian Aboriginal community that should be respected in any related or nearby developments.

The Apsley Conservation Area and Diamond Island Nature Reserve, to the west and north of Bichenó respectively, are listed on the now defunct RNE. Both are primarily listed for their natural values, but the citation for the former acknowledges that the area may have Indigenous heritage values which were not the focus of its recording, and this will almost certainly be the case for Diamond Island. A number of Aboriginal sites recorded on the TASI database extend around Waubs Bay and the coast around the town, probably reflecting contiguous deposits extending along the entirety of the coastline, and this archaeological potential should be recognised in planning for any development in these areas. Relatively few sites are recorded inland, and this probably reflects a lower potential in these areas, although this may also be in part attributable to the lower visibility of sites in such wooded areas.



Figure 71: Known cultural heritage in the Bichenó case study area



3.5.16 Isaacs Point campsite (The Friendly Beaches)

Post-contact history and character

The Friendly Beaches were located in proximity to one of the original privately owned properties within the area, an estate comprising approximately 400 acres. These areas fell outside the boundaries of the game reserve which was established over all Crown Land on the Freycinet Peninsula in 1906 and then elevated to the status of National Park in August 1916. In 1992 the Friendly Beaches were incorporated as a coastal area within the National Park's boundaries.

The Friendly Beaches represents a combination of private and public owned land which is recognised to be of outstanding national beauty. The 400 acre property was privately purchased by Bush Heritage Australia (BHA) in 1997 and this saw the establishment of the Friendly Beaches Reserve, containing coastal heath bushland and saltwater lagoon, which is administered by BHA. The rise of ecologically sustainable tourism in the appreciation of the area's natural beauty saw the establishment of The Freycinet Experience Walk and the associated Friendly Beaches Lodge in 1992. The architect designed eco lodge, which received awards from the Royal Australian Institute of Architects, established a bench mark in experiential accommodation and prompted the evolution of the luxury tourism experience, and the same business plan was employed in

the development of the Bay of Fires Lodge at Mt William National Park in the late 1990s.

The Friendly Beaches and its camp site, which are serviced with toilet facilities, remain popular as one of the few locations on which to camp on the Freycinet Peninsula.

Known cultural heritage and potential development impacts

The whole case study area lies within an area listed on the now defunct RNE as the 'Freycinet - Friendly Beaches Area'. This listing is primarily based on the area's natural values, including relating to important wetlands and old-growth forests, but it should be recognised that these values also translate into cultural significance for the Aboriginal community. The citation identifies that the Freycinet-Friendly Beaches area is significant as a forest place important to the community for its aesthetic values, including its spectacular dry sclerophyll forested granite peaks and coastal scenery of rugged granite cliffs. It also identifies that the place is of social value as a signature landmark for the East Coast and a 'long valued haven for holiday makers wanting a quality bush experience in an area of near pristine beauty'. Development proposals will need to be prepared in consultation with the community on these values, and potential impacts to them.

The citation states that significant Indigenous values are known to exist in this area and further notes that the (Australian Heritage) Commission consulted with relevant Indigenous communities about the amount of information to be placed on public record, but no information is provided on the results of this consultation.

Aboriginal sites, comprising shell middens and accompanying artefacts, are recorded on the TASI database spaced along the coastline of the case study area. These individual records probably reflect a contiguous band of cultural heritage material running along its whole length, and any proposed development should recognise this high potential for sub-surface deposits in this coastal context.

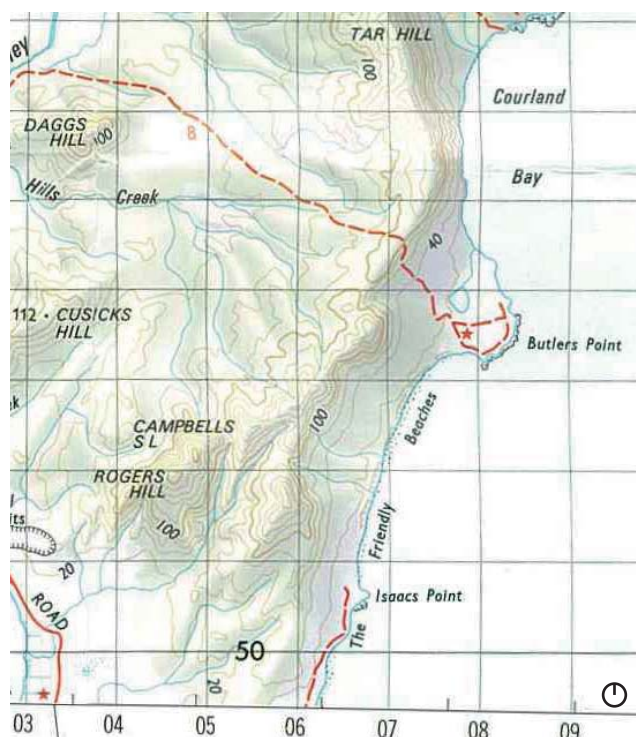


Figure 72: Extract from 1:100,000 TASMAP of Isaacs Point campsite case study area

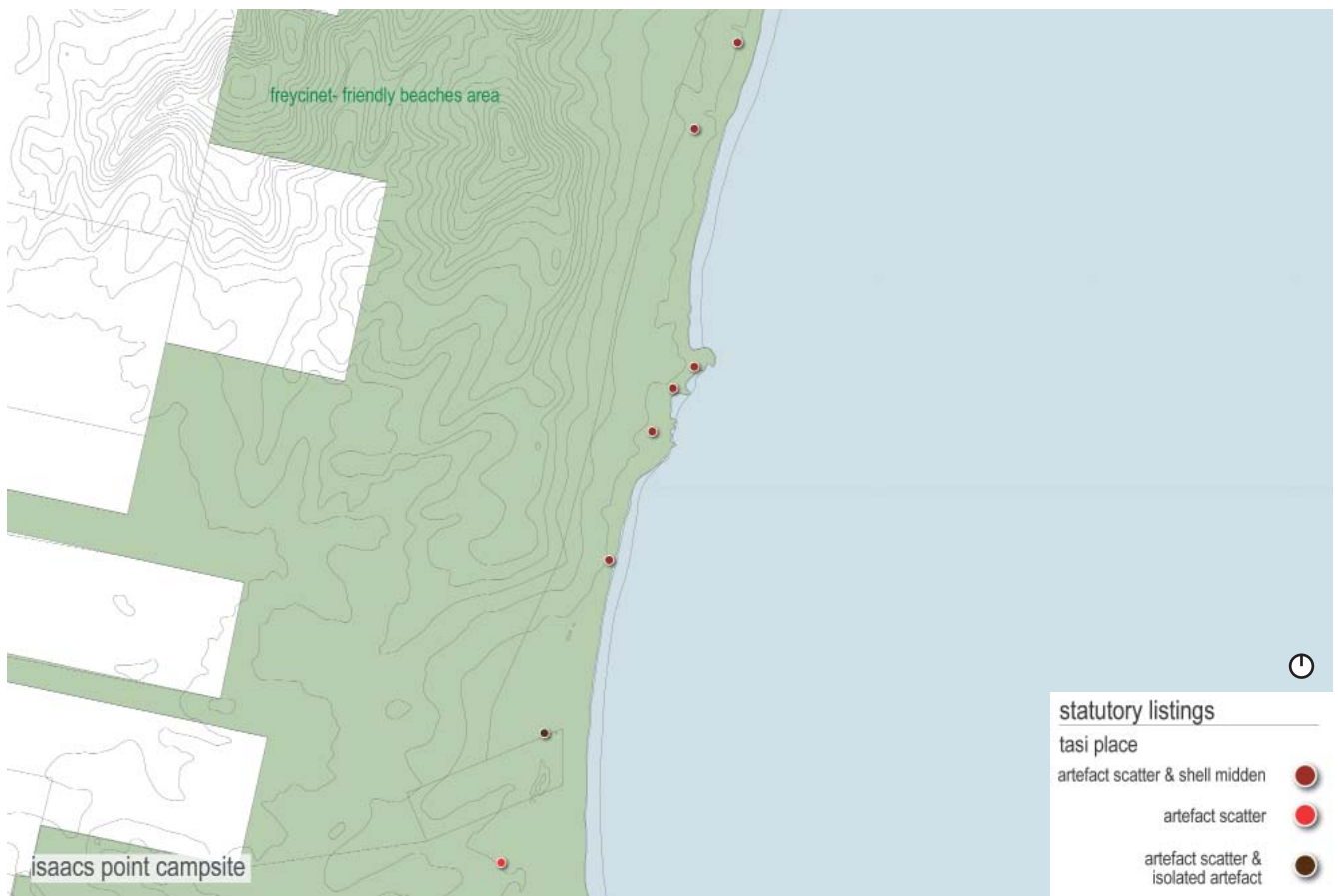


Figure 73: Known cultural heritage in the Isaacs Point campsite case study area



3.5.17 Coles Bay

Post-contact history and character

No formal township existed at Coles Bay until the early twentieth century, but the settlement is now the main township on the Freycinet Peninsula. Initially charted and named 'Vanderlins Eylandt' by Dutch explorer Abel Tasman in 1642, the Freycinet Peninsula was again charted in 1789 by Captain John Henry Cox. Further expeditions and charting of the area occurred under the 1802 French scientific expedition of Captain s Baudin, who named the Peninsula and several of its notable landforms, including Cape Faure, Cape Baudin, Cape Forestier and Thouin Bay.

Informal settlement of the Great Oyster Bay area began with the establishment of transient coastal whaling stations from 1810 and the formal settlement of land in the Freycinet Peninsula area beginning at Moulting Lagoon from 1821. By 1824, Swansea farmer Captain George Meredith had established a whaling station at Coles Bay in order to capitalise on the lucrative, yet short lived, industry of harvesting black whales for their blubber which, when rendered, was much prized as lighting for oil lanterns. The significant stands of wattle trees on the Peninsula around Moulting Lagoon were also highly prized for the bark, which was used in the tanning of

leather from the mid 1800s to the mid 1900s. Consisting primarily of Crown Land Reserves, the significant parts of the Peninsula around Moulting Lagoon were let from the late nineteenth century as extensions to the grazing lands of the Swanwick estate or as mining leases. Mining, especially for tin, continued on the Peninsula, and at Middleton Creek in particular, for over one hundred years from 1875 until the 1990s when the final lease over the tin field was forfeited. Red granite quarrying occurred intermittently at Parsons Cove in particular from the early 20th century, the stone being used in buildings and monuments including in the walls of the Commonwealth Bank Head Office, Hobart.

The environmental significance and natural beauty of the area were acknowledged early with a game reserve proclaimed over all of the Crown Land reserves on the Freycinet Peninsula and Schouten Island in 1906, in response to a fear of overhunting of the native wildlife. Following this, in August 1916, the Freycinet National Park was declared with Schouten Island initially administered as a scenic reserve before being eventually incorporated as part of the National Park in 1977. Additional coastal areas, including The Friendly Beaches, were also included within the Park's boundaries in 1992. At a similarly early juncture, Moulting Lagoon near Swanwick was declared a game reserve in 1918 in a bid to protect the native wildfowl in the Lagoon, and this area was later extended with the declaration of a wildlife sanctuary over an additional 500 hectares of the Lagoon in 1959 and the designation of 13.7 hectares at Pelican Bay in 1980 as a conservation area. These reserves, sanctuaries and conservation areas were later incorporated as a Game Reserve in 1976 under new legislation, and the combined Moulting Lagoon Game Reserve was proclaimed in 1988. In 1982, the Lagoon was nominated as an internationally significant wetland under the Ramsar Convention on Wetlands, and it was subsequently listed in 1983 as the Moulting Lagoon Game Reserve Ramsar Site.

The Coles Bay area and wider Freycinet Peninsula is one of the most popular places for local, interstate and international tourists in Tasmania. This popularity is based upon its outstanding natural scenery, and the majority of tourism facilities and experiences are focussed on this aspect. Facilities include a YHA youth hostel, a holiday centre and caravan park catering to the low and medium visitor market and high end and luxury resorts. Experience based tourism ranges from guided bush walking expeditions to water based tours along the coast line including both kayaking and motor boating. The non-tourist community of Coles Bay consists of a combination of permanent residents and shack owners catered for by a local shop, service station and pub. Local industries are largely based on the tourism industry but a small commercial fishing fleet operates from the Coles Bay wharf.

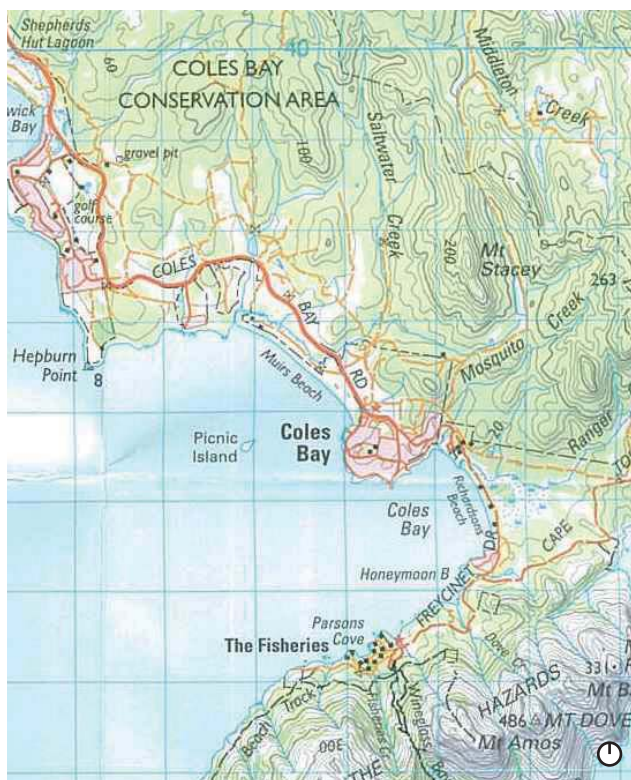


Figure 74: Extract from 1:100,000 TASMAP of Coles Bay case study area



Known cultural heritage and potential development impacts

The whole case study area lies within an areas listed on the now defunct RNE as the 'Freycinet - Friendly Beaches Area' and Freycinet National Park. These listings are primarily based on the area's natural values, including relating to important wetlands and old-growth forests, but it should be recognised that these values also translate into cultural significance for the Aboriginal community. The citation for the former identifies that the area is significant for its aesthetic values, including spectacular dry sclerophyll forested granite peaks and coastal scenery of rugged granite cliffs. It also identifies that the place is of social value as a signature landmark for the East Coast and a 'long valued haven for holiday makers wanting a quality bush experience in an area of near pristine beauty'. Development proposals will need to be prepared in consultation with the community on these values, and potential impacts to them.

The bay is lined by Aboriginal sites recorded on the TASI database, although few are known in the interior, probably relating to a lack of investigation and/or poor surface visibility on the wooded slopes. But human activity has likely focussed along the more accessible and

resource rich coastline, and development proposals should recognise the high potential for archaeological sites in this area. Consultation with Aboriginal groups indicates that the Freycinet Peninsula holds strong intangible associations for the Aboriginal community.

The relative youth of the Coles Bay settlement is reflected in the lack of designated historic places in the township, but a number of historic archaeological sites are recorded around the southern side of the bay on the THPI and THR, all relating to the granite quarrying industry. It is likely that workings relating to this and the mining industry extend around the accessible parts of the peninsula.

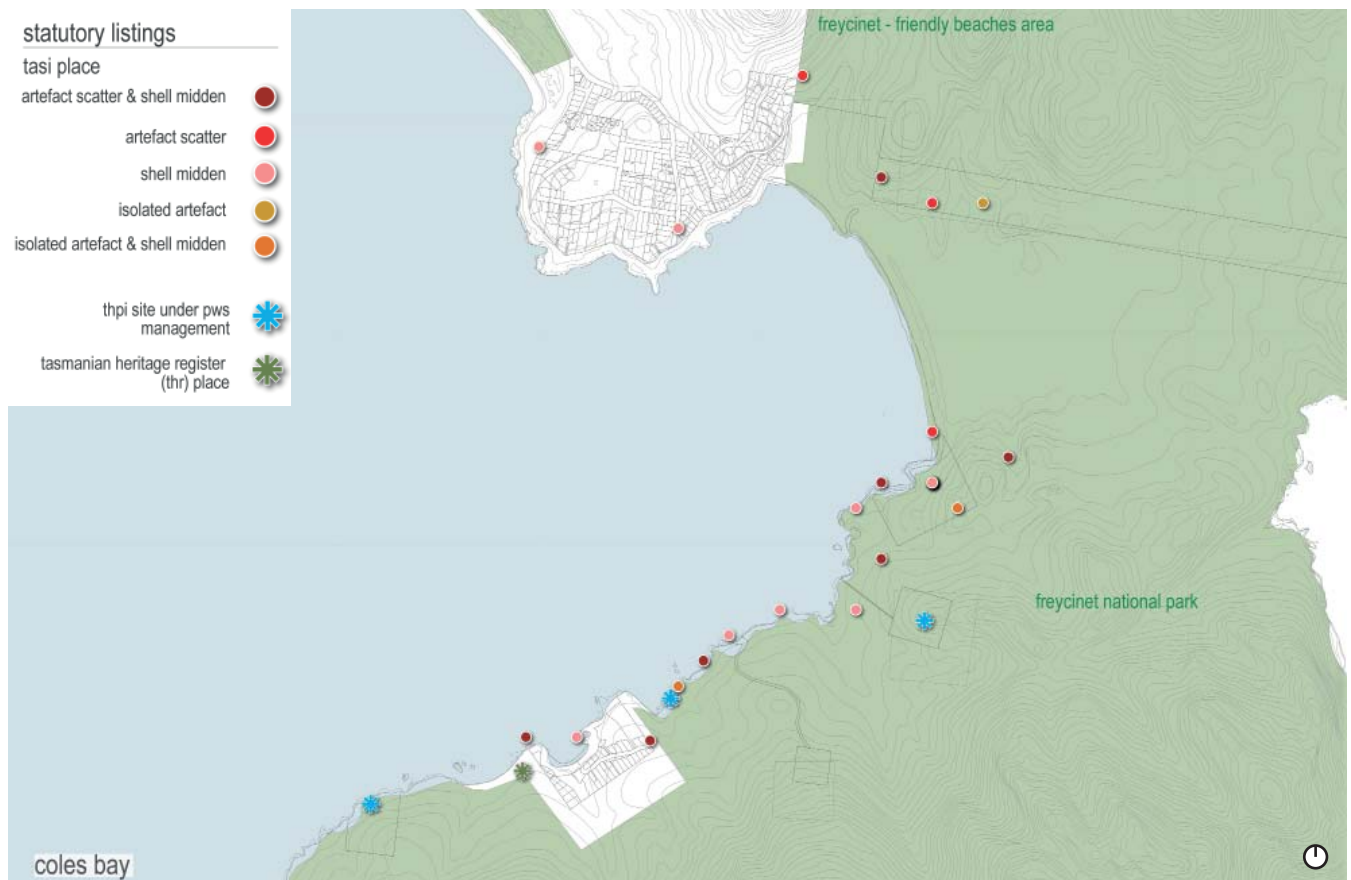


Figure 75: Known cultural heritage in the Coles Bay case study area



3.5.18 Swanwick

Post-contact history and character

The original Swanwick Estate, overlooking Moulting Lagoon towards Swansea, was established in 1829 through a grant of 500 acres to Captain Robert Hepburn, Royal Navy, and the former homestead, a field stone and hand fired brick single storey cottage, was built on the property by Hepburn in 1830s. The property was sold by the Hepburn family in 1867 and then leased by Charles Buckley before he purchased the property outright in 1878. Under Buckley's tenure, considerable extensions were made to the homestead, including construction of a new principle front to the house and a two storey gabled weatherboard extension. Upon his death, the property was continued as a going concern by his two children, Charles and Cecilia, until they sold it in 1928, neither having married. A series of owners then followed, including a Frederick Charles Carr Shaw of the notable Swansea family who retained the property until 1951. The final owners of the estate over-capitalised in the property, and a desire to recoup losses, coupled with a downturn in the Tasmanian agricultural sector and a shortage of development land in nearby Coles Bay, saw the agricultural land and coastal heath of the estate subdivided for development in the 1970s.



Figure 76: Extract from 1:100,000 TASMAP of Swanwick case study area

The Swanwick development is a typical example of 1970s town planning consisting of a large cul-de-sac subdivision containing large homes on small blocks, the majority with boundary fences. The development lacks services and depends for these on nearby Coles Bay of which it is essentially a suburb. The intrusion of the subdivision into the landscape around Coles Bay Road is minimised by a buffer provided by the Freycinet Golf Club which also occupies part of the former Swanwick Estate and achieves something akin to a continuation of the surrounding open grazing land and remnant fringe bushland along the approach to Coles Bay.

Known cultural heritage and potential development impacts

To the north west of the case study area, the Moulting Lagoon Game Reserve and Coles Bay Road Area is listed on the now defunct RNE, but this listing is entirely based on its natural values as the largest coastal lagoon on the East Coast of Tasmania and an extremely important habitat for waterbirds. The eastern part of the case study area lies within an areas listed on the RNE as the 'Freycinet - Friendly Beaches Area'. This listing is also primarily based on the area's natural values, including relating to important wetlands and old-growth forests, but it should be recognised that these natural values of both areas also translate into cultural significance for the Aboriginal community. The citation identifies that the area is significant for its aesthetic values, including spectacular dry sclerophyll forested granite peaks and coastal scenery of rugged granite cliffs. It also identifies that the place is of social value as a signature landmark for the East Coast and a 'long valued haven for holiday makers wanting a quality bush experience in an area of near pristine beauty'. Development proposals will need to be prepared in consultation with the community on these values, and potential impacts to them.

Aboriginal sites, comprising shell middens and stone artefacts, are recorded on the TASI database spaced along the coastline of the case study area, except where they are interrupted by the Swanwick township. Few sites are recorded inland, but these individual coastal records probably actually reflect what was a contiguous band of cultural heritage material running along the whole length of the coast, although unrecorded material has probably been removed by the development of Swanwick. Proposed developments should recognise this high potential for sub-surface deposits in this coastal context.

The Swanwick homestead is designated at a State level on the THR, but no other historic places are recorded in the case study area, reflecting the youth of the settlement. The homestead, a possible attraction in itself, sits in a setting of parkland surround by existing and residential development on three sides and as yet undeveloped residential plots to the east. Additional development should respect the historic setting of the homestead as the core of the settlement.



Figure 77: Known cultural heritage in the Swanwick case study area



3.5.19 Swansea

Post-contact history and character

Swansea is located on the western coast of Great Oyster Bay, at Waterloo Point, and has an outlook that takes in the whole of the Freycinet Peninsula, Schouten Island and Maria Island and extends further down the East Coast towards the southern coast towns of Triabunna and Orford. The areas was initially explored in 1642 by Dutch explorer Abel Tasman, Tasmania's namesake, who named Maria and Schouten Islands and Vanderlins Eyl which was later to be renamed the Freycinet Peninsula. Following Tasman, the area was explored further by the British Captain John Henry Cox in his armed brig Mercury who named Great Oyster Bay upon anchoring there in 1789. A later expedition of 1802 by French explorer Nicolas Baudin saw further exploration and the naming of coastal landmarks, including the Freycinet Peninsula and Ile des Phoques (Island of the Seals, but known colloquially as 'White Rock'). A memorial to Baudin's voyage stands on Waterloo Point.

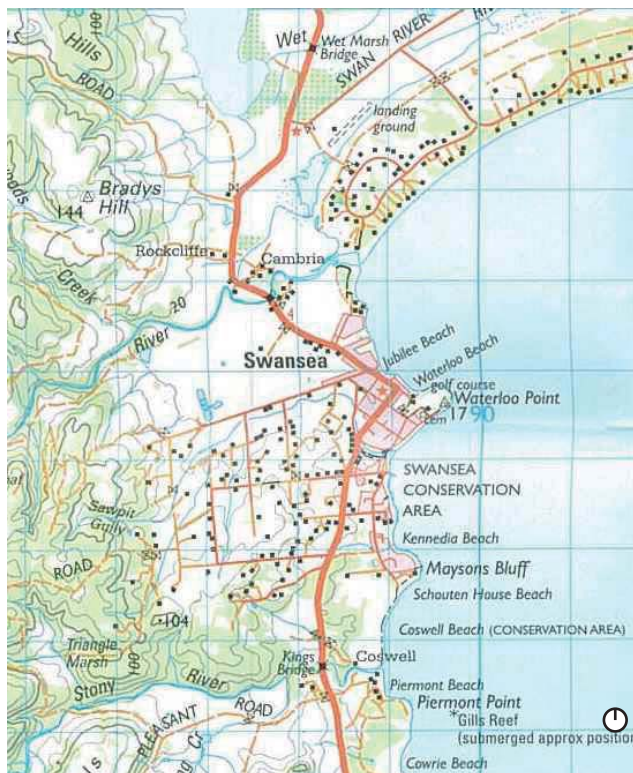


Figure 78: Extract from 1:100,000 TASMAP of Swansea case study area

Following the formal settlement of Tasmania on the River Derwent in 1804, official exploration in the area began in 1806. Transient camps were established by coastal whalers and sealers from 1810 and official settlement at Swansea began in 1821 when local grazier Captain George Meredith and his family settled on what became the Meredith River to the north of Swansea. By 1823 a military encampment of part of the 88th Regiment, under Captain George Hibbert, was established on Waterloo Point together with an accompanying settlement that initially contained 69 people, of which 31 were convicts. By 1830 the settlement had grown to 320 people (of which 170 were convicts or assigned servants). A veteran of the Battle of Waterloo, Hibbert named Waterloo Point, and the name was adopted for the early settlement until it was officially changed to Swansea in 1842 on the recommendation of George Meredith, who had previously farmed in Pembrokeshire, Wales prior to his emigration. It was also upon Meredith's recommendations that the name of Glamorgan was adopted for the area in 1850, and in 1860 the Municipality of Glamorgan was established as the first rural municipality in Tasmania. The founding of the municipal council was to see several initiatives implemented, including the establishment of a local tourism bureau - the Swansea Visitors and Tourists Bureau, as early as 1895. Developed in order to attract visitors and tourists to the municipality, the object of the Bureau was to advertise the scenic beauty of the local area and to supply tourism information on local accommodation and excursions. Running until 1901, the Bureau published its first and only information pamphlet of 3,000 copies in 1895.

Swansea represents one of the earliest established settlements on the East Coast, and it retains significant colonial architecture which reflects its initial colonial settlement and development during the Georgian period and role as a municipal administrative centre during the Victorian period and later. The town continues to serve as a major service centre to the surrounding agricultural district and to outlying townships and villages including Coles Bay, Swanwick, Dolphin Sands, Cranbrook and Pontypool. The early tourism efforts implemented by the municipality in 1895 continue today, and the modern Glamorgan Spring Bay Council has established the East Coast Heritage Museum in Swansea with a permanent curator to assist in the communication of the areas rich European heritage to the tourists. Tourists are serviced through a variety of accommodation including motels, hotels, bed and breakfasts, guest houses, a back packers hostel and caravan park. Local services, which serve both the local population and the tourist trade, include a bank, service station, hotel restaurants, independent restaurants and cafes, bottle shops, public houses, a primary school, a retirement village, churches, a bowls club and a golf course.



Known cultural heritage and potential development impacts

As would be expected from one of the earliest settlements in the region, the town centre contains a number of historic buildings which are designated as of State significance and included on the THR, as well as less significant places and sites which are recorded on the THPI, including the probation station which is now beneath the golf course (Peter Rigozzi Parks and Wildlife Service Heritage Officer, pers. comm.). In addition, several historic properties on the outskirts of the town are similarly designated and two historic homesteads, the Cambria Homestead and Outbuildings and Redbanks and Outbuildings, are recorded to the north west of the town on the now defunct RNE, although this listing does not confer any statutory protection. All of these places present potential tourist attractions, but those within the town are unlikely to be subject to negative impacts arising from tourist development in the area, except in the improbable event that physical alterations to them are required, or that development is of a scale and nature that is particularly unsympathetic to their setting. Those around the edges of the urban area are perhaps more at risk from unsympathetic development of the nearby open land.

Aboriginal sites are recorded on the TASI database along this section of coastline, interspersed amongst areas of development, suggesting that other sites have been removed by previous development. These coastal sites comprise a combination of shell middens, reflecting the exploitation of marine food sources, and stone artefacts, whereas the fewer sites recorded further inland comprise the latter. Generally speaking, on the basis of the existing record, the coastline has a higher potential for sub-surface deposits, and this should be taken into account when planning developments in these areas.



Figure 79: Known cultural heritage in the Swansea case study area



4 Cultural heritage issues

A number of issues have been identified with the existing processes. In the main the issues relate to Aboriginal heritage, and these are described below.

It is assumed that the recording and assessment of culturally significant landscapes, which are of significance for both the Aboriginal and wider communities, has become less effective since the freezing of the Register of the National Estate, but this is currently difficult to quantify in the absence of an identifiable dedicated management process. The need for such an approach is included in the recommendations below.

4.1 Aboriginal heritage management process issues

The following discussion of issues currently impeding the Aboriginal heritage management process has been informed by discussions with the following people:

- Graeme Gardner, Manager at the Aboriginal Land Council of Tasmania (ALCT);
- Karen McFadden, Senior Archaeologist and Manager of Operations Aboriginal Heritage Tasmania;
- Heather Sculthorpe, CEO of the Tasmanian Aboriginal Centre; and
- Gloria Andrews, Aboriginal Elder living in St Helens.

The issues identified are discussed below.

4.1.1 Suspicion of state agencies

There is some suspicion amongst the Aboriginal community as to the motivations of the State Government and its agencies in relation to the management of Aboriginal cultural heritage. An example raised was the frequent referral to reducing 'regulatory burdens' in relation to the management of Aboriginal heritage, and the suggestion that it would be better to remove the perception that this responsibility is 'burdensome'.

Related to this, on a State level, is a distrust on the part of the communities of the state Aboriginal heritage management bodies, both of their impartiality and effectiveness - the Aboriginal Heritage Council (AHC) (Interim) is a government appointed advisory body with no legislative power, and its current interim form means that it also has no legal status. This distrust is magnified by a lack of communication between the bodies and the wider Aboriginal community. Aboriginal Heritage Tasmania (AHT) is developing a process for making information available to a wider community, but the current AHT management process (described above) is perceived as a box-ticking exercise, and neither AHC or AHT are viewed as sufficiently independent.

However, there is a recognition that an independent heritage management body, in place of the AHC, would not currently be financially viable, and TAC has instead considered bypassing AHT and working directly with local councils.

Another organisation, the Tasmanian Aboriginal Land and Sea Council (TALSC), to whom Aboriginal cultural heritage management issues were previously referred, has all but folded and now have 'no interest in cultural heritage'. There is thus now no independent Aboriginal organisation dedicated to the management of cultural heritage. TAC is viewed by many as the only organisation in the State that has the ability to consult with the whole community at a high level as any Aboriginal person can be a member, the organisation has offices in all of the region and it holds regular regional meetings which are open and transparent (Heather Sculthorpe, pers. comm.). TAC is funded mostly by the Commonwealth and therefore has some financial independence from the state. However, there are still Aboriginal people in the State who are not represented by that organisation.

The issue of retaining anonymity for culturally significant places and practices described above is one that is difficult to reconcile with the management process. Such information was not requested during consultation with Aboriginal people, but the assertion was still made that the community would not reveal areas of Aboriginal significance, and there is a recognition that the Aboriginal community is not trusting AHT with certain information. Identifying individual places is not required for this project, but when making management decisions that might impact upon cultural heritage it is necessary to identify them, to at least some extent, and there is a need for greater credence on the part of the wider community in the information that is provided, especially given recent high profile instances in which Aboriginal culture has interrupted development on a local and state-wide level. Individuals consulted suggested that categories of information, rather than specific descriptions, could be employed, and that a statement of existence of a sensitive resource should be sufficient if this is done through an accredited system (this concept was compared to Heritage Tasmania's professional judgement being used in relation heritage buildings).



4.1.2 Lack of consultation on other cultural values

According to the The AHT management process described above, decisions on whether an assessment of Aboriginal cultural heritage should be undertaken are based on the presence of (archaeological) places on the TASI database, and not on the presence of other Aboriginal cultural values. Relying on 'dots on maps' provides an inadequate representation of Aboriginal culture, ignoring considerations of ambience, significance and spirituality (Sharnie Everett, TAC, pers. comm.), and Graeme Gardner suggest that a landscape approach including a consideration of 'zones' for aboriginal heritage would be more appropriate. Heather Sculthorpe's view is that currently, in the few instances where information on intangible heritage values is gathered, it is ignored further into the process. Ultimately inadequate weight is given to these 'other values' anyway as they do not have legislative protection under the outdated Aboriginal Relics Act 1975, and this is a major reason that a review and update of the existing legislation is necessary.

The role of Aboriginal Heritage Officers (AHOs)

The AHT sees fundamental role of AHOs as being able to undertake consultation with the Aboriginal community, and this is the intended method for identifying intangible and other community held values (Karen McFadden, pers. comm.). AHT has a list of recognised AHOs and all of the main consultancies have favoured individuals. But they are few in number across the state, and even fewer in the study area (Donna Stanley, PWS Manager North East Coast, pers. comm.). In TAC's experience, AHOs are not always involved in the process, contrary to the AHT guidance, and when they are consultation is often limited to a request for comments on the completed report, often with a very short time limit (Heather Sculthorpe, pers. comm.). TAC employees assert that AHOs are generally not undertaking proper consultation, and as a result TAC has largely stopped commenting on the assessments that are being undertaken. For these, and other, reasons, the AHT and ALC are keen to improve the quality of AHOs (Karen McFadden, pers. comm.).

In respect to the whole process, TAC take the view that consultation is often undertaken too far down the development path when the development can no longer be changed. They maintain that proponents should engage with Aboriginal community at the earliest possible stage, contacting both the ALC and the TAC.

4.1.3 Moratorium on Aboriginal heritage work

The above situation has been aggravated following the controversy surrounding the perceived inadequate management of Aboriginal heritage during construction of the Brighton bypass over the Jordan levee, and the resultant imposition of a moratorium on Aboriginal heritage work by the Tasmanian Aboriginal community through the TAC. A statement was made by TAC that the moratorium 'will remain in place until such time as decent legislation protecting Aboriginal heritage is put in place and the new protection has Aboriginal community support' and a letter was sent to heritage consultants requesting that no reports be provided to construction, planning bodies or AHT that would enable the heritage Minister to issue permits to destroy Aboriginal heritage.

Example - Binalong Bay viewing platform

An example which is illustrative of the current complexity in the management of cultural heritage in the region is the 2013 installation of the Bay of Fires viewing platform in Boat Harbour at Binalong Bay. This was originally proposed for installation at Sloop Rock in 2007, but the identification of cultural heritage places relating to significant Aboriginal cultural practice, largely through the presence of an Aboriginal Elder on the planning committee, resulted in a change of proposed location to Boat Harbour Point in Binalong Bay (Chris Hughes, Break O'Day Council Community Services Manager, pers. comm.).

The local Aboriginal community was happy for the development to proceed even though an archaeological site (a shell midden and artefact scatter) was recorded on the TASI database nearby, as Aboriginal cultural heritage issues were not so pressing as at the Sloop Rock site. An RAA was completed for the site (which was on PWS controlled land) and an assessment undertaken, despite the moratorium being in place following the Brighton Bypass. However, non-Indigenous members of the community opposed the development primarily on the grounds that it impacted on the significant Bay of Fires landscape. This group also raised the presence of Aboriginal heritage without the explicit concurrence of the Aboriginal community, and this has created the apprehension that Aboriginal heritage is becoming used by other groups to further their own agendas. Ultimately an appeal made to the Resource Management and Planning Appeal Tribunal was rejected, but the project was held delayed for a further year.

This example is particularly illustrative of the need for developments to be informed by early and thorough consultation with both Aboriginal and wider community, and how a lack of early consultation can result in prolonged delays to development programs.



4.2 Non-Indigenous heritage

The existing system for managing developments involving THR places is well established and functions relatively well on both public and private land.

4.2.1 Lack of protection for places of lower significance on private land

The process for managing non-Indigenous places of less than state significance is currently reasonably effective on PWS managed land where places are afforded a degree of protection owing to the statutory obligations of PWS to identify and protect cultural heritage.

Local councils maintain lists of locally significant places which are afforded some protection through the planning process, but the majority of these places are also on the THR and thus protected anyway. The local lists are also quite building-centric and focussed on places in and around the settlements, at the expense of other places, such as archaeological sites. In the study area the Dorset list is an exception in that it consists entirely of archaeological sites. But the list includes only three places.

In the absence of statutory protection, the survival of places which are not under PWS management protection is essentially dependent on the measures, if any, undertaken by each individual landowner, and without an inventory of these places, comparable to the THPI, it will be difficult to raise awareness to improve this situation.

4.3 Legislative changes

In addition to the revision of the Tasmanian planning system, several updated pieces of heritage legislation are currently under consideration, as described below.

4.3.1 Aboriginal Heritage Protection Bill 2013

The Aboriginal Heritage Protection Bill 2013 and the Aboriginal Heritage Protection (Consequential Amendments) Bill 2013 were passed in the Tasmanian House of Assembly on 12 November 2013. They were introduced in the Legislative Council on 21 November 2013 and then referred to a Committee for consideration.

The previous Government's legislation had thus not been approved by both Houses when Parliament was prorogued before the State election, and at that point all Bills that had not completed their Parliamentary processes lapsed. These revisions to the Aboriginal Relics Act 1975, which perhaps most importantly begin to move away from a focus on 'relics' and take account of intangible heritage, have thus effectively been shelved.

The Local Government Association of Tasmania (LGAT) is the representative body of Local Government in Tasmania, incorporated under the Local Government Act 1993 and with a membership comprising 28 of the 29 Tasmanian councils.

According to their submission on the Bill (2012b), the LGAT recognises the need to provide up to date legislation in respect of the protection of Aboriginal Heritage, but concludes that the Bill is too reactive and does not allow sufficient ability to provide for strategic areas of exemption and non-listing in the same way as the Historic Cultural Heritage (Amendment) Bill 2012 - see below. The submission further states that the tone of the Bill is highly aspirational and it identifies a range of issues in delivering against those aspirations.

4.3.2 Historic Heritage Bill 2012

The Historic Cultural Heritage (Amendment) Bill 2012 has been approved and will soon effect as Historic Cultural Heritage Amendment Act 2013. From the beginning of February 2014, Heritage Tasmania has been holding information sessions for local councils to assist them in understanding the new legislation.

In contrast to their position on the Aboriginal Heritage Protection Bill 2013, the LGAT's position has been very supportive of the principles of the Historic Cultural Heritage (Amendment) Bill, particularly in relation to works (2012a).



5 Current approval process

The following describes the current mechanisms that are in place for managing cultural heritage in the development process. It then identifies issues with the existing system and describes changes currently proposed. Finally it makes recommendations for addressing these issues which could be incorporated into a revised mechanism to support tourist development in the study area.

5.1 Managing cultural heritage during development

Penalties for unauthorised or illegal work on heritage listed properties can be severe if the breach of the relevant Act is deliberate. However, generally speaking the relevant government agencies prefer to resolve issues early in the development process through discussion and mediation, to avoid conflict, objections, and penalties wherever possible.

5.1.1 Places under local council or private management

Aboriginal heritage

Aboriginal Heritage Tasmania (AHT) and the Minister responsible for the Aboriginal Relics Act 1975 rely on Aboriginal heritage investigation reports produced by Aboriginal heritage practitioners, to make decisions with regard to the protection and management of Tasmania's important Aboriginal heritage.

The following summary of the approved process is derived from the recently produced Guide to the Aboriginal Heritage Assessment Process (AHT 2013) and Figure 80 reproduces the process flowchart provided in that document.

1. *Submission of a desktop assessment form*

This step, the initial contact that a proponent has with AHT, is intended to establish whether an Aboriginal heritage survey needs to be undertaken or not, on the basis of information provided by the proponent and information held in the TASI database.

If a survey is required, the following is then undertaken:

2. *Engagement of an Aboriginal heritage practitioners*

The guidance allows that surveys can be conducted by an archaeologist accompanied by an Aboriginal Heritage Officer (AHO) or, on the advice of AHT, by an AHO alone. However, in practice AHT has stopped AHOs from producing archaeological reports alone, and both are now required as a matter of course. An AHO is a Tasmanian Aboriginal community member who has a suitable skill set to undertake Aboriginal heritage assessments, but the primary role of an AHO is to assist the proponent in consulting with the Aboriginal community and providing information on the project area which is only known to the Tasmanian Aboriginal community.

3. *TASI Search*

A TASI search should only be undertaken after the initial desktop assessment and prior to undertaking any on-ground Aboriginal heritage investigations. It is the process by which an application is made to AHT for access to data which is held in the TASI and is used to achieve the following:

- Establish whether there is recorded Aboriginal heritage values in the area of the proposed development;
- Determine the nature of the Aboriginal heritage values in the area of the proposed development;
- Enable the heritage practitioner to gain a holistic view of the past Aboriginal occupation of the area and make inferences from the available information;
- Enable the heritage practitioner to prepare predictive model statements which can be tested during the on-ground field investigation.

4. *Briefing*

Prior to undertaking field investigations, a meeting should be held with AHT to provide a full brief of the project, describing the development, its potential impacts and the proposed project methodology. AHT considers it best practice for the Aboriginal community and AHC to receive the same brief so that they understand the project and the possible associated impacts to their tangible heritage. Aboriginal people have specific knowledge of country, which cannot be attained in any other way other than by consulting with them, and the Aboriginal community and AHC also have valuable insight into mitigation measures when dealing with their heritage. AHT encourages and supports any contact that a heritage practitioner or proponent has with the Aboriginal community.

5. *Aboriginal Heritage Survey*

An Aboriginal heritage survey is the on-ground survey of the development area, undertaken to establish whether the proposed development may impact an Aboriginal 'relic'. The process of an Aboriginal heritage survey should have previously been discussed with AHT, AHC and the Aboriginal Community, prior to the survey being undertaken.

6. *Reporting, review and report distribution*

The AHT guidance dictates the required content for survey reports. AHT undertakes a review of all reports relating to Tasmanian Aboriginal heritage that are submitted to AHT, and these should then be forwarded to the Aboriginal community groups previously consulted, in order that they be informed of the final results and recommendations arising from them.



7. Permits

At the conclusion of the report review process, if it has been determined that the proposal may impact Aboriginal heritage, AHT may recommend that a permit be sought prior to any further action, such as mitigation works, being undertaken. Under the Aboriginal Relics Act 1975 a permit can only be granted by the Minister on the recommendation of the AHT Director.

Process Flowchart

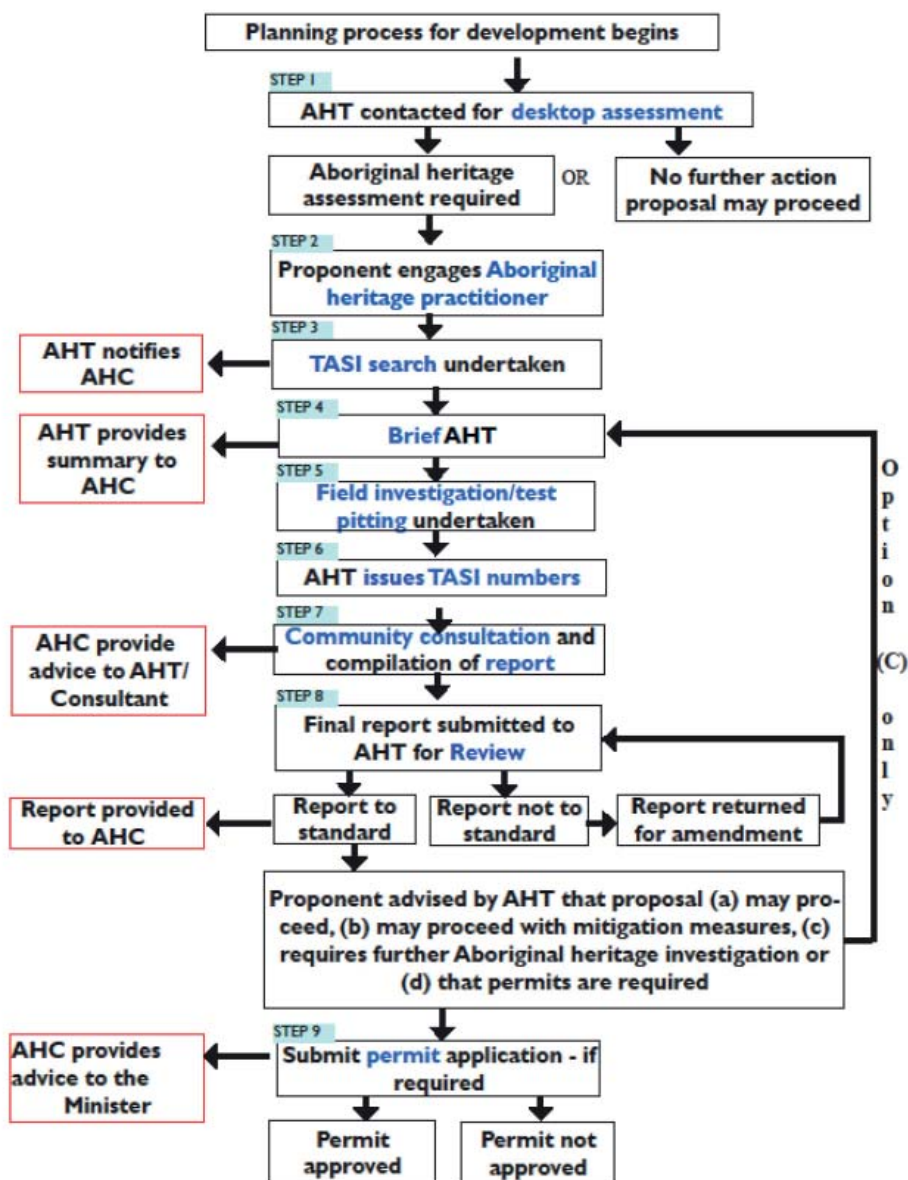


Figure 80: Process flowchart from A Guide to the Aboriginal Heritage Assessment Process (AHT 2013)



Non-Indigenous heritage

If a property is entered in the Tasmanian Heritage Register (THR), the approval of the Heritage Council must be obtained before the commencement of any development that could affect the historic cultural heritage significance of the place. Development can include works to the exterior and interior as well as any other structures of plantings within the listed area. A change of use itself does not require approval, but any works that involve modifying the significant elements of the place will require approval from the Heritage Council.

The Heritage Council approves the large majority of the works applications it receives, and where proposed works are minor and won't affect the significance of the place, it may provide an 'exemption' from the normal works application process. To assist this process, Heritage Tasmania advisors can provide free expert advice including technical information and support and on-site consultation.

Heritage Council approval is in addition to the normal development planning approval through the local council. To gain approval the proponent must submit a Works Application Form through the local council planning department as part of the normal planning application process. The local council then forwards the application to the Heritage Council for a determination unless the council has the delegated authority to deal with it.

The Historic Cultural Heritage Act 1995 requires the Heritage Council to make a decision within 42 days of the date the application is received by the local council, unless a different timeline is agreed between the applicant and the Heritage Council. All works applications are publicly advertised, and members of the public have 14 days to make any submission in relation to the works from the day the application is advertised, or up to 28 days if agreed to by the Heritage Council.

If the works are likely to destroy or reduce the significance of a registered place, the Heritage Council may only approve those works if it is satisfied that there is no other alternative to carrying out the works.

The local council will issue a single permit if the application is approved by the Heritage Council and local council. Applications relating to THR to locally listed places will also be assessed by the local council in line with any local heritage policy under the Land Use Planning and Approvals Act 1993.

Heritage Tasmania is only empowered to deal with listed sites. Under the Historic Cultural Heritage Act 1995 they are not able to make recommendations for non-listed places.

5.1.2 Places under PWS management

All developments undertaken on PWS managed land are informed by a Reserve Activity Assessment (RAA). Assisted by a checklist, through the RAA process land managers are prompted to identify and address the issues relating to the development, including social and environmental considerations. Each RAA is assigned a unique identifier and entered into the PWS management system after being circulated for comment from relevant officers. This documentation is not public, but it is available through request under the Right to Information Act 2009 (Donna Stanley, PWS Manager North East Coast, pers. comm.).

Assessments can be undertaken for specific sites, or sometimes one is prepared for a suite of sites in the same reserve for which the actions are identical. For example, recent works in the Bay of Fires required an RAA for each individual site whereas one RAA was recently completed for a number of separate fence lines in the Waterhouse Conservation Area. The decision on the number of RAAs required rests with the PWS managers on the ground, and their decision is generally rests on what is the best and most efficient process. For example, a joint RAA is more likely to be prepared for a collection of sites with no anticipated Aboriginal cultural heritage to achieve a quicker permit process, but one will be prepared for each site if impacts anticipated (Donna Stanley, pers. comm.).

PWS is the delegated land manager for the lands under its control, but it can permit other enterprises within these areas under lease or licence. PWS would not 'lead from the front' in regards to tourist development, but it does put out Expressions of Interest requests for certain projects proposed on PWS managed land – e.g. tourism developments Bruny Island Light Station and Entally House, and it is well connected with tourism organisations (Chris Colley, PWS Regional Manager North, pers. comm.). For external applications, which most commonly relate to the creation of standing camps or guided walks, the same process is required, but the proponent completes the RAA and pays for assessments, under the guidance of PWS.

The ALCT have recently undertaken RAAs and assessments for their proposed Wukalina to Larapuna Aboriginal trek (see above). Assessments have included site surveys for flora and fauna, water and soil, as well as heritage values (Graeme Gardner, Manager ALCT, pers. comm.).

Internal RAAs for the region are currently in 'double figures' annually, whereas external RAAs are in 'single to low double figures' yearly (Donna Stanley, pers. comm.). As Manager of the Northern Region, Chris Colley signs off both internal and external RAAs under recommendations from PWS officers.



The new State Government has given direction to be more open to new development, and all new queries and proposals are now referred to Commercial Visitor Services who provide a 'one stop shop' and facilitate the proponent to complete the RAA in discussion with PWS officers. It appears that PWS is currently reexamining the RAA process, and a manual for proponents is being prepared to make the process quicker. PWS managers encourage groups to undertake RAA early in the process, and they are dealing with other organisations such as NRM north and councils so that proposals can be communicated as they arise, creating networks and partnerships over time. To some extent the process currently succeeds on the basis of particular personalities operating for long periods in areas with which they are particularly familiar, but PWS does have some guiding principles/strategic direction provided by the Business Plan.

Some RAAs also require local council approval, and an RAA must be complete before a Development Application can be made. Some elements are repeated in each process. Where heritage assessments are required, PWS engages external consultants - previously these were undertaken in-house but the organisation no longer has the capacity. PWS generally leaves external proponents to identify appropriate contractors, although they do retain a list from which to make recommendations.

A significant element of the RAA process is the requirement to consider alternatives to the proposal if a negative impact is anticipated. The impression is that this strategy has served well to date owing to the room of manoeuvre afforded by the large public reserves. However, this might not continue to be the case as visitation, and the pressure on land, increases.

Aboriginal heritage

PWS is excluded from the management of Aboriginal heritage through the legislation under which it operates, and all proposal relating to Aboriginal heritage are referred to Aboriginal Heritage Tasmania (AHT).

Aboriginal heritage is given priority in management decisions in the study area, and for virtually all proposed developments on the East Coast PWS recommend referral to AHT. Most recently this has resulted in an extensive assessment report to inform on- ground works at key camp ground sites at Waterhouse and Petal Points, and The Bay of Fires (Cultural Heritage Management Australia 2013).

Again, avoidance is the general mitigation approach adopted, but where this is not possible, sites are investigated and preserved by record in line with AHT process. This was recently the case at the Friendly Beaches where a permit to destroy was obtained and works were preceded by rescue excavation of deposits. These works are often done with the involvement of Aboriginal community sometimes, and also PWS Aboriginal rangers - the Aboriginal

Ranger program comprises 5 or 6 rangers across the state who have completed a Diploma of Conservation and Land Management with Commonwealth funding. PWS is building capacity amongst the Aboriginal community through the Aboriginal rangers, with a possible view towards joint management of some parks, including Wukalina (Mt William) in particular, and ALCT also use PWS Aboriginal rangers for management activities and assessments as part of their training.

Non-Indigenous heritage

Non-Indigenous heritage issues are referred to PWS Heritage Officers. As with Aboriginal heritage, matters relating to statutorily protected places - i.e. places on the THR, are referred to the relevant state agency, Heritage Tasmania, and managed through the process described above.

Matters relating to non-statutorily protected places (essentially places managed through the PWS maintained THPI) are dealt with through the recommendations of the PWS Heritage Officer.

As discussed above, a large proportion of the places on the THPI are comprised of isolated sites relating to activities such as mining and quarrying, and a major consideration in the development of these places is the management of visitor risk, and to inform this the PWS Reserve Standards Framework identifies nodes as neutral, moderate or substantial hazard zones. 'Derby Tunnel', which forms a section of a mountain bike track currently being developed near Derby to the west of the study area, is near a mining adit and concerns about its stability have led PWS to undertake engineering studies. However, there is an acceptance that at some stage visitors must take some responsibility (Donna Stanley, PWS Manager North East Coast, pers. comm.).

Unofficially PWS provides information to others, including nearby land owners, although this activity is not stipulated under the Under the National Parks and Reserves Management Act 2002 PWS (Peter Rigozzi, PWS Heritage Office, pers. comm.).



6 Impacts and opportunities

The following discusses the potential impacts and opportunities for the cultural heritage of the study area that are presented by increased tourism development.

6.1 Managing Aboriginal cultural heritage

Notwithstanding the goals of the Aboriginal Tourism Development Plan 2007, the prevailing opinion amongst the Aboriginal community is that anonymity affords the best protection for cultural heritage sites, and this raises questions over how best to portray and protect Aboriginal cultural heritage.

Gloria Andrews, an Aboriginal elder who lives in St Helens and has led tours around the Bay of Fires area makes reference to an Aboriginal hut found in Cradle Mountain-Lake St Clair National Park in recent years which, having been publicised, was destroyed by vandals (pers. comm.). Graeme Gardner, Manager at ALCT (pers. comm.) states that, whilst interpretation of Aboriginal cultural heritage is good, this should therefore be at a broad level that does not identify individual sites and leave them open to such abuse.

Donna Stanley, PWS Manager North East Coast, (pers. comm.) agrees that in the past there has been some destruction of Aboriginal sites through visitation, but the suggestion is that more frequently this has occurred through indifference and ignorance than malice. One example would be 'traditional campers' who return to the same spots over many years but have never been consciously aware that slowly expanding marked coastal camping sites can impact upon significant dune midden deposits, and in these cases the identification of sites could aid in their protection.

On this subject local historian Garry Richardson (pers. comm.) points out that a lot of people walk the Bay of Fires, and some of the middens along its length are quite obvious anyway, even in the absence of interpretation. He further suggests that the majority of people do not move away from defined tracks, and that more remote sites could perhaps be interpreted on the basis that those prepared to walk some distance are more likely to be sympathetic to a cultural heritage site.

As a long-term resident of the area, Mr Richardson expresses the opinion that, although many of the non-Aboriginal population are apathetic about Aboriginal heritage, many are keen to show-off the area's Aboriginal heritage alongside its other attractions, and he cites a growing recognition of Aboriginal names following the instigation of Tasmania's dual naming policy in March 2013 and the dual naming of six places including Wukalina (Mt. William) and Larapuna (the bay of Fires area) in the study area. Graeme Gardner (pers. comm.) asserts that the dual naming process is important in achieving respect and acknowledgement of Aboriginal connections, and educating visitors in this regard, and that the wider community needs to see Aboriginal cultural heritage as part of Tasmania's heritage.

PWS has undertaken consultation with the Aboriginal community in developing interpretation, most recently for the Bay of Fires area. The material produced has been broad picture, but the PWS experience has been that the local Aboriginal community is still working out what information they wish to share (Donna Stanley, pers. comm.). A focus has been on encouraging Aboriginal groups to lead the stories, developing management skills through the assistance of the PWS Aboriginal ranger program, and seeking to develop a sense of ownership amongst the community (Donna Stanley, pers. comm.). Gloria Andrews states that the Aboriginal community of the study area is fairly united, and that the community is making progress in providing education in local schools about Aboriginal cultural heritage. The Aboriginal population are involved with wider community schemes and, like the wider community, they are keen to support tourism since 'everyone benefits from the tourist dollar' (Gloria Andrews, pers. comm.).

However, Graeme Gardner strikes a note of caution noting that, as well as potential direct impacts on sites, an increase in tourism would create numerous indirect threats. These would include increasing visitor numbers, with the associated problems of both conscious and unconscious damage (e.g. through erosion), a requirement for additional infrastructure such as roads, car parking and toilets, and additional peripheral development in the form of holiday accommodation and supporting services on the coast.

Moving away from a specific site focus, Mr Gardner also points out that development can detract from the landscape aesthetics of a place, describing the situation on the Freycinet peninsula as being one in which development has 'planted a city on the coastline', and he also points out that the best viewing points, and thus the likely focuses of development amongst the spectacular scenery of the study area, will also have been focuses for Aboriginal culture. The wishes of the Aboriginal community in relation to the above matters need to be taken into account before Aboriginal cultural heritage places are drawn into tourism development.



6.2 Impacts and opportunities by option for development

A brief assessment of the issues and opportunities in relation to cultural heritage arising from each of the proposed Options for Development was set out in Component 1. The following revisits these assessments in the light of the previous account of cultural heritage in the various case study areas within the study area.

6.2.1 Option 1: Business as usual

Impacts

This option will likely result in less direct and indirect impacts on heritage resources as it is envisaged that development would proceed at existing rates or even decline. Visitor activity will likely continue to be restricted to areas which have already been affected.

Opportunities

New opportunities under this option will of course be limited, and continued low revenues may result in lower regulation capabilities, reducing the management capacity of responsible bodies to manage heritage resources. This could undermine efforts to manage attritional threats such as the physical deterioration of built heritage fabric and the loss of unrecorded cultural heritage materials through coastal erosion. Lack of resources may also restrict the ability of bodies to control or manage more deliberate impacts, such as the unauthorised expansion of camping areas in the coastal dune systems.

Existing management of cultural heritage

Places under local council or private management

The relevant Tasmanian Government agencies encourage landholders to take all reasonable and practical steps to prevent harm to areas of historical cultural heritage on their property. However, there is no legal obligation to undertake maintenance or interpretation works for heritage places on private property unless councils have local policy which obliges them to undertake some management works.

For places of State level significance on the THR only, Heritage Tasmania's advisors can provide free and expert architectural or conservation advice and on-site consultation, and properties may qualify for limited funding under the Heritage Conservation Funding Program. Priority is given to physical conservation works, for example urgent stabilisation or essential maintenance works, and the Heritage Council may provide some limited funding for up to one-third of the cost of approved works, usually to a limit of \$25,000.

Places under PWS management

Management decisions for cultural heritage places on Crown land which are managed by PWS are currently made on a site or issue specific basis. Given inevitably limited resources and the wide range of management responsibilities, these are necessarily subject to a series of priorities within which heritage is unfortunately somewhere down the list - for example, a current focus of PWS resources is on upgrading camping facilities (in particular the existing 'long drop' toilets) (Chris Colley, PWS Regional Manager North, pers. comm.). This varies somewhat where specific funding programs are available, as was the case for the interpretation panels recently installed along the Bay of Fires and the Peddle Point and Waterhouse Conservation Areas funded by the Commonwealth 'Coast Care' program. The State Government makes decisions on priorities for funding, and if cultural heritage was to become seen as a prime resource in the region this may change.

Under this regime, places are generally left uninterpreted and with maintenance only in response to threats, under advice from the PWS Heritage team. The resulting lack of attention received by these sites is viewed as somewhat advantageous in achieving their preservation. Anonymity is similarly deemed the best policy in the management of Aboriginal sites, and management decisions are often instead promoted as 'improving the experience for campers' to avoid undue attention for the sites (Donna Stanley, PWS Manager North East Coast, pers. comm.). Camping operations currently manage themselves because of the low level of impact, but this would likely change with significantly increased visitor numbers.

Where heritage places are marked for interpretation, this is more to do with the 'degree of invitation' that PWS wishes to offer to the place - interpretation is avoided where visitors are not desired in a certain area for whatever reason, for example to limit the spread of plant disease. These processes, including that for interpretation, are reflected in the PWS Reserves Standards Framework in which interpretation is included under 'information and signage'. This specifies the type of interpretation to be employed for each required management regime.

Management activities benefit in part from entry and camping fees from the Mt William and Freycinet National Parks, although the destination of funding from campsites outside the National Parks is currently a state government decision, but there can be reasonable confidence that money generated on the East Coast would stay on the East Coast (Chris Colley, pers. comm.). PWS has some ability to specifically channel resources towards certain management issues when required.



PWS does engage in discussion with private land holders on land management, e.g. in relation to controlled burning across tenure, but PWS is not normally the initiator of these discussions. The level at which interaction occurs depends on the issue and its profile (Peter Rigozzi, PWS Heritage Office, pers. comm.).

Some aspects of the day to day management activities undertaken by PWS are questioned by the local community from a heritage point of view. For example, Gloria Andrews, a local Aboriginal elder, has suggested that PWS burning regimes around campsites on the Bay of Fires have started to alter the nature of the surrounding vegetation.

PWS have a lot of flexibility in the way places in their control can be managed (Peter Rigozzi, pers. comm.). The organisation undertakes a large amount of work in partnership with volunteers and friends groups (all or most of which are managed through Wildcare Incorporated <http://www.wildcaredtas.org.au/>). Quite a lot of funding comes through these volunteer organisations because, unlike PWS, they can apply for grants. But all works - including interpretation, signage etc, have to come back to PWS for approvals under their policies. The Tasmanian PWS, with support from NRM North (another organisation that can receive grant funding), are currently planning to undertake on-ground works at key camp ground sites across Tasmania's north-eastern coastal areas. The proposed works program is concentrated in two main areas, these being Waterhouse and Petal Points, and The Bay of Fires.

6.2.2 Option 2: East Coast Blossoms

Impacts

Increased development of the proposed hubs will not result in significant impacts on any places which are subject to the highest level cultural heritage designations (i.e. Matters of National Environmental Significance protected under the EPBC Act). However, concentrated development pressure in and around each of the hubs may result in direct impacts on other heritage resources, particularly along the coastline dune systems which are sensitive for the Aboriginal archaeological material which they contain.

Heritage properties, including places of State significance on the Tasmanian Heritage Register, particularly in St Marys, Bicheno and Swansea, may come under increased development pressure as the hubs expand to accommodate more overnight visitors. Direct impacts could include unsympathetic alterations or extensions to historic fabric, and more likely is that development would result in indirect impacts to the settings of heritage places.

Without careful management, larger concentrations of visitors within the hub areas may begin to intrude upon places which have intangible cultural associations, for example places of significance to the Aboriginal community or of social significance to the wider community, such as the various shack settlements.

Another possible effect of higher tourism in the area, that can be anticipated from the experience of other regions around the country, is a consequent rise in property and living costs that may result in local people having to move out of the area. This would raise the question of what heritage is being presented/impacted and who is benefitting. Ideally members of the local community would benefit from increased portrayal of their cultural heritage, and, where necessary, impacts to this heritage would be outweighed by benefits to that same community primarily.

Opportunities

Positive impacts deriving from development in line with this option, as with Option 3 overleaf, would include increased opportunities to raise awareness of heritage and to provide that heritage with a means to 'earn its keep' by increasing related revenue to management organisations.

By providing economic opportunities to the community – potentially the Indigenous community in particular, this could be the driver for the development of improved consultation channels and Council protocols for managing cultural heritage whilst also increasing the resources of management bodies.

Under this option, short distance themed circuit trails could be focussed on cultural heritage resources but with a degree of flexibility in their route to prevent, or mitigate, undue disturbance.



Example - Larapuna walk

The Aboriginal Land Council of Tasmania is currently in planning to develop an eco-tourism venture in the form of a cultural trek from Wukalina (Mt William Nation Park) to Larapuna (Eddystone Point) during the peak tourism period of September to April. The trek will pass through the natural landscape led by contemporary Aboriginal people who are walking in the footprints of traditional people, telling the stories of creation, existence and celebration as well as describing the relationship with European settlement. The interpretation is proposed to cover the history of Wukalina/ Larapuna in particular and also lutriwitja (Tasmania) generally. Walkers will be accommodated in traditionally designed huts in Wukalina and at Larapuna in the historic granite cottages of the lighthouse station.

Larapuna is a good example of a sustainable tourism development which has the potential to portray the heritage values of both Aboriginal and non-Indigenous cultures (Graeme Gardner, pers. comm.).

6.2.3 Option 3: String of Pearls

Impacts

The development of linear routes cutting across waterways and along the coastline is more likely to directly impact on sensitive archaeological deposits in these areas. Given the high archaeological potential of the coast line demonstrated in the case study areas, such development in places with lack of route options, for example river crossings, will inevitably result in disturbance to archaeological deposits.

This option presents a potentially larger development footprint with the potential to create impacts along the whole coast. In these circumstances it will be difficult to retain areas of coastline for the exclusive use of the Aboriginal community.

The connections will traverse areas which are as yet largely undisturbed, and without careful management deviation from the managed routes could bring impacts to sensitive areas which were previously relatively isolated (of course this is also an advantage as regards the attraction of certain heritage resources).

Increasing visitation, and probably also seasonal residence, could begin to affect the ambience of many of the small settlements along the coast. Musselroe Bay has already been significantly altered, although it remains a fairly tranquil settlement, but the character of places such as Ansons Bay, The Gardens, Flammouth and Four Mile Creek established by these surviving vernacular structures is vulnerable to unsympathetic development.

Opportunities

An advantage of this option would be the potential to link widely spaced heritage resources into themed trails. However, it should be borne in mind that much of the cultural heritage material along the coastline (namely Aboriginal middens and other sites characterised by artefact deposits) is not only very fragile but also of limited interpretive potential.

Any such routes would require careful coordination between agencies and management bodies to ensure that cultural heritage offerings are representative and complementary.

Example - 'the Trail of the Tin Dragon'

The Trail of the Tin Dragon is a themed linear journey running through North East Tasmania between Launceston and St Helens which aims to celebrate the history of tin mining and the Chinese in North East Tasmania. Anchored around the 'Tin Centre' at Derby, the trail incorporates themed displays at the Queen Victoria Museum and Art Gallery in Launceston and the St Helens museums, together with interpretation material located at significant locations in between.

Built around extensive research and themes developed through community workshops, a business plan was developed in 2005 (The Sentience Group 2005) and the staged development of the trail began in 2007. Unfortunately, to date the trail has not been completed - in particular the 'Maa Mon Chin Gateway' at Weldborough has yet to be constructed, and, aside from at the three main nodes - at Launceston, Derby and St Helens, the trail is quite anonymous to passing visitors.

There is relatively little Chinese mining heritage in the Blue Tier, and Derby was famously European/non-Chinese (Garry Richardson, local historian, pers. comm.). Conversely the main Chinese mining area in the north east was at Weldborough where the trail currently has no presence. The main Chinese village site in Weldborough is known to survive as archaeological remains, and other similar sites are known at Moorilla and Garibaldi. In addition, one of the largest related attractions encountered on the route of the trail - the 'Chinese Mining Heritage Walk' in Branxholm, is not included within it.

It appears that the trail has suffered from a lack of advertising and also quite restrictive controls over what could be included. But it is evident that, with greater cooperation between the sponsoring councils, PWS, who have undertaken interpretation works at known mine sites in the area, and private owners the trail would become much more representative and likely benefit from a higher profile.



section 3 - case studies





1 Biodiversity and cultural heritage by landscape type

To inform planning strategies, the following distils the above descriptions of the known, and expected, biodiversity and cultural heritage resources in the study area into short accounts relating to the landscape types within which development is most likely under the three options identified in the Sustainable Tourism Options Report (Component 1).

These accounts are generalised and cannot be considered to represent definitive descriptions of any particular place. They are simply intended to enable the likely impacts that may arise from development of each area type to be determined for the purposes of this report. Impacts relating to the development of an actual place should be assessed and addressed through studies focussed on that place.

The three landscape types deemed most likely to be targeted in development proposals in East Coast Tasmania are: coastal dune systems, river mouths and wetlands. While development in these areas is not necessarily supported, an assessment of the potential impacts of different intensities of development allows for consideration of potential impacts.

1.1 Coastal dune systems

Although they are not recorded everywhere, it is probable that Aboriginal midden deposits exist fairly continuously along the coast, and the lack of records in places is probably attributable to a lack of focussed investigation. It should be remembered that these sites are viewed as living places with significant wider associations by the Aboriginal community and not simply collections of archaeological material. From the known record, this material often appears to be focussed on coastal promontories which would have presented attractive camping spots and vantage points, and these locations also became the locations for historic sites and structures (for example lighthouses), primarily for the latter reason.

Specific locations along the coastline have accommodated historical activities, including whaling and sealing and various industrial practices, particularly where marine transport was required. But generally the coastline has been reserved for conservation and recreation in the historic period. Much of it is included in areas listed on the now defunct RNE, and much will be of social and/or aesthetic significance to the whole community.

In some parts of the study area, coastal dune vegetation is all that remains of the former native vegetation cover of the district. In other parts, it exists as a continuum with inland vegetation and landforms. In either case it tends to concentrate some biodiversity values by virtue of its physical form, and the nature of the vegetation that it supports.

Many coastal lagoons in East Coast Tasmania feature a primary dune on an isthmus leading down to an estuary where outflow from the lagoon meets the sea. Typically the dune is vegetated with kinds of scrub and heathland, which provide habitat for fauna species of national significance such as the New Holland Mouse. Beaches on such isthmuses typically support ocean beach shorebirds such as the Hooded Plover, and may support nesting Little Penguins and Short-tailed Shearwaters.

1.2 River mouths

The banks, and particularly the mouths, of rivers are a focus for known Aboriginal archaeological sites. As with coastal contexts, it is probably the case that proportionally more sites are recorded in these areas where they are more visible, for example eroding from the river banks. However watercourses have always been a focus for human activity, and evidence of historic settlement, agriculture and industry from the earliest colonial times can also be expected in these areas, taking advantage of the opportunities for subsistence, transport and shelter which they provide.

Their prominent role in the landscape makes river mouths a likely focus of intangible Aboriginal associations, whilst their recreation potential and aesthetics are likely to also be valued by the non-Indigenous community.

River mouths and their attendant estuaries exist in close proximity to coastal dune systems, and share some biodiversity values. Some shorebird species are more likely to be found in muddy areas of the river mouth exposed at low tide, and yet others are likely to attempt to nest in areas of the river mouth slightly protected from winds off the ocean. In a similar way to coastal dune systems, river mouths tend to concentrate habitat features used by some MNES species such as shorebirds, terns (Little and Fairy Terns) and colonial seabirds.

1.3 Wetlands

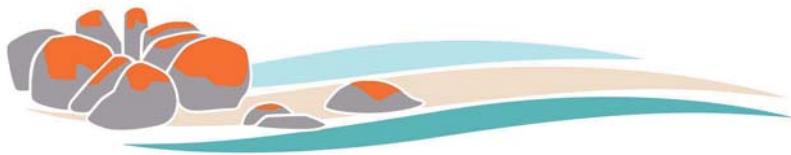
Wetlands are known to have been a focus of Aboriginal subsistence activity although, owing to the resources exploited and the means employed, they do not exhibit such extensive evidence as is provided by coastal midden deposits for example. They do however have relatively high potential for preserving some residue of such past activities, in the form of archaeological deposits. These connections, and the biodiversity to which they can be attributed, are likely to be of enduring cultural significance to the Aboriginal community.

Low lying wetland topography is unlikely to have attracted much historic construction, but the fertile land around the peripheries of these areas would likely have been the focus of early agricultural activity, and evidence of this, in the form of homesteads or early farming facilities, could survive in these areas.



In this study area, most wetlands on the coastal plain are connected either permanently or occasionally to the ocean. Typically they abut coastal dune systems on the east side, and may have an opening to the sea as a river mouth or estuary when water levels are high enough. In most cases they are not independent entities to river mouths or coastal dune systems, and share many of the biodiversity values.

The exceptions are some deeper water systems in the Moulting Lagoon and Apsley Marshes Ramsar sites that are part of larger serpentine river systems, but empty to the sea to the south at Swanwick. Although running through dunes near the river mouth, these larger marshes mostly exist in wide basins with surrounding hills and rises, some covered in forest communities.



2 Anticipated impacts and process by landscape type

The following discusses the likely impacts on the resources in these areas that might arise in relation to a variety of development proposals, as dealt with through the existing processes described above. For each landscape type, the following developments have been considered:

- A coastal walking trail, running north-south through the study area;
- A new camp site, or expansion of an existing site;
- A new 'eco-friendly' private development; and
- A major golf resort.

These four examples are intended to be representative of a range of development types, but also to reflect the different magnitudes of potential new development.

Under the current system it is unlikely that a full appreciation of Aboriginal heritage values – to include intangible associations, would be gained in relation to any of the below development scenarios. And a continuation of the current Aboriginal community imposed moratorium would likely make it impossible.

Whilst developments may proceed through satisfying the current archaeologically-focussed legislation, it is recognised that this would not address Aboriginal cultural heritage in a holistic way and any approvals would almost certainly not be achieved with the support of the whole community.

2.1 Coastal dune systems

2.1.1 Cultural heritage

Within the study area, much of the coastline outside the settlements lies within Crown land managed by the PWS. As such, most development within it would currently be addressed through the Reserve Activity Assessment (RAA) system, with Aboriginal cultural heritage matters referred to Aboriginal Heritage Tasmania.

The route of a coastal walking trail will by its very nature coincide with the likely continuous band of midden deposits within the coastal dunes. Moreover, to take full advantage of the landscape the trail will need to run close behind or over the dune systems, as construction of such a path on the seaward side of the system is impractical and would be unsightly. For most places in the study area new coastal

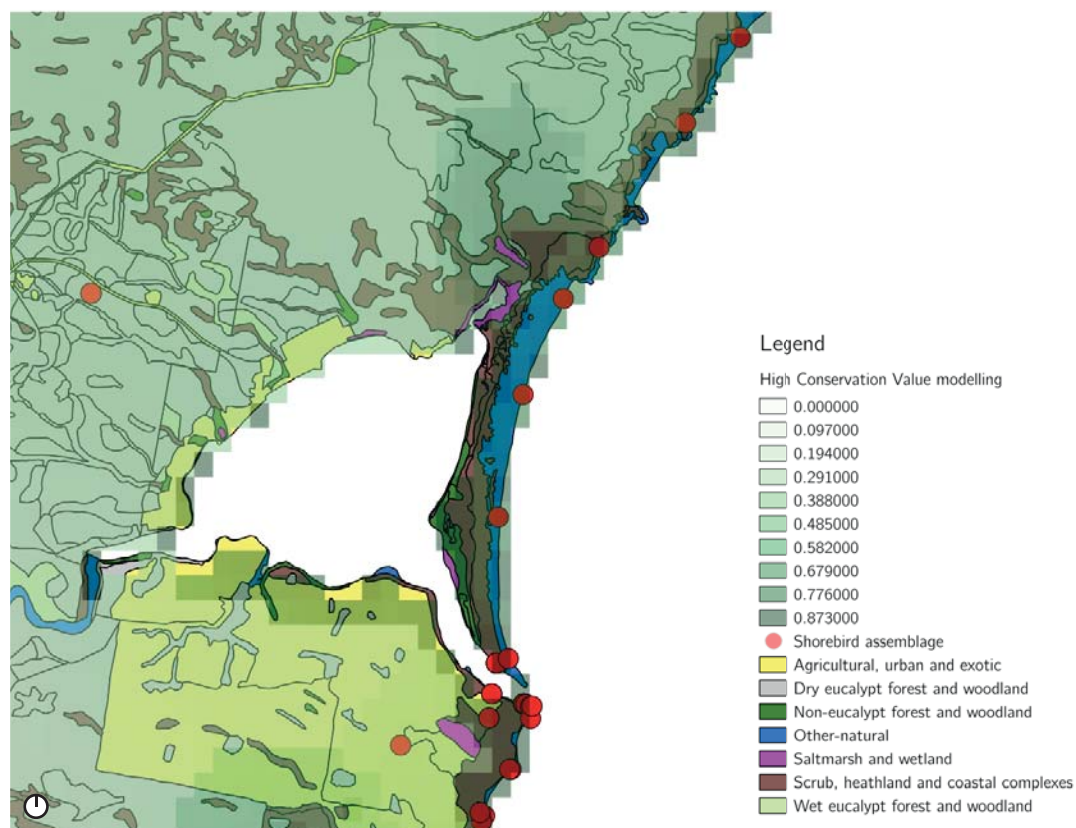


Figure 81: Ansons Bay – Policemans Point, Break O'Day shire. Example of coastal dune systems and river mouth landforms, with overlays of vegetation, High Conservation Significance modelling and shorebird assemblage sites



campsites, or expansions of existing sites, will involve impacts on dune deposits, either for the footprint of the site itself or to provide beach access. In addition to these direct impacts, without careful management both developments might encourage trespass beyond the affected footprints into other sensitive areas.

In practical terms, the majority of any larger development is likely to be inland, in which case impacts on the dune systems are likely to be limited to achieving beach access. An exception would be the creation of a coastal 'links' golf course, for which the required landscaping would likely constitute a major impact on archaeological deposits and related intangible values.

Assuming assessments through the RAA process confirm the presence of cultural material within a proposed development footprint, the usual PWS mitigation approach of avoiding direct impacts by relocation may suffice in the case of camp sites.

However, for the larger development footprints, some impact will be unavoidable, and in this eventuality archaeological salvage excavation would present the most likely course of action under the current system. In the case of the footpath, only deviation of the route away from the coast will avoid continual coincidence with areas of high potential for deposits. But in this instance, mitigation of this coincidence could likely also be achieved through consideration of construction methods, and thus the degree of impact across its footprint.

Any historic sites within a development area are likely to be fairly evident, although some archaeological sites (for example artefact scatters relating to early sealing/whaling activity or degraded shipwrecks) might not, in which case identification would depend on their being flagged by the presiding PWS staff. Few coastal sites are currently designated as of state significance, and so their management would be at the discretion of the PWS heritage team, and largely resource dependant.

The larger developments have a greater potential to impact upon the heritage landscape values of the area, although 'eco-friendly' designs are perhaps more likely to be sympathetic to them, but without legislative protection there is no statutory obligation to address these aspects. However, recognising that these values exist, and that they have been previously identified albeit not through statutory designation, responsible development should identify and address impacts to them through community consultation.

2.1.2 Biodiversity

In Figures 81 and 82, examples of the intertwined coastal dune systems, river mouth and wetlands are shown at Policemans Point (Ansons Bay) and Templestowe Lagoon (near Seymour). Though these are specific examples rather than generic ones, they are typical of many sites along the length of the study area.

The way in which these site complexes act as biodiversity 'pinch points' is clear from the mapped values. In both cases there are HCS values at the upper end of the scale clustered along the coastal dune system of the barrier dune or isthmus. Habitat on the isthmus is well suited to the New Holland Mouse, and the river mouth concentrates shorebird activity (roosting, foraging, nesting).

A coastal walking trail or a new or expanded camping area, would directly encounter some of these high profile values, and would likely be shown to have impacts on MNES that would trigger a controlled action under the EPBC Act.

Neither a golf course, nor campground nor an eco-resort are likely to be located entirely on top of narrow stretches of naturally vegetated coastal dunes, such as on a barrier isthmus to an estuary, due to spatial constraints. However, any of these developments could feasibly be located partly on the dune system or directly adjacent in purely engineering terms, but the principles recommended here are to prioritise the siting of such developments in already degraded land, and not either on a barrier dune or within the margins of a wetland.

Some low-lying areas within the coastal zone will have a higher probability of increasing frequency of inundation (flooding) according to current predictions of future sea level rise (see DPIPW E Tasmanian coastal vulnerability project in References). These factors should also militate against placing tourism infrastructure in areas which are close to the current king tide level (plus a buffer).

Increased visitation by tourists, often to a relatively small area, can have a significant impact on both supply of potable water and disposal of waste water. Tourists can add significant seasonal peaks to the pollution, waste, and water needs of a smaller local population, and thereby put local infrastructure and aquatic habitats under unsustainable pressure. Selection of appropriate sites for development must include land capability considerations, such that waste water can be safely and efficiently be dealt with (and contained) on site wherever possible.



2.2 River mouths

2.2.1 Cultural heritage

As with the coastal reserve, most of the river frontage within the study area comprises Crown land managed by the PWS. Any development within this land would therefore also currently be addressed through the RAA system.

The same issues and processes in relation to sub-surface archaeological deposits that are discussed above are equally likely to apply to estuarine contexts.

Each of the developments considered here could involve the need for a crossing of the river mouth, and this would be most pertinent for a north-south coastal trail. The most easily crossable points are likely to have always been so, and the potential for cultural heritage at these locations is therefore higher. This may comprise a relative concentration of Aboriginal cultural heritage material or evidence of historic use, for example fords, the remains of punt/ferry infrastructure such as jetties and perhaps accompanying settlement, or even earlier bridges.

Few of the known non-Indigenous sites located around river mouths are currently designated as of state significance, with most of these lying at the centre of existing river mouth settlements. For those within PWS managed land, management would therefore be at the discretion of the PWS heritage team, and largely resource dependant. Non-Indigenous sites of less than State level significance on private land are essentially not subject to any form of formal heritage protection.

The intrusion of new crossings into the landscape could represent a potential impact on landscape values, and, although they are not subject to statutory heritage protection, best practice dictates that these should be considered in any development proposal. Of the landscape types discussed here, river mouths are perhaps most likely to have associated intangible Aboriginal community values, but, as described above, the management process for these is currently in some disarray.

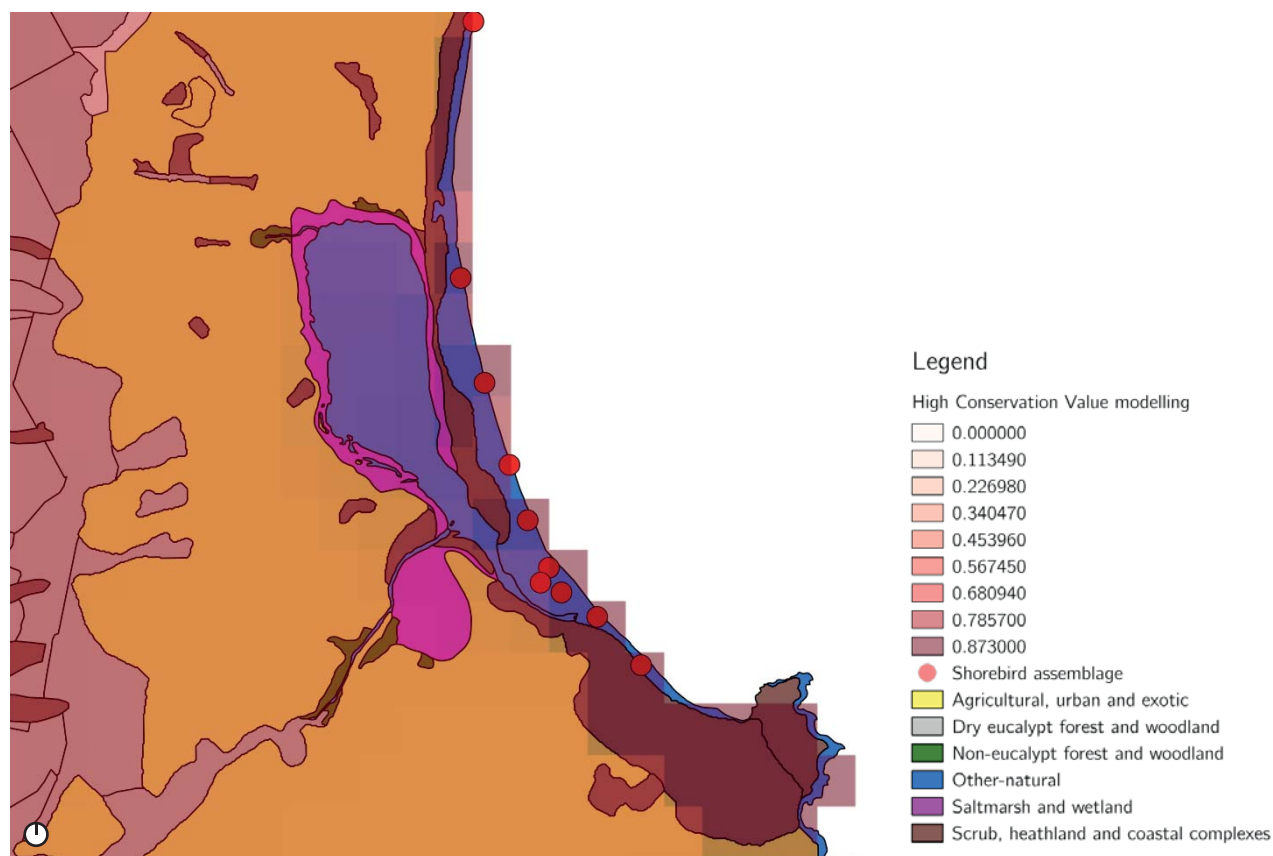


Figure 82: Templestowe Lagoon near Seymour, Break O'Day shire. Example of coastal dune systems, wetland and river mouth landforms, with overlays of vegetation, High Conservation Significance modelling and shorebird assemblage sites



2.2.2 Biodiversity

The examples given above are repeated here. As stated earlier, from a biodiversity perspective in the East Coast Tasmania study area, coastal dune systems, river mouths and wetlands cannot be disentangled.

The areas around river mouths are generally rich foraging areas for migratory and resident shorebirds, seabirds and some waterfowl. Areas inside the river mouth on the lee side of associated dunes can be used for breeding sites by shorebirds and seabirds, and some high tide roosts are located around river mouths.

Routing a walking trail across a river mouth, or adding new or expanded camping areas in such sites, may lead to a reduction in habitat values for MNES in the form of shorebirds, colonial seabirds, etc if not carefully managed.

Whilst a golf course or eco-resort may be located close to a river mouth, it is unlikely that such a development would impinge directly into the estuary. It may be the case that either of these developments would result in greater numbers of people using the margins of the estuary to access the beach, and by so doing would result in a similar reduction in habitat values for MNES in the form of shorebirds, colonial seabirds, etc.

Increased visitation by tourists, often to a relatively small area, can have a significant impact on both supply of potable water and disposal of waste water. Tourists can add significant seasonal peaks to the pollution, waste, and water needs of a smaller local population, and thereby put local infrastructure and aquatic habitats under unsustainable pressure. Selection of appropriate sites for development must include land capability considerations, such that waste water can be safely and efficiently be dealt with (and contained) on site wherever possible.

2.3 Wetlands

2.3.1 Cultural heritage

Wetlands in the study area fall under a variety of jurisdictions, and therefore different management regimes. Because PWS defers matters of Aboriginal heritage to AHT, there is essentially no difference in the management of Aboriginal heritage, excepting perhaps that PWS land managers may be more aware of the presence, or likely presence, of cultural heritage material and that this potential may be raised more quickly and reliably.

Of the developments considered, only the walking trail is likely to pass into wetland areas, as the topography is not conducive to more substantial constructs. However, the flat land at the peripheries of these areas would present more viable locations for larger, more substantial developments, and in these instances the development footprints may impact on sub-surface Aboriginal cultural heritage, or more rarely non-indigenous artefact scatters, and above ground remains, such as relating to agricultural settlement.

Under the AHT process, TASI desktop search may not identify the presence of known sites, but as discussed above, this could be attributable to the lack of previous investigation in the study area rather than actual absence. Acknowledging this, development proponents should be wary of proceeding without further investigation if, under the current system, such work is not explicitly required, as the identification of cultural heritage material further into the development process could result in costly delays.

If the presence of cultural heritage material is confirmed, or suspected, preliminary site investigation could be used to inform the location/route of construction footprints. In the likely event that some impact on deposits is inevitable, in addition to the requirement for an AHC permit, local Aboriginal community support should be sought for any mitigation, which involves the archaeological salvage of material.

Again, few of the known non-Indigenous sites located around wetlands are currently designated as of State significance. For those within PWS managed land, management would therefore be at the discretion of the PWS heritage team, and largely resource dependant. Non-Indigenous sites of less than State level significance on private land are essentially not subject to any form of formal heritage protection.

The fairly low lying topography of wetlands means that developments within them are likely to be less prominent in the wider landscape, and landscape values are therefore perhaps less likely to be an issue. However, the design of developments should recognise that this topography may increase impacts at a more local level.



2.3.2 Biodiversity

As identified earlier, the hydrological regime of a wetland makes it unlikely that any of the development types would be located directly within the wetland – although the possibility exists that part of a walking trail could traverse a wetland on a raised boardwalk.

The example of Templestowe Lagoon (Figure 82) is typical of a number of wetlands in more developed parts of the study area south of St Helens. In this case and others like it, there are areas of farmland on the inland side of the wetland. This offers the opportunity to take a walking track on a relatively direct north-south route through the farmland, and by so doing reduce direct impacts on the wetland, its fringing dune and the opening to the sea. All of this can be accomplished whilst maintaining sightlines from the walk over the wetland and its landscape – such a view might be enhanced with appropriately located bird hides for closer viewing of wetlands and their denizens.

The same proximity to farmland could be seen as opportunities for more sensitive locating of infrastructure such as golf courses or eco-resorts.

Increased visitation by tourists, often to a relatively small area, can have a significant impact on both supply of potable water and disposal of waste water. Tourists can add significant seasonal peaks to the pollution, waste, and water needs of a smaller local population, and thereby put local infrastructure and aquatic habitats under unsustainable pressure. Selection of appropriate sites for development must include land capability considerations, such that waste water can be safely and efficiently be dealt with (and contained) on site wherever possible.



section 4 - recommendations





1 Biodiversity

In considering sustainable development and how this may be better facilitated along Tasmania's East Coast, biodiversity issues, particularly those of national significance present a complex range of options. With reference to the 'options' for development outlined in Component 1 of this project, a consolidation of activities around the larger existing nodes would appear to be the preferable outcome. However, this needs to be balanced with the potential for improved biodiversity outcomes to be generated through carefully managed development in other parts of the East Coast. So while, Option 2 may on the surface, seem the ideal outcome, Option 3 also needs to be considered. However, given the identified sensitivities along much of the coastline, any attempt to create linkages right along the coast needs to be very carefully managed and subject to rigorous assessment prior to any implementation. As such, it is considered that from a biodiversity perspective, this option could only be supported if it was government led, where there could be more assurance that the assessment and consultation process would be rigorous and be reflected in any implementation.

With regards to the broader assessment of policy that needs to be addressed in relation to development impacts on biodiversity on the East Coast or changes to current systems or practices, the recommendations are as follows:

- Large scale tourism development should be co-located with existing major tourism nodes and service centres as a first order priority.
- Extension of existing reticulated water and sewerage infrastructure into rural and natural areas of the coastline should be resisted, in the interests of minimising ribbon development and preventing land degradation by small lot-size subdivision.
- Establishing new sites for development would best be attempted in areas where vegetation is already degraded by weeds, stock grazing, or similar non-conservation land use history. The process of setting up new development site boundaries and infrastructure could be accompanied by rehabilitation of parts of the site not directly required for tourism activities.
- The nationally significant shorebird sites listed above as well as the three Ramsar sites are a starting point for a list of 'no go' zones for further beach-access developments. A more definitive list is a gap in current knowledge, to the extent that other sites are known, but a prioritisation is necessary to refine a stakeholder-agreed list of constrained sites.
- Stakeholders including local Councils should prioritise the introduction of a developer's pre-application 'checklist' for environmental assessments and approvals.
- Pre-submission meetings for planning approval is the time to suggest an EPBC referral if appropriate. The clock does not stop for long enough to allow an EPBC Act referral to be processed (20 working days) once formal planning application has been made, leading almost inevitably to a refusal.
- Approved developments need comprehensive weed and Phytophthora management provisions mandated as part of any C/EMP documentation.
- A program of encouraging slower driving (65km/h) between dusk and dawn has been introduced in parts of Tasmania where roadkill rates are high. Such a program would be important to consider in parts of the study area where tourism development would increase traffic levels, and where sealing currently unsealed roads may lead both to increased levels of traffic and to higher driving speed throughout the day and at night.
- Opportunities for developer-funded research to fill current data gaps should be explored. Two examples for consideration include:
 - Modelled probability mapping for threatened species, using a proven environmental niche modelling technique such as MaxEnt, should be conducted for all biodiversity values (species, communities) for which existing data sources are sparse or uninformative. Further 'no go' zones may be identified by individual or assemblage modelling of threatened species.
 - Use of decision support modelling software (such as Zonation or Marxan) will also be important aids to the making of objective decisions about siting tourism infrastructure and activities. Such aids to optimisation of conservation outcome assist in filtering the difficult decision-making about conservation trade-offs for development gains.



2 Cultural heritage

In considering sustainable development and how this may be better facilitated along Tasmania's East Coast, the management of cultural heritage is clearly a challenging area. This is highlighted by the range of issues outlined within this report, in particular the lack of a consistent or agreed range of stakeholders and in part due to the failure of current policy to acknowledge heritage beyond physical artefacts. It is noted, however, that the majority of these issues are local or State issues, given the lack of identified MNES within the study area. With reference to the 'options' for development outlined in Component 1 of this project, a consolidation of activities around the larger existing nodes would appear to be the preferable outcome particular given the sensitivity of areas such as the coastal dune systems. The lack of information allowing for up-front assessment of many of these issues in the planning process is a particular issue in planning for sustainable tourism.

With regards to the broader assessment of policy that needs to be addressed in relation to development impacts on biodiversity on the East Coast or changes to current systems or practices, the recommendations are outlined below. Recommendations are made in response to the above, and to the previous discussion on knowledge gaps, and these will be expanded and incorporated into recommendations regarding planning processes in Stage 4 of this project, the Sustainable Tourism Plan. The recommendations are as follows:

- Planning mechanisms should take Aboriginal cultural heritage into account early in the process in deference to this cultural heritage but also as a means to minimising unforeseen delays in development programs. The Aboriginal community should be contacted as soon as a development is proposed and consultation and any assessments requiring comment should be submitted in adequate time based on the principle of free, prior and informed consent as defined by the UN Declaration on the Rights of Indigenous Peoples. (http://www.humanrights.gov.au/sites/default/files/declaration_abridged_community_guide.pdf)
[N.B. In line with this point, the Aboriginal community has been kept informed of this project from an early stage, although because the inadequacies of the current system have only become apparent through this work, this was initially through the established pathways that this report concludes to be inadequate. In line with the current protocols, a briefing was submitted to the Aboriginal Heritage Council, and this was followed by a presentation made in person by a representative of Break O' Day Council. The other Aboriginal groups consulted have learnt about the study as it has progressed.]

- An effective and representative body (or bodies) needs to be identified or established to respond to proposals relating to Aboriginal cultural heritage. As a possible example, AHT see no problem with the idea of local councils creating their own advisory bodies, if this will help to improve the heritage management process for all parties (Karen McFadden, Senior Archaeologist and Manager of Operations Aboriginal Heritage Tasmania, pers. comm.).
- In addition to impacts on heritage fabric, the Aboriginal and wider community should be consulted about the effects of development on intangible heritage considerations, including the aesthetic, social and spiritual significance of the landscape.
- Additional studies should be undertaken whenever resources become available, to inform knowledge of heritage places in the study area. Where possible, these studies should be thematic, in line with best practice, but also to provide knowledge of heritage themes in the study area that might present tourism opportunities.
- Local councils should be encouraged to expand their lists of local heritage places, so that these places can be protected through the planning scheme. Non-indigenous places of less than State significance should be a focus of these lists, rather than places which are already state listed and thus already subject to statutory protection.
- To protect the anonymity of particular sites, AHT, PWS and local councils may wish to collaborate with the Aboriginal community to prepare maps of significant Aboriginal heritage 'zones' to inform development in the area. As done in other states, notably Victoria, predictive models could be employed as a means to inform management planning. These could be prepared at a state level, but experience elsewhere suggests that this could be too broad brush and local modelling might be more effective.



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appendix 1

Example THPI sites

Scamander River Silver Mine (THPI 8515.064)

This silver mine, on the south side of the river, was worked from January 1886 to December 1889 on private land via a lease obtained by John Robert Chaffey. In that year the workings were described as including a tunnel more than 80 feet in length that had been driven into the hill side, and Chaffey also found similar deposits on the opposite northern bank of the Scamander River which he worked under another 40 acre lease. In 1889-1890 Annual Report of the Secretary of Mines, production of the mine was estimated at 50 tons, with an average of 33 ounces of silver per ton. Little is otherwise known of the Scamander River mine, but in June 1893 its workings were described as being long abandoned by a visiting Government Geologist who surmised the reason to be consistent flooding of the lower workings. It is assumed that the 40 acre lease on the northern banks Scamander River mine closed at the same time. The report of this visit also recorded workings a short distance to the north which were believed to post-date Chaffey's. These included a main shaft 132 feet (40m) deep on the higher slopes of the hill with a 123 feet (35m) deep underlay shaft located immediately below it.

Today, on the north east facing slopes of the hill facing the Scamander River, the entrance to the main adit of Chaffey's mine is marked by a large mullock heap in a clearing amongst thick bush. This adit is partially unfilled, but otherwise remains open, and additional indications of disturbance in the surrounding area suggests the infilling of the later workings. The THPI record for the site comprises a pro forma site card from the Historic Site Inventory Project undertaken in 1990 which records basic textual information about the place.

Seymour Coal Mines, Long Point (THPI 8514.002)

From 1861 Mines were established in proximity to Long Point by a number of companies, each with their own associated infrastructure. The first company to do so was the Seymour Coal Company which mined Long Point itself from 1861, constructing a coal dump and pier on the southern face side of the Point and a secondary pier on its northern face. A lack of finance caused the closure of that company in 1867 and a second company, the Australian Coal and Kerosene Company, was established the following year. Mining shaley 'slack' coal, which was exported to Melbourne for the extraction of oil at a rate of 50-60 tons a month, this venture operated until 1880. After a hiatus of some 40 years the company's workings were re-established in 1923

as the Seymour Coal Mines Limited which produced black coal for export to Hobart and Launceston until 1931. Incorporating an existing sandstone coal bin from the existing 1860s workings of Seymour Coal Company, the new venture further developed this infrastructure with the addition of a 1,100 foot pier extending from a large embankment constructed of slack coal from the 1860s workings. This pier was lost in storms during 1931, and an explosion at the mine's site office in the same year saw the closure and liquidation of the Company and its workings. The Seymour area continued to be worked for coal under a local syndicate, the Seymour Coal Syndicate, from 1956 until its eventual closure in 1964.

The majority of the remains associated with Seymour Coal Mines Limited are now readily identifiable amongst pasture, although this is rapidly being overcome with intrusive gorse. Remaining structures include the 1860s coal bin and footings for plant and machinery associated with the redevelopment of the site from 1923. The site is separated from the Seymour Beach by coastal shrubs, but it can be reached via an old cutting to the embankment of the former pier. The embankment is now overgrown, although the slack coal used in its construction of the embankment is evident and remains of the timber pier that ran from the embankment still remain on the beach. The THPI record for the site comprises a pro forma site cards from the Tasmanian Historic Archaeological Site Catalogue, undertaken in 1986 and the Historic Site Inventory Project of 1990 which record basic textual information about the place.

Douglas River Probation Station (THPI 8514.025)

Developed in 1851, this site, which is located on the corner of Burgess and James Streets in Bicheno, originally included a superintendent's cottage, a storeroom, accommodation for constables and overseers, huts and barracks for the convicts, a lock up with six cells and a dispensary. The convicts were withdrawn following the closure of the Douglas River Coal Company in 1858, and the Probation Station closed. With the establishment of the Municipality of Glamorgan in 1860, and this body's assumption of the responsibility of policing the district, the site was acquired by the Council and the current watch house and cells was constructed in 1860.

The former gaol and its extant stable block to the rear have been renovated for use as a bed and breakfast and the site is now privately owned. The THPI record comprises only a form from the Tasmanian Convict Probation Stations Inventory which was undertaken by the Tasmanian Heritage Office in 2003.



Bicheno Coal jetty and associated ruins (THPI 8514.027)

The jetty at Waubs Boat Harbour was the termination point of a three mile horse drawn timber tramway from the Douglas River Coal Company's Outer Mines, south of the Denison Rivulet (see below), and represents part of the coal export infrastructure developed by the Company in 1854. Originally enclosed on four sides, the tramway ran along the top of the walls, with the coal trucks dumping the coal into the bin beneath.

In addition to large iron rings set into the granite of Governor Island, which shelters the harbour on the opposite side, a series of rubble sandstone walls are all that remain of the former wharf and mooring facilities developed by the Company. These walls were possibly constructed from stone excavated as part of the shaft excavation at Denison Rivulet. The THPI record for the site comprises a pro forma site card from the Historic Site Inventory Project undertaken in 1990 which records basic textual information about the place, together with a record of a request for advice from PWS and a collection of photos.

Denison Rivulet Coal Mines, Outer Mines (THPI 8514.001)

The Douglas River Coal Company's exploration and commercial mining in the area lasted from the company's formation in May 1849 until its eventual closure in 1858. A series of coal pits, known as the Outer Mines, were linked to wharf and port infrastructure at Waubs Boat Harbour in Bicheno via a three mile, horse drawn timber tramway (see above).

Remnant features at the site, which are located amidst large slack heaps, include two deep mine shafts cut through solid sandstone bedrock which are now flooded. Additional excavations nearby appear to be related to the timber tramway. Although overgrown within what is now light bush, the site remains clear enough for these features to be discerned and understood. The THPI record for the site comprises a pro forma site cards from the Tasmanian Historic Archaeological Site Catalogue, undertaken in 1986, which record basic textual information about the place.

Former Apslawn homestead (THPI ref unknown)

The 640 acre Apslawn estate was granted to John Lyne following his arrival in Tasmania in October 1826 and construction of the homestead began soon after. John Lyne's subsequent industriousness enabled him to support both his youngest and eldest to become politicians. William, the eldest who moved to Sydney following a term as the Council Clerk of Glamorgan, went on to become Sir William Lyne, Premier of New South Wales, who upon Federation in 1901 was a preference as first Prime Minister of Australia prior to Sir Edmund Barton forming government. This place is accordingly also designated on the THR (ref 1495).

The surviving dressed sandstone house preserves a new principle front constructed on the original house in the 1840s, but, together with a brick stable block, this represents only a portion of the original homestead that originally formed the centre of the estate. The structure was in a ruinous state by the 1920s and is now in a poor state of repair, having been extensively vandalised, losing its windows, doors and internal joinery and consequently suffering from the effects of water ingress. It is currently used for the storage of hay, having previously served as a livestock shelter. The structure of the brick stable block is deteriorating, but, despite its current state, that of the house appears to remain strong, and it still retains significant decorative plasterwork from its construction in the 1840s and floor boards throughout. The THPI record relating to this place could not be located by PWS staff.

Coles Bay Red Granite Company (THPI 8513.039)

The pink granite for which the Coles Bay area is famous has been produced intermittently at this site from 1934 until the late 1970s, but the quarry, which is located just over a kilometre south of The Fisheries and accessed via a rough track, was formally established by Balmoral Red (Aust) Pty Ltd in 1945 under a 99 year lease. In 1956 Balmoral Red sold the lease to Bern Cuthbertson who undertook the majority of the extant excavations together with three Italian quarrymen sponsored to come to Australia under the migrant support scheme of the time (Rodney Haas, grandson of Bern Cuthbertson, pers comm.). After 1967 the quarry lease operation passed to several other owners before eventually closing in the late 1970s due to reduced load limits on the Coles Bay Road and a decline in the regional maritime trade.



At the height of Cuthbertson's operations stone was quarried as blocks which were moved on small railway trolleys to a timber wharf set between two breakwaters constructed from waste stone. Two cranes on concrete footings served the wharf hoisting the blocks onto boats which under Cuthbertson's tenure included the local vessels George Bass, John Franklin, Naracoopa, and Sumatra. The stone was then transported to various yards in Hobart to be sculptured and finished. The quality of the quarry's stone saw its inclusion in numerous high profile structures, including the head office of the Commonwealth Bank in Hobart. Additional structures on the site included a blacksmiths shop near the entrance to the quarry and a series of five quarrymen's huts, constructed by the Balmoral Red company, located along the foreshore between The Fisheries and the quarry site.

Today the two distinct periods of quarrying, under the Balmoral Red company and Bern Cuthbertson, are apparent in the quarry face. Amongst later equipment on the site the remains of the former wharf, the granite rubble breakwaters, and a large waste heap indicative of the quarry's former workings are slowly becoming overgrown by the coastal heath. Only two of the quarrymen's huts remain today, both under the management of the Coles Bay Youth Hostel following their gifting to the Youth Hostel Association by Cuthbertson in the early 1960s. The quarry site retains spectacular views to the north across Parsons Cove and Coles Bay. The THPI record relating to this place could not be located by PWS staff.

Middleton Creek Tinfield (THPI 8513.021)

Worked from the 1870s by groups of small prospectors, the tin fields at Middleton Creek developed as a series of mining leases on the Crown land of the Freycinet Peninsula and continued until the last mining lease was forfeited in the 1990s when the area was incorporated into the Freycinet National Park.

The landscape has been much altered by the mining excavations and the accompanying dams, sluices, and water diversions. Much of the area has been recalled by the surrounding vegetation, but many mining related relics remain, including the stone and adobe chimneys of miners huts dating from the 1870s to as recently as the 1970s. The latter include that occupied by Doug Lewis who owned a lease over the area from 1966-1984, and the majority of the extant mining equipment remaining on the site, including dams and roadways, date from Lewis' working of the mining lease. The relatively extensive THPI record for this place includes pro forma site cards from the Tasmanian Historic Archaeological Site Catalogue, undertaken in 1992, together with additional information including photographs, a site history, plans and maps and a Statement of Significance for the site.