

*AN OVERVIEW OF THE ABORIGINAL  
ARCHAEOLOGY WITHIN THE  
“NON-URBAN SOUTH & NON-URBAN  
FORESHORE”,  
VICTORIA*

**A REPORT TO THE CITY OF CASEY**

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## ABSTRACT

This report outlines the results of an archaeological desktop study of the area described as the "Non-Urban South & Non-Urban Foreshore", and has been commissioned by the City of Casey. The study area is bounded by Ballarto Road, South Gippsland Highway, Baxter-Tooradin Road and Dandenong-Hastings Road, and is located approximately 60 kilometres south east of Melbourne (Figure 1). The study reviews Aboriginal cultural heritage of the area, and supplemented by a vehicle reconnaissance, produces a predictive Aboriginal archaeological assessment.

The consultant and Ms Vicky Nicholson, member of the Wurundjeri Tribe Land, Compensation and Cultural Heritage Council Incorporated, conducted a vehicle reconnaissance of the study area on Saturday 23<sup>rd</sup> of August 1997. During this reconnaissance, areas were identified which may still contain evidence of Aboriginal occupation, as well as those where it is highly unlikely due to intensive development.

The study area lies within the former Aboriginal language group of the Bunurong tribe. The clans whose lands included the present study area were known as the Mayone-bulluk and the Yallock bulug. Ethnographic and historical background information, although providing little specific information about these clans, does provide detailed information about the lifestyle and seasonal movements of the Bunurong tribe within the Western Port area (Section 4). Today, the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated are the cultural custodians for these former clan estates.

Prior to this investigation, two previous archaeological studies have been undertaken (Gaughwin 1981, Ellender 1991), and 25 archaeological sites have been recorded within the study area. These sites comprise 6 isolated artefact occurrences (AAV 7921/115,119,255,256,303,304); 15 surface scatters of stone artefacts (AAV 7921/11,116,118,120,121,122,123,124,126,127,128,186,300,301,302); 3 midden sites (AAV 7921/8,9,32); and one exposure in a bank (AAV 7921/117) (Appendix 3 - Glossary, Appendix 4 - Site Gazetteer, Figure 2 - Site Locations). These sites are spread throughout the study area, with the highest densities recorded within the Cranbourne Sands, ridges and hummocks; and Low-Lying Plains landform units (Figure 3).

Based on the Aboriginal archaeological background, ethnographic data and the results of the vehicle reconnaissance, the site types considered likely to occur within the study area are surface scatters of stone artefacts and isolated artefact occurrences. Less likely to occur are Aboriginal scarred trees and human burial sites. It is also possible that Aboriginal midden sites may occur throughout the Foreshore landform unit, but are currently obscured by vegetation. Most sites within the study area are likely to be located within 100 metres of a past or present water source. The dominant raw material types most likely to be found within any stone artefact site are silcrete, chert and quartz. As the study area is defined as a stoneless region, all stone material used in the manufacture of artefacts will have been imported. Aboriginal sites recorded within the Foreshore and Low-Lying landform units will most likely date to the last 5,000 years. Sites located within

the Cranbourne Sands, ridges and hummocks landform unit may potentially be older, as this landform dates to the Pleistocene.

Due to the paucity of recorded Aboriginal archaeological sites within the study area that are in a good to excellent state of preservation, any sites recorded during a subsequent archaeological site survey that fulfil these requirements would be provisionally assessed as being of high scientific significance. Ceremonial/social gathering sites or human burial remains would be considered as being of extremely high scientific and cultural significance.

Two landforms have been identified during this study as being of provisional high archaeological sensitivity for Aboriginal sites these are; Cranbourne Sands, ridges and hummocks unit, and the Foreshore unit (Figures 3&7). The Cranbourne Sands unit is considered highly likely to contain further evidence of undisturbed surface scatter of stone artefacts as well as isolated occurrences. The Foreshore unit is provisionally assessed as being highly likely to contain extensive midden deposits. The landform unit of Low-Lying Plains is provisionally assessed as being of moderate archaeological sensitivity for disturbed surface scatters of stone artefacts and isolated artefacts. Prior to any major land use changes in these areas, each of these of landforms should be subject to further archaeological investigation in the form of an intensive ground surface survey.

No archaeological sensitivity for Aboriginal sites is considered to exist within areas which have been highly developed (residential areas of less than 2 hectares). Areas where there is no archaeological sensitivity are primarily the townships of Village Junction, Cranbourne South, Five Ways, Pearcedale, Blind Bight, Warneet, Cannons Creek, Tooradin and Devon Meadows (Figure 7).

Based on the findings of this study, the recommendations made in this report are (Section 8):

1. That a detailed systematic archaeological site survey be undertaken of the study area described as the "Non-Urban South & Non-Urban Foreshore" by a qualified archaeologist and member of the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated.
2. Any subsequent archaeological site survey of the study area should target areas identified during this background study as being moderately or highly archaeologically sensitive. Adequate time should be allowed for an effective survey coverage of the study area (minimum 4 weeks). The effectiveness of any archaeological site survey is largely dependent on ground surface visibility. Within each landform unit there are currently large areas of market gardens. Market gardens provide excellent ground surface visibility after crops have been harvested, and before new crops are established. Any archaeological site survey should take advantage of the seasonal rotation of market gardens to minimise sample bias. A current cost estimate for such a study would be approximately \$26,000.00

3. Attempts should be made by the archaeologist conducting the survey to identify the exact location of the midden sites along Western Port Bay referred to in historical documents. Prior to the survey, local publicity should be sought to encourage residents to make available any artefacts they may possess which originate from the study area for recording. The National Museum Of Victoria's artefact collection for the study area should also be reviewed and taken into account during the archaeological analysis of the study area.
4. If a comprehensive archaeological site survey of the study area is not undertaken, then the City of Casey should ensure that developers who wish to conduct major land use changes to areas greater than 2 hectares of land considered in this study to potentially be archaeologically sensitive should be required to underwrite a cultural heritage assessment. Appropriate heritage assessments would involve intensive grounds surface survey for both Aboriginal and non-Aboriginal archaeological sites.
5. Throughout any archaeological site survey of the study area, consultation must be made with the Wurundjeri Aboriginal community and with the Aboriginal Affairs Regional Site Officer.
6. Copies of the archaeological desktop report of the "Non-Urban South & Non-Urban Foreshore" should be forwarded to the Heritage Services Branch, Aboriginal Affairs Victoria, the Australian Heritage Commission and the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated.

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**Vicky Nicholson**- Representative of the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated.

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# 1 INTRODUCTION

This report outlines an archaeological desk-top study of the area described as the "Non-Urban South & Non-Urban Foreshore" (study area) and has been commissioned by the City of Casey. The study area encompasses the districts of Cranbourne South, Devon Meadows, Pearcedale, Cannons Creek, Warneet, Blind Bight and Tooradin, an area of approximately 100 km<sup>2</sup> located some 60 kilometres south east of Melbourne (Figure 1). The study area is bounded by Ballarto Road, South Gippsland Highway, Baxter-Tooradin Road and Dandenong-Hastings Road. This study reviews the Aboriginal cultural heritage of the area, and supplemented by a vehicle reconnaissance, produces a predictive Aboriginal archaeological assessment.

All major and the majority of minor road routes within the study area were subject to a vehicle reconnaissance survey by the consultant and Ms Vicky Nicholson, a member of the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated on Saturday 23<sup>rd</sup> of August, 1997. During this time minimal ground surface inspection was undertaken, and no Aboriginal archaeological sites were recorded.

The study area has in the past, been subject to archaeological survey in some sections, resulting in a total of 25 Aboriginal archaeological sites being recorded (see Figure 2; Appendix 4). These sites were predominantly recorded by Gaughwin (1981) during a study of the Western Port Catchment Area, and by Ellender (1991) during a study of the Royal Botanic Gardens Annex at Cranbourne.

The significance of Aboriginal items, sites and places that comprise the cultural heritage record varies considerably, and can be measured primarily upon their historical, scientific, social, educational, economic and aesthetic values. However, the integrity and significance of cultural heritage items, sites and/or places can be jeopardised by natural (eg. erosion) and human (eg. development) activities. In the case of human activities, a range of State and Federal Legislation exists to assure preservation of elements and features of our cultural heritage (section 7).

It is the general policy of State heritage bodies to request developers, planners, private or otherwise, to underwrite independent cultural heritage assessments such as this document. Such assessments will ensure that the significance of cultural heritage sites and places are properly documented, preserved and managed. This preliminary report fulfils a range of social and legislative obligations relating to potential cultural heritage sites and places within the "Non-Urban South and Non-Urban Foreshore" study area.

## 1.1 Aims

The aims of this study are defined within the project brief (Appendix 1), and are summarised as:

1. To review all available Aboriginal archaeological material relating to the area.
2. To synthesise the background material, produce a summary of this information, and to generate a site prediction model for the area in report form.

3. Identify any archaeological areas or sites of significance which may require further archaeological investigation.
4. To establish the implications of the presence of any Aboriginal cultural heritage sites and places may have for the future proposed management and/or development of the study area.
5. Consult with the Aboriginal community in relation to cultural heritage matters.
6. Ensure that draft copies of the report are provided to the City of Casey and the relevant Aboriginal community (Wurundjeri) for discussion/confirmation prior to the final report being produced.
7. Produce a report using the findings in accordance with the guidelines of the Heritage Services Branch, Aboriginal Affairs Victoria (AAV). Copies of the report should be forwarded to the relevant Aboriginal community, Australian Heritage Commission (AHC), and AAV.

## **1.2 Consultation**

In accordance with the *Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act* 1984, the Cultural Officer for the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated, Mr Bill Nicholson Jnr, was contacted on Monday the 18<sup>th</sup> of August, 1997 and given details of the impending archaeological study and reconnaissance survey. Mr Nicholson engaged Ms Vicky Nicholson as community representative during the vehicle reconnaissance survey.

The site registers at Heritage Services Branch, AAV, and the National Estate were each consulted for the presence of Aboriginal archaeological sites which have been previously recorded within the study area. Archival plans held at the Central Plans Office, Melbourne, were also consulted for the presence of references to Aboriginal places. As required by Victoria State Legislation, a notification of intention to conduct an archaeological survey was lodged (Form D) by the consultant with the Heritage Services Branch, AAV, prior to conducting the reconnaissance survey (Appendix 2).

## **1.3 The Study Area**

The study area lies within the low lying plains of Western Port, with its boundaries being to the north, Ballarto Road, to the west, Dandenong - Hastings Road, to the east, the South Gippsland Highway and the south, the coast of Western Port Bay (Figure 1). The study area covers approximately 100 km<sup>2</sup> and is comprised of a range of developments. These include areas of high density residential, small to medium sized "hobby farm" allotments, as well as larger scale agricultural and horticultural properties. There are a number of areas where stands of native vegetation exists, particularly along the foreshore region, with smaller sections of woodlands existing in the north and north east areas. In general however, areas which are not currently developed into high and moderate density residential (Village Junction, Devon Meadows, Five Ways, Cannons Creek, Warneet, Blind Bight and Tooradin) have been extensively cleared. The loamy soils which characterise much of the study area have attracted the development of

market gardens and pastoral grazing. The study area can generally be described as being stoneless, with no outcrops of sedimentary stone occurring within its boundaries. The northern and eastern sections are gently undulating which give way in the south to flat low-lying areas adjacent to the mangrove and tidal areas along the Western Port coast line.

There are no permanent rivers or creeks within the study area, however, there are numerous channels which drain the low-lying areas into Western Port Bay. Prior to European settlement, water would have naturally collected within low lying ground (depressions) as well as forming the vast Koo-Wee-Rup Swamp to the east of the study area. The study area has been extensively drained by Europeans, removing virtually all traces of the swamp land which once dominated the landscape.

## **2 ENVIRONMENTAL BACKGROUND**

The importance of understanding the past and present environment is two-fold. Firstly, it is the pre-European settlement environment that was the evolving context for Aboriginal land use in the region. Secondly, to understand the changes in the environment since European settlement is to bring an understanding of what Aboriginal archaeological sites may have survived and their potential location.

### **2.1 Pleistocene and Early Holocene Environment**

The Pleistocene and early Holocene environment within the study area was one of gradual and continuous change. As Aboriginal people are known to have occupied south-eastern Australia during the late Pleistocene (c. 40,000 to 10,000 years B.P.) from archaeological evidence at Kellor (Coutts and Cochrane 1977) and Hunter Island (Bowdler 1979), it is necessary to consider the environment of Western Port at this time to determine where Pleistocene sites may be located. During the Pleistocene, sea levels were in general much lower than present. Western Port was during this period part of a plain which stretched to Tasmania. This ancient plain would have provided a different set of resources from those available within the present coastal configuration. During the Pleistocene the resource rich coastal zone would have been over 150 km to the south.

Approximately 18,000 years B.P., sea levels began to rise slowly and it was not until about 10,000 years B.P. that the Bay became inundated by the sea (Marsden and Mallet 1975:114-116). This resulted in the loss of large areas of territory for the Aboriginal population and the severing of connections between Tasmania and the mainland. During this time many archaeological sites were inundated. About 5,000 to 6,000 years B.P., the sea reached a maximum of 1.5 to 2m higher than at present, during which time Phillip Island was formed. The archaeological implications of these periods are that they provided different sets of resources for the human populations inhabiting the area. Pleistocene and Holocene coastal sites would be expected to be either submerged or further inland.

The most extensive geological features of the study area are of Quaternary age. Along the coast these include beach sands and mud flats with mangroves. Inland, wind-blown

sand deposits termed Cranbourne Sands have been shaped into low hummocks and ridges. These dunes were formed during a low sea level phase that may correspond to an arid climatic period between 15,000 and 20,000 B.P.. Vegetation has stabilised these dunes and their emplacement initiated drainage disruption of the streams that crossed the lowland to the north of Western Port Bay and led to the development of freshwater swamp conditions. Lower lying areas of Cranbourne Sands were buried beneath these swamp deposits so that in places only the top of the ridge crests protrude (Rosengren and Williams 1979).

Dry land vegetation changed from *Casurina* woodland in the early Holocene to a *Eucalyptus* dominated heathland as a result of a combination of climatic, water table and coastal changes. It has been suggested that an increased diversity in vegetation associated with this change may have been the result of increased burning by Aborigines (Aitken and Kershaw 1993:78). Aboriginal burning served to open up the country for the purposes of access, new growth for game and flush out animals for hunting. A change in vegetation from a *Casurina* woodland to a *Eucalyptus* dominated heathland would have had the effect of altering the resources available to Aboriginal people.

## **2.2 The Study Area Today**

The relief of the study area varies from flat, poorly drained areas in the south, to sandy ridges in the north. The highest relief of 80 metres occurs within the sand ridges of the Royal Botanic Gardens Annex at Village Junction, with the majority of the study area within 10 to 40 metres relief. There are no hilly or steep areas within the study area. There are also no naturally occurring permanent or seasonal creeks or rivers within the study area. In general, the study area forms part of the ancient swamp land (Koo-Wee-Rup Swamp) which drains into Western Port Bay.

The geology within the study area is important to consider as the availability of stone material suitable for manufacture of tools influences aspects of Aboriginal occupation of the area. From the northern boundary of the study area to approximately Five Ways and Pearcedale, the geology is comprised of calcareous and siliceous sands, dune limestone, sandy sheets (including Cranbourne Sands), ferruginous sandstone, sandy clay, and ligneous clays known as Baxter Sandstone, and mudstone, claystone and hornfels near granite contacts. In the southern section of the study area calcareous and siliceous sands, dune limestone, sandy sheets (Cranbourne Sands) dominate. None of the geological formations within the study area provide stone materials. This then excludes the study area from one where raw stone materials were once extracted, quarried or collected for the manufacture of stone implements by pre-contact Aboriginal people. Therefore, Aboriginal quarry sites will not be identified within the study area. This absence of stone will also result in Aboriginal sites that are located within the study area being comprised of materials which have been imported.

The original vegetation within the low-lying southern section of the study area comprised Swamp Paper-Bark (*Melaleuca ericafolia*), closed scrub with dense tea-tree scrub (*Leptospermum* spp.) and *Acacia verticillata*. On low lying areas where flooding was permanent, the reed beds (*Phragmites australis*) were predominant, and on higher ground subject to less frequent flooding *Acacia melanoxylon* and *Cassinia aculeata* were probably common (Sneddon 1975). Open forest existed in areas west of Tooradin

to the foothills of the Dandenongs, these drier forests included Manna Gum (*Eucalyptus obliqua*), Messmate (*Eucalyptus globulus*), Blue Gum (*Eucalyptus st. johnii*) and *Banksia* spp (LCC 1991:100-103). The presence of *Banksia* in the pre-contact period vegetation regime would support a history of Aboriginal burning practises.

The Western Port Bay and coastal areas are biologically one of the richest areas in Victoria. There are shallow channels, rocks and reefs and, because of the wide tidal range, a richly varied intertidal zone, extensive mud flats, sandy spits, seagrass beds, mangrove thickets and salt marshes (Edgecombe 1989:86). Because of this diversity, the study area would have contained a large number and wide variety of faunal species associated with the coast and hinterland area prior to European settlement.

With the demise of native habitat, the number and range of species which once existed has been greatly reduced. Arboreal and land mammal species which would have been commonplace throughout the study area are: eastern grey kangaroo, swamp wallaby, potoroo, eastern native cat, brushtail possum, ring-tail possum, horseshoe bat, tiger quoll, native rats, echidna, and koala. Within wetlands and associated with ponded water would have existed: eels, black swans, ducks, ibis, quail, emu, (295 bird species have been recorded for the Western Port Region; Lyon 1975:61) fish, and crustaceans (LCC 1991:111). Detailed lists of plants and animal species available within the Western Port and Port Phillip areas can be obtained from Gaughwin (1981), Sullivan (1981), Presland (1994) and Gott (1983).

The climate of the study area is characterised by cool wet winters and moderate summers with short dry periods. The average rainfall is in excess of 750mm annually. The average temperatures range from a winter minimum of 3°C to a summer maximum of 26°C (LCC 1991:60).

For purposes of generating a site prediction model, the study area has been divided into three relatively homogenous landform units (see Figure 3):

- 'Cranbourne Sands, ridges and hummocks': these extended from the Royal Botanic Gardens Annex and continue in a narrowing band to Cannons Creek,
- 'Low-Lying Plains': these comprise all the past wetland areas which are now drained,
- 'Foreshore' region: a narrow band of 100 metres width which extends the length of the coast within the study area (including township foreshore areas).

### **2.3 Resources Available for Aboriginal People**

The resources available within the study area for Aboriginal subsistence in the past would have been rich. The most productive zones within study area those associated with wetlands and the coastal fringe.

It would be expected then, that areas associated with these past water bodies and coastal regions would be the focus of Aboriginal exploitation within and near the study area. Within each of these ecological zones, there would have been variations in staple species diversity and abundance, and this would have in turn influenced site location (Walsh 1987). It is beyond the scope of this study to reconstruct the resource structure at a local scale, however, in addition to those mentioned in the previous section, some

of the food resources which may have been utilised by Aboriginal people are; wetland root crops (such as *Typha*, *Triglochin*), dry land root crops (such as *Microseris scaigera*), fresh water fish and crustaceans, waterfowl and land mammals.

The availability of food and materials would have been fairly constant throughout the study area. Seasonal congregations would have provided the highest food potential, such as eels, nesting birds and their eggs within wetland and swamp areas (Low-Lying Plains unit). Larger mammals such as kangaroos would have frequented the drier lands towards Cranbourne (Cranbourne Sands, ridges and hummocks unit), while localised areas of abundant soft shore shellfish would have been available along the coast (Foreshore unit). The greatest density and diversity of potential Aboriginal archaeological sites will generally occur in areas where the resources of several landforms are accessible, which to a certain extent describes the present study area where the coast, swamps and inland dry forests were within traversable distances for pre-contact Aboriginal people.

An important resource not to be found within the present study area is flakeable stone sources. As mentioned in the previous section, preferred stone material such as silcrete and chert would have been imported into the area. These highly utilised stone materials occur to the south-east of the study area along the coast, and on the Mornington Peninsular (Sullivan 1981; Gaughwin 1981; McConnell 1981:159).

Suitable large tall trees which potentially provide bark materials are also rare within the study area. The preferred tree species of Swamp Gum and Red Gum do not naturally occur within the study area, however, large numbers of Red Gums occur to the north and north east. The plains of Dandenong were originally covered in Red Gum forests, with the few remaining trees in this region possessing a high number of Aboriginal scars. It is highly likely that Aboriginal people exploiting the study area would have travelled to this region for the procurement of bark to manufacture wooden implements. However, it is still possible that the native tree species within the study area (Messmate and Manna Gum) would have been utilised for wooden implements. Apart from the manufacture of wooden implements and access to food resources, the bark from these trees may also have been removed for other non-utilitarian purposes such as for ceremonial and social activities.

For pre-contact Aboriginal people, access routes through the area would have been provided by following the foreshore region (east - west), or possibly by following the slightly higher ground of the ridges from Cranbourne to Cannons Creek (north-south). Access routes may have been established and maintained by regular small scale burning by pre-contact Aboriginal people. Well defined access routes, especially through dense swamp, were known to have been established and maintained by pre-contact Aboriginal people. The Bass Highway follows one of these routes through what was once thick swampland.

## **2.4 European Impact on the Study Area**

Since the settlement by Europeans of the study area in 1830s, dramatic changes have been made to the landscape. The dominant changes are associated with pastoral and

market garden activities (such as the clearing of vegetation, and major drainage works), residential development, road construction and the installation of services.

Even before official settlement of the Port Phillip District, whaling and sealing vessels called into Western Port to obtain wattle bark. Since this time, deforestation within the Western Port catchment has been considerable, making it difficult to reconstruct the potential for human occupation as the animal and plant species are severely depleted.

Tree clearance, and land development for market gardens, pastoral and residential activities, and road construction would have adversely impacted on any sites which may exist. In these instances cultural material (such as stone tools) would have been disturbed, redeposited, or even destroyed. Any scarred tree sites which existed prior to clearance would have been destroyed. Only sections within the study area which have not been cleared may still contain scarred tree sites (such as within road reserves, remnant pockets on private land, and foreshore reserves).

Virtually all of the original wetland areas have now been drained. The construction of extensive drainage channels now gives the impression that wetland areas are rare, when originally these dominated the low lying areas. Any sites associated with these wetlands would have been adversely affected by European clearance and drainage schemes. Undisturbed sites associated with these ecosystems would now only exist in areas that have incurred minimal past disturbance.

In addition, the introduction by Europeans of exotic plant and animal species would also have affected the landscape. Some marine species also may have become less common due to commercial and recreational activities, such as mud oysters, mussels, crayfish and many species of fish.

### **3 HISTORICAL BACKGROUND**

Though the Portuguese possessed maps of Western Port Bay by 1493, the first recorded visit by Europeans to the Western Port area was by George Bass in 1798. Bass was followed by Lieutenant Grant in 1801. Later that same year Murray carried out a detailed investigation of Western Port, during which time contact was made with local Aboriginal people (Sullivan 1981:13). From 1798 to 1826 sealers were the most common visitors, establishing various coastal bases such as Phillip Island (Gunson 1974:16). The men involved in the exploitation of seals travelled from Tasmania, often bringing Aboriginal women and men with them. Seals were then a common sight along the coast and at saltwater inlets. However, such was the wholesale destruction of their colonies that by 1832 sealing was no longer profitable. Tasmanian ships also visited Western Port during this period to obtain wattle bark (for the use in tanning) from the black wattle which flourished on the mainland (Edgecombe 1989:14).

Until 1826 the destructive and disruptive effects on Western Port Bay by Europeans had been limited to the coastal fringe. Later in that year a military settlement was established at Red Point (Corinella) to forestall possible claims and colonisation by the French. From this short lived settlement (2 years) several survey trips were made to the upper regions of the Bay. Hovell was the first European to actually explore this region,

making two trips, one in an attempt to cross the Koo-Wee-Rup Swamp from Sawtells Creek, and another searching for a route north which would avoid the swamp (Gunson 1974:18).

The earliest runs which included the study area were Balla Balla and Kilmore ('Rutherford'), both of which were on the boundary of the earliest Settled Districts (Figure 4).

The Balla Balla run was first settled by Robert Innes Allen in 1839 covering an area of 6,000 square acres. By 1872 the Balla Balla run had changed hands, as well as size five times (Gunson 1974:37). Adjoining 'Allen's Station' on what came to be known as Rutherford's Inlet, was the 'Bourbinandera' (later known as 'Rutherford' then 'Kilmore') run of 4,480 acres. A license for this run was taken out by Rutherford and his partner Blackmore in 1842. Rutherford and a man named Anderson were also managers of a larger run owned by Edwin Sawtell, after which Sawtell Inlet is named. The next station to Kilmore was Manton's old Station or Tooradin, which was taken up by the Manton brothers in 1840. Charles Manton, one time master furbisher at the Tower of London lived on the Tooradin run where he exploited the plentiful game. In 1845 he extended his squattage to the limits of the Cardinia run (Gunson 1974:38).

Apart from the station complexes there were no villages in the area, though timber splitters and others working in the red gum forests had built their huts on the junction of Gippsland and Western Port Roads. Throughout the 1840's there had been three main tracks into the Western Port District, principally to connect the various station homesteads. The main route went from Dandenong to Tooradin and the inlets, and was by 1840, useable all year round. By the 1850's one of these early routes, which later became the Western Port Road, was well defined (Gunson 1974:54).

It was not until after the land sales of 1854, when secure ownership was obtained, landowners would have begun major constructions (such as houses, sheds, dairies) and developed land for pastoral and horticultural activities. Prior to this period main homesteads and other farm buildings would have been modest.

During 1898, bush fires swept through much of the study area in a broad band between Tooradin, Frankston and Cranbourne. Though most of the homesteads were saved, virtually all the post and wire fences in this area were destroyed along with outhouses, haystacks, crops, orchards and thousands of head of stock. 'Balla Balla' was one of the properties to be severely effected by this fire (Gunson 1974:171).

The next major European settlement phase to occur in the area was due to the 'Closer Settlement Scheme' initiated by the government in 1916-17 to establish returned World War One soldiers. Areas such as Devon Meadows, Cannons Creek, Warneet and Five Ways grew as a result of this scheme. Partly as a result of Closer Settlement, and partly as a result of post war boom in dairy prices, the population of both cattle and people dramatically increased in these areas from their 1919 levels. Fodder and market crops were also a primary activity during this time (Gunson 1974:192,195,211).

Since the land sales of 1854, the intensity of development within the study area has steadily increased. Pastoral land has been altered to include horticultural areas, small

hobby-farms allotments, and high density residential areas. Large pastoral land-holdings are now a rarity within the study area. The European land use history within the study area is one where much of the land has been subject to major changes in the past, with only small pockets of undisturbed areas remaining.

## 4 ABORIGINAL BACKGROUND

### 4.1 Ethnohistory

The information used to establish pre-settlement Aboriginal spatial organisation is mostly based on observations made by Europeans during the initial period of contact and subsequent settlement of the study area. Early historical accounts of Aboriginal land use within and surrounding the study area are scant, with most descriptions by the Assistant Aboriginal Protector William Thomas (Thomas Journals 1840-1843) and early European landowners of the area. It was William Thomas who saw the need to provide a settled life for the Aborigines and established protectorate stations, first at Arthur's Seat (1839-40) and then at Narre Narre Warren (1840-43).

The study area lies within the traditional lands of the Bunurong tribe (Figure 5). The Bunurong (Western Port) tribes belonged to the inter-marriage network and language ties group known as the Kulin, which inhabited areas around Melbourne. At the time of contact the Kulin nation was made up of the Bunurong, Woiworung, Jajowrong, Taunguon and Wathaurung (Presland 1994: 40).

The territory of the Bunurong is thought to have extended north from the coast at Western Port Bay to the Dandenong Ranges (Thomas in Gaughwin and Sullivan 1984:86). The northern boundary is thought to have been delineated by the source streams in the Dandenong Ranges, while the western boundary is thought to have followed a line from the Dandenong Ranges south to Mordialloc on the coast, and the eastern boundary was the Tarwin River (Gaughwin and Sullivan 1984:87). Early Aboriginal population numbers made by observers are, at best estimates. An 1839 census of the Bunurong by Thomas suggested that at the time of colonisation, this tribe comprised of approximately 500 persons or 'six square miles per person' (Thomas ML 9:47).

European contact with the Bunurong around Western Port was initially by sealers and whalers frequenting Bass Strait from the late 1790's. Aboriginal women were kidnapped from both Tasmania and the mainland for use as labourers and concubines, often resulting in hostile confrontations. The missionary Langhorne (Thomas ML: 61) mentioned that tribes of the Western Port had the 'occasional affray' with sealers and he believed that this contact had greatly reduced their numbers.

However, most early explorers did not come face to face with any of the Western Port inhabitants (Bass 1798, Grant 1803, Murray 1801, Weatherall 1827) although they made observations on their campsites, fires and artefacts. However, the effects of early contact with Europeans on Aboriginal tribes of Western Port severely decimated the population. Diseases such as smallpox, influenza and venereal disease spread rapidly throughout the territory, and by 1835 an entire clan which once occupied the present

study area known as the “Bonkoolawol” had succumbed to the effects of small pox (Thomas ML:21:14). Virtually no other information is available within ethnographic sources of this group.

In physical appearance there was little to distinguish the various Kulin tribes. There are few descriptions of coastal Aboriginals when still relatively unaffected by European contact. Those seen by Captain Milius of *Le Naturaliste* at Western Port in 1802 could well have been members of the Bonkoolawol or a war party from Gippsland, with whom the Bunurong often clashed. Captain Milius described these people as “different from many of the Aboriginals whom we had previously seen. They had white paint over their faces, around their eyes and over their bodies. Some members also had their nostrils pierced to allow the passing through of a dry straw, which they regarded as an ornament” (Scott 1917).

Intermarriage and exchange of goods between the Kulin tribes is known to have occurred (Ellender 1991:15; Sullivan 1981:36). Kulin people often met for interclan gatherings, such as that recorded in 1844 when groups of Woiworung people were camped on the site of the future M.C.G., and a group of Bunurong were camped on the site of the future Government House (Presland 1994:47). Greenstone from the Mt William quarries in the Woiworung territory appears to have been transported or traded into the Bunurong territory (McBryde 1984). Within the Kulin, some tribes were more likely to exchange wives or hold corroborees with certain other tribes. The Bunurong had ceremonial links with, and most often married, members of Taungurong and Wathaurung tribes (Gaughwin 1981:59). However, these alignments did not prevent warfare between the tribes (Thomas ML 1, 23 March 1839).

Aspects of the seasonal movements by the Bunurong through their territory has been recorded by Assistant Aboriginal Protector Thomas, and early settlers in the Western Port region. Gaughwin (1981) considers that the Bunurong continued their seasonal exploitation in a circular pattern from Melbourne and the Mornington Peninsula via the study area. (1981:75, Figure 6). This trip was thought to take about one month with an average stay of one to two nights at each campsite while the resources within a 10 kilometre radius were exploited (Sullivan 1981:37). During these travels Thomas observed that ‘Blacks seldom travel more than 8 or 9 miles per day’, (Thomas PRO Letter 3 July 1840). It must be noted that, ethnohistorical information on seasonal movements made during this time, apart from reflecting an already disrupted population, would also be dependent on the seasonal exploitation of resources.

Hunting was mainly done by men, with plant foods and small animals largely collected by women. These included liquid amber from the black wattle tree, tuberous roots, as well as the hearts of fern trees (Snoek 1987:8). A large variety of plants were not only valued for their potential food resources but also in the manufacture of implements and for their medicinal uses (Snoek 1987:8-9).

The Bunurong clan whose estate included the present study area were the Mayonebuluk meaning people of the swamp. Their territory is thought to have been “Carrum Swamp, the coastal strip at the head of Western Port Bay, and the upper portion of the Mornington Peninsular” (Barwick 1984:177). A Dr Bailey who recorded much ethnographic information during the 1840s cites clan member Manmangenur (ca. 1821-

1845) as a recognised authority within this group (Barwick 1984:117). To the east of this group, the Yallock bulug clan although based around the Bass River, had land which extended to Tooradin (Clark 1990:368).

There is little specific ethnographic information of the lifestyles of the Mayone buluk and Yallock bulug clans at the time of European settlement. The few instances and recollections cited by early residents make no reference to clans or clan estates, movements or names. However, snippets of information cited within local histories can be assumed to be that of Mayone buluk or in instances located near Tooradin, Yallock bulug clan members.

Thomas noted that Aboriginal people would congregate around swamps to spear eels (Gaughwin 1981:75). Eels were noted by Thomas as being an important food and allowed people to stay at one camp spot for extended periods (Gaughwin and Sullivan 1984:89-90). When the tide was out at Tooradin, Aboriginals would wade in the mud of the creek, feel for the eels with their hands, and on extracting them, bite them at the back of the head and throw them on the bank (Brett 1920:382). Lyre-birds, wombats, wallabies and other animals were hunted in summer (Snoek 1978:7).

Although the coastal area south of Koo-Wee-Rup Swamp was considered not to have been heavily populated, there is evidence for seasonally visitation. During the early period of European settlement numerous scarred trees were seen in this area as well as 6m long wooden canoes which were used to cross the Bay on egg collecting expeditions to French Island (Gunson 1974:3). Camp spots with bark huts were noted by early settlers and explorers throughout the Western Port area, and these were always found on the banks of rivers and creeks (Sullivan 1981:33). Extensive middens (Glossary - Appendix 3) were found both inland and adjacent to the coast indicating intensive exploitation of shellfish species in the Bay. Brett recalls that during the 1880's middens were numerous around Tooradin and noted that they contained "large heaps of cockle shells, with some having axe heads and stone tools" (1920:382). Tooradin may have been a traditional boundary between the Mayone buluk and Yallock bulug clans. Archaeological sites in this area may therefore be pre-contact gathering/meeting areas for these clans. As in many parts of coastal Australia, the conspicuous shell deposits associated with Aboriginal middens sites were often utilised by early settlers for building purposes (Gunson 1974:10). This early practise by settlers may account for the low number of recorded midden sites within the study area.

The Lyall family which established the 'Harewood' property in Tooradin in 1868 also noted that extensive midden sites were located all along the shore, and that stone axes and spear heads were sometimes exposed during ploughing (Davis 1993:69). Although by the time the Lyalls moved to 'Harewood' there were few remaining local aborigines which lived in the area, a small number lived in the scrub near the homestead. The Lyalls were on good terms with these people. William Lyall would always converse with this group, and every winter he would give them a bullock and a few red blankets. The blankets were particularly prized by the Aboriginal men in the group. William Lyall's wife Annabella, liking the woven baskets the Aboriginal women had made would often trade a cake for a basket (Davis 1993:69). The last members of this group living at 'Harewood' were 'Jimmie' and 'Eliza'. There is a note in William Lyalls diary dated 13<sup>th</sup> March 1875: "Mr Green, in charge of the Blacks' Protection Station, wanted

to kidnap old Eliza, the last aboriginal women of this part. Her husband Jimmie and self resisted and Eliza left free" (Davis 1993:70).

There are currently no recorded Aboriginal burial sites located within the study area or throughout the Western Port region. However, there is historical evidence that burial sites within the Western Port region were both common and conspicuous. Besides the location near Tooradin noted by Clow, there were others along the coast. Thomas saw a burial location near the Lang Lang Creek in 1840 (Gunson 1974:10). Members of the Kulin were known to both bury their dead, as well as place them in tree hollows which were often burnt. Thus, based on this scant information, burial sites although a rarity within the study area, may still exist in undisturbed locations.

The meteorites which landed near Cranbourne were believed by early European settlers to have been significant to local Aboriginals. It is reported that Aboriginals often camped at the location of these meteorites, on the property "Ironbank", and became very distressed by the meteorites removal (Smith 1989:16). These meteorites are now housed in the Melbourne and London Museums. The meteorites impact sites are located just outside the present study area to the east.

The ethnohistorical information provides evidence that the Bunurong tribe occupied Western Port in an organised manner. Clans generally had areas in which they spent much of their time and which provided the basis for all their needs. Tooradin may have been one such area. While the shoreline within the study area, comprising mangroves and mud flats is not considered a 'high energy' coast, there is ethnographic evidence that the soft shore shellfish species which inhabit this environment were extensively exploited. There is also evidence for scatters of stone tools, some of which contained axe heads to be located within the farmland area adjacent to the coast.

Aboriginal population numbers decreased rapidly after white settlement in the Western Port area due to dispossession of land and associated resources, and the spread of diseases brought into the area by Europeans settlers. By 1856 the remaining Bunurong lived mostly at 'Moody Yallock' (Mordialloc), exploiting the swamp and adjacent coastline. Today many of the descendants of the original Aboriginal clans presently live in nearby areas and form the Wurundjeri community.

## **4.2 Previous Archaeological Studies**

As with most parts of Australia, the study area would have been well known, if not utilised by Aboriginal people for at least the last 30,000 years. As outlined in section 2.1, the Port Phillip Bay region has evidence for this period of occupation at Keilor (Bowdler 1976:63-65), and burial sites in the Maribyrnong and Werribee River Valley dating back 7,000 years (Mulvaney 1970, Coutts 1977, 1980). While slightly more favourable climatic conditions during the early Holocene period may have seen increased use of the region during this time, greatest use is most likely to have occurred during the last 5,000 years. Like many parts of Victoria, the study area may have experienced population increases and reorganisations of social groupings due to a series of complex internal changes in society (Lourandos 1993).

Within a the study area there have been a total of 25 previously recorded Aboriginal archaeological sites. These sites comprise 6 isolated artefact occurrences (AAV 7921/115,119,255,256,303,304); 15 surface scatters of stone artefacts (AAV 7921/11,116,118,120,121,122,123,124,126,127,128,186,300,301,302); 3 midden sites (AAV 7921/8,9,32); and one exposure in a bank (AAV 7921/117) (see Appendix 4 - Site Gazetteer and Figure 2 - Site Locations). These sites are spread throughout the study area, with the highest densities recorded within the sand ridges of the Cranbourne Botanic Annex, and along foreshore of Western Port Bay. The majority of these sites were identified by Gaughwin (1981) during a study of Western Port Catchment, and by Ellender (1991) during a detailed examination of the Cranbourne Royal Botanic Gardens Annex. The distribution of these previously recorded sites within the current landform units (Figure 3) are:

'Cranbourne Sands, ridges and hummocks':	8
'Low-Lying Plains' :	10
'Foreshore' :	7

The site type distribution within these landform units are:

<b>Cranbourne Sands, ridges and hummocks:</b>		<b>Low-lying Plains:</b>	<b>Foreshore</b>
<b>Surface</b>			
<b>Scatter:</b>	5	8	2
<b>Isolated</b>			
<b>Artefacts:</b>	3	2	1
<b>Middens:</b>	0	0	3
<b>Exposure in</b>			
<b>banks:</b>	0	0	1

Examination of the previously recorded sites within the above localised landform units reveals that although the low-lying landform unit contains marginally more sites than other units, sites are relatively evenly spread throughout the different landforms. The foreshore landform unit contains the widest variety of recorded site types, while the low lying plain unit contains the greatest proportion of surface scatter sites. The Cranbourne Sands unit contains a both surface scatters and isolated artefacts.

Any site distribution analysis must take into account the scale, aims and nature of previous archaeological sites surveys which recorded the sites. Also of importance is the level of ground surface visibility which was available at the time the surveys were conducted, as well as the past survey coverage. For these reasons the site distribution patterns presented in this study should be considered as a tentative distribution model rather than an established pattern. As a greater proportion of a particular study area is archaeologically investigated, site distribution patterns and artefact analysis can be considered more reliable. The present study area has received less than 10% site survey coverage.

The nearest Aboriginal sites of National significance which are recorded with the National Estate Register are the Narre Narre Warren Protectorate Station (File no. 2/18/292/0009); and the Grave of Bungeleen (File no. 2/18/292/0080). Both of these sites are located outside the present study area.

There is one important regional archaeological survey for Aboriginal sites that has been conducted of the Western Port Bay Catchment that includes the present study area (Gauthwin 1981). Gauthwin's study provides detailed archaeological and ethnographic information about Western Port Catchment and also generates an Aboriginal archaeological model for the region.

**Gauthwin** undertook a detailed study of the **Western Port Catchment Area** in 1981 for the then Ministry of Conservation. Her study area extended from Cranbourne to Pearcedale and Tooradin, as well as French and Phillip Islands, in all an area of over 2000km<sup>2</sup>. The aims of her study were broadly to gather data in such a way as to allow for preliminary statements regarding the prehistory of Western Port. Those facets included "the relationship between the environment and its resources and the hunter gatherer population, the expression of this relationship in settlement patterns, the nature of the archaeological sites and their relationship to the Victorian sequences as a whole" (1981:25).

During this extensive study Gauthwin recorded a total of 266 Aboriginal archaeological sites, 13 of which are located within the present study area, which Gauthwin describes as "The Top of the Bay". The most common site type recorded during her study was middens, with surface scatters of stone tools the next most common. Very few sites recorded during this study were in better than poor to fair condition, and the majority were situated within 100m of a water source. Less than 2% of the all sites recorded were associated with mud flats and mangroves. Within midden sites, the dominant shellfish species recorded was *subnina undulata* (a rock platform species). Within the surface scatter sites, the dominant materials used in the manufacture of tools were silcrete, marine chert and quartz, stone which is locally available in parts of her study area (quartz), and possibly imported from the nearest known outcrops on the Mornington Peninsula (silcrete). The artefacts recorded within surface scatters were waste flakes and blades. Formal tool types comprised 4%, with waste flakes comprising 96%. This ratio is consistent with most other recorded surface scatter assemblages throughout Australia (Kamminga 1978). Gauthwin considers that due to their content and context, the majority of sites recorded date to the last 1,000 years (1981:128).

The sites Gauthwin recorded within the present study area comprise 10 surface scatters of stone artefacts, one exposure in a bank, and 2 isolated artefact occurrences. During Gauthwin's study, less than 2% of the total area comprising 'The Top of the Bay' was subject to ground surface inspection for archaeological sites. Within the present study area the highest site and artefact densities were found to occur on sandy ridges in the Cranbourne area, particularly those associated with water. This finding has also been previously noted by Ellender (1991) and Presland (1983:89). It was considered by Gauthwin that the sites located within these sand ridges are situated to take advantage of resources associated with swamp depressions. Each of the sites recorded were in a highly disturbed state, thereby their original context had been destroyed. As a consequence, each of the sites were considered to be of low scientific significance (see Section 5). The dominant stone material types identified in the surface scatters of the present study area by Gauthwin (1981) were chert and quartz. The majority of artefact types recorded at these sites were flaked pieces and flakes, with less than 2% of the recorded assemblage consisting of formalised tools. Interestingly, the rare tool type of 'Bondi Points' were only found within 'Top of the Bay' sites. Given that over 260 sites

were examined during this study, Gaughwin considers that the clustering of this tool type in this area is not a result of sample bias. She also adds that although no dates have been obtained for the Cranbourne Sands sites, the general stability of the landform, and unusual tool assemblage may suggest that these sites are of greater age than any others recorded during her study (1981:128).

Gaughwin collected the archaeological material from each of the sites she recorded within the present study area for "it was reasoned that these exposures could provide the only opportunity to obtain the information, and that they were likely to be damaged if left to remain", (1981:39). However, it is highly likely that since Gaughwin's study, further artefacts have been exposed in areas which have incurred soil disturbance such as ploughing and water erosion.

There are three sites within the present study area which were originally recorded between 1928 and 1949 from literature sources (AAV 7921/8,9,11). During her field examination Gaughwin could not relocate these sites. The two midden sites and one surface scatter have incurred up to 70 years of active post-deposition processes, and have either become disturbed, destroyed, or if minimal disturbance has occurred in these areas, have been covered by recent soil deposits. Any subsequent site survey should make attempts to relocate these sites, especially the two midden sites located near Cannons Creek, as no midden sites were recorded by Gaughwin during her 1981 inspection of the study area. The lack of midden sites identified along mud flat and tidal shorelines of Western Port Bay during her study prompted Gaughwin to suggest that this area was infrequently utilised by pre-settlement Aboriginal people. This aspect of her model should be further investigated as there is local historical evidence to support the notion that the shellfish resources at least were known to be utilised around Tooradin (Davis 1993:69). The relevance of the results of further archaeological site survey of the foreshore area would directly impact the assessment of archaeological sensitivity and therefore the impact of potential development.

The site prediction model formulated for this landscape unit of 'Top of the Bay' by Gaughwin (1981:135) is applicable to the present study area and concludes that:

- Artefact scatters and isolated artefacts are the most likely site type to occur within this unit.
- Most sites will occur within 100m of a water source. Water sources include swamps, ponds, seepage, springs, coastline, lagoons and soaks.
- The highest site densities will be found in the Cranbourne Sands, and high dry ground such as ridges and hummocks.
- Lowest site densities will be found along the foreshore and low lying areas such as past swamps.
- It is highly unlikely that scarred tree sites will be located within the study area due to the lack of suitable trees.

- It is also unlikely that burial remains will be located within the study area.
- Surface scatters and isolated artefact sites in this unit will be dominated by silcrete, quartz and chert artefacts. The rare 'Bondi Point' tool type may be located within surface scatters situated in the Cranbourne Sands.

The general conclusions made by Gaughwin (1981:134) are that due to then poor surface visibility within the 'Top of the Bay' area, it was considered that many more sites than those recorded by the site survey occur. Furthermore, that due to the degree of disturbance to the landscape within much of this area it will be expected that most of these sites will be disturbed to some extent.

In addition to Gaughwin's study (1981) there have also been a number of previous archaeological surveys undertaken in the region that are relevant to the present study. These have comprised regional studies (Goulding 1988; Presland 1983; Murphy 1996; Ellender and Weaver 1994; Smith 1989; Sullivan 1981) and a number of localised surveys (Ellender 1991, 1994; Brown 1995; Marshall 1995; Murphy 1992; Rhodes 1990a, 1990b; Sciusco 1996; Weaver 1992; Webb 1995).

The study by **Goulding (1988)** is a synthesis of available material relating to Aboriginal occupation of the area between Western Port Bay and Healesville. The study deals with the history of Aboriginal people in this area, and assesses the scientific significance of Aboriginal archaeological sites on public land. This study did not undertake field investigations.

**Presland (1983)** in his study of the Melbourne Metropolitan Area, did not include the present study area within his field examinations.

The study of the **Mornington Peninsula** by **Sullivan (1981)** although not inclusive of the Cranbourne area, examined similar landscape units on the Peninsula. Sullivan concentrated on the coastal exploitation of Port Phillip Bay, and like Gaughwin's study (1981) found that base camps were located 'in the hinterland particularly around freshwater swamps' (1981:95). Artefact assemblages recorded in Sullivan's study area belong to the microlithic industry of the last 6,000 years (1981:96).

**Smith (1989)** has undertaken a regional investigation of the Aboriginal archaeology of the **Berwick to Bunyip Corridor**, the present study area lies in the south west corner of this corridor. Smith recorded a total of 62 Aboriginal archaeological sites during this study. These sites comprise 32 scatters of stone artefacts, 15 scarred tree sites, and 15 isolated artefact occurrences. The highest site and artefact densities were found to occur with the 'Cranbourne Sands' which she identified as being an area of high archaeological sensitivity. The sites Smith recorded within this landform during her study are located immediately north of the present study area. The dominant stone material types identified in the surface scatters by Smith (1989) were chert and quartz. The majority of artefact types recorded at these sites were flaked pieces and flakes, with less than 2% of the recorded assemblage consisting of formalised tools (Smith 1989:47).

**Murphy's** study of the "**Casey Foothills**" (1996) located to the north of the present study area was a desktop study accompanied by a field reconnaissance of the Narre Warren North and Harkaway areas. This study investigated hill areas which form part of the Dandenong Ranges, a landscape with major differences to the present study area. Although this study most likely involved the same clan group which once exploited the present study area, the desktop results are not directly comparable. If the field work component recommended in this study is undertaken, the results will provide an excellent comparative base to assess the seasonal movements of the Mayone buluk clan (Bunurong).

The results of relevant small scale studies undertaken in the area have generally conformed to the site distribution and contents models formulated within the regional studies (Goughwin 1981).

The archaeological investigation by **Ellender (1991)** of the **Royal Botanic Gardens at Cranbourne**, identified 4 Aboriginal archaeological sites (AAV 7921/300,301,302,303) and comprised three surface scatters of stone artefacts and one isolated artefact occurrence, each recorded in a fair state of preservation. The Cranbourne Botanic Gardens are located in the northern section of the present study area, and within the archaeologically significant Cranbourne Sands area. The dominant raw materials used to manufacture the artefacts recorded were quartzite and chert. The dominant artefact types recorded within these sites were un-utilised flakes and flaked pieces. A small percentage of the artefacts had cortex remaining on the external surface. This implies that the reduction sequence of deriving flakes from a core has been well advanced. This collaborates with the nearest stone source sites located some kilometres away on the Mornington Peninsula, as generally the smaller or more heavily worked, and smaller amount of cortex which remains on artefacts indicates greater distance from the source material.

The artefact scatter site AAV 7921/300 recorded by Ellender during this study is the only site within the present study boundary which has been assessed as being of high archaeological significance, each of the other sites recorded were considered to be of low scientific significance. It is possible that further archaeological material exists at this location in a relatively undisturbed state. This site is located overlooking the Tadpole Swamp which has had its base dated to 8,500 years ago, however, the artefacts associated with this site belong to the Small Tool Tradition which dates to the last 5000 years (White & O'Connell 1992).

**Ellender (1994)** also conducted an archaeological site survey of a proposed wastewater treatment plant located at Tooradin. No Aboriginal archaeological sites were located during this survey. However, Ellender (1994:5) considered that the lack of sites identified during this study may have been in part due to the low ground surface visibility available at the time.

A survey of the **Lynbrook Estate Section A** was undertaken by **Brown** in 1995. During this time, one scarred tree site was re-recorded, and four more were identified and recorded (AAV 7921/214,262-265). Site AAV 7921/214 was considered to be of high archaeological and cultural significance, while the remaining scarred tree sites were assessed as being of low archaeological significance.

A further study of **Lynbrook Estate** was undertaken by **Marshall (1995)** and due to the constraints of low ground surface visibility no archaeological sites were located. The survey did identify three 'hoop trees' of cultural interest to the Wurundjeri Aboriginal community. Marshall provides a detailed analysis of the possible Aboriginal origin of these 'hoop trees'. It was suggested that the branch growth pattern of Eucalyptus discourages the potential for natural grafting. These 'hoop trees' resemble other Red Gums found along the Murray River near Swan Hill, whose main branches were grafted by Aboriginals to form a hoop or a ring. Oral tradition states that these trees serve as boundary markers, however this oral history has yet to be verified. Marshall did not register these 'hoop trees' with AAV Site Registry as further investigations are required to establish the origins of, and any Aboriginal cultural associations with, these trees.

A short linear site survey was undertaken by **Sciusco (1996)** between Dandenong-Hastings and Knowles Road, **Cranbourne** which did not locate any archaeological sites nor identify any areas of archaeological sensitivity.

**Webb (1995)** conducted an archaeological survey of farmland near **Cranbourne** and located five scarred trees of possible Aboriginal origin. Despite poor ground visibility, Webb considered that the absence of stone artefacts within her study area to be a true reflection of the archaeology of the area.

The nearest site to the study area to have its sub-surface deposit archaeologically tested study was undertaken by **Murphy (1992)**. The site investigated is located on **Cardinia Creek** (AAV 7921/245) north east of the present study area, and proved to be a small dense artefact scatter which had been buried by alluvium from the creek sometime in the recent past. The site was assessed as being of moderate scientific significance on the basis of its rareness in the region and site contents (geometric microlith). No organic remains or charcoal were identified within the deposit which could have been used to date the site.

The **Dandenong Police Paddocks** have been investigated by **Rhodes (1989)**. This study documented the archaeological remains at this site, the results of which are significant in terms of detailing Aboriginal history during the initial period of European contact. A total of 27 archaeological features were identified within Rhodes' study area ranging from Aboriginal surface artefact scatters to European building sites. Many of the features identified by Rhodes were previously undocumented and all relate to the sites use as Police Headquarters during the 1800s.

The previous regional studies and localised surveys have located a range of Aboriginal archaeological sites within the Western Port Catchment area. These include; scarred trees, isolated stone artefact occurrences, and surface scatters of stone artefacts. No burial sites have been previously recorded. Within the present study area the majority of sites which have been previously recorded are surface archaeological sites. There have been no sites near the study area which have provided dates of occupation for these areas. As the majority of sites are located on the present ground's surface they will most likely date to the last 5,000 years (recent).

#### **4.3 Implications of the Aboriginal and Environmental Background for the Present Study**

The implications of the environmental, ethnographic and archaeological background for the present study are:

- Surface scatters, isolated artefacts are the most likely sites to be located within the study area.
- Surface scatters of stone artefacts and isolated artefacts are most likely to be found within 100 metres of a present or past water supply. These water sources include margins of swamps, lagoons, springs, soaks, seepage areas and coastline.
- The dominant raw materials within surface scatters and isolated artefacts will be silcrete, chert and quartz.
- Less likely raw materials within surface scatters and isolated artefacts are basalt, mudstone, and greenstone.
- The dominant artefact types found within lithic scatters will be flakes, blades and flaked pieces.
- Highest site densities will be found within the Cranbourne Sands, ridges and hummocks landform unit.
- Areas further than 100 metres away from present or past water sources will have the lowest site density within the study area.
- It is possible that lithic sites located within the Cranbourne Sands, ridges and hummocks unit may contain “Bondi Points”, a rare tool type in southern Victoria. Any sites found to contain this tool type will be considered as being of high archaeological scientific significance.
- Sites located within the Cranbourne Sands, ridges and hummocks unit may possibly be much older sites than those recorded on the present coastline. Those sites recorded within close proximity to the present coastline will most likely date to the last 1,000 years.
- Sites located in the Tooradin area should be analysed in terms of their ability to support the notion that the area was once the boundary between the Mayone buluk and the Yallock bulug clans.
- Aboriginal stone quarry sites will not be located within the study area due to lack of source material.
- Ceremonial sites will be a rare occurrence within the study area.

- It is unlikely that burial remains will be found within the study area. Any human burial remains which may be located in the future will be of high archaeological significance, and of extremely high cultural significance to the Wurundjeri Aboriginal community.
- Aboriginal scarred tree sites will most likely be a rarity within the study area due to the lack of suitable tree species. However, if any Aboriginal scarred trees sites are found to exist within the remaining woodland, they will be considered of high archaeological scientific significance.
- Ethnographic information suggests that the foreshore region of the study area may contain high numbers of midden sites. Any midden site that is recorded in the future will be of high archaeological scientific significance.
- Any sites found within the study area to be of good to excellent state of preservation are a rarity within the region, and are to be considered of high archaeological scientific significance.

## 5 ASSESSMENT OF SCIENTIFIC SIGNIFICANCE

The following section outlines criteria for assessing cultural heritage significance which would be applicable in the archaeological assessment of any sites identified within the present study area. This section has been included so that significance assessments referred to in the previous section can be understood, as well as the basis for the scientific assessment of any sites that may be recorded in the future.

Assessment of archaeological site significance can be complex and encompass a range of heritage values. The heritage values of a site or place are broadly defined as the “aesthetic, historic, scientific or social values for past, present or further generations” (Australia ICOMOS 1988).

Scientific significance is assessed by examining the research potential and the representativeness of archaeological sites recorded.

Research potential is assessed by examining site contents and site condition. Site contents refers to all cultural materials and organic remains associated with human activity at a site. Site contents also refers to the site structure; the size of the site, the patterning of cultural materials within the site, and the presence of any stratified deposits. Site condition refers to the degree of disturbance to the contents of a site at the time it was recorded. Ratings for site contents and condition are given below.

The **site contents ratings** used for archaeological sites are:

- 0 No cultural materials remaining.
- 1 Site contains a small number (eg. 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.
- 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.

The **site condition ratings** used for archaeological sites are:

- 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 reflect the way in which the cultural materials were laid.

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

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

The representativeness ratings used for archaeological sites are:

- 1 Common occurrence
- 2 Occasional occurrence
- 3 Rare occurrence

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

- 1-3 Low scientific significance
- 4-6 Moderate scientific significance
- 7-9 High scientific significance

Management of archaeological sites and/or places are made on the basis of their assessed scientific significance, and discussion of the potential impact a proposed development may have.

### **5.1 Cultural Significance to the Aboriginal Community**

Both prehistoric and historic Aboriginal sites and places will generally have specific significance to the Aboriginal community which possess custodianship, and more broadly to Australian Aboriginal people.

Any archaeological sites that may potentially be located within the study area are to be considered as culturally significant to the Wurundjeri Tribe Land Compensation and Cultural Heritage Council. Such sites are the main source of information about the areas Aboriginal past as they provide evidence for occupation and land use.

Furthermore, Aboriginal archaeological sites are an uncommon feature within the region due to past European land use practises and development. Therefore sites that still exist, and those yet to be found are important glimpses of past Aboriginal occupation of the area and therefore of Aboriginal cultural significance.

It is important also to note that archaeological and Aboriginal significance do not necessarily follow the same assessment criteria. Archaeological sites or places which are not of high scientific significance can be of high cultural significance to the local Aboriginal community. It is of course, up to the local Aboriginal community, in this case the Wurundjeri, to assess the Aboriginal cultural significance of any sites within their area of custodianship.

## **6 ARCHAEOLOGICAL SENSITIVITY WITHIN THE STUDY AREA**

Areas of archaeological sensitivity are those designated as containing potential for archaeological sites. These are usually areas which have poor ground surface visibility so that it is possible that surface and/or sub-surface deposits may exist but are currently obscured. Archaeologically sensitive areas are also those which may not have been previously surveyed, but within which, the results of a study indicate that sites might occur. Areas deemed archaeologically sensitive may be considered low, medium or highly sensitive. Figure 7 indicates areas considered archaeologically sensitive for Aboriginal sites within the study area.

Based on the archaeological, ethnographic and environmental background, and results of the vehicle reconnaissance, the archaeologically sensitive areas within the present study area for Aboriginal archaeological sites are:

- Areas described as belonging to the Cranbourne Sands, ridges and hummocks landform unit. This landform unit extends from the northern boundary of the study area to a narrow band at Cannons Creek (Figure 7). This area encompasses land which is higher than the surrounding area, and may therefore potentially have provided dry camp sites from which the swamp resources may have been utilised. This line of ridges and hummocks may also have provided a convenient dry access

route to the coast in the past. This area is provisionally assessed as being of high Aboriginal archaeological sensitivity.

- The landform unit defined as Foreshore (Figure 7). The foreshore unit extends from the coastline to 100 metres inland throughout the entire study area. There is sufficient archaeological and ethnographic background information to suggest that the foreshore area possibly contains a large number of Aboriginal midden sites which are yet to be identified due to low ground surface visibility. This area is also provisionally assessed as being of high Aboriginal archaeological sensitivity.
- The area defined as Low-Lying Plains landform unit (Figure 7) has shown to contain a number of disturbed archaeological sites. It is highly likely that further sites of this nature will be located in this area. The low-lying plains are provisionally assessed as being of moderate Aboriginal archaeological sensitivity.
- Areas of no Aboriginal archaeological sensitivity are those which currently possess high density residential development (2 hectares or less), principally the townships of: Devon Meadows, Five Ways, Village Junction, Pearcedale, Cannons Creek, Tooradin, Warneet, Cranbourne South and Blind Bight.

The landform unit of Cranbourne Sands, ridges and hummocks is considered archaeologically sensitive for isolated artefact occurrences and surface scatters of stone artefacts. Past soil disturbance in these areas has been moderate (clearing, grazing, ploughing), and therefore, it is possible that cultural material exists.

The Foreshore landform unit is primarily considered archaeologically sensitive for middens sites.

The Low-Lying Plains landform unit is considered archaeologically sensitive for disturbed surface artefact scatters and isolated artefact occurrences.

Areas where mature stands of manna and messmate gum still exist are considered to be of moderate archaeological sensitivity. The archaeological sensitivity of these tree types is not limited to those occurring near waterways. Although Aboriginal scarred tree sites are more likely to occur on red and swamp gums, it is possible that Aboriginal scars may occur on the manna and messmate gums which occur within the study area.

Any ceremonial area or location where people gathered for social purposes that can be identified within a subsequent field survey will be considered to be of high archaeological significance. Depending on the artefactual remains at such a location, the site may be considered of national archaeological significance, and accordingly, be nominated for inclusion on the "National Estate Registry" for Aboriginal archaeological sites. The location of a ceremonial or clan meeting site during a site survey of the area would have great significance to the Wurundjeri community.

## 7 STATUTORY REQUIREMENTS

This section relating to the statutory requirements associated with archaeological sites has been included to inform users of this report of the legal obligations regarding heritage sites. Person/s breaching this legislation are liable to prosecution.

The following is a summary of the Victorian Cultural Heritage Legislation.

Victoria has both State and Commonwealth legislation providing protection for Aboriginal cultural heritage. With the exception of human remains interred after the year 1843, the *State Archaeological and Aboriginal Relics Preservation Act* 1972 provides blanket protection for all material relating to the past Aboriginal occupation of Australia, both before and after European occupation. This includes individual artefacts, scatters of stone tools, rock art sites, ancient camp sites, human burials, trees with slabs of bark removed (for the manufacture of canoes, shelters etc.) and ruins and archaeological deposits associated with Aboriginal missions or reserves. The Act also establishes administrative procedures for archaeological investigations and the mandatory reporting of the discovery of Aboriginal sites. Aboriginal Affairs Victoria (AAV) administers the *Archaeological and Aboriginal Relics Preservation Relics Act* 1972.

In 1987, Part 11A of the *Aboriginal and Torres Strait Islander Heritage Protection Act* 1984 was introduced by the Commonwealth Government to provide protection for Aboriginal cultural property in Victoria. Immediately after enactment, the Commonwealth delegated the powers and responsibilities set out in Part 11A to the Victorian Minister Responsible for Aboriginal Affairs. Currently, this delegation is held by the Hon. Michael John MP, and the legislation is administered on a day to day basis by AAV.

Whereas the State Act provides legal protection for all the physical evidence of past Aboriginal occupation, the Commonwealth Act deals with Aboriginal cultural property in a wider sense. Such cultural property includes places, objects and folklore that "are of particular significance to Aboriginals in accordance with Aboriginal tradition". Again, there is no cut-off date and the Act may apply to contemporary Aboriginal cultural property as well as ancient sites. The Commonwealth Act takes precedence over State cultural heritage legislation where there is conflict. In most cases, Aboriginal archaeological sites registered under the State Act will also be Aboriginal places subject to the provisions of the Commonwealth Act.

The Commonwealth Act prohibits anyone from defacing, damaging, interfering with or endangering an Aboriginal place unless the prior consent of the local Aboriginal community has been obtained in writing. If no reply from an Aboriginal community is received to any permit application within 30 days, then an application for a permit may be made to the State Minister Responsible for Aboriginal Affairs. This is provided for under Section 21U(5-6) of the 1987 Act. The Schedule to the Act lists local Aboriginal communities and each community's area is defined in the Regulations so that the whole of Victoria is covered. Any applications to disturb, destroy, interfere with or endanger an Aboriginal place, object or archaeological site should be made to:

Mr Bill Nicholson  
Chairperson/Elders Spokesperson  
Wurundjeri Tribe, Land, Compensation and Cultural Heritage Council Incorporated.  
PO Box 26  
Boolarra 3870  
Victoria

Applications to excavate or disturb an Aboriginal archaeological site for purposes of archaeological fieldwork, should be addressed in writing to:

The Director  
Aboriginal Affairs Victoria  
2nd Floor  
115 Victoria Parade  
Fitzroy 3065.  
Victoria.

General enquires relating to Aboriginal archaeological sites should be forwarded to:

The Site Registrar  
Heritage Services Branch  
Aboriginal Affairs Victoria  
2nd Floor  
115 Victoria Parade  
Fitzroy 3065.  
Victoria  
Ph: (03) 9412 7498  
Fax (03) 9412 7601

## **7.1 Independent Review of Reports**

It should be noted that archaeological reports relating to Aboriginal and non-Aboriginal historic archaeological sites/places and the recommendations contained therein, will be independently reviewed by the Heritage Services Branch of Aboriginal Affairs Victoria, the relevant Aboriginal community, and Heritage Victoria, Department of Planning and Development. Although the findings of a consultant's report will be taken into consideration, recommendations by an archaeological consultant for actions in relation to the management of an Aboriginal site should not be taken to imply automatic approval of those actions by Aboriginal Affairs Victoria, or the relevant Aboriginal community.

## **8 RECOMMENDATIONS AND MANAGEMENT ISSUES**

### **8.1 Management Issues**

Areas of archaeological sensitivity (Figure 7) should be taken into account in the future planning and cultural heritage management by the City of Casey. If the City of Casey does not instigate an archaeological survey of the study area, it should consider any

proposals which include major land use changes in terms of their effects on Aboriginal and non-Aboriginal historic archaeological sites. Any development proposal which includes altering the land use of archaeologically sensitive areas outlined within this study, should be requested to underwrite an intensive archaeological site survey of the area. An ensuing archaeological site survey of the study area should make assessments regarding both Aboriginal and non-Aboriginal historic archaeological sites. Granting proposals for major land use changes within the study area without undertaking impact assessments on cultural heritage will most likely disturb and/or destroy archaeological sites. The major threat to existing, though as yet unrecorded archaeological sites within the study area, is from further disturbance by current activities such as grazing, erosion, clearing, market gardens and housing development.

## **8.2 Specific Recommendations**

Based on the Aboriginal archaeological background, ethnographic information and the results of the vehicle reconnaissance of the study area, the following recommendations are made:

1. That a detailed systematic archaeological site survey be undertaken of the study area described as the "Non-Urban South & Non-Urban Foreshore" by a qualified archaeologist and member of the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated.
2. Any subsequent archaeological site survey of the study area should target areas identified during this background study as being moderately or highly archaeologically sensitive. Adequate time should be allowed for an effective survey coverage of the study area (minimum 4 weeks). The effectiveness of any archaeological site survey is largely dependent on ground surface visibility. Within each landform unit there are currently large areas of market gardens. Market gardens provide excellent ground surface visibility after crops have been harvested, and before new crops are established. Any archaeological site survey should take advantage of the seasonal rotation of market gardens to minimise sample bias. A current cost estimate for such a study would be approximately \$26,000.
3. Attempts should be made by the archaeologist conducting the survey to identify the exact location of the midden sites along Western Port Bay referred to in historical documents. Prior to the survey, local publicity should be sought to encourage residents to make available any artefacts they may possess which originate from the study area for recording. The National Museum Of Victoria's artefact collection for the study area should also be reviewed and taken into account during the archaeological analysis of the study area.
4. If a comprehensive archaeological site survey of the study area is not undertaken, then the City of Casey should ensure that developers who wish to conduct major land use changes to areas greater than 2 hectares of land considered in this study to potentially be archaeologically sensitive should be required to underwrite a cultural heritage assessment. Appropriate heritage

assessments would involve intensive grounds surface survey for both Aboriginal and non-Aboriginal archaeological sites.

5. Throughout any archaeological site survey of the study area, consultation must be made with the Wurundjeri Aboriginal community and with the Aboriginal Affairs Regional Site Officer.
6. Copies of the archaeological desktop report of the "Non-Urban South & Non-Urban Foreshore" should be forwarded to the Heritage Services Branch, Aboriginal Affairs Victoria, the Australian Heritage Commission and the Wurundjeri Tribe, Land Compensation and Cultural Heritage Council Incorporated.

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## **APPENDIX 1 - THE BRIEF**

**BRIEF**

**1. BACKGROUND**

The City of Casey is undertaking a study entitled "Non-urban South Strategy" and "Non-urban Foreshore Strategy" for the non-urban areas in the southern end of the municipality.

The need for the Strategies emerged following a number of amendment requests affecting land within the study area.

The purpose of the Strategies is to:

- Undertake a detailed investigation of the study area to gain a clear understanding of the opportunities and constraints that exist for its future use and development.
- Develop a policy framework that will guide the use and development of non-urban land in the southern section of the City of Casey.

**2. STUDY AREA**

The two study areas are identified on the attached map.

**3. OBJECTIVES OF THE STUDY**

- (a) To locate Aboriginal cultural heritage sites and places within the study area using a systematic survey strategy.
- (b) To record and interpret any Aboriginal cultural heritage sites and places found.
- (c) To establish the significance of any Aboriginal cultural heritage sites and places found, using criteria normally applied to the assessment of cultural heritage resources.
- (d) To identify any areas or landforms of high potential for Aboriginal cultural heritage sites and places.
- (e) To establish the implications which the presence of any Aboriginal cultural heritage sites and places may have for the future management and/or development of the study area.
- (f) To establish the views of Aboriginal people, and of any other groups with a special interest in the cultural heritage and places of the project area on matters such as the interpretation and significance of recorded sites, and on appropriate management procedures.

- (g) To develop recommendations and guidelines for:
  - (i) management of any threatened Aboriginal cultural heritage sites and places or areas of high potential for Aboriginal cultural heritage sites and places;
  - (ii) methods to be used for carrying out any additional work, including information on permits/consents required if sites are to be disturbed or destroyed.

#### **4. TASKS**

The Project Archaeologist will be responsible for the following tasks:

- (a) Consult regularly throughout the course of the project with appropriate Aboriginal communities, and any other relevant groups or individuals.
- (b) Consult with any relevant public and private sector organisations and/or individuals responsible for the management of land within the study area.
- (c) Devise a systematic Aboriginal cultural heritage sites and places survey strategy for the study area.
- (d) Carry out the above strategy in order to document the Aboriginal cultural heritage sites and places of the area.
- (e) Assess the extent to which development is likely to impact upon Aboriginal cultural heritage sites and places within the study area.
- (f) Determine the actions required to protect, and/or mitigate the impact of development upon, Aboriginal cultural heritage sites and places and areas of importance identified during the project.
- (g) Prepare a satisfactory report describing the commission of the above tasks and commencing on the extent to which the objectives of the project have been fulfilled.

#### **5. DOCUMENTATION**

The Project Archaeologist will submit the following documentation.

- (a) Direct to the Site Registrar, Aboriginal Affairs (AAV):
  - A completed FORM D (*Notification of intention to carry out a survey*) prior to the start of fieldwork.
  - Completed AAV site record cards and associated documentation (field notes, photographs, maps, etc) for all Aboriginal cultural heritage sites and places located.
  - Two (2) copies of the final report on the project.

(b) To the Project Manager nominated in Section 8:

- Three copies of a draft report on the project.
- Three copies of a final report on the project.

## **6. REPORT**

The project report should generally conform with the AAV *Guidelines for conducting and reporting upon Aboriginal cultural heritage sites and places surveys in Victoria*.

All figures, tables and references to sites recorded during the project must show AAV registry numbers, NOT field designations. AAV registry numbers will be issued by the Site Registrar on receipt of suitably completed record cards and associated documentation.

## **7. RESTRICTIONS AND REQUIREMENTS**

- (a) The Project Archaeologist will ensure that all work is carried out in accordance with the requirements set out in the AAV *Guidelines* noted in Section 6 above.
- (b) No person involved in the project shall damage or interfere with Aboriginal cultural heritage sites and places sites beyond the requirements of the survey.
- (c) No excavations, auguring or other forms of sub-surface sampling are to be carried out during the project unless all necessary permits and consent have been obtained.
- (d) The Project Archaeologist shall be fully responsible for the supervision of any sub-consultants or assistants engaged in connection with the work.
- (e) All necessary arrangements for access to private land are to be made in advance of fieldwork by Council's Project Manager Lorna Benoiton.

## **8. PROJECT MANAGEMENT AND TIMING**

- (a) The Project Manager is Lorna Benoiton.
- (b) The project will start as soon as possible and will finish on **5 September 1997**.
- (c) All site record cards and associated documentation must be submitted to the Site Registrar (AAV) at the earliest possible time following completion of fieldwork.
- (d) A draft report must be submitted to the Project Manager no later than 9 am on **Monday 1 September 1997**.

The Project Manager may, at her discretion, submit this draft to AAV for comment.

- (e) The Final Report and all additional documentation must be submitted to the Project Manager by the finishing date.

The City of Casey requires an Aboriginal Cultural Heritage Sites and Places Study for the land within the non-urban south and foreshore area.

The study should identify, evaluate and document Aboriginal cultural heritage sites and places of significance within the study area and make recommendations for their future conservation.

A copy of the brief is attached.

Expressions of interest (including an estimated cost) should be forwarded to:

**Mr H Dalheim  
Manager Strategic Development  
City of Casey  
PO Box 1000  
NARRE WARREN 3805**

Fax No. 9705 5288

Closing date for submissions is: **Friday 15 August (5:00 pm)**

For further information, please contact: **Lorna Benoiton, 9705-5267**

**APPENDIX 2 - FORM D**



19 August 1997

AAV/0861

Ms Andrea Murphy  
163 High Street  
Berwick Vic 3806

Dear Andrea,

**PROPOSED SITE SURVEY - "NON URBAN SOUTH" & "NON URBAN FORESHORE"  
STRATEGY FOR CITY OF CASEY**

Thank you for providing notice of your intended survey for archaeological sites within the above project area. Your Form D notification was received by this office on 19 August 1997.

Please note that, under the terms of section 22(5)(b) of the *Archaeological and Aboriginal Relics Preservation Act* 1972 and associated Regulations, you are required to provide this office with:

- a) completed AAV record cards for any sites found during the survey; and
- b) two copies of any resultant project report.

Blank record cards can be obtained from the Site Registrar, Mr Jamin Moon on (03) 9412-6827. Copies of the document *Guidelines for Conducting and Reporting upon Archaeological Surveys in Victoria* (last updated February 1993) are also available on request.

If your project is likely to include documentation of non-Aboriginal historic sites, you should contact Heritage Victoria on (03) 9628-5457, to discuss their requirements.

Under the terms of the Commonwealth *Aboriginal and Torres Strait Islander Heritage Protection Act* 1984, specified local Aboriginal organisations throughout Victoria hold responsibility for cultural heritage matters within their particular community areas. Your proposed survey affects the area covered by the Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated. I therefore recommend that you contact the community's Board of Directors to discuss your project, and to establish how the community may best be advised of its results. Contact details are as follows:

Wurundjeri Tribe Land Compensation and Cultural Heritage Council Incorporated  
P.O. Box 26  
Boolara Vic 3870  
Ph: 0414 797 932  
Chairperson & Elders' Spokesperson: Mr Bill Nicholson Snr  
Cultural Officer: Mr Bill Nicholson Jnr

Human  
Services



People/first

*Incorporating Aboriginal Affairs*

I have forwarded a copy of your Form D notification to our AAV Regional Heritage Officer, Ms Annette Xiberras. Annette may wish to meet up with you at some stage during the field project, in order to maintain her awareness of current archaeological activities within the area. I therefore suggest that you contact Annette before the start of the survey, on ph. (03) 9412 7498. In general, the Heritage Officers have their office days on Fridays.

Please feel welcome to contact me if any further information is required.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jane Kierce', written over the printed name and title.

JANE KIERCE  
Site Registry Officer  
Heritage Services Branch

97\_0541

## APPENDIX 3 - GLOSSARY

## APPENDIX 3 - GLOSSARY

### Types of Aboriginal Prehistoric Archaeological Sites

**Artefact Scatter:** A surface scatter of stone artefacts which is defined as being the occurrence of five (5) or more items of cultural material within an area of about 100 square metres (AAV 1993:lj). Artefact scatters are often the only physical remains of places where Aborigines have camped, prepared and eaten meals and worked stone material.

**Hearth:** Usually a sub-surface feature found eroding out of a river or creek bank or in a sand dune - it indicates a place where Aboriginal people cooked food. The remains of a hearth are usually identifiable by the presence of charcoal and sometimes clay balls (like brick fragments) and hearth stones. Remains of burnt bone or shell are sometimes preserved within a hearth.

***In Situ:*** Refers to cultural material which is discovered as being undisturbed and considered to be in its original context. That is, material which, when identified is considered to be in the same location when the site was abandoned.

**Isolated Artefact Occurrence:** An isolated artefact is defined as being the occurrence of four (4) or less items of cultural material within an area of about 100 metres (AAV 1993:1) It/they can be evidence of an ephemeral (or one off) activity location, the results of an artefact being lost or discarded during travel or evidence of an artefact scatter which is otherwise obscured by poor ground surface visibility.

**Midden Sites:** Midden sites are an accumulation of hearth debris which has built up a deposit on the grounds surface over a length of time. Middens are generally comprised of charcoal and either freshwater or coastal shell species, depending on the sites location. Midden sites may also contain stone artefacts, and the food refuse of other native animals such as small mammals. Midden sites can be distinguished within the landscape by their thick deposit of burnt shells and dark grey/black deposit. Coastal shell middens are often found in close association with rock platforms. Freshwater shell middens are found in close proximity to areas which provided freshwater mussels.

**Mound Sites:** Mound sites are accumulation of hearth debris which has, over time built a deposit on the grounds surface over a length of time. Mounds are generally comprised of charcoal, burnt clay balls and burnt food refuse such as native animal bones. Mound sites may also contain stone artefacts. On rare occasions mound sites may also contain human burial remains. Mound sites can be distinguished in the landscape by their characteristic dark grey/black deposit and height above surrounding land. mounds which have been utilised over long periods can obtain dimensions of over 100 metres in length and 1 metre in height. Mound sites are generally situated close to major streams, and large

waterbodies. In times of flood, mound sites are often become marooned, and provide dry land points from which surrounding resources could have been exploited.

**Scarred Tree:** Scars on trees may be the results of removal of strips of bark by Aborigines for the manufacture of utensils, canoes or for shelter; or resulting from small notches chopped into the bark to provide toe and hand holds for climbers after possums, koalas and/or views of the surrounding area. A scar made by humans as opposed to natural scars made by branches falling off, etc. is distinguished by the following criteria: symmetry and rounded ends, scar does not extend to the ground, some regrowth has occurred around the edges of the scar, and no holes or knots present in the heartwood.

**Rock Shelter/Cave:** These are sites which are located within a rock shelter/overhang or caves. The archaeological deposits within such sites can vary considerably but are often predominantly lithic. Depending on their location, the archaeological deposit may also include midden deposits of shellfish, fish or terrestrial fauna. Due to the often undisturbed deposits at these site, they are potentially very valuable sites and are generally considered of high scientific significance. Instances where rock shelter sites also possess art work on the stone walls are considered as rock shelter/art site combined.

## **ABORIGINAL ARTEFACT TYPES**

**Artefact:** Any product made by human hands or caused to be made through human actions.

**Anvil:** A portable flat stone, usually a river pebble, which has been used as a base for working stone. Anvils which have been used frequently have a small circular depression in the centre where cores were held while being struck. An anvil is often a multifunctional tool used also as a grindstone and hammerstone.

**Axe:** A stone artefact which has been ground on one or more sides to produce a sharp edge.

**Backed Blade (Geometric Microlith):** A blade flake that has been abruptly retouched along one or more margins opposite an acute (sharp) edge. Backed pieces include backed lades and geometric microliths. They are thought to have been hafted onto wooden handles to produce composite cutting tools or spears. Backed blades are a feature of the "Australian Small Tool Tradition", dating from between 5,000 and 1,000 years ago in southern Australia (Mulvaney 1975).

**Blade:** A long. parallel sided flake from a specially prepared core. Blade flakes are twice as long as they are wide.

**Bipolar:** A core or a flake which, presumably, has been struck on an anvil. That is, the core from which the flake has been struck has been rotated before the flake has been struck off. Bifacial platforms tend to indicate that the flake has come off a heavily worked core.

**Broad Platform:** This a term used to describe the shape of the platform on a flake. A broad platform is wider than the body of a flake. Broad platform flakes are produced when flakes are struck off back from the edge of the platform on a core.

**Bulb of Percussion:** This is the conchoidal protuberance formed under the point of impact when a flake is struck off the core.

**Core:** An artefact from which flakes have been detached using a hammerstone. Core types include blade, single platform, multiplatform and bipolar forms.

**Cortex:** Original or natural (unflaked) surface of a stone.

**Flaked Piece/Waste Flake:** A piece of stone with define flake surfaces which cannot be classified as a flake or core. These artefact types are generally refuse materials discarded during the working of stone material.

**Focal Platform:** This is a term used to describe the shape of the platform on a flake. A focal platform is narrower than the body of the flake. Focal platform flakes are produced when flakes are struck off near the edge of the platform on a core.

**Implement:** A general term for tools, weapons, etc. made by people.

**Lithic:** Anything made of stone.

**Microlith:** Small (1-3 cm long) stone tools with evidence of retouch. Includes 'Bondi Points' segment, triangle and trapezoid.

**Mortar:** The lower stone associated with grinding plants for food and medicine and/or ochre for painting. These stones are usually large and flat, and when well used show deep grooves from repeated grinding.

**Pestle:** The "upperstone" , used to grind plants for food and medicine and/or ochre for painting. A pestle stone often doubles as a hammerstone and/or anvil

**Scraper:** A tool used for scraping.

**Tools:** Artefacts which have been designed for a specific purpose.

## OTHER ARCHAEOLOGICAL TERMS

**B.P.:** Before present. The 'Present' is defined as 1950.

**Secondary Flaking:** Secondary working of a stone artefact after its manufacture. This is often done to resharpen stone tools after use, or in the production of formal tool types such as blade flakes and scrapers.

**Visibility:** Refers to the degree to which the surface of the ground can be observed. This may be influenced by natural processes such as wind erosion or the character of the native vegetation, and by land use practices, such as ploughing or grading. It is generally expressed in terms of the percentage of the ground's surface visible for an observer on foot (Bird 1992)/

**Obtrusiveness:** refers to how conspicuous a site is within a particular landscape, and thus the possibility of positive identification within a field environment. Some site types are more conspicuous than others. Thus a surface stone artefact scatter is generally not obtrusive, especially in areas of low ground surface visibility, while a scarred tree is (Bird 1992).

**Raw Material:** Organic or inorganic matter which has not been processed by people.

**Use Wear:** Tiny flakes or chips that have been broken off the edges of a stone artefact during use.

## References

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Mulvaney, D. J. 1975. *"The Prehistory of Australia"*, Harmondsworth, Penguin.

## **APPENDIX 4 SITE GAZETTEER**

# APPENDIX 4

## "NON-URBAN SOUTH & NON-URBAN FORESHORE"

### SITE GAZETTEER

Site Name	AGM	AAV No	Site Type	Landform Unit	Contents	Stratigraphy	Preservation	Recorded By	Scientific Significance
Balla Balla	504696	7921/8	Midden	Foreshore	Shell	Unknown	Unknown	R.A. Keble 1928	Unknown
Rutherford Inlet	518693	7921/9	Midden	Foreshore	Shell	Unknown	Unknown	R.A. Keble 1928	Unknown
Cranbourne	468764	7921/11	Surface Scatter	Cranbourne Sands	Tools Waste Flakes	Unknown	Unknown	S.R. Mitchell 1949	Unknown
Warneet	522684	7921/32	Midden	Foreshore	Oyster	Unknown	Fair	D.Palmer 1976	Unknown
Blind Bight 1	7547 8689	7921/115	Isolated Artefact	Foreshore	Waste Flake	N/A	Very Poor	D. Gaughwin 1981	Low
Blind Bight 2	7546 8689	7921/116	Surface Scatter	Foreshore	Cores/Blades	None	Very Poor	D. Gaughwin 1981	Low
Blind Bight 3	7546 8690	7921/117	Exposure in Bank	Foreshore	Waste Flakes	Probably	Very Poor	D. Gaughwin 1981	Low
Deavon Meadows 1	7471 8696	7921/118	Surface Scatter	Low-Lying Plain	Tools	None	Very Poor	D. Gaughwin 1981	Low

**cont'd**

Tooradin 1	7554 8708	7921/119	Isolated Artefact	Low-Lying Plain	Waste Flake	N/A	Very Poor	D. Gaughwin 1981	Low
Harewood 1	7613 8688	7921/120	Surface Scatter	Foreshore	Tools Waste Flakes	None	Very Poor	D. Gaughwin 1981	Low/Moderate
Tooradin Estate 1	7579 8712	7921/121	Surface Scatter	Low-Lying Plain	Waste Flakes	None	Very Poor	D. Gaughwin 1981	Low
Tooradin Estate 2	7576 8703	7921/122	Surface Scatter	Low-Lying Plain	Waste Flakes	None	Very Poor	D. Gaughwin 1981	Low
Tooradin Estate 3	7580 8700	7921/123	Surface Scatter	Low-Lying Plain	Waste Flakes	None	Very Poor	D. Gaughwin 1981	Low
Five Ways 1	7527 8749	7921/124	Surface Scatter	Low-Lying Plain	Waste Flakes	None	Very Poor	D. Gaughwin 1981	Low
Smiths Lane 1	7473 8707	7921/126	Surface Scatter	Low-Lying Plain	Tools Waste Flakes	None	Very Poor	D. Gaughwin 1981	Low
Smiths Lane 2	7475 8726	7921/127	Surface Scatter	Cranbourne Sands	Tools	None	Very Poor	D. Gaughwin 1981	Low
North Road 1	7530 8729	7921/128	Surface Scatter	Low-Lying Plain	Waste Flakes	None	Very Poor	D. Gaughwin 1981	Low
Bass Highway Site 1	3543 5727	7921/186	Surface Scatter	Low-Lying Plain	Tools	None	Destroyed	V.A.S. 1986	N/A

Botanic Annex 5	3490 57784	7921/255	Isolated Artefact	Cranbourne Sands	Waste Flake	N/A	Very Poor	I. Ellender 1991	Low
Botanic Annex 6	3482 57785	7921/256	Isolated Artefact	Cranbourne Sands	Waste Flake	N/A	Very Poor	I. Ellender 1991	Low
Botanic Annex 1	3485 57775	7921/300	Surface Scatter	Cranbourne Sands	Tools	Probably	Fair	I. Ellender 1991	High
Botanic Annex 2	3478 57773	7921/301	Surface Scatter	Cranbourne Sands	Tools Waste Flakes	None	Fair	I. Ellender 1991	Low
Botanic Annex 3	3481 5775	7921/302	Surface Scatter	Cranbourne Sands	Waste Flakes	None	Fair	I. Ellender 1991	Low
Botanic Annex 4	3488 57775	7921/303	Isolated Artefact	Cranbourne Sands	Waste Flake	N/A	Very Poor	I. Ellender 1991	Low
Fisheries Rd	3514 57716	7921/304	Isolated Artefact	Low-Lying Plain	Waste Flake	N/A	Very Poor	F. Weaver 1991	Low

## FIGURES

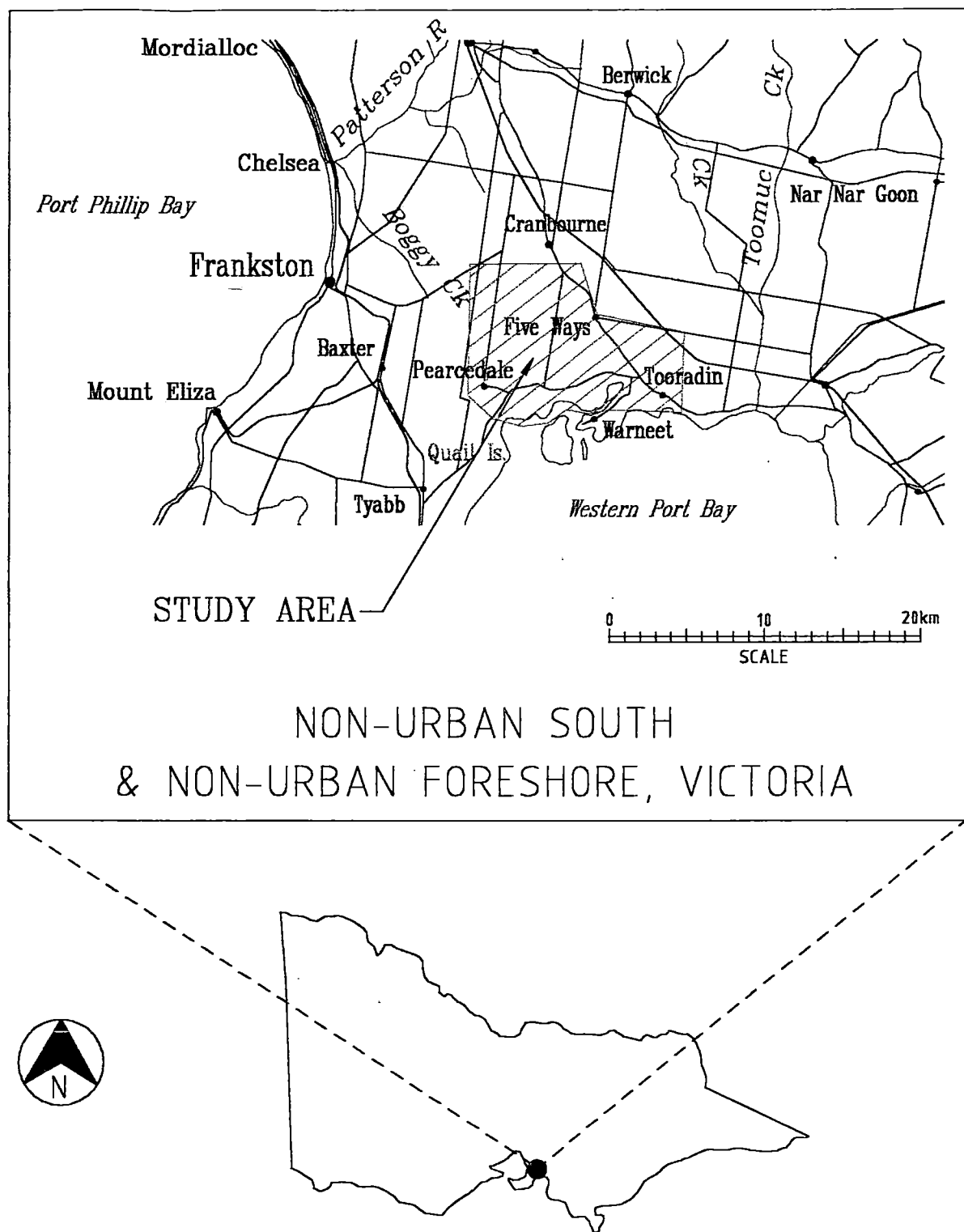


Figure No 1

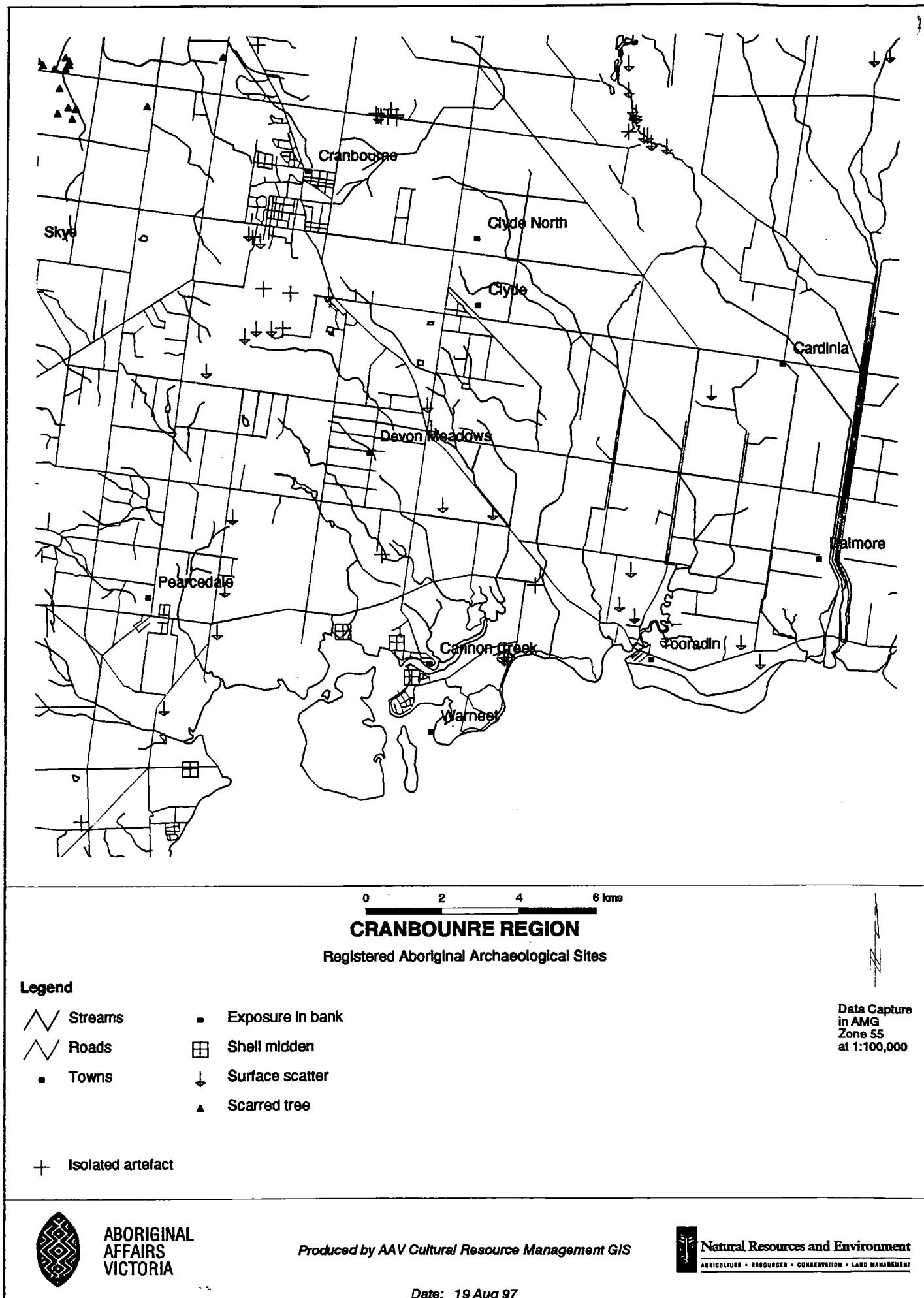


Figure 2

Previously Recorded Aboriginal Archaeological Sites within the Study Area

# LANDFORM UNITS WITHIN THE STUDY AREA

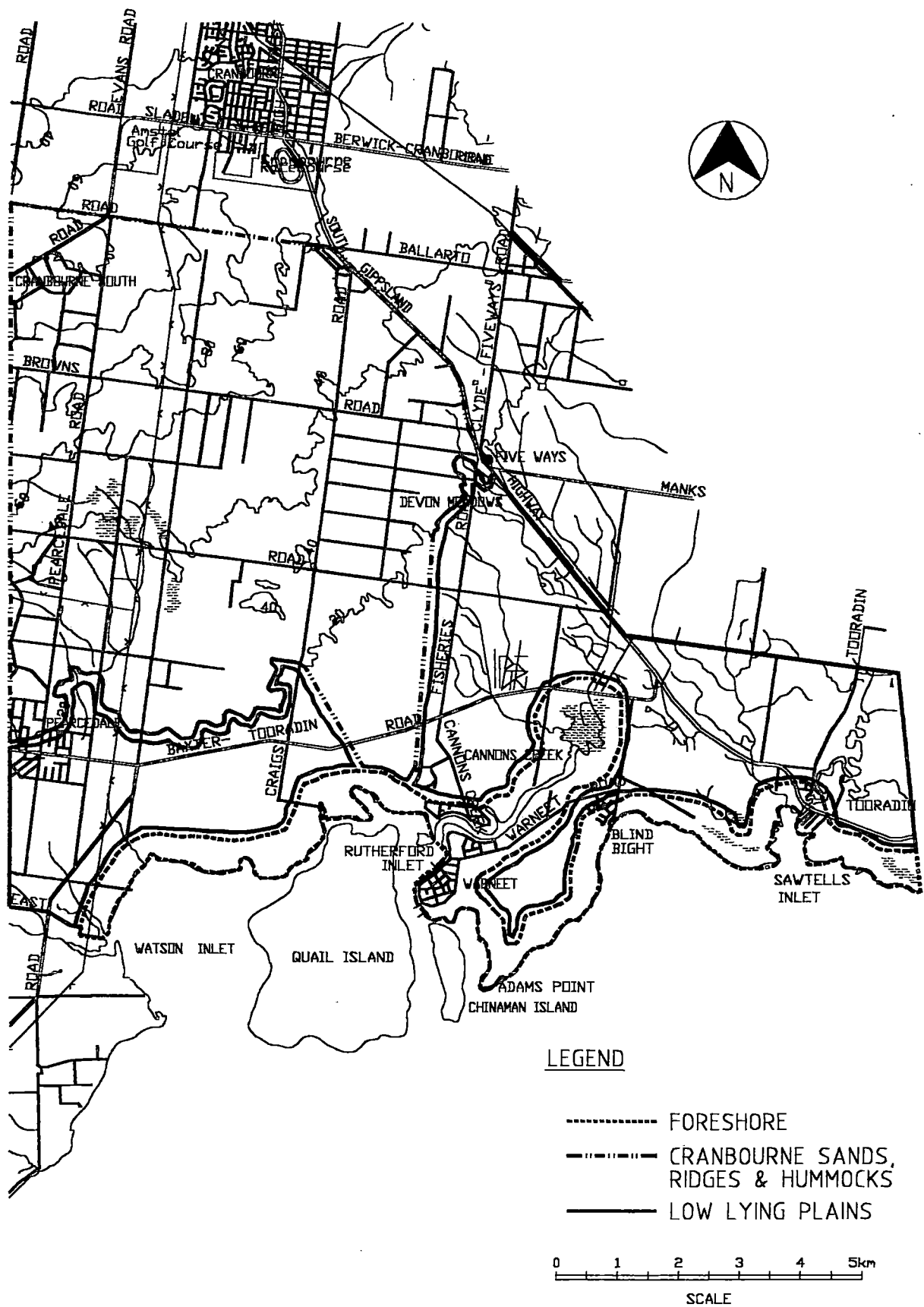
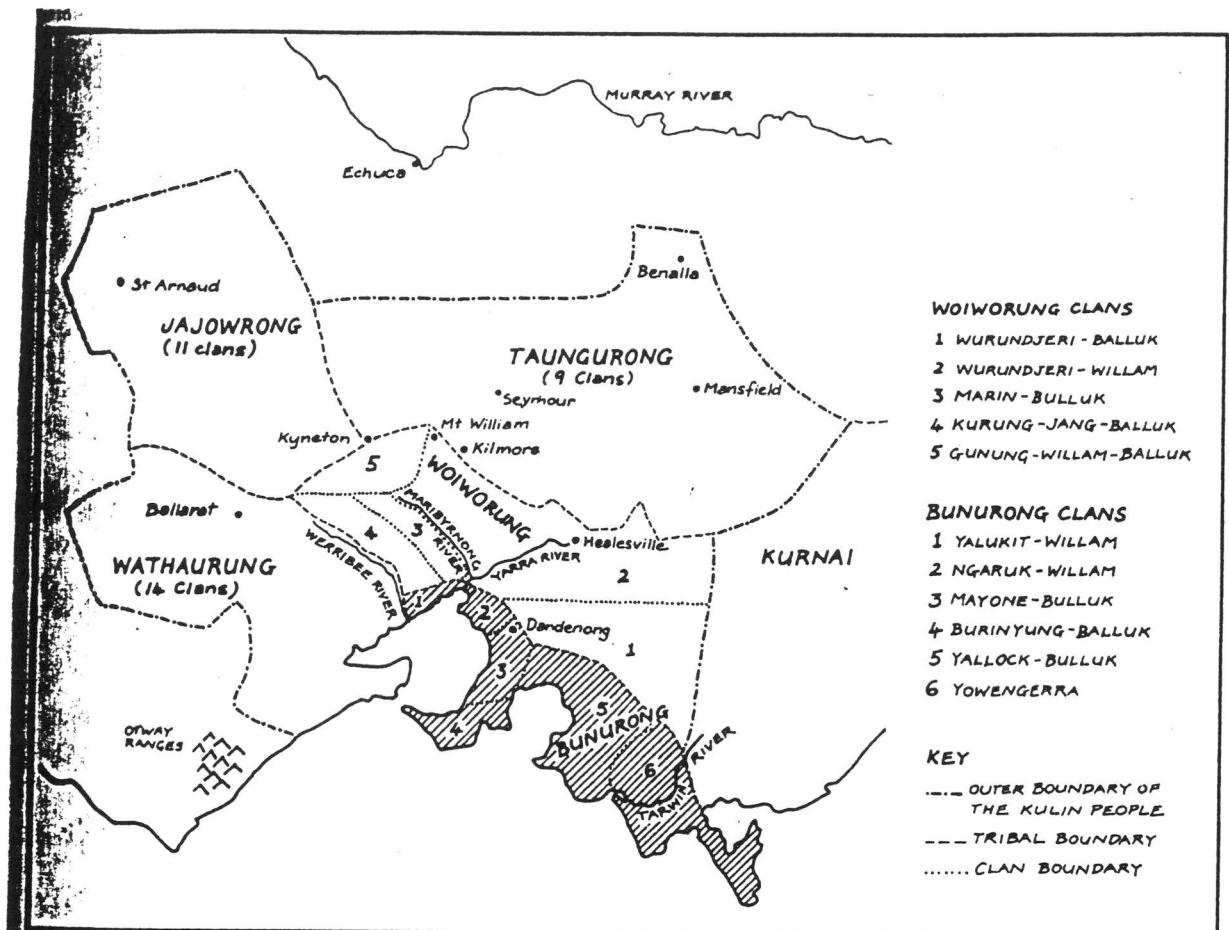


Figure No 3



Figure 4 Early Runs of the Study Area (from Spreadborough & Anderson 1983)



The approximate boundaries of the Kulin nation, showing the areas of the five tribes, and of the clans of the Woiworung and the Bunurong, who lived mostly in the Melbourne area.

Figure 5 Aboriginal Tribe and Clan Estates (from Presland 1994:37)

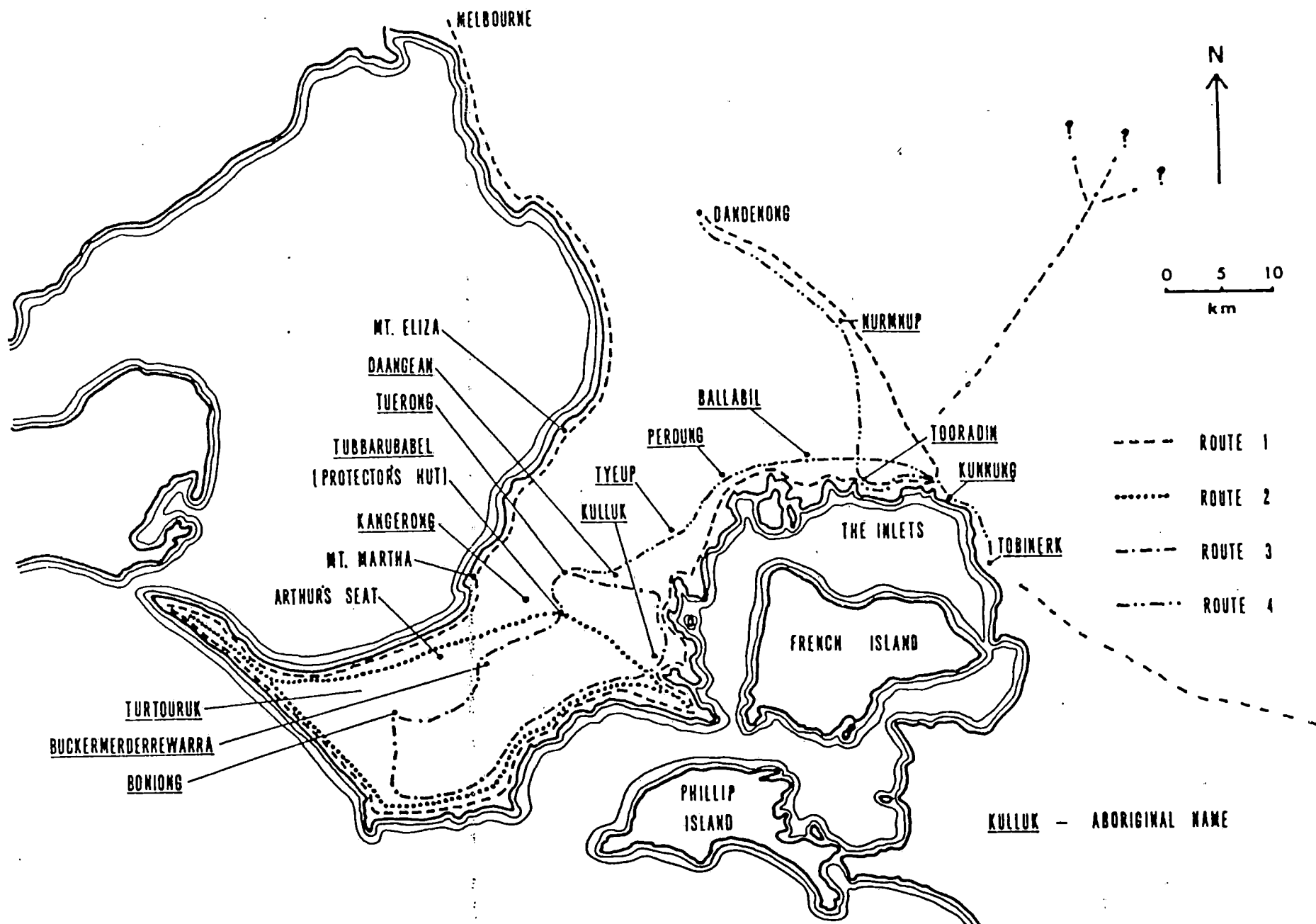


Figure 6 Seasonal movements by the Bunurong which included the Study Area  
(from Gaughwin 1981:74)

# AREAS OF ARCHAEOLOGICAL SENSITIVITY FOR ABORIGINAL SITES

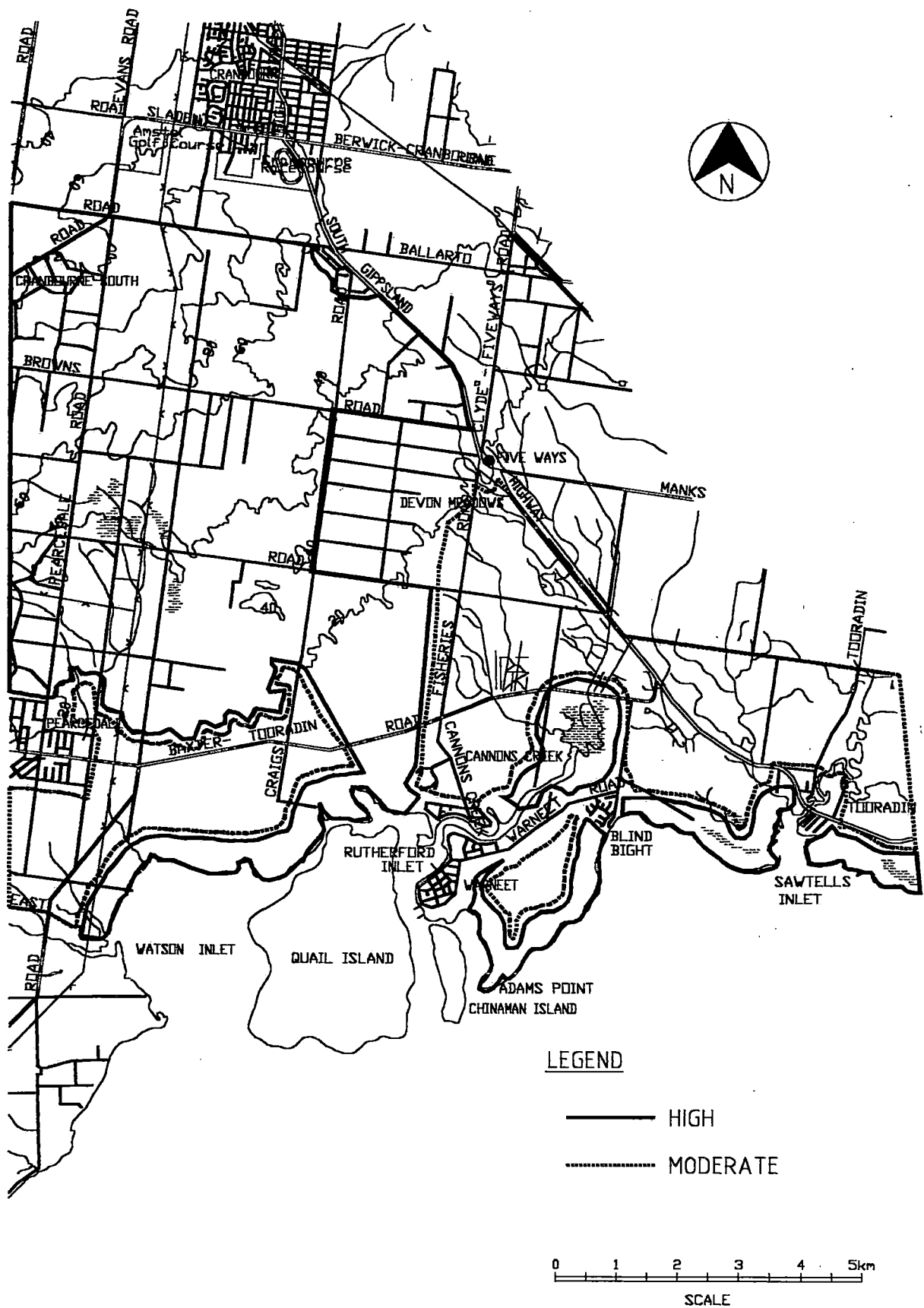


Figure No 7