

Inverloch Coastal Resilience Project— Aboriginal Cultural Heritage Values, Current Status and Potential Threats

*Report Prepared for the South Gippsland
Conservation Society and the Inverloch Coastal
Resilience Project*



Joanna Freslov
Author: Joanna Freslov
2 June 2019

Inverloch Coastal Resilience Project— Aboriginal Cultural Heritage Values, Current Status and Potential Threats

*Report Prepared for the South Gippsland
Conservation Society and the Inverloch Coastal
Resilience Project*

Author: Joanna Freslov
2 June 2019

Cover Plate: Typical midden on the coast of Victoria

Executive Summary

This report is a risk assessment for Aboriginal cultural heritage values for the coastal reserve at Inverloch and Point Smythe, Venus Bay. The report has considered the location and site types of 15 Aboriginal places¹ located in and adjacent to the study area against a range of variables that pose a risk to the stability of Aboriginal sites. The report has concluded that three sites are at high risk with one site at a very high risk. As the area has not been thoroughly surveyed there is a high potential for further sites to be located in the coastal reserve. This report predicts those areas where there is a high potential for previously unknown sites to be found and also those areas where sites (known or unknown) would be most at risk.

An analysis of the known Aboriginal places in the study area found that there are 14 sites in or immediately adjacent to the study area. Of these four places are identified as at high risk from destabilisation of the dunes from sea level rise and associated erosion. The report also concludes that due to the lack of archaeological survey in the area there is a high risk that as yet unknown Aboriginal places may also be at risk in the study area.

Consultation was undertaken with the Registered Aboriginal Party for the Inverloch area, the Bunurong Land Council Aboriginal Corporation ('BLCAC') and with both the BLCAC and the Gunaikurnai Land and Waters Aboriginal Corporation ('GLAWAC') RAP applicants and traditional owners for the Venus Bay area. Both groups expressed the view that all the Aboriginal places identified in the study area were of high cultural significance and that urgent measures were required to address the potential impacts to the sites from climate change. They considered that insufficient investigation had been carried out so far that there were likely to be more as yet unknown, Aboriginal sites in the study area and that further investigation was required to establish a better understanding of this area. They also suggested that management of the mitigation of impacts to the sites should be based on their high *cultural* significance rather than their *scientific* significance.

¹ The term 'Aboriginal place' is used interchangeably with 'Aboriginal site'. Generally place is used as a more inclusive term as it may also include locations where there are no physical remains (e.g. a spiritual site) and it distinguishes a location from a 'construction site', 'development site' etc. when Aboriginal places are found in those locations.

Table of Contents

1	INTRODUCTION	2
1.1	The Study Area	2
2	CONSULTATION	13
2.1	Background	13
2.2	Consultation	13
3	GEOLOGY, GEOMORPHOLOGY AND VEGETATION	13
3.1	Introduction	13
3.2	Geology	13
3.3	Geomorphology	16
3.4	Pre-1750s Vegetation	17
3.5	Past Climate	17
4	PRE-CONTACT HISTORY	18
4.1	Introduction	18
4.2	Bunurong People Pre-contact and Contact History	18
4.3	Contact and Post-contact History	19
4.3.1	Early Contacts Sealers and Explorers	19
4.3.2	The Bun Wurung and the Protectorate System	19
4.3.3	Group Relationships	19
4.3.4	Subsistence	20
4.3.5	Movement	20
4.3.6	Fires	21
4.3.7	Conflict	21
4.3.8	Populations	21
4.3.9	Effects of Settlement	21
4.4	Gunaikurnai People Pre-contact and Contact History	22
4.4.1	Population	22
4.4.2	Group Organisation and Boundaries	23
4.4.3	The Kutwut	24
4.4.4	Marriage, Birth and Death	24
4.4.5	Ceremonies, Spiritual Beliefs and Social Activities	24
4.4.6	Conflict	25
4.4.7	Trade and Exchange	26
4.4.8	Precontact Resource Exploitation	26
5	ABORIGINAL HERITAGE IN THE STUDY AREA	30

5.1	Introduction	30
5.2	Desktop Assessment	30
5.3	Search of the Victorian Aboriginal Heritage Register	30
5.4	The Study Area	30
5.5	Aboriginal Places in the Study Area and Adjacent Areas	30
5.5.1	Historic References	31
5.5.2	Preliminary Reports	31
5.5.3	Chronology	31
5.6	Previous Work in the Geographic Region	32
5.7	Light (2006)	34
5.8	Significance of the Sites in the Study Areas	34
5.8.1	Scientific Significance Assessment	34
5.8.2	Aboriginal Community Statement of Cultural Significance	35
5.9	Conclusions from the Desktop Assessment	35
6	ABORIGINAL CULTURAL HERITAGE RISK ASSESSMENT	45
6.1.1	Analysis of risk to known Aboriginal places in and adjacent to the study area	45
6.1.2	Results of Site Analysis	47
6.1.3	Site Predictive Model	47
6.1.4	Areas at most risk	47
6.2	Conclusions from the analysis	48
6.3	Final Remarks	48
7	REFERENCES	58

Tables

Table 1: Cadastral information for the activity area	2
Table 2: GLaWAC historic places, connections, attachments in\with the region and study area	27
Table 3: Aboriginal places in and adjacent to the study area	30
Table 4: Site types in the study area	31
Table 5: Radiocarbon dates in or adjacent to the geographic region	31
Table 6: Surveys in and adjacent to the study area	32
Table 7: Scientific significance of the site in the activity area	35
Table 8: Risk Scores for sites in and adjacent to the study area	46
Table 9: Risk Scores for sites in the study area	47
Table 10: At risk locations	47

Figures

Figure 1: Activity area – Areas 1-8	3
Figure 2: Activity Area 1 (detail)	4
Figure 3: Activity Area 2 (detail)	5
Figure 4: Activity Area 3 (detail)	6
Figure 5: Activity Area 4 (detail)	7
Figure 6: Activity Area 5 (detail)	8

Figure 7: Activity Area 6 (detail)	9
Figure 8: Activity Area 7 (detail)	10
Figure 9: Activity Area 8 (detail)	11
Figure 10: RAP and Traditional Owner areas (detail)	12
Figure 11: Geology in the study area	14
Figure 12: Geomorphology in the study area	15
Figure 13: Pre-1750s vegetation of the study area	16
Figure 14: Aboriginal places in and adjacent to study area 1	36
Figure 15: Aboriginal places in and adjacent to study area 2	37
Figure 16: Aboriginal places in and adjacent to study area 3	38
Figure 17: Aboriginal places in and adjacent to study area 4	39
Figure 18: Aboriginal places in and adjacent to study area 5	40
Figure 19: Aboriginal places in and adjacent to study area 6	41
Figure 20: Aboriginal places in and adjacent to study area 7	42
Figure 21: Aboriginal places in and adjacent to study area 8	43
Figure 22: Aboriginal places in and adjacent to surveyed areas	44
Figure 23: High risk areas in the study area (Area 1)	50
Figure 24: High risk areas in the study area (Area 2)	51
Figure 25: High risk areas in the study area (Area 3)	52
Figure 26: High risk areas in the study area (Area 4)	53
Figure 27: High risk areas in the study area (Area 5)	54
Figure 28: High risk areas in the study area (Area 6)	55
Figure 29: High risk areas in the study area (Area 7)	56
Figure 30: High risk areas in the study area (Area 8)	57

Appendices

Appendix 1 - Glossary	64
Appendix 2 - Gazetteer	68
Appendix 3: Significance Assessment	69

Acknowledgements

A number of people have assisted with the preparation of this assessment and the preparation of this CHMP including:

- Phillip Heath, Alison Oates (Inverloch Coastal Resilience Project]
- Russell Mullett (GLaWAC).
- Robert Ogden (BLCAC).

Abbreviations used in the Text

ACHRIS	Aboriginal Cultural Heritage Register and Information System
AHA	Aboriginal Heritage Act 2006
AHR	Aboriginal Heritage Regulations 2007
AS	Artefact Scatter
ATSIC	Aboriginal and Torres Strait Islander Commission
AV	Aboriginal Victoria
BLCAC	Bunorong Land Council Aboriginal Corporation
BP	Before Present
DPC	Department of Premier and Cabinet
CHMP	Cultural Heritage Management Plan
DELWP	Department of Environment Land Water and Planning
DGPS	Differential Global Positioning System
DPC	Department of Premier and Cabinet
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
GLaWAC	Gunaikurnai Land and Waters Aboriginal Corporation
HA	Heritage Advisor
ICOMOS	International Council on Monuments and Sites
KYA	Thousand Years Ago
LDAD	Low Density Artefact Deposits
MASL	Metres Above Sea Level
RAP	Registered Aboriginal Party
SGCS	South Gippsland Conservation Society
STP	Shovel Test Pit
TO	Traditional Owner
TP	Test Pit
VAHC	Victorian Aboriginal Heritage Council
VAHR	Victorian Aboriginal Heritage Register
VAS	Victoria Archaeological Survey

All coordinates used in the preparation and reporting of this report are in GDA 94 MGA Zone 55. All measurements are in metric except where referring to historic references/quotes in imperial.

Please note that pictures and names of Aboriginal people who have passed away have been used in this report.

Part 1 Background

1 Introduction

This report has been commissioned by the South Gippsland Conservation Society for the 'Inverloch Climate Change Resilience Project'. The document is an assessment of the likely impacts of climate change combined with other risks on Aboriginal places on the Bass Coast in the Inverloch/Venus Bay area as shown in Figure 1. It comprises the following components:

- Scope of the project
- Context of the study area
- Aboriginal places in the activity area.
- Likely impacts and predicted consequences for Aboriginal sites in the study area.

1.1 The Study Area

The activity area comprises an area of the Bass Coast between the Inverloch-Cape Paterson Road, west of Inverloch, the Esplanade, Inverloch and the western end of the Venus bay peninsula at Lees Road, Venus Bay (Point Smythe) (Figure 1). The land managers for the study area are DEWLP, the Bass Coast Shire and South Gippsland Shire (Table 1).

Table 1: Cadastral information for the activity area

Area	Land Tenure	SPI	Property Address	General Location (GDA 94 MGA 55)
Area 1	Crown land	60E\PP2889	3 Surf Beach Road Cape Paterson 3995	E 385740, N 5720958 (55)
Area 2	Crown land	60D\PP2889	3 Surf Beach Road Cape Paterson 3995	E 386205, N 5721325
Area 3	Crown land	2B~1\PP2889	Surf Parade Inverloch 3996	E 387085, N 5721665
Area 4	Crown land	2B~1\PP2889	Surf Parade Inverloch 3996	E 388105, N 5722155
Area 5	Crown land	57D\PP3563	Bas Highway Inverloch 3996	E 389470, N 5722825
Area 6	Crown land	13~3\PP5393	The Esplanade Inverloch 3996	E 390115, N 5723085
Area 7	Crown land	2B~5\PP5393	The Esplanade Inverloch 3996	E 391360, N 5723035

Figure 1: Activity area – Areas 1-8

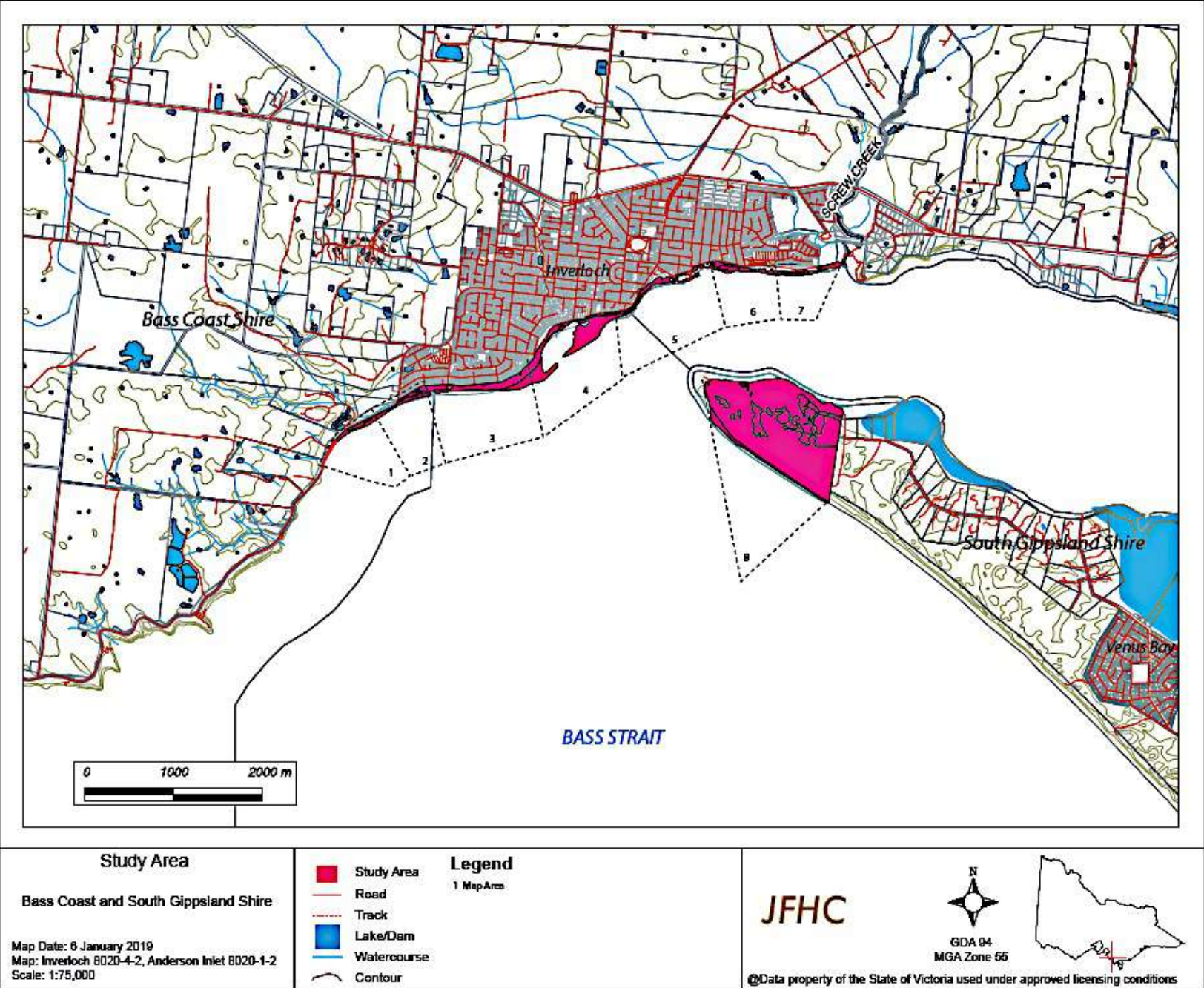




Figure 2: Activity Area 1 (detail)


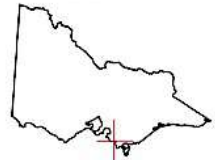
<p>Study Area - 1</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area (shapefile provided by ICRP) Coastline (Current data sourced from GeoVic) 	<p>JFHC</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center;">  GDA 94 MGA Zone 55 </div> <div style="margin-left: 20px;">  </div> </div> <p><small>@Data property of the State of Victoria used under approved licensing conditions</small></p>
--	--	---



Figure 3: Activity Area 2 (detail)




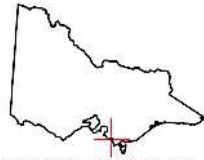
<p>Study Area - 2</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <p> Activity Area (shapefile provided by ICRP)</p> <p> Coastline (Current data sourced from GeoVic)</p>	<p>JFHC</p> <p> GDA 94 MGA Zone 55</p> <p></p> <p>@Data property of the State of Victoria used under approved licensing conditions</p>
--	--	---



Figure 4: Activity Area 3 (detail)

Study Area - 3
 Bass Coast and South Gippsland Shire
 Map Date: 6 January 2019
 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
 Scale: 1:5,000

Legend

- Activity Area (shapefile provided by ICRP)
- Coastline (Current data sourced from GeoVic)

JFHC

GDA 94
 MGA Zone 55

@Data property of the State of Victoria used under approved licensing conditions




Figure 5: Activity Area 4 (detail)


Study Area - 4
 Bass Coast and South Gippsland Shire
 Map Date: 6 January 2019
 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
 Scale: 1:5,000

Legend

- Activity Area (shapefile provided by ICRP)
- Coastline (Current data sourced from GeoVic)

JFHC


 GDA 94
 MGA Zone 55



@Data property of the State of Victoria used under approved licensing conditions



Figure 6: Activity Area 5 (detail)

Study Area - 5
 Bass Coast and South Gippsland Shire
 Map Date: 6 January 2019
 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
 Scale: 1:5,000

Legend

- Activity Area (shapefile provided by ICRP)
- Coastline (Current data sourced from GeoVic)

JFHC

GDA 94
MGA Zone 55

@Data property of the State of Victoria used under approved licensing conditions

Figure 7: Activity Area 6 (detail)



Study Area - 6

Bass Coast and South Gippsland Shire

Map Date: 6 January 2019
 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
 Scale: 1:5,000

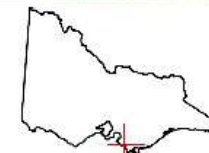
Legend

- Activity Area (shapefile provided by ICRP)
- Coastline (Current data sourced from GeoVic)

JFHC



GDA 94
 MGA Zone 55



@Data property of the State of Victoria used under approved licensing conditions

Figure 8: Activity Area 7 (detail)



Study Area - 7

Bass Coast and South Gippsland Shire

Map Date: 6 January 2019
 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
 Scale: 1:5,000

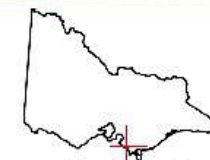
Legend

- Activity Area (shapefile provided by ICRP)
- Coastline (Current data sourced from GeoVic)

JFHC



GDA 94
 MGA Zone 55



@Data property of the State of Victoria used under approved licensing conditions

Figure 9: Activity Area 8 (detail)





Study Area - 8

Bass Coast and South Gippsland Shire

Map Date: 6 January 2019
Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
Scale: 1:10,000

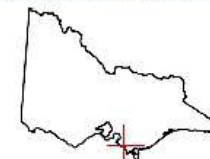
Legend

-  Activity Area (shapefile provided by ICRP)
-  Coastline (Current data sourced from GeoVic)

JFHC

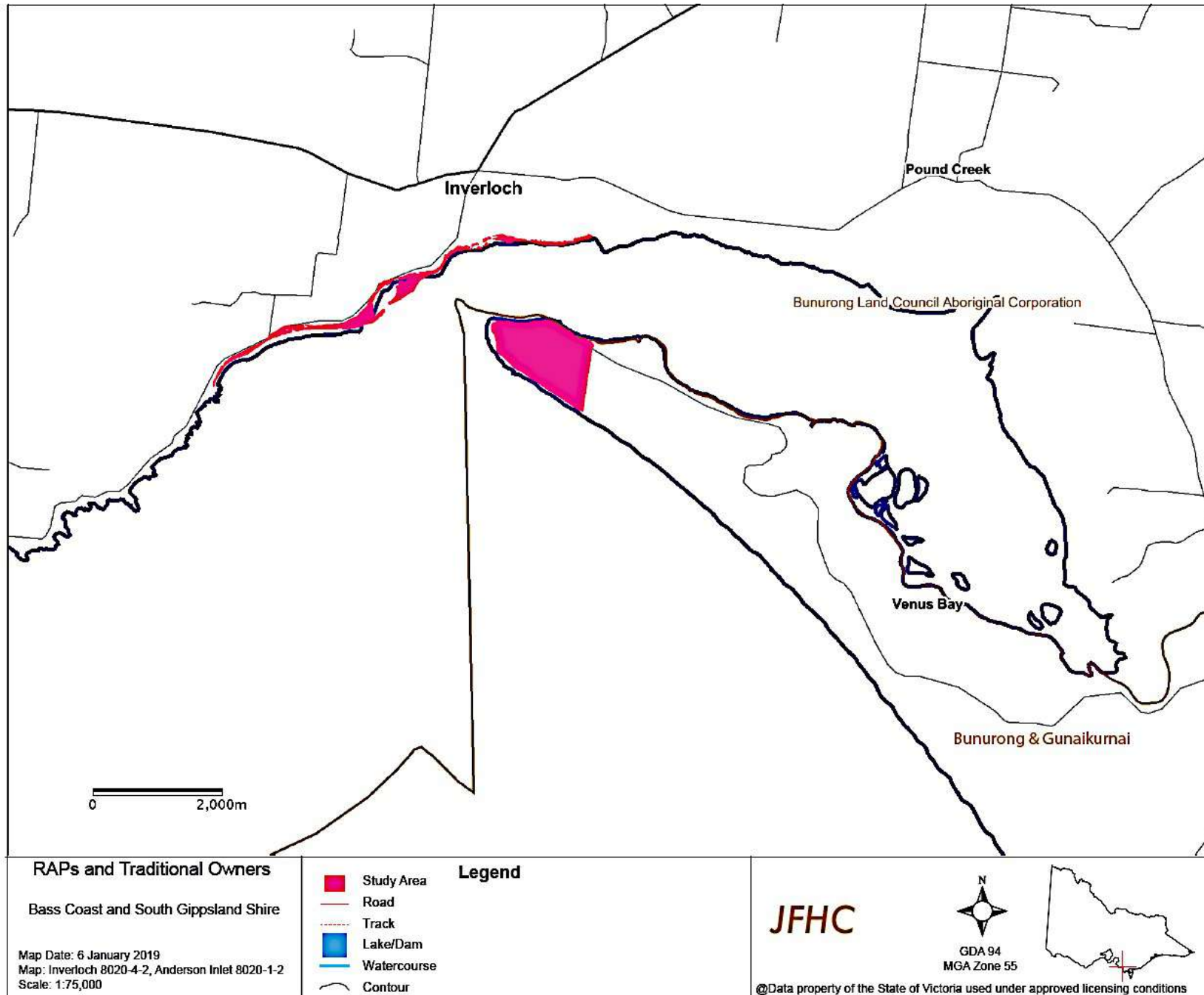


GDA 94
MGA Zone 55



@Data property of the State of Victoria used under approved licensing conditions

Figure 10: RAP and Traditional Owner areas (detail)



2 Consultation

2.1 Background

The Registered Aboriginal Parties (RAP) and Traditional Owners (TOs) for the study areas are as follows:

- Inverloch and the Anderson Inlet north coast— RAP—Bunurong Land Council Aboriginal Corporation (BLCAC).
- Anderson Inlet and Venus Bay coasts—TOs—BLCAC and Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC), currently under negotiation.

The Inverloch and Anderson inlet north coasts are in the legislated RAP area of the BLCAC, while the remaining parts of the study area are currently under negotiation between the two (Figure 10). As such consultation for both areas has been carried out with both parties for this project

2.2 Consultation

The proposed project was discussed with both groups at the RAP Forum on 20 November. Subsequently the project was introduced to the groups again in January and February and formal permission for access to the Aboriginal Cultural Heritage Register (ACHRIS) was sought from both groups.

The draft report (Version 2) was forwarded to both groups for comment (12/3/19). Consultation was planned with both GLaWAC and BLCAC regarding the draft and both groups were keen to discuss the issues in a joint meeting. Due to the pressure of work in both groups at this time this was not possible and a face-to-face meeting was held with GLaWAC (4/5/19). Russell Mullett (RAP Manager) was happy with the report. He knows the area well and agrees that further survey of the joint application area is urgently required. Rob Ogden (Cultural Heritage Manager BLCAC) was contacted by phone and then by email. In his email he stated

‘I have only one issue in the document and that's a difference of opinion to do with Pre-Contact History. Whilst we differ in opinion on the "historical" BLCAC are happy with the rest of the content provided in this document. BLCAC would like the noted that we differ on the Pre-Contact History component in this document.’

A planned meeting between BLCAC and GLaWAC is still planned in the near future to discuss issues in this area. The results of this report will form the first item on the agenda. Unfortunately again due to the significant workload at present for both groups this will not take place during the life of this project.

3 Geology, Geomorphology and Vegetation

3.1 Introduction

The geology and geomorphology is described in the associated report by Neville Rosengren and the relevant details are summarised in this section only

3.2 Geology

The coastal sediments are described as ‘Beaches (sand and gravel), dunes (foredune, transgressive), backshore ridges and swale deposits from Pleistocene higher sea-levels’. Figure 11 shows the study area is located in areas of unnamed alluvium, swamp and lake deposits and the Wonthaggi formation which Rosengren (2019: 6) described as comprising ‘feldspar-rich thinly-

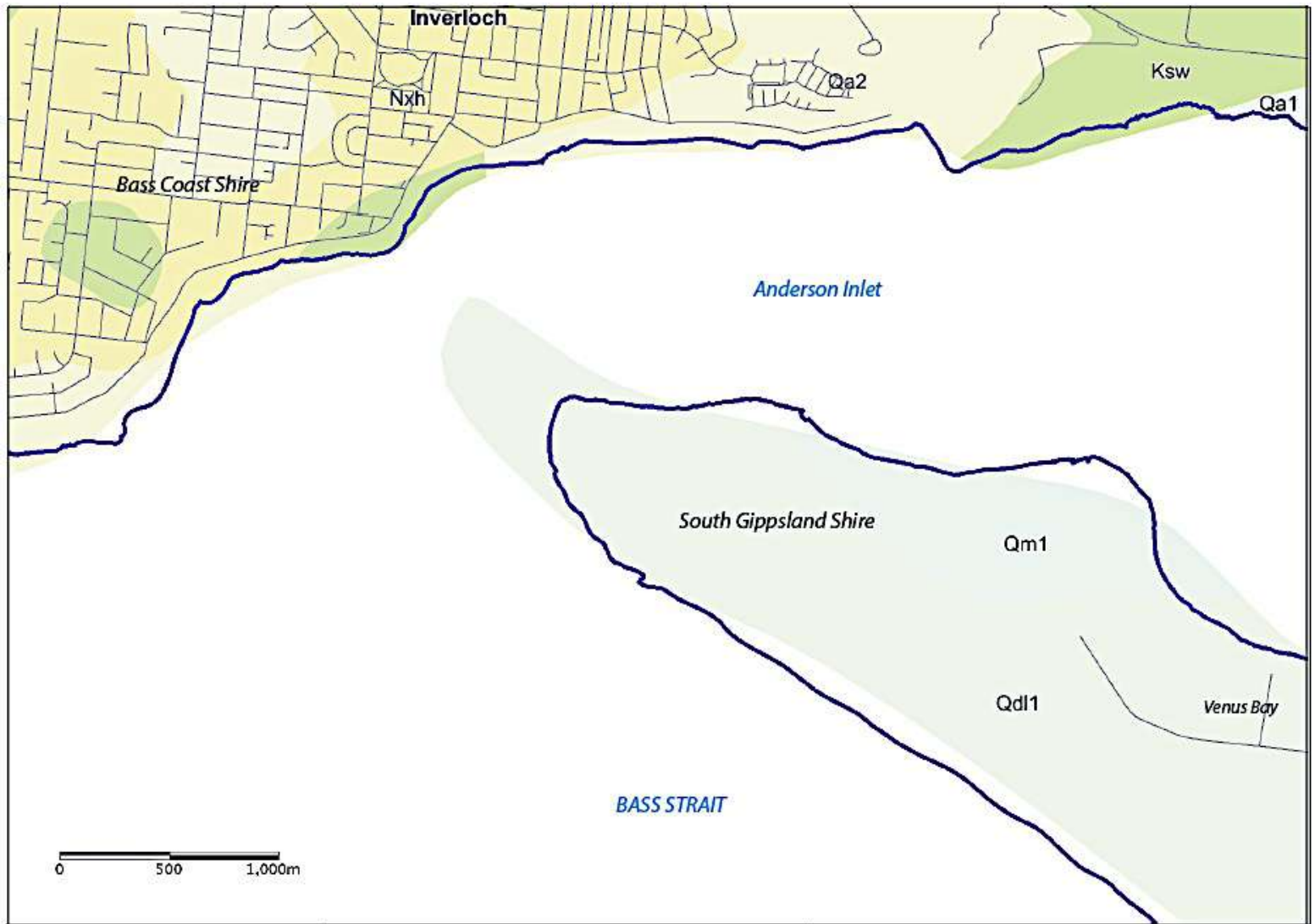



















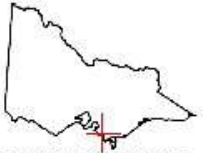











Figure 11: Geology in the study area

<p>Geology in the Study Area</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:25,000</p>	<p>Legend</p> <table border="0"> <tr> <td></td> <td>Study Area</td> <td></td> <td>Unnamed swamps & lake deposits (Qm1)</td> </tr> <tr> <td></td> <td>Road</td> <td></td> <td>Wonthaggi Formation, fluvial lithic sandstone, minor conglomerate, coal (Ksw)</td> </tr> <tr> <td></td> <td>Track</td> <td></td> <td>Unnamed alluvium (Qa2)</td> </tr> <tr> <td></td> <td>Lake/Dam</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Watercourse</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Contour</td> <td></td> <td></td> </tr> </table>		Study Area		Unnamed swamps & lake deposits (Qm1)		Road		Wonthaggi Formation, fluvial lithic sandstone, minor conglomerate, coal (Ksw)		Track		Unnamed alluvium (Qa2)		Lake/Dam				Watercourse				Contour			<p>JFHC</p> <p></p> <p>GDA 94 MGA Zone 55</p> <p></p> <p><small>@Data property of the State of Victoria used under approved licensing conditions</small></p>
	Study Area		Unnamed swamps & lake deposits (Qm1)																							
	Road		Wonthaggi Formation, fluvial lithic sandstone, minor conglomerate, coal (Ksw)																							
	Track		Unnamed alluvium (Qa2)																							
	Lake/Dam																									
	Watercourse																									
	Contour																									

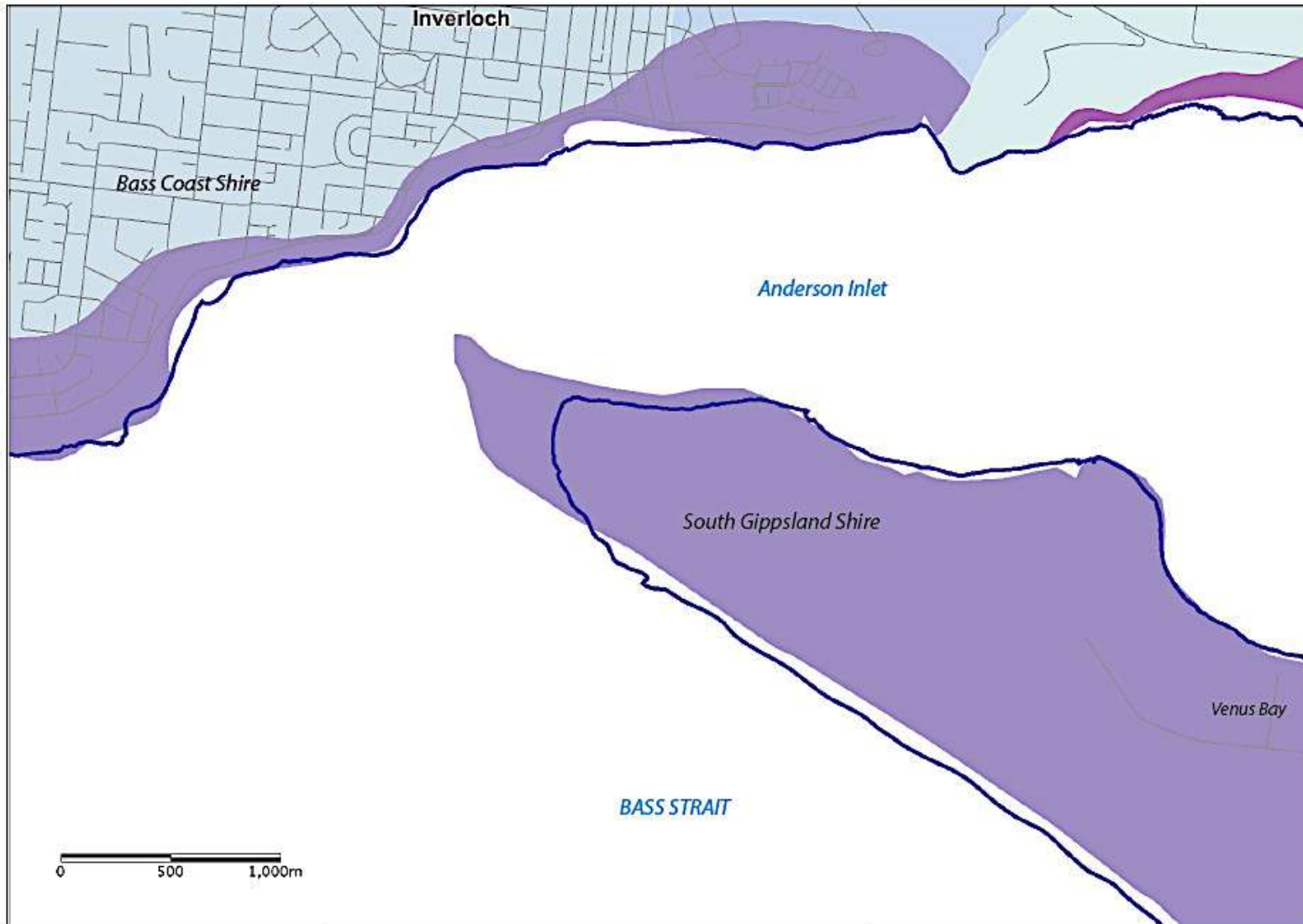



Figure 12:
Geomorphology in
the study area

<p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:25,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Study Area Road Track Lake/Dam Watercourse Contour High Level Terraces and Fans Flood Plains and Morasses Coastal barriers Southern Uplands low level relief 	<p>JFHC</p> <p>GDA 94 MGA Zone 55</p> <p>@Data property of the State of Victoria used under approved licensing conditions</p> 
--	---	--

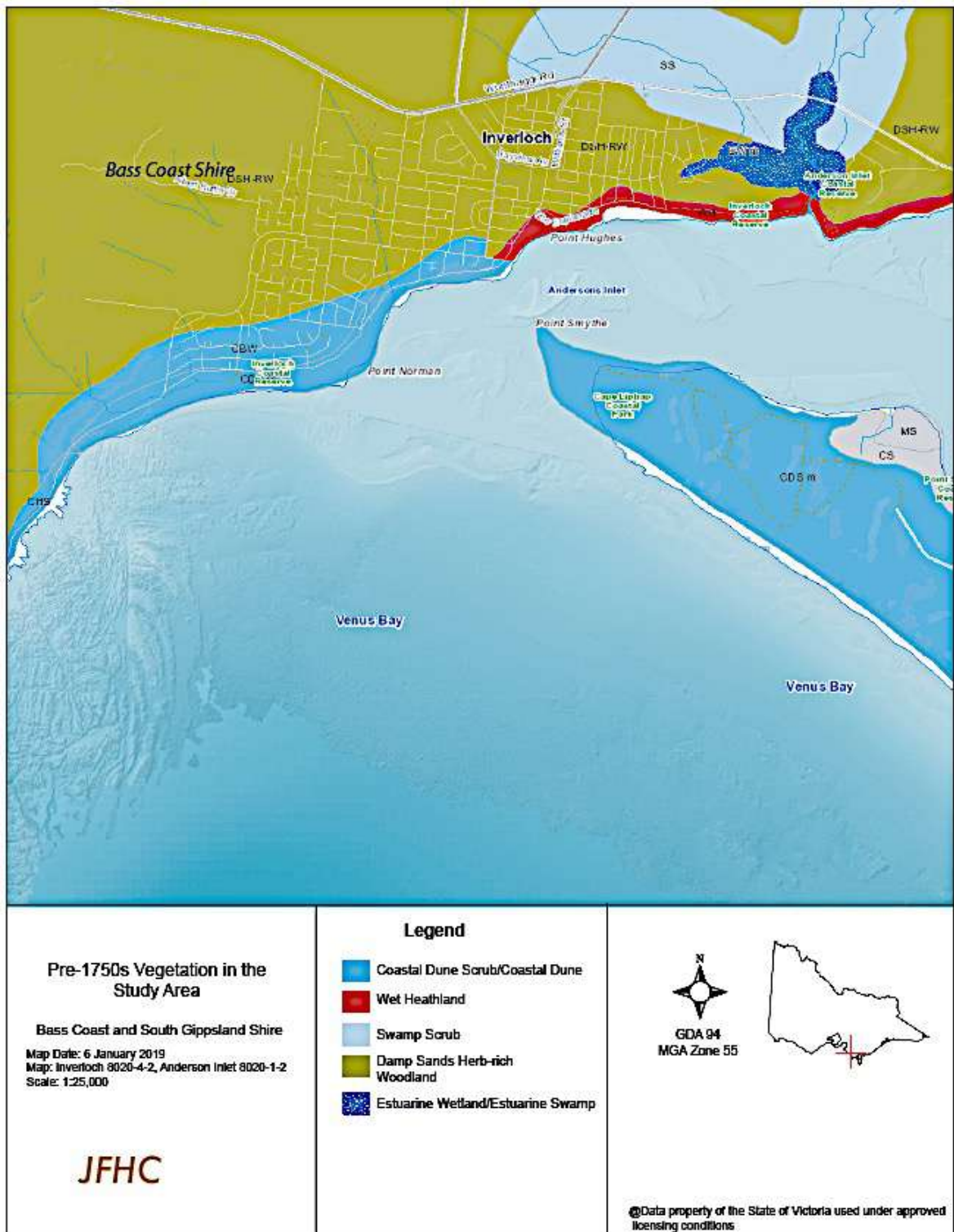


Figure 13: Pre-1750s vegetation of the study area

bedded fine to medium-grained sandstones with lesser quartz, and interbedded dark dense siltstone, mudstone and shale’.

3.3 Geomorphology

Rosengren (2019: 4) describes the Inverloch area as a ‘down-faulted depression with a different landscape from the surrounding Strzelecki Ranges’. Figure 12 shows that the study area is located in an area characterised by coastal barriers.

3.4 Pre-1750s Vegetation

As Figure 13 shows, the study area is mainly located in what was the coastal dune scrub/coastal dune vegetation area, with the eastern end partly located in an area of wet heathland. The wet heathland comprised trees such as Scented Paperbark, Prickly Tea-tree, Scrub Sheoak, sedges and ferns.² The coastal dunes EVC comprises plants such as saltbush, coastal wattle, tussocky grass knobby club rush etc.

3.5 Past Climate

Aboriginal people have been in Australia for at least 40–60,000 years possibly longer (Allen 1989; Jones 1995). This period falls within the last world climatic downturn or glacial period, which commenced about 80,000 years ago. During the glacial period, the climate was up to 6° C lower in the southern hemisphere, the tree line was lowered and large glaciers formed in Tasmania and on the Great Divide (Gibson *et al.* 1987). Greater amounts of water tied up in the large glaciers and ice sheets led to lower sea levels and Tasmania and Papua New Guinea were joined to Australia by land bridges. The climate was much drier and cooler and landmasses stretched to the edge of the continental shelf. After 26,000 BP the climatic downturn became more severe and sea levels were at their lowest and the climate at its coldest between 20–18,000 BP (Bowler *et al.* 1976: 374; Dodson *et al.* 1992: 117). A large brackish lake occupied the low point of the landbridge between Tasmania and Victoria (Blom 1988: 96). Eucalypt forest decreased and semi-arid grasslands extended over large areas of southern Victoria (Blom 1988: 96; Dodson *et al.* 1992: 118).

During the last glacial phase in the highlands, the past climate was, as elsewhere, cooler and drier than today, with the treeline depressed and the region covered by shrubland/open woodland and grassland semi arid steppe complexes, with remnant wet sclerophyll or rainforest patches in the stream valleys at lower altitudes (Dodson *et al.* 1992: 116–121). Temperatures were up to 6°C lower than today and while Tasmania was heavily glaciated, on the mainland cirque glaciers were only found at Mount Kosciusko (Peterson 1968: 74–75).

As conditions ameliorated following the last glacial, it became milder, but wetter and the treeline increased to its present altitude. Vegetation dependant on wetter conditions expanded, including rainforests and wet sclerophyll forests, reaching its maximum extent during the mid-Holocene at 5000 BP (Gell and Stuart 1989: Figures 6–11). Since 5000 BP, conditions have been cooler and drier, with the El Nino (*el nino* southern oscillation ENSO) weather pattern becoming more dominant (Rowland 1999: 18; Sandweiss *et al.* 1996). Increased fire risks and extensive fires are associated with a periodic but severe ENSO weather pattern (Freslov and Goulding 2002). Changes and variation in climate patterns indicate that animal and plant resources in the study area would have undergone change through time, and change through time can be expected in the exploitation of these resources and consequently evidence Aboriginal occupation (Freslov and Goulding 2002).

² https://www.environment.vic.gov.au/data/assets/pdf_file/0033/48696/GipP_EVCs_combined.pdf. Accessed 11/3/19

4 Pre-Contact History

4.1 Introduction³

Pre-contact, contact and post-contact history is reviewed in this report to examine the nature and extent of past Aboriginal occupation. This information provides further contextual information to assist with archaeological site location prediction and risk assessments recommendations.

There is some debate, but it is thought that region in which the study area is located was, at the time of initial European settlement, used by people of the Bunurong language group. The ethnohistory has been separated into two parts (BLCAC and GLAWAC) until consultation has concluded as agreement has been reached on the presentation of this part of the report.

Early observations made by Europeans have been used to reconstruct a picture of 'traditional' Aboriginal society. There are a number of problems with this approach including:

- The patchiness and incomplete nature of these records.
- The fact that Aboriginal society had often been severely disrupted by the time that these observations were recorded.
- The difficulties of projecting such post-settlement observations back into the past without presenting a 'frozen in time' caricature of what was undoubtedly a dynamic and highly flexible culture.

Some information about the contact period has also been retained as 'oral history'.

4.2 Bunurong People Pre-contact and Contact History

At the time of initial European settlement, it is generally accepted that the region in which the study area is located was partly (Inverloch and Andersons Inlet), occupied by people of the *Bun wurrung* language group which was one of the groups making up the East Kulin languages (Clark 1990: 363). The Bun wurrung speakers were divided into six clans, each of whom had strong associations with and responsibilities for particular tracts of land. Clark (1990: 365) lists these groups as

- *Bun wurung balug*—located at Point Nepean and Cape Schanck.
- *Mayune balug*—located at Carrum Swamp and Mayune Station.
- *Ngaruk willam*—located at Brighton, Mordialloc, between Mount Eliza and Mount Martha, and Dandenong.
- *Yallock balug*—located at Bass River and Tooradin.
- *Yalukit willam*—located east of Werribee, Williamstown, Sandridge and St Kilda.
- *Yowengarra*—located at the Tarwin River.

It is likely that the Yallock balug or the *Yowenjerre* were the group occupying the study area.⁴ Early records or information about the areas east of Western Port Bay are consistently poor with regard to Aboriginal groups living in this area.

While exact boundaries are difficult to determine, it is thought that the Bun wurrung lands extended along the coast from the Werribee River to the Tarwin River watershed and Anderson

³ See note in Section 2.2 regarding the BLCAC ethnohistory.

⁴ The information provided in this document is, regarding Aboriginal people (past and present), prepared without prejudice to any future negotiated outcomes between the Government/s and Victorian Aboriginal communities. It is acknowledged that such negotiated outcomes may necessitate amendment of this information in the future. Every effort has been made to ensure that the information in this report is accurate. JFHC does not guarantee that the information provided is without flaw of any kind and therefore disclaims all liability for any error, loss or consequence which may arise from relying on any information in the report.

Inlet (Clark 1990: 363). Just prior to contact, Bun wurrung custodianship may have extended to Wilsons Promontory, though a serious clash between the local clan the Yowengarra and the *Borro borro willam* from Gippsland at the Tarwin River, are said to have wiped out the Yowengarra, and Gippsland clans controlled Wilsons Promontory by the time George Augustus Robinson 'Chief Protector of Aborigines' travelled through the region in 1844 (Wesson 2000: 18).

Robinson noted that the Bun wurung balug had a good relationship with their neighbours the *Wurundjeri balluk* and *Wurundjeri willum* (Clark 1990: 366).

4.3 Contact and Post-contact History

4.3.1 Early Contacts Sealers and Explorers

It is certain that the Bun wurrung people experienced some of the earliest encounters with European people in this area of the coast, well before permanent settlement.

It is likely that sealers were in Western Port by 1812, and they were regularly in the area from the turn of the century and were living on Phillip Island by 1826 (Gaughwin and Sullivan 1984: 82). The sealers on Phillip Island had planted crops and had built simple huts by this time (Coutts 1983; D'Urville 1830 cited in Priestly 1984: 114; Sullivan 1981: 14). Clashes with the sealers were frequent and they were reported to have kidnapped both Aboriginal men and women. The sealers are reported to have had several Aboriginal women living with them on the island, presumed to have been taken by force or barter from the mainland or from Van Diemens Land (Coutts 1983 14; Sullivan 1981: 14). The first official settlement of the area occurred in 1826 at Corinella. Settlers at Corinella reported a visit by one of the sealers.

Scott the sealer came up to the settlement in his whaleboat, with his black wife, and presented Captain Wright with a quantity of green peas and potatoes (Bowden 1970: 13).

These early settlements, clashes, kidnaps and the displacement from the land would have had a major impact on the people from the Bass Coast area. It is likely that the seizure of women from the coastal groups was a contributing factor to increased tension and fighting between the Bun wurrung and the Gunai/Kurnai people to the east. These border skirmishes resulted in the deaths of many Aboriginal people in various tribal conflicts from c. 1812 to 1836 including the one at Tarwin River (see above) (Sullivan 1981: 21).

The Bun wurrung also came into contact with early explorers. Nearby Western Port Bay was first explored in 1798 by George Bass, and subsequently by Lieutenant Grant in the *Lady Nelson* and then Lieutenant Murray also in the *Lady Nelson* in 1801 (Priestly 1984: 14; Sullivan 1981: 13).

4.3.2 The Bun Wurung and the Protectorate System

Following the settlement of Port Phillip in 1835, William Thomas was appointed as Assistant Protector of Aborigines in 1839 and for over 20 years he was responsible for the Western Port and Gippsland Districts. Thomas maintained a hut at Arthurs Seat and was the primary observer and source of information about the Bun wurrung, although mainly those groups occupying the Mornington Peninsula. Sullivan (1981:14–16) notes that while he was a prolific writer his interests were narrowly focused and overly concerned with administration and he rarely gave any account of religious beliefs or rituals.

4.3.3 Group Relationships

Thomas distinguished between the Bun wurrung people from Port Phillip and those of Western Port, though he rarely had contact with the Bun wurrung people on the eastern side of Western Port Bay (Sullivan 1981: 16, 19). West of the Tarwin River, boundaries, groups and group

membership is not clear, but the area was one where disputes with the Gippsland Aboriginal people, the Kurnai, were frequent (Barwick 1984: 115; Gaughwin and Sullivan 1984: 87). William Barak, an elder and informant from the *Woiworung*, considered Bun wurung territory to extend to Wilsons Promontory (*Wa-mung*) (Barwick 1984: 115).

Friendly contacts external to the Bun wurrung were to the north and west rather than to their more hostile neighbours to the east. At least two Bun wurrung clans were noted to belong to the *bunjil* moiety and while ceremonial contacts were with Bunjil clans from the *Woiworung* people to the west and *Taungurong* people to the north, marriage could only take place with members of the *waa* moiety clans in groups to the west (Gaughwin and Sullivan 1984: 95).

4.3.4 Subsistence

While Thomas' observations were limited and people were already receiving rations, he did make some notes on Bun wurrung subsistence practices, observing them eat a variety of marine and terrestrial resources (Sullivan 1981: Table 1). Large mammals hunted included possum and kangaroo, which were consumed fresh, or interestingly, sometimes cured and dried. Smaller mammals included bandicoots, rats, lizards, roasted fowl, swan and pelican eggs (Sullivan 1981: 22). Fishing was often observed and Bun wurrung generally used a spear or net, though some fishing may have taken place with line and hook, but this may have been influenced by sealers' fishing practices (Sullivan 1981: 24). Canoes were used for fishing on sheltered waterways and bays, but they were unlikely to have been used on the open sea (Sullivan 1981: 25). A canoe was found in 1803 by Grant's second mate, Bowen, at Ross Creek in Western Port.

It was sixteen feet in length and that instead of being tied at both ends as about Sydney, it was filled at each end with clay mixed with grass, it had three timbers (Grant 1803: 138–139; Horton and Morris 1983: 21)

Like Aboriginal people elsewhere in Victoria, Bun wurrung people caught large quantities of eels which are available in large numbers in the coastal waterways of Victoria (including Screw Creek, Inverloch (J. Freslov pers. ob.)). It was said to be a dietary staple for the Bun wurrung people during the summer (Thomas PRO Box 2, 12 March 1841, cited in Sullivan 1981: 25). Shellfish also formed a common part of the Bun wurrung diet. D'Urville, exploring the Anderson Peninsula in 1826 noted that to the east of Griffiths Point

. . . we discovered only some traces of the natives' residence there, though their huts, 40–50 in number, were still set up not far from the bank, surrounded by remains of their fireplaces and fragments of shell-fish which they had used for food. Some huts consisted of framework of thick branches, covered over with wide pieces of bark.

(D'Urville 1830 cited in Priestly 1984: 13).

4.3.5 Movement

To the west of the study area in Western Port, early settlers sometimes observed large groups of Aboriginal people travelling with their dogs (Horton and Morris 1983: 26). They were generally dressed in possum skin cloaks and their bodies were vividly decorated with red ochre and white circles (Horton and Morris 1983: 23–24).

The Bun wurrung are generally thought to have moved between the coast and the inland with the seasons spending the summer on the coast and moving inland in winter (Sullivan 1981: 31). Otherwise, distances travelled every day were generally small (c. 10 kilometres). Small groups moving moved to new resources or campsites frequently, staying one to three nights or occasionally longer, for eight to ten days in favourable locations (Sullivan 1981: 33). When campsites were formed, shelters were made of branches and bark (see above) most frequently next to potable freshwater (Bowden 1970: 54).

4.3.6 Fires

The first explorers frequently observed fires on this coast (Bowden 1970: 14). It is interesting to note that they were assumed to have been deliberately lit, as they commonly found Aboriginal people in the general locality of such fires. Firing of the landscape by Aboriginal people has been widely reported throughout Australia and has been closely associated with the concept of 'firestick farming' (Jones 1969, 1970). Fires were lit by Aboriginal people to increase the overall fertility of the landscape, to maintain pathways through scrubby areas and to signal or attract attention (Jones 1969, 1975). Fires were observed in 1802, near the Bass River and three months later Capt. Milius of *Le Naturalist* saw fires at Settlement Point (Horton and Morris 1983: 21, 23–24).

4.3.7 Conflict

There were a number of clashes reported between the settlers and the Bun wurrung in the Western Port and adjacent areas including a fight shortly after the settlement of Port Phillip between wattle bark strippers and the Bun wurrung at Point Griffiths (subsequently called San Remo) (Horton and Morris 1983: 44). During this fight it was reported that Aboriginal people were wounded and their women were kidnapped (Horton and Morris 1983: 44).

4.3.8 Populations

Thomas noted in a census in 1839 that only 83 Bunwurrung people remained, though the Bunwurrung may have numbered up to 250 people prior to settlement (Sullivan and Gaughwin 1984: 88). Given the large numbers of people gathered for the skirmishes with the settlers from Sorrento in 1803, and the large groups observed travelling in the Western Port area by early settlers, it is clear that a significant decline in the population had occurred very shortly after contact. Thomas thought that some of the causes of this decline were 'intemperance, murder, executions, shooting by the authorities, death in gaol', disease and sickness (Thomas cited in Sullivan 1981: 17–18).

4.3.9 Effects of Settlement

The rapid granting of grazing licenses and expansion of settlement quickly displaced people from their land and Bun wurrung people were forced to rely on rations issued from Melbourne (Sullivan 1981: 17). However for some time in the early post contact period hunting was still practised and people quickly adapted to the use of firearms and sold game such as ducks to the settlers (Thomas cited in Sullivan 1981: 17). A number of Bun wurrung men joined the native police (Sullivan 1981: 17).

From 1841 an Aboriginal camping reserve was opened at Mordialloc for the Bun wurrung. It comprised 822 acres on the Mordialloc Creek (Caldere and Goff 1991: 7; Felton 1981: 181).

Following the demise of the protectorate system a system of depots for the distribution of rations was set up in by the Central Board for the Protection of Aborigines (CBPA) from the 1860s where station owners were appointed as Honorary Correspondents to supply rations to Aboriginal people. Many of the Honorary Correspondents supplied detailed reports to the Board on the condition of people in their area. The closest Honorary Correspondent's depot in the region was the Mordialloc depot, which was probably associated with the Mordialloc Creek camping reserve. From 1872 to 1876, J. Randell was the appointed Honorary Correspondent (BPA Reports 1872–1876). The depot issued rations such as food, utensils, clothing and blankets to local Aboriginal people (Christie 1979: 163). The reserve continued under various people until 1878, when all remaining Aboriginal people were transferred to Coranderrk (Caldere and Goff 1991: 7; Felton 1981: 182). Many Bun wurrung people lived on the reserve with some ending their days there including Jimmy Dunbar and his wife, Eliza (Hanrahan 1984: 8). There is a joint memorial marker

on the foreshore commemorating the Aboriginal people of the area and Alexander McDonald the first permanent white settler (AAV Places database No. 7.1-12).

The descendants of the Bun wurrung people still strongly identify attachments to this area. Today these people are represented by the Bunurong Lands Council Aboriginal Corporation.

4.4 Gunaikurnai People Pre-contact and Contact History

At settlement it was thought the *Kurnai* or *Gunai* language group, occupied the region between the Tarwin River west of Wilsons Promontory and the Snowy River in the east, and the Dividing Range in the north (Barwick 1984; Clark 1990: 364; Wesson 2000: 17). *Gunai* means man though the term and the alternative term *Kurnai* are currently accepted by traditional owners as the larger group name for the Aboriginal people of Gippsland (Wesson 2000: 17).⁵

Principal post-contact observers of the Gippsland Aboriginal people include Robinson (1840, 1841, 1842, 1844), Tyers (1852–1858), and Thomas (1849, 1860), and later Hagenauer (1862, 1875) Smyth (1878) Bulmer (1863) and Howitt (1904). These people recorded information from Aboriginal people, some of whom have descendants still living in the area (Wesson 2000: 7).

4.4.1 Population

The Aboriginal population of the Gippsland region prior to contact has been estimated to have been about 4–5000, but within a few years of European contact the population declined markedly (Attwood 1984: 42; Hotchin 1989: 122). By 1860 Thomas' census recorded only 219 Gunai\Kurnai people.⁶ In 1863, population assessments for two of the three groups of the study area (see below) were about 68 people, compared to 300 people in one group alone in the 1840s (Wesson 2000: 23–38).

The rapid decline in population is due to a number of factors. Settlement within Victoria took place from the established colonies south into Victoria and from coastal settlements, but prior to this some contact occurred with sealers and whalers. Population decline occurred before this settlement when a smallpox epidemic decimated populations in most areas of Victoria with the possible exception perhaps of East Gippsland (Broome 1994: 27, Butlin 1983). It is likely that this epidemic had spread in the second year of the settlement of Australia from Sydney, killing an estimated 40 to 60% of people affected (Broome 1984: 28; Butlin 1983).

While the disease had a significant initial impact on the Aboriginal population, this decimation contributed subsequently to a further decline in the Aboriginal population by facilitating early settler expansion and decreasing the effectiveness of Aboriginal resistance (Butlin 1983). Populations continued to drop rapidly after settlement. The rapid expansion of the frontier, settler aggression and ineffective defence had resulted in as many as 1,000 Aboriginal deaths by 1839, most caused by violence (Broome 1984: 31).

⁵ The terms 'Gunai' and 'Kurnai' are currently a matter of dispute amongst the Gunai Kurnai native title claimants and their use can offend some people. The information provided in this document is, regarding Aboriginal people (past and present), prepared without prejudice to any future negotiated outcomes between the Government(s and Victorian Aboriginal communities. It is acknowledged that such negotiated outcomes may necessitate amendment of this information in the future. Every effort has been made to ensure that the information in this report is accurate. Perspectives P/L does not guarantee that the information provided is without flaw of any kind and therefore disclaims all liability for any error, loss or consequence which may arise from relying on any information in the report.

⁶ Wesson (2000: 18) suggests that the census probably omitted the Lakes people and the Snowy River people.

In Gippsland, as elsewhere, there were a number of massacres, including one at Warrigal Creek to the east of Wilsons Promontory, that contributed to the decline in the Gippsland population (see below).

4.4.2 Group Organisation and Boundaries

Information about group boundaries and the composition of groups in Gippsland is often conflicting and confusing. Wesson (2000: 7) observes that group boundaries were most strongly delineated where conflict with neighbouring groups was entrenched and looser and more poorly defined between groups with good relationships. For instance, the borders between the South Gippsland Aboriginal people and the *Kulin* to the west were known in detail and strongly defended (Wesson 2000: 7). Mountain ranges, peaks, watersheds, and watercourses were named, and incorporated into spiritual belief systems and generally marked boundaries. Features in the landscape such as distinctive rocks, hills and creeks were named (Wesson 2000: 15). Boundaries therefore discussed below should not be considered definitive but an indication only.

Early observers, notably Howitt, thought that the Gunai\Kurnai people were a loosely grouped confederation of six smaller groups of peoples—the *Brataualong*, *Braiakaulung*, *Tatungalung*, *Brabralung*, *Krauatungalung*, and *Bidawal*, though it is likely that the Bidawal were an intermediate group between the *Yuin* to the northeast and the Gunai\Kurnai (Clark 1998; Howitt 1904; Freslov and Goulding 2003: 33). Wesson (2000: 39) argues that these groupings were ‘connected’ to language groups but more importantly were ‘directional names’ rather than groupings such as tribes, and referred to the orientation of their country within the Gunai\Kurnai territory. Direction was taken from the Mitchell River people who Wesson (2000: 39) states called themselves ‘the people’. The names were gender specific and women of those areas called themselves a different name, while the names referred to by Howitt (1904) refer to men of that country (Wesson 2000: 39). The larger groupings given by Wesson (2000: Figure 14) are:

- *Brataualung* (male), *Thaua Rookut* (female), meaning the fire people (the area bordered by the southern watershed of the La Trobe River to Cape Liptrap).
- *Tatungalung* (male), *Tatun Worcut* (female), means the people of the south (east of Merriman Creek, the coast and the lakes area).
- *Krowuntunkoolong* (male), *Kroatun Worcut* (female), meaning people of the east (mainly west of the Snowy River).
- *Brabriwoolong* (male), *Berry Worcat* (female), means ‘the people’ (the area including the Mitchell River, Tambo River, Bruthen and the Alps).
- *Brayakkolung* (male), *Yactun Worcut* or *Yakthun Ookah* (female), meaning the people of the west (northwest Gippsland from the La Trobe River, west of the Dargo and Mitchell rivers, east of Lake Victoria and including the Alps).

The study area lies entirely within the country of the Brataualung people (*Thaua Rookut*), the fire people.

There were a number of smaller groupings within this larger directional group. Each group had strong associations with, and responsibilities for, particular tracts of land corresponding to major geographic features. Responsibility or association with country came through descent (mother or father), conception or birth in that country, through burial (where ancestors were buried), totemic association, succession and conquest (Wesson 2000: 9). Generally such groups have been referred to as clans and were made up of people speaking a similar dialect. However Wesson (2000: 8) in her analysis of Gippsland groups rejects groupings such as clans in favour of ‘named groups’.

All Kurnai (Ganai) were divided into two totem groups: the *Yerang* and the *Djeetgang* (named after birds), with women belonging to the *Djeetgang* and men belonging to the *Yerang* (Rhodes 1996: 15).

In the study area, or adjoining it, the named group was the *Kutwut*.

4.4.3 The Kutwut

The country of the *Kutwut* (meaning the people who live where the pigface plant grows) included Welshpool, Snake Island, Rabbit Island, Wilsons Promontory, the Franklin River, Stockyard Creek and Foster (Wesson 2000: 30). The *Kutwut* were part of the larger *Brataualung* group (Wesson 2000: 38).

While Gippsland was isolated to some extent from regions to the west and northeast by the mountain ranges and forest, within the Gippsland region intersecting native tracks provided access to the coast, ranges and other people (Wesson 2000: 17). Early explorers commonly followed these paths, as do some twentieth century roads and highways (Table 2).

4.4.4 Marriage, Birth and Death

Marriage was conducted with people who were not from the same moiety or 'skin group', thus reinforcing kinship ties over a broader region (Rhodes 1996: 15; Wesson 2000: 12). However, wives were also obtained from raids across unfriendly borders, though this was rare compared to the number of such raids in other parts of the southeast (Wesson 2000: 12, 45). It is possible that such raids were a consequence of the dramatically declining population when women became scarce. Wesson (2000: 45) reports that before the European settlement a Yowung man, (the group to the west of the *Kutwut*), took a Cranbourne woman, though this may have been associated with a number of raids and border skirmishes. After settlement marriages outside the *Gunai\Kurnai* group were common due to the lack of suitable marriage partners (Wesson 2000: 45).

Death was accompanied by some ceremony. Rather than burying their dead, the *Gunai\Kurnai* were reported by Robinson (1844: 11) to have placed their dead sometimes in the hollow of a tree or horizontally on a piece of bark on the branches of a tree. However in Gippsland, Aboriginal human remains are found as burials, so that there may have been a range of different burial practices.

4.4.5 Ceremonies, Spiritual Beliefs and Social Activities

Very little is understood about social life and ceremonies in the study area. Stories suggest a possible social link with a *Wurundjeri* legend concerning migration from the Yarra River to Wilsons Promontory and the antecedents of *Gunai Kurnai*:

The *Wurundjeri* legend of *Lohan* is, that when he was cooking eels at the Yarra River he observed a swan's feather carried by the south wind. Walking in that direction, he at length came to Westernport Bay, where the swans lived. There he remained until they migrated to the east, and he followed them. Coming to Corner Inlet, he made his home in the mountains of Wilson's Promontory, and watched over the welfare of the people who followed him (Howitt 1904: 385)

The *Gunai Kurnai* also knew of *Lohan* living in the Wilson's Promontory mountains with his wife *Lohan-tuka*. Howitt (1904: 385) records that:

The Brataua clan, in whose country his home is, said that their old men had seen him from time to time marching over the mountains with his great jag-spear over his shoulder. They also believed that he watched over them, and that he caused their country to be deadly to strangers. It was therefore to him that they attributed the taboo which protected them against the visits of other tribes, from the eastern extremes of Gippsland to the Lower Murray.

Social organisation tended to be based around a diverse range of people. While each named group tended to have a leader responsible for the group, they also may have had several men who were expert in or respected for their knowledge of magic, medicine, poetry songs, dances, or rainmaking (Wesson 2000: 21). Women were respected or held in high esteem for their skills in story telling, genealogy, midwifery and as healers (Wesson 2000: 21).

In Gippsland initiation ceremonies were generally only held within their own language groups unlike other areas where these were the occasion for the mingling of diverse groups (Howitt 1904 in Wesson 2000: 14). The initiation ceremonies were also a time for arranging marriages, trade and exchange, and for games and hunting (Wesson 2000: 14).

Like other Aboriginal groups the Gunai Kurnai decorated utilitarian objects and pieces of bark with art depicting human figures and animals, an activity that has continued to the present time (Robinson 1844: 18).

4.4.6 Conflict

The relationships between Gunai Kurnai and the *Bunurong* to the west were noted to be hostile at contact. Wesson (2000: 18) argues that there is clear evidence for the Bunurong land to the east of the Tarwin River (including Wilsons Promontory) having been usurped by the Gunai Kurnai some time before colonisation. This animosity appears to have been between the Brataualung and the Bunurong, but may have involved other Gunai Kurnai groups.

The conflicts arose on the borders of the Brataualung territory with the *Bun wurrung* (see below), Barak, a Wurundjeri clan head told of a conflict between the Mordialloc 'tribe' and the Kutwut from Port Albert that began before 1835 Wesson (2000: 18). The Bun wurrung group had travelled to the Tarwin River to feast on native cabbage, but found the Kutwut already there eating the cabbage without permission (Barwick 1984: Appendix 1). A fight ensued in which the Bun wurrung chased and killed a number of the Kutwut. In a punitive revenge attack, a group of Kutwut warriors travelled to Western Port and killed a number of Bun wurrung men. The consequence of the conflict was an ongoing feud between the Bun wurrung and the Kutwut (Barwick 1984: 18). An Aboriginal informant told Thomas (1840) that the *Yowenjerre*, the Bun wurrung group living between the Tarwin River and Wilsons promontory had virtually been exterminated prior to 1835. Robinson heard similar information when travelling through the region in 1841 from the native police accompanying his group (Wesson 2000: 19).

Further conflict between the groups continued up until 1846–7 when Tyers (1853) recorded that 30 of the Corner Inlet people (Kutwut) were killed by people from Melbourne under the leadership of *Yal Yal* and Billy Lonsdale.

These conflicts expelled the Bun wurrung from the area between the Tarwin River and all of Wilsons Promontory which then came under the control of the Gunai Kurnai people, specifically the '*Yoto-warra-warra*' (Wesson 2000: 18–19).

Conflicts also took place between the Gunai Kurnai groups, with ongoing skirmishes recorded between allied groups from Dargo, Bruthen, Wy-yung, Binnjerra and Manero, Omeo and even people from the Ovens River and Mount Buffalo with the Dargo Braiaka and Brataua men in 1854 and 1856 (Fison and Howitt 1880: 218; Wesson 2000: 51). In 1857 there was also a big fight at Sale reported by the local papers at Orbost (Wesson 2000: 51). As late as 1868 such fights still continued with a potential one averted at Lake Victoria by Hagenauer and some constables from Sale and Stratford (Wesson 2000: 51). By 1857 the Aboriginal men had guns that they were prepared to use (Wesson 2000: 51).

In 1855 the Port Albert clan were involved in a fight with some other Gippsland Aboriginal people. The Kutwut Aborigines apparently broke tribal law by swimming across the Tambo River into Brabralung territory on a swan-egging expedition (Pepper and De Araugo 1985: 108–109). The two groups met at the mouth of the Tambo River and the fight was said to have lasted all day and into the night resulting in many killed and wounded people (Pepper 1980: 38). ‘

... (T)he men and women too... went with their weapons, barbed spears, waddies, sticks and killer boomerangs. (Pepper 1980: 38).

4.4.7 Trade and Exchange

Although Wesson (2000: 45) argues that the Gunai Kurnai had little or no contact outside their language areas, it is likely that contacts between Gunai Kurnai groups were more extensive than previously thought in the alpine regions and with groups in Far East Gippsland and southern NSW (Freslov *et al.* 2004). By contrast it is more likely that contacts between the Gunai Kurnai and Kulin groups to the west were restricted to conflicts.

4.4.8 Precontact Resource Exploitation

Our knowledge of the pre-contact way of life in this region is limited and generalised to some extent for the whole Gippsland region. The Gunai Kurnai people were thought to have moved through their clan regions in small family groups, only gathering in larger groups for social reasons (Thompson 1985: 54). As elsewhere in Australia, men carried out hunting of larger mammals,

Year/Time period	Location	Group	Observation	Reference
Dreamtime	Corner Inlet, Wilsons Promontory	Wurundjeri, Brataualung	Lohan moved to Wilsons Promontory from the west to look over the Gunai Kurnai	Howitt (1904: 385)
Before contact	South Gippsland	Yowung man	A Yowung man took a Cranbourne woman	Wesson (2000: 38)
Before contact	South Gippsland	? Brataualung	'Native track' between Port Albert and Sale roughly following the South Gippsland Highway	Wesson (2000: 17)
Before 1835	Tarwin River	Kutwut and Yowenjerre	The Kutwut were found illegally eating native cabbage at Tarwin R. Yowenjerre chased Kutwut and killed a number. Later Kutwut pursued the Yowenjerre to Westport where they killed.	Wesson (2000: 18); Thomas (1840); Robinson (1840)
Post-contact	Port Albert	Western Port people (Bun wurrung) and Brataualung	McAlpine observed a number of Western Port people visiting at Port Albert when he first arrived there	Howitt cited in Wesson (2000: 49)
1843	Port Albert	Probably Brataualung, probably Kutwut	Party of Aboriginal people killed Mr Kenneth (Roland) McAllister with waddies (some accounts say spears) near his station at Port Albert. Possible retaliation for shooting of several Aboriginal men drinking at Port Albert. It is possible that these men were pursued and shot for the murder	Gardner (1983: 40)
1844	Warrigal Creek	? Brataualung	Massacre of up to 150 people by settlers on Varney's property on the Warrigal Creek	Hanrahan (1984)
1840s	Gippsland	Bun wurrung, Monaro, Omeo people	Bun wurrung, Monaro, Omeo people working throughout Gippsland in the 1840s	Wesson (2000: 21)
1846/7	Tarwin, Corner Inlet	Kutwut, Melbourne people	30 Kutwut people killed by Melbourne people	Tyers (1853)
c. 1848	Tarraville	? Brataualung	Hale saw 100 people at Tarraville	Hale cited in Wesson (2000: 49)
1849	Melbourne	Gippsland Aboriginal people, ?Brataualung	58 people camped at Melbourne south of the Yarra	Thomas 1849)
1849	Templestowe	Yowung	21 men, 16 women, 26 children and 7 others camped at Templestowe	Thomas (1849)
1861	Lake Tyers	Various	Lake Tyers Mission founded	
1863	Lake Wellington	Various	Ramahyuck Mission founded	

Table 2: GLaWAC historic places, connections, attachments in\with the region and study area

while women and children gathered plant foods and shellfish, and fished and hunted for small animals, birds and insects. They relied on hunting and gathering seasonal resources throughout their clan territories.

Wetlands, lakes and river mouths are thought to have been exploited mainly during the spring and summer and Robinson (1844: 11) thought that they could be regarded as 'Ichthyophagist' or very big fish eaters. Fish were caught with net, spear and bone hooks attached to lines (Robinson 1844: 11). On the lakes people used bark canoes which were folded at either end and which they paddled while kneeling (Robinson 1844: 11, 19). As well as fish, people exploited the large congregations of birds on the lakes and coastal wetlands and gathered items such as swan eggs and eels.

Part 2 Analysis

5 Aboriginal Heritage in the Study Area

5.1 Introduction

The Aboriginal heritage in this assessment is described but the exact locations are not described in this report, as the report will be made public.

5.2 Desktop Assessment

The analysis of the Aboriginal cultural heritage values was undertaken to assess the context and relationship of a range of historic and landscape features to develop an understanding and predictive model of past Aboriginal landscape use in and adjacent to the activity area which will form the basis of the analysis of risk in the following chapter. The results of this assessment are discussed below.

5.3 Search of the Victorian Aboriginal Heritage Register

A search of the Aboriginal Heritage Register was undertaken on 10 March 2019 by Joanna Freslov. The search was conducted to assess

- Aboriginal places in and adjacent to the study area.
- Aboriginal historic references in and adjacent to the study area
- The results of Aboriginal cultural heritage studies carried out in and adjacent to the activity area.
- Based on the results of the search, to develop a predictive model of site location in the study area.

These results form the basis of the analysis of risk carried out in the next chapter.

5.4 The Study Area

The study area comprises the dune system shown in Figures 14-21 and sites within 200 metres of the dunes.

5.5 Aboriginal Places in the Study Area and Adjacent Areas

There are 15 registered Aboriginal places in the study area and adjacent areas of which only two are located in the study area (VAHR 8040-0042 and 8020-0103), while two sites are located adjacent to the study area (VAHR 8020-0140, and 8020-0202 (Table 3, Figures 14-21).

Table 3: Aboriginal places in and adjacent to the study area

Aboriginal Place No	Aboriginal Place Name	Component Type	Landform
8020-0176	IGCC SAS 1	Artefact scatter	Back dune/ swamp
8020-0199	RACV 11	Hearth Feature/artefact Scatter	Back dune/ swamp
8020-0133	RACV 2 (SM1)	Shell Midden	Back dune
8020-0198	RACV 10	Shell midden	Back dune
*8020-0042	Toilet Block Axe Head	Isolated artefact (Axe)	Foredune
8020-0214	Venus Street 3	Artefact scatter	Developed
8020-0211	Venus Street 2	Artefact scatter	Developed
8020-0210	Venus Street 1	Artefact scatter	Developed
8020-0202	Ramsay Boulevard 1	Shell midden/artefact	Developed/Fore dune

Aboriginal Place No	Aboriginal Place Name	Component Type	Landform
		scatter	
8020-0140	Anderson Inlet 1	Shell midden	Developed/Fore dune
8020-0289	Wyeth Plain AS	Artefact scatter	Developed
8020-0124	Inverloch Parklands 1	Shell midden	Developed
8020-0125	Inverloch Parklands 2	Shell midden	Developed
8020-0126	Inverloch Parklands 3	Shell midden	Back Dune
*8020-0103	Point Smyth 1	Shell Midden	Inland dune

* In the study area

Table 4: Site types in the study area

Site Type/Components	No.	%
Artefact Scatter/hearth	1	7
Artefact scatter	6	40
Shell midden	7	47
Shell midden/arteact scatter	1	7
Grand Total	15	100

The site types in the study area and adjacent areas comprise artefact scatters and shell middens (40% and 47% respectively). Artefact scatters are located mainly in the back dunes and in the developed areas behind the dunes. Shell middens are located in the study area in the dunes and in the wet heathlands associated with Screw Creek.

5.5.1 Historic References

There are no historic references in the activity area or adjacent to it.

5.5.2 Preliminary Reports

There are no preliminary reports in the activity area or adjacent to it.

5.5.3 Chronology

There is one known date for the study area, from a midden at the RACV resort west of Inverloch (see Table 5). Otherwise the nearest dated sites are for Great Glennie Island and Yanakie at Wilsons Promontory and Corinella at Westernport. All dates are on middens and are more recent than 3000 BP.

Table 5: Radiocarbon dates in or adjacent to the geographic region

VAHR	Field Name	Site Type	Sample	Sample ID	Date BP
8119-0056	Ggi/2 (Great Glennie Island)	Midden	Shell	ANU-2431	1350+/-80
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Shell	ANU-2430	2330+/-80
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Charcoal	ANU-3832	1850+/-120
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Shell	ANU-2428	1580+/-80
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Charcoal	ANU-2429	1480+/-120
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Shell	ANU-2296	1370+/-80
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Shell	ANU-3831	1210+/-80

VAHR	Field Name	Site Type	Sample	Sample ID	Date BP
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Charcoal	ANU-2427	1070+/-90
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Shell	ANU-2426	880+/-80
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Charcoal	ANU-2422	390+/-75
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Shell	ANU-2423	300+/-80
8119-0053	Ggi/1 (Great Glennie Island)	Midden	Charcoal	ANU-2424	270+/-85
7921-0145	Corinella 3	Midden?	Charcoal	BETA-22320	2430+/-100
7921-0145	Corinella 3	Midden?	Shell	BETA-23073	2290+/-80
7921-0145	Corinella 3	Midden?	Shell	BETA-23072	2270+/-90
7921-0145	Corinella 3	Midden	Charcoal	BETA-22319	1100+/-70
7921-0145	Corinella 3	Midden	Charcoal	BETA-22318	270+/-60
8020-0133	RACV 2 (SM1)	Midden	Charcoal	WK 9589	1005+/-38 BP

5.6 Previous Work in the Geographic Region

A large number of studies have been carried out adjacent to the study area, with one in the study area. These are summarised in Table 6 below.

Figure 22 shows the survey areas in and adjacent to the study area. As the figure shows very little of the study area has been previously surveyed on the Inverloch coast. Some areas close to Surf Parade between Toorak Road and Abbott Street have been surveyed with only one site located (see below). Several small areas adjacent to the Esplanade have been surveyed without find any sites. No survey has been carried out in the Venus Bay Study area. The one site located adjacent to the study was registered as it is obvious in the road cutting.

Table 6: Surveys in and adjacent to the study area

ID	Year	Title	Author	Results
4290	2010	Archaeological Salvage Program Venus Street, Inverloch, Implementation of Management Plan 10049	Barker, A. & Light,	Report on salvage of -0210, -0212. Adjacent to the study area
1459	1999	Coast Action / Coastcare Grant Applications: Port Phillip East, Gippsland South, & Gippsland East Aboriginal	Edmonds, V. Long, A., Schell, P.	Report on field inspections for proposed Coastcare grant applications. None in the study area
3999	2007	Venus Street, Inverloch	Schell, P	Site survey and subsurface testing for a subdivision. Three sites located 8020-0210, -0211 & -0214, all adjacent to the study area
11402	2010	Landscaping Works at the Glade, Inverloch, Victoria	Orr, A	Site survey and complex assessment. No cultural heritage
1273	1998	An Aboriginal	Marshall, B.	Survey for a subdivision east

ID	Year	Title	Author	Results
		Archaeological Survey of Inverloch Parklands Estate		of Inverloch and west of Screw Creek. Three middens located 8020-0124, -0125, 0126. Area highly disturbed and sites were under threat from the development and rabbit burrows
2362	2001	Report on Archaeological Sub-Surface Testing and the Excavation of Site AAV 8020-0133 on the RACV Property at Inverloch, Victoria	Rhodes, D.	Hand excavation of 8020-0133. A 2 x 1m trench was excavated and found midden to 580mm depth. Deposit was found in 3 layers. Shells were mainly, <i>Subnivalia undulata</i> , <i>Cellana tramoserica</i> and <i>Austrocochlea constricta</i> . A small number of stone artefacts were present. A radiocarbon sample for the site obtained a date of 1005±38 BP (WK 9589)
3153	2005	Report on an Archaeological Survey of a Proposed Inverloch Recreation Resort	Rhodes, D.	Survey for a proposed resort found 8 new sites. Sites 8020-0133, 0132, -0198, & -0198 are the most relevant to this study and are adjacent to the study area. 8020-0133 was a midden (see above).
1943	No date	An Archaeological Survey of the Proposed RACV Eco-Tourism Resort at Inverloch	Rhodes, D.	As above
13813	2016	Residential Subdivision between Wyeth Place and St Kilda Street, Inverloch	Orr, A and R. Butler	CHMP assessment for a subdivision including subsurface testing. One site located 8020-0289 located, an extensive artefact scatter. This site is to the north of the study area
*3687	2006	Inverloch Foreshore Reserve. Aboriginal Cultural Heritage Assessment	Light, A	Survey of foreshore reserve between Abbott Street and Venus Street. One new site 8020-0202 and one known site 8020-0140
*3688	2006	Inverloch Foreshore Reserve. Archaeological Subsurface Testing Program	Light, A	Subsurface testing for the above project. Further testing at 8020-0140 found no further material. No new sites
10049	2008	Venus Street Subdivision, Inverloch	Schell, P & Light, A.	Subsurface testing to establish the extent of 8020-0210 and -0211 within the proposed subdivision.
10302	2010	Lot A, Inverloch-Venus	Jennifer Chandler	CHMP carried out for a

ID	Year	Title	Author	Results
		Bay Road, Inverloch Residential Subdivision	And Jonathan Howell-Meurs	subdivision. One known site in the are which could not be relocated 8020-0231

*The most relevant study in the area is described below

5.7 Light (2006)

Light carried out a survey of the Inverloch foreshore reserve for the Bass Coast Shire Council on Ramsay Boulevard between Venus Street and Abbott Street. The survey was for a footpath (770m x 2.5m), five car parks and one exercise area proposed for the reserve. The survey relocated site 8020-0140 and found one new site 8020-0202. Light (2006: 2) observed that the area had been subject to extensive disturbance due to road construction, installation of services (sewage pipes), a caravan park and vehicle and pedestrian access. A program of subsurface testing was recommended.

Subsequently subsurface testing was carried out in the vicinity of 8020-0140. No further material was recovered (Light 2016: 3). Light noted the midden was being eroded on the seaward side. No further sites were located during the subsurface testing and no testing was carried out at 8020-0202.

5.8 Significance of the Sites in the Study Areas

As a general principle all Aboriginal sites are considered to be of high cultural significance to Aboriginal people as they are a tangible link to their past. The archaeological record is the primary record of the pre-contact period of the Aboriginal occupation of Australia; so all manifestations of this record are therefore significant to Aboriginal people.

Although the Aboriginal cultural or social significance of an Aboriginal place is generally the primary basis on which Aboriginal cultural sites are managed, all Aboriginal sites are of some scientific significance as they are a non-renewable resource. The Australian ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter) examines the significance of heritage places and proposes a methodological procedure for establishing significance, which has generally been adopted by heritage professionals (Australia/ICOMOS 2000).

Significance is defined by a limited range of criteria and values: 'aesthetic, historic, scientific or social values for past, present or future generations' (Marquis-Kyle and Walker 2004: 21). Aesthetic values are not generally assessed for Aboriginal pre-contact sites, though social values have increasingly gained importance in the overall assessment of pre-contact site values, as have historic values for post-contact sites (for a full discussion of these values see Appendix 3). Scientific significance is the value most commonly assessed by archaeologists for pre-contact sites.

5.8.1 Scientific Significance Assessment

Scientific values are those associated with the importance of sites to research, the rarity of the site, its 'quality' and representativeness (Australia/ICOMOS 1999: 2.4). Three main criteria are used to assess the significance of Aboriginal archaeological sites:

- Site contents (cultural material, organic remains and site structure).
- Site condition (degree of disturbance of a site).
- Site representativeness (the regional distribution of a particular site type).

The scientific significance of the Aboriginal site in the activity area is listed in Table 7. It should be noted that none of the sites listed in Table 7 have been assessed on site by the author so that the assessment is based on the original descriptions provided on ACHRIS.

Table 7: Scientific significance of the site in the activity area

AAV Site No.	Site Name	Content	Condition	Represent- ativeness	Total	Scientific Significance
8020-0176	IGCC SAS 1	1	1	1	3	Low
8020-0199	RACV 11	2	1	2	5	Moderate
8020-0133	RACV 2 (SM1)	1	1	2	4	Low
8020-0198	RACV 10	1	1	2	4	Low
*8020-0042	Toilet Block Axe Head	3	1	2	6	Moderate (Salvaged)
8020-0214	Venus Street 3	1	1	1	3	Low
8020-0211	Venus Street 2	2	1	1	4	Low
8020-0210	Venus Street 1	2	1	1	4	Low
8020-0202	Ramsay Boulevard 1	1	1	1	3	Low
8020-0140	Anderson Inlet 1	1	1	1	3	Low (Salvaged)
8020-0289	Wyeth Plain AS	1	1	1	3	Low
8020-0124	Inverloch Parklands 1	2	1	1	4	Low
8020-0125	Inverloch Parklands 2	2	1	1	4	Low
8020-0126	Inverloch Parklands 3	2	1	1	4	Low
*8020-0103	Point Smyth 1	2	1	1	4	Low

5.8.2 Aboriginal Community Statement of Cultural Significance

Aboriginal cultural significance can only be assessed by Aboriginal people. As the study region falls within the BLCAC and GLAWAC traditional country, consultation was undertaken with representatives of BLCAC and GLAWAC regarding the significance of the Aboriginal places within the activity area. Both representatives thought that all of the sites had a high cultural significance and that any proposed management of the sites and mitigation of impacts to the sites should be based on their high *cultural* significance rather than their *scientific* significance.

5.9 Conclusions from the Desktop Assessment

There are 15 known Aboriginal places in and adjacent to the study area. Of these, two sites are located in the study area: VAHR 8020-0042 at Surf Parade and 8020-0103 at Point Smythe. Two sites are on the edge of the study area: VAHR 0140 and 8020-0202 at Ramsay Boulevard. Both these sites may extend into the study area. The remaining 11 are outside the study area.



Figure 14:
Aboriginal
places in and
adjacent to
study area 1

<p>Study Area - 1</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour <p> Site with 50 m buffer</p>	<p>JFHC</p> <div style="text-align: center;">  GDA 94 MGA Zone 55 </div> <div style="text-align: right;">  </div> <p><small>@Data property of the State of Victoria used under approved licensing conditions</small></p>
--	--	---



Figure 15: Aboriginal places in and adjacent to study area 2

Study Area - 2


Bass Coast and South Gippsland Shire


Map Date: 6 January 2019
 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
 Scale: 1:5,000

Legend

- Activity Area
- Road
- Track
- Lake/Dam
- Watercourse
- Contour
- Site with 50 m buffer

JFHC


 GDA 94
 MGA Zone 55



©Data property of the State of Victoria used under approved licensing conditions

Figure 16: Aboriginal places in and adjacent to study area 3



Study Area - 3

Bass Coast and South Gippsland Shire

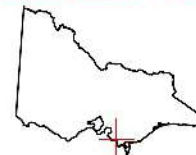
Map Date: 6 January 2019
 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
 Scale: 1:5,000

- | | | | | |
|---|---------------|---------------|---|-----------------------|
|  | Activity Area | Legend |  | Site with 50 m buffer |
|  | Road | | | |
|  | Track | | | |
|  | Lake/Dam | | | |
|  | Watercourse | | | |
|  | Contour | | | |

JFHC



GDA 94
MGA Zone 55



@Data property of the State of Victoria used under approved licensing conditions

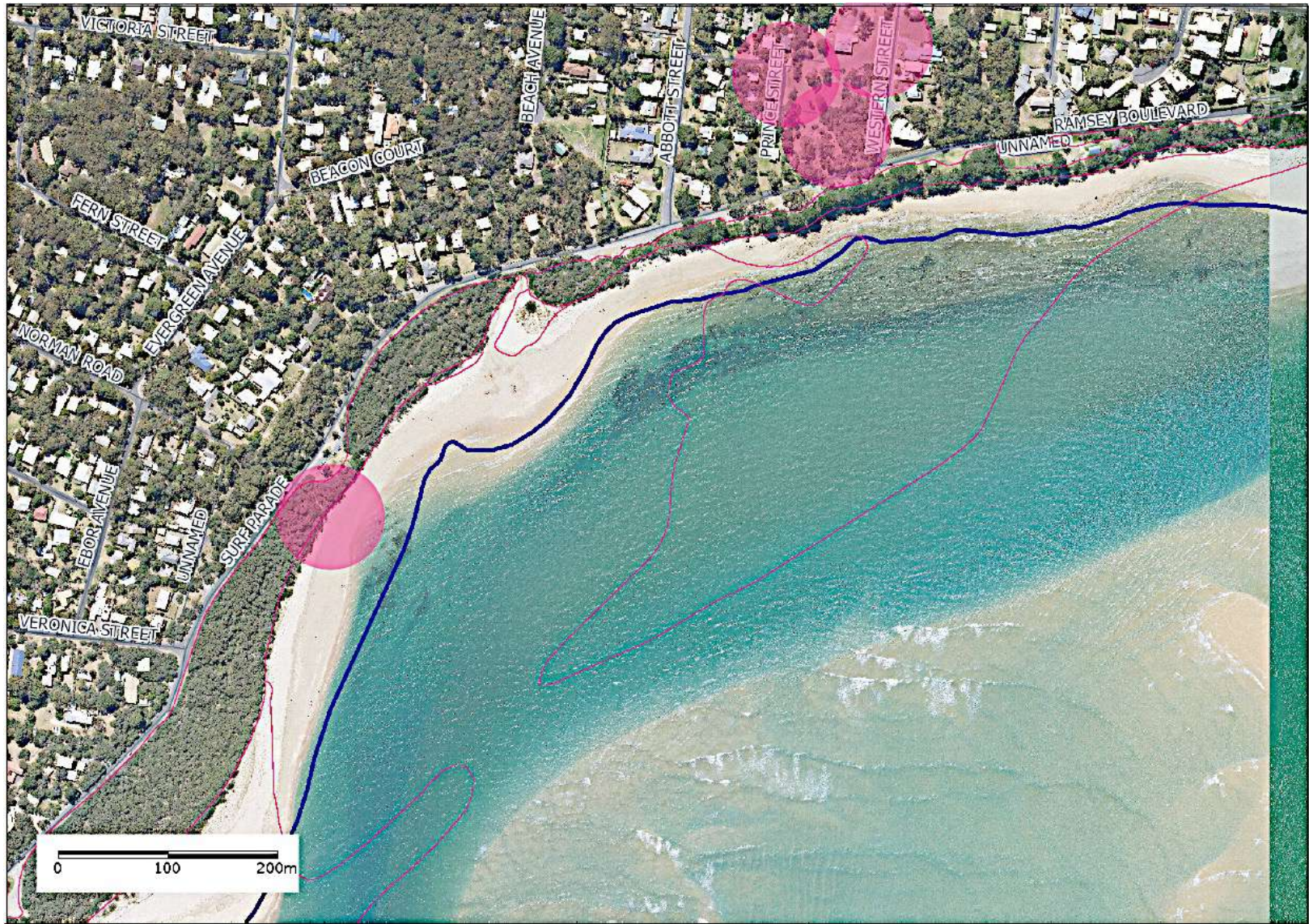

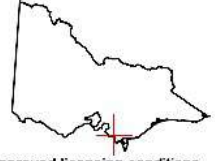


Figure 17:
Aboriginal places
in and adjacent
to study area 4

<p>Study Area - 4</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour <p> Site with 50 m buffer</p>	<p>JFHC</p> <p style="text-align: center;">N  GDA 94 MGA Zone 55</p> <p></p> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	--	---

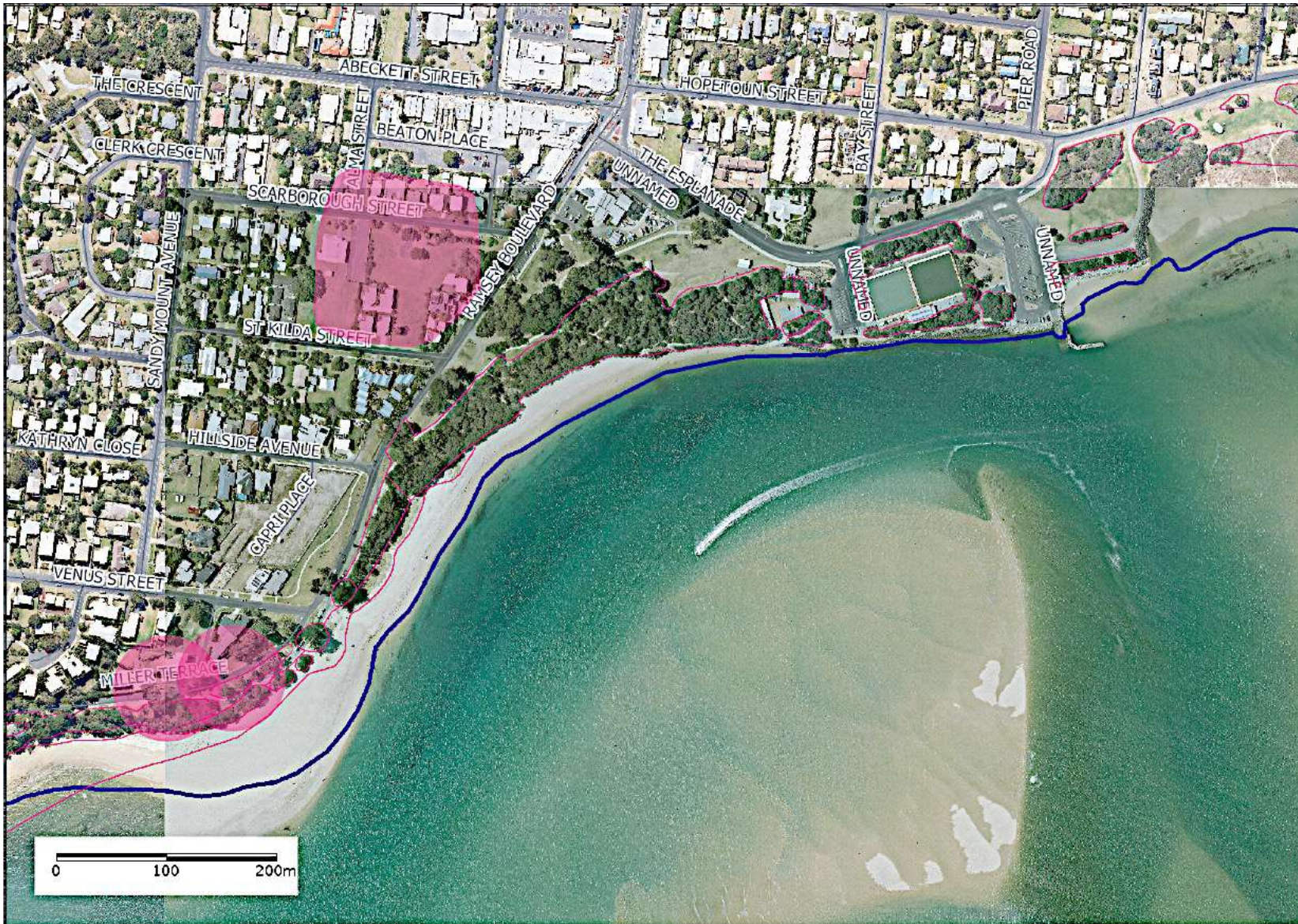


Figure 18:
Aboriginal places in and adjacent to study area 5

<p>Study Area - 5</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour <p> Site with 50 m buffer</p>	<p>JFHC</p> <div style="text-align: center;">  GDA 94 MGA Zone 55 </div>  <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	--	---

Figure 19:
Aboriginal places
in and adjacent to
study area 6



Study Area - 6

Bass Coast and South Gippsland Shire

Map Date: 6 January 2019
Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2
Scale: 1:5,000

- Legend**
- Activity Area
 - Road
 - Track
 - Lake/Dam
 - Watercourse
 - Contour
 - Site with 50 m buffer

JFHC



GDA 94
MGA Zone 55



©Data property of the State of Victoria used under approved licensing conditions

Figure 20:
Aboriginal places
in and adjacent to
study area 7

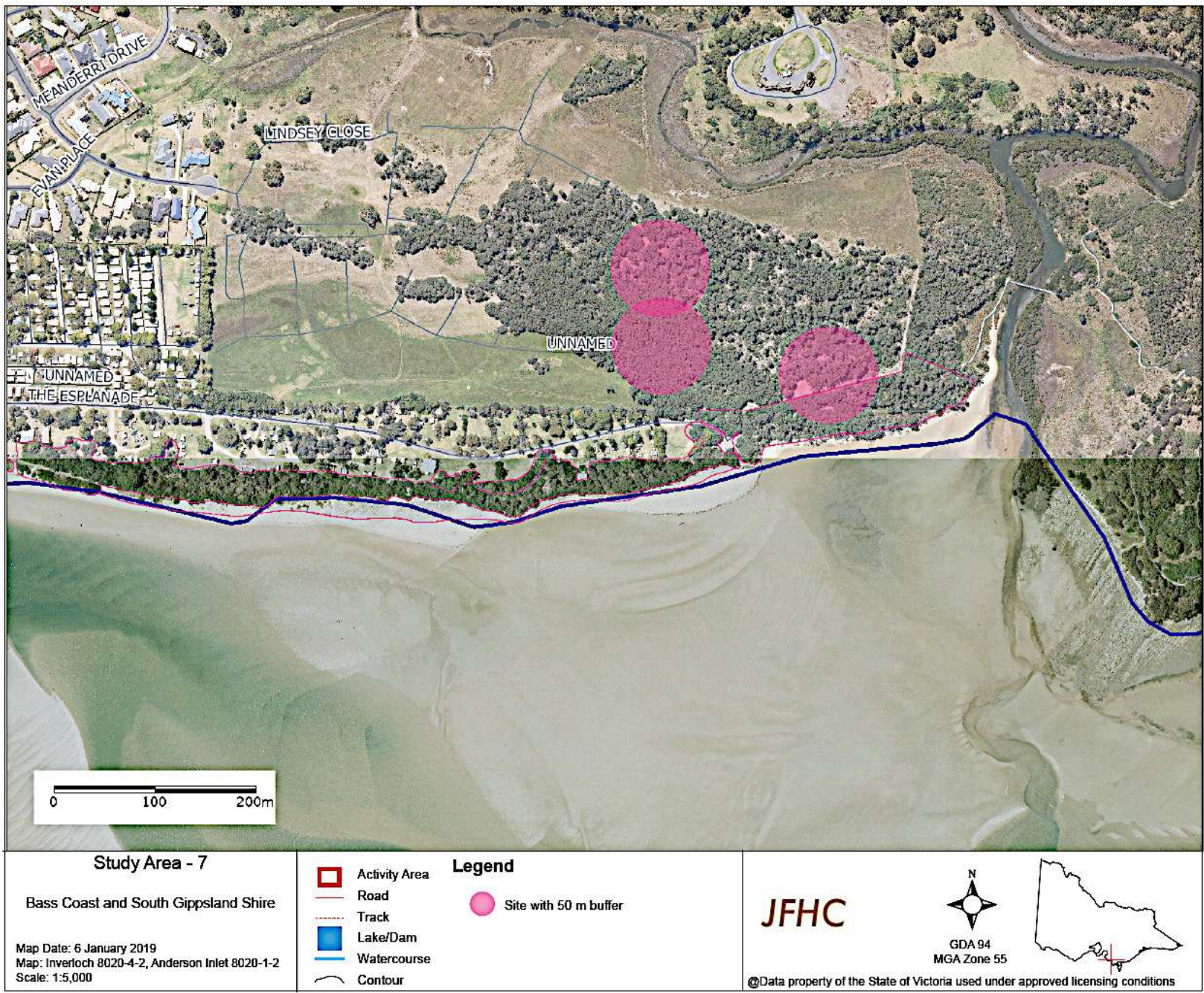




Figure 21:
Aboriginal places
in and adjacent to
study area 8



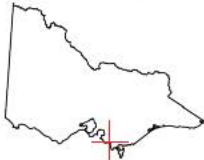
<p>Study Area - 8</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:10,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour <p> Site with 50 m buffer</p>	<p>JFHC</p> <p style="text-align: center;">  GDA 94 MGA Zone 55 </p> <p style="text-align: center;">  </p> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
---	--	--



Figure 22: Aboriginal places in and adjacent to surveyed areas

<p>Study Area Surveys and Results</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1: 26,312</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour Site with 50 m buffer Survey Areas 	<p>JFHC</p> <div style="text-align: center;">  GDA 94 MGA Zone 55 </div> <div style="text-align: right;">  </div> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
---	--	---

6 Aboriginal Cultural Heritage Risk Assessment

The previous chapter detailed the Aboriginal places in the study area. This section will analyse the risk to those sites and then, based on the results from the previous sections, predict those areas of the coast where survey has not taken place to predict the risk to as yet unknown sites.

6.1.1 Analysis of risk to known Aboriginal places in and adjacent to the study area

An analysis of risk was carried out with the 15 sites (including those just outside the study area) using attributes of risk developed during a series of inspections of middens on the entire Victorian Coast (Freslov 1996; Freslov and Frankel 1999). More recent observations in the Mornington N.P. have also contributed to the risk assessment attributes (Freslov 2002).

The risk attributes are—

- Distance to high water mark.
 - 0-25m, very high (10)
 - 25-50m, high (8)
 - 50-100, moderate (5)
 - >100m low (2)
- Landform.
 - Foredune, very high (10)
 - Swale and back dune, high (8)
 - Back swamps, moderate (5)
 - Urban development (0)
- Aspect (relative to prevailing winds).
 - West, very high (10)
 - South, high (8)
 - North and east, moderate (5)
- Location relative to tracks.
 - 0-10m, very high (10)
 - 10-20m, high (8)
 - 20-50, moderate (5)
 - >50m low (2)
- Density of surrounding vegetation.
 - 80-100% visibility, very high (10)
 - 50-80% visibility, high (8)
 - 20-50% visibility moderate (5)
 - <20% low (2)
- Proximity to urban development
 - 0-100m, very high (10)
 - 100-200m, high (8)
 - 200-300m, moderate (5)
 - >300m low (2)

The analysis of risk to individual sites is shown in Table 8

Table 8: Risk Scores for sites in and adjacent to the study area

Site (VAHR)	Area	Site Type	Land Status	Study Area	Distance to High Tide	Landform	Aspect (Relative to Prevailing Winds)	Location Relative to Tracks	Vegetation Density	Proximity To Urban development	Score
8020-0176	Area 1	Artefact scatter	Private	Out	2	5	8	10	10	2	27
8020-0199	Area 1	Hearth Feature/artefact Scatter	Private	Out	2	5	8	10	10	2	27
8020-0133	Area 1	Shell Midden	Private	Out	5	5	8	10	10	2	30
8020-0198	Area 1	Shell midden	Private	Out	2	5	8	10	5	2	22
8020-0042	Area 4	Isolated artefact (Axe)	Crown	In	8	8	5	8	2	10	33
8020-0214	Area 4	Artefact scatter	Private	Out	2	0	8	0	0	0	10
8020-0211	Area 4	Artefact scatter	Private	Out	2	0	8	0	0	0	10
8020-0210	Area 4	Artefact scatter	Private	Out	5	0	8	0	0	0	13
8020-0202	Area 5	Shell midden/artefact scatter	Crown	On the edge	5	8	8	0	0	0	21
8020-0140	Area 5	Shell midden	Crown	On the edge	5	8	8	0	0	0	21
8020-0289	Area 5	Artefact scatter	Private	Out	2	0	8	0	0	0	10
8020-0124	Area 7	Shell midden	Private	Out	2	0	8	0	0	0	10
8020-0125	Area 7	Shell midden	Private	Out	2	0	8	0	0	0	10
8020-0126	Area 7	Shell midden	Crown	Out	5	5	8	8	2	2	22
8020-0103	Area 8	Shell Midden	Crown	In	2	5	5	10	2	2	26

Table 9: Risk Scores for sites in the study area

Site	Area	Score	Risk
8020-0042	Area 4	33	High ⁷
8020-0140	Area 5	21	Very High
8020-0202	Area 5	21	High
8020-0103	Area 8	26	High

6.1.2 Results of Site Analysis

The desktop analysis shows that four sites in or on the edge of the study area are at high to very high risk from a range of factors including urban development, proximity to tracks, and coastal populations etc. In terms of risk due to climate change and higher sea levels, sites 8020-0042 (at Surf Parade) and 8020-0140 (at Ramsay Boulevard) have the highest risk and will require active measures to ensure their stability. Site 8020-0042 has been salvaged but there is some potential for other artefacts to have been left in this location, so that this 'sensitive location' is under threat. VAHR 8020-0140 is already showing signs of destabilisation and erosion and is therefore the site at highest risk. The number of coastal sites at threat or destroyed adjacent to the study area are particularly notable, so that sites in the coastal reserve clearly represent a diminishing resource and as such have a higher significance rating.

6.1.3 Site Predictive Model

As noted above there has been very limited survey in the study area. Therefore a range of variables has been used to predict the likely location of sites in the activity area and 'at risk zones'. Aboriginal shell middens can be found anywhere along the dunes so that the prediction refers to most likely areas. Artefact scatters can be found in middens, but artefact scatters without midden material are generally located outside the study area.

Variables used to determine likely areas for middens are:

- Proximity to rock platform (for rock platform species).
- Proximity to the beach (for sandy beach species).
- Proximity to fresh water.

These have been mapped on Figures 23-30. Variables used to predict risk (dotted lines) are:

- Areas with access.
- Areas of erosion

6.1.4 Areas at most risk

Table 10: At risk locations

Area	Location	Attributes contributing to likely site location	Risks
Area 1	Cape Paterson Inverloch Road/Flat Rock	Fresh water, rock platform	Multiple access paths
Area 2	Toorak Road to Goroke	Fresh water	Some access

⁷ This site was under threat from erosion in 2013, but since then there has been significant accretion/build-up of sand (Rosengren 2019). While erosion is not currently placing this site under threat, other risk factors remain including human impact.

Area	Location	Attributes contributing to likely site location	Risks
	Street		paths, inlet
Area 3	Goroke St to Veronica St	No obvious water	Car parks, paths multiple access
Area 4	Veronica St to Ramsay Boulevard	Fresh water, other sites	Multiple access
Area 5	Venus St to Esplanade	Other sites, no obvious water	Multiple access, close to urban development, parking
Area 6	Esplanade	Lower potential, very disturbed	Disturbed, development, erosion
Area 7	Screw Creek	Fresh water	Multiple access points
Area 8	Point Smythe Coastal Park	Ocean Beach and may be similar to high density in Venus Bay ocean beach	Few, but may be middens inland adjacent to track

6.2 Conclusions from the analysis

Table 10 shows those locations where sites would be most at risk. As the table clearly shows, while erosion from climate changes poses a high risk to sites in the coastal reserve, the risk is exacerbated when the coastal erosion is coupled with other factors such as informal tracks, and beach access facilities such as car parks. In particular where the edges of the paths or car parks are not clearly delineated, these have the potential to expand and destabilise dunes and sediments on their edges and hence any cultural heritage sites. Other risk factors include drainage lines. Sites are most likely to be found close to freshwater. Inlets are prone to erosion so that sites on terraces adjacent to inlets are most at risk.

6.3 Final Remarks

Insufficient survey has been carried out in the study area to make definitive remarks. However, the analysis carried out predicts the following—

1. Known sites that are at most risk.
2. Those areas where previously unknown sites are most likely.
3. Areas that should be focussed on to survey for previously unknown sites.
4. Factors contributing to risk for Aboriginal sites.

While this report cannot make recommendations, consideration should be given to applying for a further research grant in partnership with BLCAC and GLaWAC to carry out the following—

1. A full survey of the study area to test the predictions outlined above.
2. The salvage of sites at highest risk where stabilisation measures are considered fruitless in the short term.
3. A management program for the remaining sites at risk.

Most Aboriginal sites on the coast of Victoria reflect a particular occupation period from 6-7000 years ago to the recent past. Sea levels rose from a low point at the last Glacial maximum to stabilise roughly at their present levels at about 6-7000 years ago. Older coastal sites are very rare and most older sites were swallowed up by the sea as sea levels rose prior to 6000 BP.⁸ Therefore, Aboriginal coastal history is reflected in a very narrow strip along the coast. Once these sites have gone the record of this particular facet of Aboriginal history has gone. There has been very little academic research on the coast and survey nowadays is focussed in urban development areas inland. This has been a desktop study but there is an urgent need to survey and document these sites in detail and assess their condition before they are gone. The study area is relatively small and consequently a relatively small study of the area would provide a firm basis for management of this precious resource. Aboriginal coastal sites are of high significance to Aboriginal people and an important component of our understanding of the past occupation of Victoria.

⁸ For example a submerged 7000 year old midden on the Gippsland Lakes



Figure 23: High risk areas in the study area (Area 1)

<p>Study Area - 1</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> □ Activity Area — Road - - - Track ■ Lake/Dam — Watercourse — Contour ● Site with 50 m buffer ■ Likely location of Aboriginal middens Area of high risk of impact 	<p>JFHC</p> <p style="text-align: center;">  GDA 94 MGA Zone 55 </p> <p style="text-align: right;">  </p> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	---	---



Figure 24: High risk areas in the study area (Area 2)



<p>Study Area - 2</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour 	<ul style="list-style-type: none"> Site with 50 m buffer Likely location of Aboriginal middens Area of high risk of impact 	<p>JFHC</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="text-align: center;">  <p>GDA 94 MGA Zone 55</p> </div> <div style="margin-left: 20px;">  </div> </div> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	--	--	--



Figure 25: High risk areas in the study area (Area 3)

<p>Study Area - 3</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour Site with 50 m buffer Likely location of Aboriginal middens Area of high risk of impact 	<p>JFHC</p> <p style="text-align: center;"> N GDA 94 MGA Zone 55 </p> <p style="text-align: right;"> </p> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	--	---

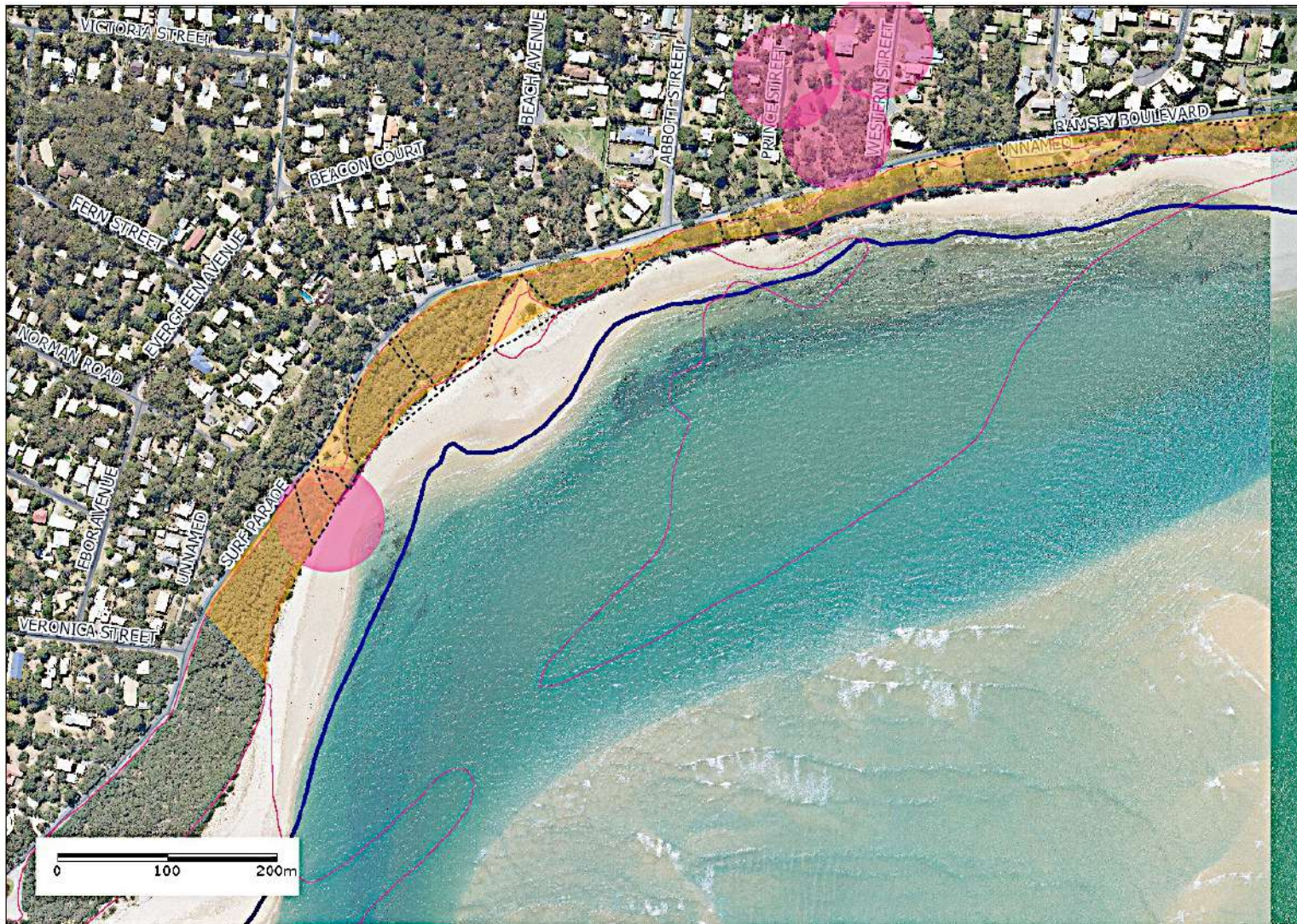













Figure 26: High risk areas in the study area (Area 4)

<p>Study Area - 4</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none">  Activity Area  Road  Track  Lake/Dam  Watercourse  Contour 	<ul style="list-style-type: none">  Site with 50 m buffer  Likely location of Aboriginal middens  Area of high risk of impact 	<p>JFHC</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">  GDA 94 MGA Zone 55 </div>  </div> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	---	---	--

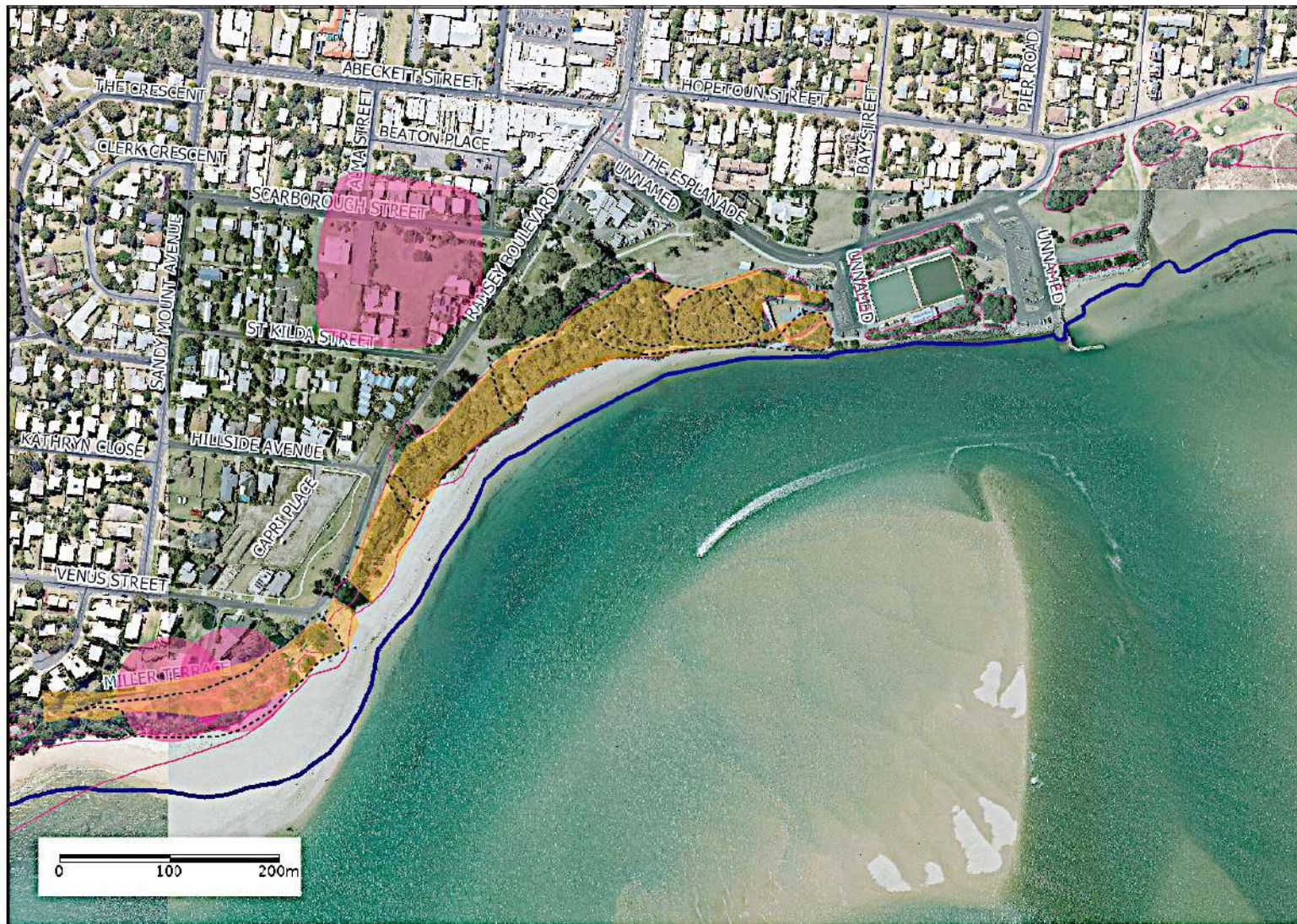


Figure 27: High risk areas in the study area (Area 5)


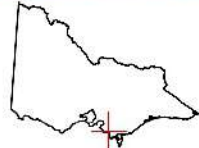











<p>Study Area - 5</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none"> ■ Activity Area — Road - - - Track ■ Lake/Dam — Watercourse ~ Contour ● Site with 50 m buffer ■ Likely location of Aboriginal middens Area of high risk of impact 	<p>JFHC</p> <div style="text-align: center;">  GDA 94 MGA Zone 55 </div> <div style="text-align: right;">  </div> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	---	---



Figure 28: High risk areas in the study area (Area 6)

<p>Study Area - 6</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:5,000</p>	<p>Legend</p> <ul style="list-style-type: none">  Activity Area  Road  Track  Lake/Dam  Watercourse  Contour  Site with 50 m buffer  Likely location of Aboriginal middens  Area of high risk of impact 	<p>JFHC</p> <p> GDA 94 MGA Zone 55</p> <p></p> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
--	--	---

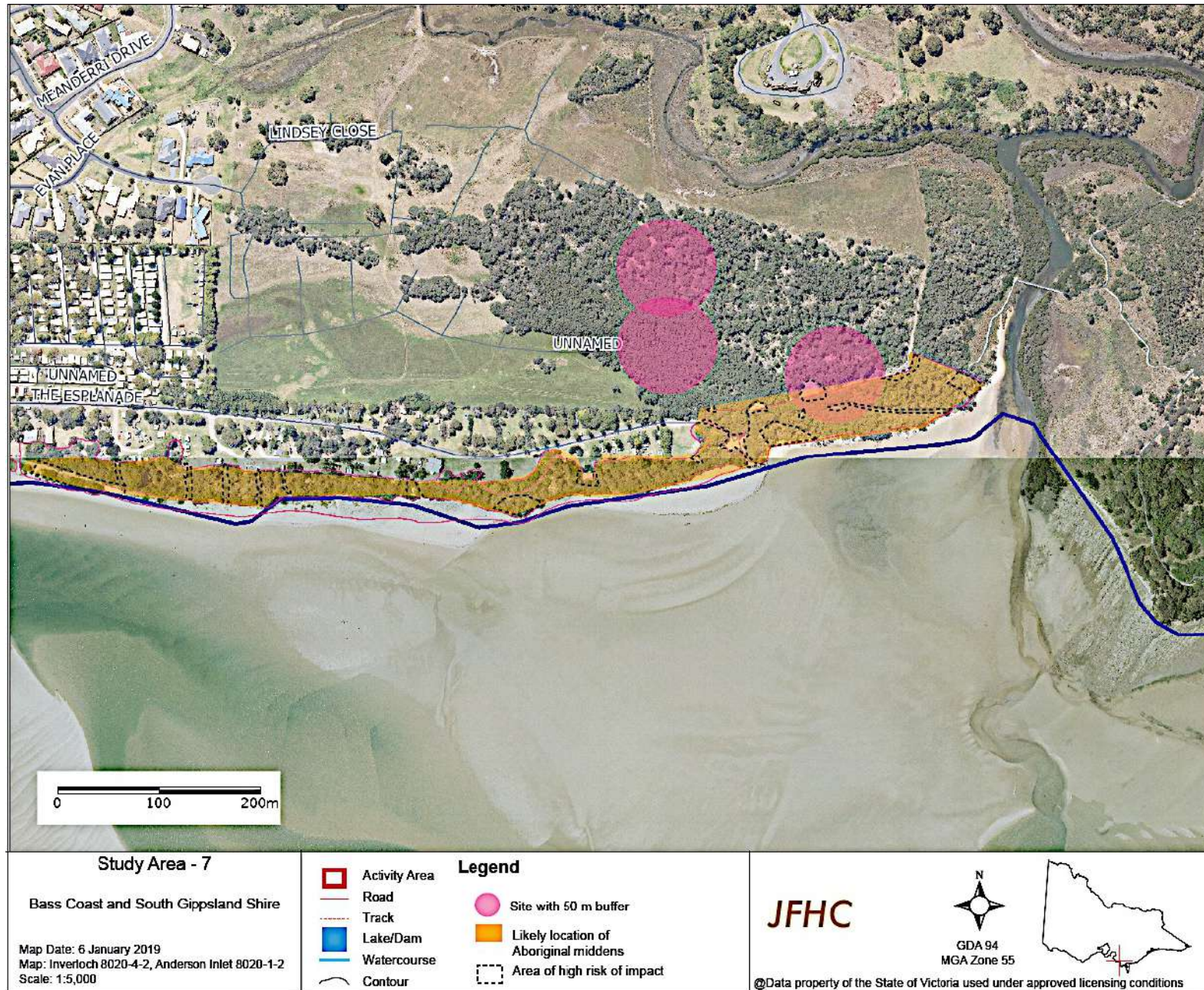

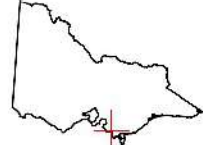


Figure 29: High risk areas in the study area (Area 7)



Figure 30: High risk areas in the study area (Area 8)

<p>Study Area - 8</p> <p>Bass Coast and South Gippsland Shire</p> <p>Map Date: 6 January 2019 Map: Inverloch 8020-4-2, Anderson Inlet 8020-1-2 Scale: 1:10,000</p>	<p>Legend</p> <ul style="list-style-type: none"> Activity Area Road Track Lake/Dam Watercourse Contour Site with 50 m buffer Likely location of Aboriginal middens Area of high risk of impact 	<p>JFHC</p> <div style="text-align: center;">  GDA 94 MGA Zone 55 </div> <div style="text-align: right;">  </div> <p><small>©Data property of the State of Victoria used under approved licensing conditions</small></p>
---	--	---

7 References

- Allen, J., 1989. When did humans first colonize Australia? *Search*, 20:149–154.
- Attwood, B.M., 1984. Blacks and Lohans; A Study of Aboriginal-European Relations in Gippsland in the 19th Century. Unpublished PhD Thesis, La Trobe University, Bundoora.
- Barker, A. and A. Light, 2010. Archaeological Salvage Program Venus Street, Inverloch, Implementation of Management Plan 10049. Unpublished report (4290) to H.G. Bullock, S.R. Burchett, D.E. Warren & C.B. Peterson.
- Barwick, D.E., 1984. Mapping the Past: An Atlas of Victorian Clans 1835-1904, *Aboriginal History*, 8(1–2): 100–131.
- Blom, W.M., 1988. Late Quaternary sediments and sea levels in Bass Strait, southeastern Australia—a preliminary report. *Search*, 2:94–96
- Bowden, K. 1970. *The Western Port Settlement and its leading Personalities*, South Eastern Historical Association, Cheltenham.
- Bowler J.M., Hope, G.S., Jennings, J.N., Singh, G. and Walker, D., 1976. Recent developments in reconstructing late Quaternary environments in Australia. In R.L. Kirk and A.G. Thorne (Eds), *The Origins of the Australians*. Australian Institute of Aboriginal Studies, Canberra, pp. 55–77.
- Broome, R., 1994 (2nd edition). *Aboriginal Australians: Black Responses to White Dominance 1788-1994*. Allen and Unwin, N.S.W.
- Bulmer, J., 1863. Census of Lake Tyers Residents, Australian Archives B312, Item 9.
- Butlin, N., 1983. *Our Original Aggression: Aboriginal Populations of Southeastern Australia, 1788-1850*. Allen & Unwin, London.
- Caldere, D.B., & D.J. Goff, 1991. *Aboriginal Reserves and Missions in Victoria*. Department of Conservation and Environment, East Melbourne.
- Chandler, J., & J. Howell-Meurs, 2010. Lot A, Inverloch-Venus Bay Road, Inverloch Residential Subdivision. Unpublished CHMP (10302) to Kaldumb Pty Ltd.
- Christie, M.F., 1979. *Aborigines in Colonial Victoria 1835-86*. Sydney University Press, Sydney.
- Clark, I., 1990. *Aboriginal Languages and Clans: an Historical Atlas of Western and Central Victoria, 1800–1900*. Monash Publications in Geography, no. 37, Clayton.
- Clark, I.D. 1998. *Place Names and Land Tenure—Windows into Aboriginal Landscapes: Essays in Victorian Aboriginal History*. Heritage Matters, Melbourne.
- Coutts, P.J.F., 1983. *Corinella: a Forgotten Episode in Victorian History*. Records of the Victoria Archaeological Survey, No. 15. Ministry of Conservation, Melbourne.
- Dodson, J., Fullagar and Head, L., 1992. Dynamics of environments and people in the forested crescents of temperate Australia. In J. Dodson, (ed.), *The Naïve Lands, Prehistory and Environmental Change in Australia and the Southwest Pacific*, Longman, Melbourne, pp. 115–159.

- Edmonds, V. Long, A., Schell, P., 1999. Coast Action / Coastcare Grant Applications: Port Phillip East, Gippsland South, & Gippsland East. Unpublished report (1459) to Coastcare.
- Felton, P., 1981. Victoria: land reserved for the benefit of Aborigines 1835-1971. In N. Peterson, (ed.), *Aboriginal Land Rights: A Handbook*, Australian Institute for Aboriginal Studies, Canberra.
- Fison, L. and Howitt, A.W. 1880. *Kamileroi and Kurnai: Group Marriage and Relationship, and Marriage by Elopement drawn chiefly from the usage of the Australian Aborigines; also the Kurnai Tribe; their Customs in Peace and War*. George Robertson, Melbourne.
- Freslov, J., 1996. Effective Strategies for the Management of Coastal Aboriginal Sites and Places in Victoria. Unpublished report to Aboriginal Affairs Victoria and the Australian Heritage Commission.
- Freslov, J., 2002. A Review of Archaeological Heritage Values and an Impact Assessment between Hughes Road, Sorrento and Alison Avenue, Rye, Mornington Peninsula National Park. Unpublished Report to Parks Victoria.
- Freslov, J and D. Frankel, 1999. Abundant fields? A review of coastal archaeology in Victoria. In J. Hall and I. McNiven (eds), *Australian Coastal Archaeology*, Australian National University, Canberra, pp. 239-54.
- Freslov, J., and Goulding, M., 2002. An Aboriginal Cultural Heritage Values Assessment of the Howitt Plains Region, Alpine National Park, Victoria. Unpublished report to Parks Victoria
- Freslov, J., and Goulding, M., 2003. An Aboriginal Cultural Heritage Values Assessment of the Coopracambra National Park, Far East Gippsland. Unpublished report to Parks Victoria.
- Freslov, J., Hughes, P, Mullett, R., 2004. Post Wildfire Indigenous Heritage Survey. Volume 1: Background, Survey, results and Recommended Management Options. Report to Parks Victoria, Department of Sustainability and Environment and Aboriginal Affairs Victoria.
- Gardner, P., 1983. *Gippsland Massacres: The Destruction of the Kurnai Tribe 1800-1860*. Centre for Gippsland Studies, Churchill.
- Gaughwin, D. and Sullivan, H. 1984. Aboriginal boundaries and movement in Western Port, Victoria. *Aboriginal History*, 8(1-2): 80-98.
- Gell, P.A. & Stuart, I.M., 1989. *Human Settlement History and Environmental Impact: the Delegate River Catchment, East Gippsland, Victoria*. Monash Publications in Geography No. 36, Clayton, Victoria.
- Gibson, N., Kiernan, K.W., and Macphail, M.K., 1987. A fossil bolster plant from the King River, Tasmania. *Papers and Proceedings of the Royal Society of Tasmania*, 121:35-42.
- Grant, J. 1803. *The Narrative of a Voyage of Discovery*, Roworth, London.
- Hagenauer, F., 1862. In Second Report Central Board for the protection of Aborigines.
- Hanrahan, J., 1984. Sites of National Estate Significance in Victoria. Unpublished report to the Australian Heritage Commission, Canberra.
- Horton, T. and K. Morris, 1983. *The Andersons of Western Port*, Bass Historical Society, Shire of Bass, Victoria
 Hotchin, K., 1989. Environmental Evolution and Culture Change in the Gippsland Lakes Region, Victoria. PhD Thesis, Australian National University Canberra.

- Howitt, A.W., 1904. *The Native Tribes of South-east Australia*. Macmillan and Co., London.
- Jones, R., 1969. Firestick farming. *Australian Natural History*. 16(7): 224-228.
- Jones, R., 1970. Tasmanian Aborigines and Dogs. *Mankind*, 7: 256-271
- Jones, R., 1975. The Neolithic, Palaeolithic and the hunting gardeners: man and land in the Antipodes. In R.P. Suggate and M.M. Cresswell (eds), *Quaternary Studies*, Wellington, The Royal Society of New Zealand, pp. 21-34.
- Jones, R., 1995. Tasmanian archaeology: establishing the sequences. *Annual Review of Anthropology*, 24: 423-426.
- Light, A., 2006. Inverloch Foreshore Reserve. Aboriginal Cultural Heritage Assessment. Unpublished report (3687) to Bass Coast Shire Council.
- Light, A., 2006. Inverloch Foreshore Reserve. Archaeological Subsurface Testing Program. Unpublished report (3688) to Bass Coast Shire Council.
- Marshall, B., 1998. An Aboriginal Archaeological Survey of Inverloch Parklands Estate. Unpublished report (1273) to Beveridge Williams and Co.
- Orr, A., 2010. Landscaping Works at the Glade, Inverloch, Victoria. Unpublished report (11402) to Bass Shire Council.
- Orr, A and R. Butler, 2016. Residential Subdivision between Wyeth Place and St Kilda Street. Unpublished CHMP (13813) to Edilu Pty Ltd.
- Pepper, P., 1980. *You Are What You Make Yourself To Be*. Hyland House Publishing, South Yarra.
- Pepper, P. and T. De Araugo. 1985. *What did happen to the Aborigines of Victoria: the Kurnai of Gippsland*, Hyland House, Melbourne.
- Peterson, J.A., 1968. Cirque morphology and Pleistocene ice formation conditions in southeastern Australia. *Australian Geographical Studies* 6: 67-83.
- Priestly, S., 1984. *Making their Mark*, Fairfax, Syme and Weldon, McMahons Point, NSW.
- Rhodes, D., (No Date). An Archaeological Survey of the Proposed RACV Eco-Tourism Resort at Inverloch. Unpublished report (1943) to GHD Pty Ltd and the RACV.
- Rhodes, D., 1996. *The History of Ramahyuck Mission and a Report on the Survey of Ramahyuck Mission Cemetery*. Occasional Report No. 47, Aboriginal Affairs Victoria, Melbourne.
- Rhodes, D., 2001. Report on Archaeological Sub-Surface Testing and the Excavation of Site AAV 8020-0133 on the RACV Property at Inverloch, Victoria. Unpublished report (2362) to GHD Pty Ltd and the RACV.
- Rhodes, D., 2005. Report on an Archaeological Survey of a Proposed Inverloch Recreation Resort. Unpublished report (3153) to Inverloch Recreation Resort.
- Robinson, G.A., 1840. Journals of George Augustus Robinson, January - March 1840. Edited by G. Presland, Records of the Victoria Archaeological Survey No. 5, Melbourne, Aboriginal Affairs.
- Robinson, G.A., 1841. Field Journals 2 January 1841-14 February 1841. A7037, Mitchell Library Sydney.
- Robinson, G.A., 1842. Field Journals 3 November 1842-2 December 1842. Vol. 18, Part 7, Mitchell Library Sydney.

- Robinson, G.A. 1844 in Mackaness, G. 1941. George Augustus Robinson's journey into S.E. Australia. *Journal and Proceedings, Royal Australian Historical Society*, 28:14–15.
- Rosengren, N., 2019. Inverloch Resilience Project. Coastal Geomorphology. Geomorphological Values. Unpublished Report prepared for the South Gippsland Conservation Society.
- Rowland, M.J., 1999. Holocene environmental variability: have its impacts been underestimated in Australian pre-History? *The Artefact* 22: 11-48.
- Sandweiss, D.H., J.B. Richardson, E.J. Reitz, H. B. Rollins and K. A. Maasch 1996. Geoarchaeological evidence from Peru for a 5000 years B.P. onset of El Niño. *Science* 273: 1531–3.
- Schell, P., 2007. Venus Street, Inverloch. Unpublished report (3999) to H.G. Bullock, S.R. Burchett, D.E. Warren & C.B. Peterson.
- Schell, P & Light, A., 2008. Venus Street Subdivision, Inverloch. Unpublished CHMP (10049) to H.G. Bullock, S.R. Burchett, D.E. Warren & C.B. Peterson.
- Smyth, R. B., 1878. *The Aborigines of Victoria, 2 Vols.* Government Printer, Melbourne.
- Sullivan, H., 1981. *An Archaeological Survey of the Mornington Peninsula, Victoria.* Occasional Report No. 6, Occasional Report Series, Victoria Archaeological Survey, Ministry of Conservation, Melbourne.
- Thomas, W, 1849. List of the names and ages of the Gippsland Aborigines met on the 26 June 1849. MSS 214/11 and 214/3, Mitchell Library Sydney.
- Thompson, K., 1985. A History of the Aboriginal People of East Gippsland. Unpublished Report to the Land Conservation Council, Victoria.
- Tyers, C.J., 1852–1858. Blanket returns 1852-1858. Unpublished census compiled from lists of distributed blankets. A 842, Mitchell Library, Sydney.
- Tyers, C.J., 1853. Despatches from the Lieutenant Governor of Victoria to the Secretary of State for the Colonies: January to December 1853, pp. 1649–1654, Mitchell State Library, Sydney.
- Wesson, S., 2000. *An Historical Atlas of the Aborigines of Eastern Victoria and Far South-eastern New South Wales.* Monash Publications in Geography and Environmental Science, No. 53, School of Geography and Environmental Science, Clayton.

BPA Reports

1871-1876 https://digitised-collections.unimelb.edu.au/bitstream/handle/11343/21345/114161_Protection%20of%20Aborigines%20Report%2031%201895.pdf?sequence=31

CBPA reports: <http://www.parliament.vic.gov.au/papers/govpub/VPARL1889No129.pdf>

Websites

DEDJTR 2015a. Victorian Resources Online: Geomorphology.

[http://vro.depi.vic.gov.au/dpi/vro/vrosite.nsf/pages/landform_geomorphology].

DEDJTR 2015b. GeoVic. [http://er-info.dpi.vic.gov.au/sd_weave/anonymous.html].

https://www.environment.vic.gov.au/__data/assets/pdf_file/0033/48696/GipP_EVCs_combined.pdf. Accessed 11/3/19

Appendices

Appendix 1 - Glossary

Aboriginal Archaeological Site	The location of the physical remains resulting from past Aboriginal behaviour before and after settlement.
Aboriginal Ancestral Remains	Human remains of Aboriginal origin.
Aboriginal Artefact Scatter	A scatter of material remains resulting from past Aboriginal activity on the surface of the ground. Can be stone tools, animal bones, plant remains. AAV defines a scatter as more than 5 items in 100 m ² .
Aboriginal Historic Place	A location that is important because of its associations with, and cultural significance to, Aboriginal people. Such places may or may not have material remains.
Archaeological Site	The location of the physical remains of past human behaviour.
Archaeology	The study of past human behaviour.
Artefact Scatter	Artefact scatters are scatters of stone artefacts with a density of more than 10 artefacts in a 10m x 10m area
Australian Small Tool Tradition (ASTT)	A wide range of small artefacts including Pirri Points, Kimberly Points, Tula (and non-Tula or Burren) adzes and slugs, backed blades, and blades without backed retouch (such as butted blades) present in late assemblages and most probably hafted (Gould 1980: 177).
Backed Points	Points that are asymmetrical in shape, triangular or flat, trapezoid in section, with a thick trimmed (retouched or blunted) back (McCarthy 1976: 44)
Blade	A sharp piece of stone removed from a core that is long and thin, typical twice as long as it is wide.
Bondi Point	Blades trimmed partially or completely along one or both edges of the thick margin combined with a plain, faceted or trimmed butt. The length ranges from 10 to 50 mm, width 18 mm to 30 mm, thickness 2 mm to 5 mm cm (McCarthy 1976: 44)
BP	Before present.
Burial	A location where Aboriginal ancestral human remains have been interred.
Chert	Cryptocrystalline silica occurring as bands or nodules in sedimentary rock (Whitten and Brooks 1972: 76). A stone with good flaking qualities highly prized for stone tool manufacture.
Cleavage	Natural weathered outer surface of the stone not smoothed by water.
Conglomerate	Rounded or sub-rounded gravels in a silicious matrix (Wesson and Beck 1981: 30)

Contact site	A site showing the material evidence of contact with an alien culture from the settlement period. For example an Aboriginal contact site may have worked glass tools or traditional use of non-Aboriginal materials, or non-Aboriginal materials in an unusual context (glass, tin or pottery in a campsite).
Core	A pebble or blocky piece of stone from which pieces of stone have been removed, typically showing negative scars.
Cortex	Outer unworked surface of stone. May be rough or smooth discoloured or patinated.
Debitage	The by-products of flaking stone to produce tools or sharp pieces of stone for various purposes
Edge-ground Axe	A piece of stone that has been ground along one or more edges to produce a robust and durable edge. The axe may be hafted in a handle or used as a hand tool.
Flake	A sharp piece of stone removed from a core with features including a platform, bulb of percussion, ripples of force and a typical termination type.
Geometric Microliths	Triangular or crescent shaped with backing or abrupt trimming along the thick margin (McCarthy 1976: 44)
Hafting	Mounting a tool in a piece of wood, sapling or bone to form a handle for the tool.
Heritage Place	A place with aesthetic, historic, scientific or social values for past, present or future generations – ‘...this definition encompasses all cultural places with any potential present or future value as defined above’ (Pearson and Sullivan 1995: 7)
Historic Archaeological Site (Non-Aboriginal)	Site with material remains resulting from human activity from any period from settlement to 50 years ago
Historic Scatter (Non-Aboriginal)	A scatter of material remains resulting from past non-Aboriginal activity on the surface of the ground. Can be bricks, glass, tin, iron, ceramics etc.
Historic Structure	Building or substantial above ground structure older than 50 years
Holocene	The recent period, commencing at the end of the last Ice Age, c. 12,000 years ago to the present.
Isolated Artefact	Older AAV term to describe the location of a small number (<5) of artefacts or items of cultural material in 100m ² .
Knapping Event	Location where stone tool manufacture has taken place, showing evidence of related activities or sequence of manufacture
KYA	Thousand years ago
LDAD	Low density artefact deposit. Average stone density of less than 10 artefacts in a 10m x 10m area
LGM	Last Glacial Maximum. Period at the height of the last glacial period c.

	between 18,000-20,000 years ago
Microliths	Small retouched artefacts commonly hafted
Midden	The waste products (shell) from a single meal, or many thousands of meals.
MYA	Million years ago.
PAD	Potential Archaeological deposit
Pleistocene	The geological epoch from 2.5 mya to the end of the last Ice age at c. 12,000 years ago.
Pre-contact	Before first settlement by non-Aboriginal people. Time period may vary as parts of Australia and Victoria were settled at different times. Contact peoples may vary e.g. Europeans in Victoria, but other groups earlier in northern Australia.
Post-contact	After settlement.
Post-depositional processes	Actions that affect the distribution, location or content of a site and its contents after the initial site formation process.
Post-glacial	After the last ice age, from c. 12,000 years ago
Quarry	A rocky outcrop or ground source (including river gravels) where stone for making stone artefacts was sourced.
Quartz	Clear or opaque highly silicious rock, pink, grey, white or clear. Very commonly used in the manufacture of stone artefacts
Quartzite	Hard rock with a robust edge. Can be of various colours. Comprises sandstone that has been converted to quartzite through pressure and heat.
Retouch	Smaller regularly spaced elliptical flake removals from a tool for the purpose of shaping or sharpening
Scarred Tree	A tree, usually more than 150 years old where bark has been removed by Aboriginal people to make a container or canoe or for some other purpose.
Scrapers	Artefacts with retouched edges which are concave, convex or combinations of both (McCarthy 1976: 34)
Shell Midden	A collection of shell either coastal or inland where shellfish have been accumulated as a result of past Aboriginal resource exploitation activities (meal debris).
Silcrete	Very brittle, intensely indurated rock composed mainly of quartz clasts cemented by a matrix which may be well-crystallised quartz, cryptocrystalline quartz, or amorphous (opaline) silica (Langford-Smith (1978: 3).
Strata	Discrete units of sediment and occupation debris easily distinguishable in an archaeological excavation.
Stratification	A deposit, which has recognisable layers or 'strata'. The oldest layers are assumed to be at the bottom and the most recent at the top. The layers have been formed by different cultural or natural processes or a combination of

both leading to variations in coloring or contents or other features.

Visibility

The extent to which the ground surface may be viewed when surveying for archaeological remains.

Appendix 2 - Gazetteer

The following sites are located in and adjacent to the study area.

VAHR No.	Field Name	Site Type
8020-0176	IGCC SAS 1	Artefact scatter
8020-0199	RACV 11	Hearth Feature/artefact Scatter
8020-0133	RACV 2 (SM1)	Shell Midden
8020-0198	RACV 10	Shell midden
8020-0042	Toilet Block Axe Head	Isolated artefact (Axe)
8020-0214	Venus Street 3	Artefact scatter
8020-0211	Venus Street 2	Artefact scatter
8020-0210	Venus Street 1	Artefact scatter
8020-0202	Ramsay Boulevard 1	Shell midden/artefact scatter
8020-0140	Anderson Inlet 1	Shell midden
8020-0289	Wyeth Plain AS	Artefact scatter
8020-0124	Inverloch Parklands 1	Shell midden
8020-0125	Inverloch Parklands 2	Shell midden
8020-0126	Inverloch Parklands 3	Shell midden
8020-0103	Point Smyth 1	Shell Midden

Appendix 3: Significance Assessment

Criteria for Assessing Aboriginal Significance Assessment

In order to make informed decisions regarding the management of heritage sites and places, the assessment of significance is an integral part of the assessment of heritage values. The significance assessment process assists in deciding which sites and places are worthy of preservation, the degree to which they are managed and the way in which they are managed.

Significance assessment in Victoria and Australia in general is based on a common process that has been broadly accepted by heritage professionals. The process for determining significance is derived from an international formula developed by ICOMOS (International Council on Monuments and Sites) and is described in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter) (Australia ICOMOS 1988; Marquis-Kyle and Walker 1992).

The Burra Charter defines cultural heritage significance as the 'aesthetic, historic, scientific, social or spiritual value for past, present or future generations'.

The Burra Charter describes four criteria for assessing significance:

- Aesthetic value—associated with the stimulation of the senses, including form, scale, colour, texture and fabric material.
- Historic value—associated with an historic figure, event, phase, or activity.
- Scientific value—associated with importance to research, rarity, quality and representativeness.
- Social value—associated with its special meaning, or significance to groups, the general public, in a national or political sense.

Aboriginal Cultural Heritage Significance Assessment

The brief provided required an assessment of the significance of any newly located archaeological sites. This process requires assessment of both the cultural and scientific values.

The assessment of cultural values is made by the relevant Aboriginal people. It is preferable to provide a written statement and include this in the report, although this is not always possible.

Scientific Significance

Scientific significance assessment is assessed on two criteria: research potential and representativeness.

Research Potential

Research potential is assessed on the basis of the archaeological site contents and site condition.

The archaeological site contents refer to all material and organic remains present that are the result of past human behaviour, or are associated with past human behaviour, or that can shed light on past human behaviour. Site contents also refer to the structure of the

archaeological site, including its size, the distribution or patterning of material remains within the archaeological site, the presence of any stratified deposits and the rarity of the material remains.

The archaeological site condition affects its site significance and archaeological sites are assessed on the basis of the degree to which they have been disturbed.

An assessment methodology is outlined below (see Bowdler 1981; Sullivan and Bowdler 1984).

Site Contents Ratings

- 0 No cultural materials remaining.
- 1 Site contains a small number (e.g. 0–10 artefacts) or limited range of cultural materials with no evident stratification.
- 2 Site contains:
 - (a) A larger number, but limited range of cultural materials: and/or
 - (b) Some intact stratified deposit remains.
- 3 Site contains:
 - (a) A large number and diverse range of cultural materials; and/or
 - (b) Largely intact stratified deposit; and/or
 - (c) Surface spatial patterning of cultural materials that still reflect the way in which the cultural materials were laid down.

Site Condition Ratings

- 0 Site destroyed.
- 1 Site in a deteriorated condition with a high degree of disturbance but with some cultural materials remaining.
- 2 Site in a fair to good condition, but with some disturbance.
- 3 Site in an excellent condition with little or no disturbance. For surface artefact scatters this may mean that the spatial patterning of cultural materials still reflects the way in which the cultural materials were laid down.

Representativeness

Representativeness refers to the regional distribution of a particular site type. It is assessed on whether the site is common, occasional or rare in a given region. Assessments of representativeness are subjective, biased by current knowledge of the distribution and numbers of archaeological sites in a region. This varies from place to place depending on the extent of previous archaeological research. Consequently, an archaeological site, which is assigned low significance values for contents and condition, but a high significance value for representativeness, can only be regarded as significant in terms of current knowledge of the regional archaeology. Any such site should be subject to further re-assessment as additional archaeological research is carried out.

Assessment of representativeness also takes into account the contents and condition of a particular archaeological site. For example, in any region, there may only be a limited number of archaeological sites of any type that have suffered minimal disturbance. Such sites would therefore be given a high significance rating for representativeness, although they may occur commonly within the region.

Representativeness Ratings

1. Common occurrence.
2. Occasional occurrence.
3. Rare occurrence.

Scientific Significance Ratings

Overall scientific significance ratings for archaeological sites, based on a cumulative score for site contents, site integrity and representativeness are given as follows:

- | | |
|-----|-----------------------------------|
| 1-4 | Low scientific significance. |
| 5-7 | Moderate scientific significance. |
| 8-9 | High scientific significance. |