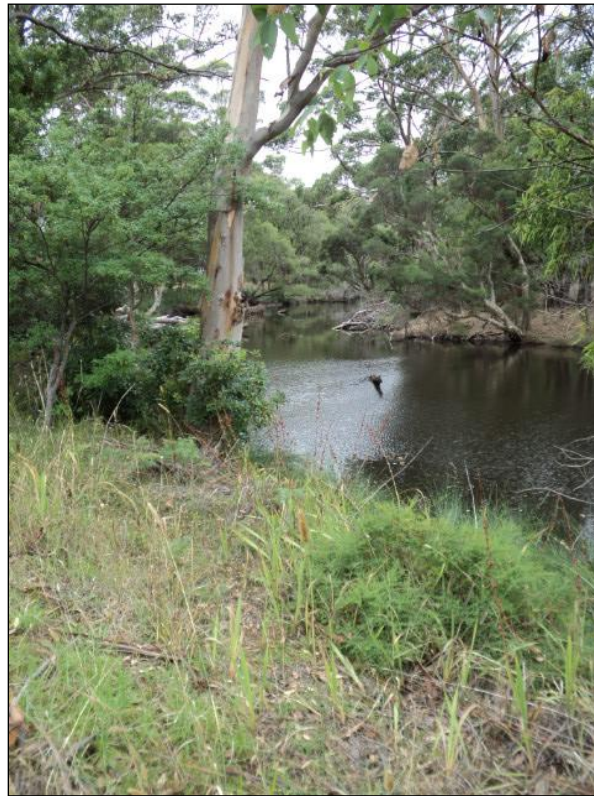


# ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN FOR SOUTHERN SECTION OF KWOORABUP BEELIA (DENMARK RIVER)



DAVID GUILFOYLE

JULY 2011



*Received by Council at the Ordinary Meeting held on 26 July 2011 (Res No: 060711) as a guiding document to protect and manage the indigenous heritage values of the Kwoorabup Beelia (Denmark River).*



Government of Western Australia  
Department of Indigenous Affairs

# Contents

<b>ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN KWOORABUP BEELIA (DENMARK RIVER)</b>	<b>1</b>
<b>BACKGROUND</b>	<b>1</b>
<b>EXECUTIVE SUMMARY</b>	<b>3</b>
<b>KWOORABUP: WATERWAYS AND CULTURAL LANDSCAPES</b>	<b>4</b>
<b>DESCRIPTION OF THE STUDY AREA</b>	<b>5</b>
Location	5
Geology, Geomorphology and Soils	6
Flora and Fauna	6
Land Use History	7
Current Uses	7
<b>CULTURAL HERITAGE BACKGROUND</b>	<b>7</b>
Heritage values	9
Cultural:	10
Social:	11
Archaeological:	11
Lizard Traps	11
Gnamma Hole	12
Stone Artefact Scatter	12
Shell Midden:	12
Wild Resource Use	12
<b>HERITAGE SITES OF THE STUDY AREA AND SURROUNDS</b>	<b>13</b>
Kockellup Springs	13
Registered Sites Associated with the Denmark River	15
Site ID 22081 Denmark River	15
Site ID 18947 Denmark River Midden	15
Site ID 22081 Denmark River Massacre Site	15
Registered Sites linked to the Denmark River	15
Site ID 4668 Katelysia Rock Shelter	15
Site ID 4580 Denmark Quarry	15
Site ID 5707 Wilson’s Inlet Denmark	16
Site ID 18948 Inlet Drive Granite Outcrop	16
Site ID 5150 Wilson’s Inlet	16
Site ID 22557 Koirchekup Hill	16
Site ID 4484 Amarillup Swamp	16
Site ID 4553 Blue Lake/Kockellup Spring	16
Kockellup Springs	17
<b>CONDITION OF THE HERITAGE VALUES</b>	<b>17</b>
Human Impacts	17
Weed Infestation	18

Rubbish and Runoff .....	18
Erosion.....	18
Introduced and Feral Animals .....	18
Noise Pollution.....	19
<b>LEGISLATION AND POLICIES TO MANAGE THE HERITAGE VALUES .....</b>	<b>19</b>
Aboriginal Heritage Act (1972).....	19
ACMC Assessment.....	21
Section 16 .....	21
Archaeological monitoring .....	21
Historic .....	21
Regulation 10.....	21
Unforeseen events .....	22
Environment Protection and Biodiversity Conservation Act 1999 .....	22
Native Title Act (1993).....	22
Aboriginal and Torres Strait Islander Heritage Protection Act 1993.....	22
<b>COMMUNITY AND STAKEHOLDERS CONSULTATIONS .....</b>	<b>24</b>
Methodology .....	24
Identification of Spokespeople and Representative Bodies.....	25
Albany Heritage Reference Group Aboriginal Corporation.....	26
Dowark Foundation Members .....	26
Department of Indigenous Affairs (South Coast).....	26
Previous Consultations: Denmark River .....	32
Department of Water Study – Brad Goode and Associates 2008.....	32
<b>VISION.....</b>	<b>35</b>
<b>MANAGEMENT THEMES.....</b>	<b>35</b>
1. Conservation and Land/Waterway Management.....	36
2. Communication and Consultation .....	36
3. Research, Training and Education.....	37
4. Interpretive Signage.....	38
5. Access to funding and support from relevant agencies.....	38
6. The implementation of statutory planning mechanisms.....	39
7. Monitoring .....	39
<b>IDENTIFIED PROJECTS, PROCESSES AND CONSULTATION OUTCOMES.....</b>	<b>40</b>
Category 1: Conservation and Rehabilitation.....	40
Category 2: Developments and Land Management .....	41
1. Traditional Meeting Place and Corroboree Ground.....	41
2. Archaeological Site – Shell Midden.....	42
3. Conservation and Management (Vegetation Buffers, Weed Control, Water Quality Monitoring) 43	
4. Degraded Wetland .....	45
5. Working with Landowners.....	45
6. Bridge.....	47
7. Kwoorabup Community Park.....	48
Recommendations: .....	49
8. Berridge Park .....	49

9. Walk trails/ Crossings ..... 49

10. Denmark Rivermouth Recreational and Boating Facilities and Environmental Protection 51

11. UCL Land Development Management ..... 51

12. Fire Management..... 53

**SUMMARY ..... 58**

**REFERENCES ..... 59**

**APPENDIX A: – GLOSSARY OF TERMS..... 62**

Heritage Terms..... 62

Environmental Terms..... 63

Geological Terms..... 63

Aboriginal Heritage Act (1972) Glossary:..... 64

**TABLE OF FIGURES**

Figure 1. Aerial view of the section of the River relevant to this Management Plan..... 2

Figure 2. View of old bridge crossing on Denmark River..... 4

Figure 3. Previously recorded sites in the Denmark River zone and beyond..... 14

Figure 4. Proportion of registered places per major soil/landform unit..... 14

Figure 5. Section of run-off channel acting as a filtration system..... 17

Figure 6. Eroding banks and cleared land within the protected site area..... 18

Figure 7. Guidelines for the development of a heritage management plan and actions (DIA)..... 23

Figure 8. Consultation meeting with AHRGAC members on 23/11/2010..... 26

Figure 9. Meeting with Traditional Owners, archaeologists and TAFE trainees in regards to heritage and environmental management actions on 15/09/2010..... 27

Figure 10. Traditional Owners identifying target areas for conservation works on 23/10/2010..... 27

Figure 11. Traditional Owners and heritage professionals meeting at significant cultural meeting place on the banks of the River on 23/10/2010. .... 28

Figure 12. Planning meeting 28/07/2010..... 28

Figure 13. Public meeting with landowners, environmental groups, DIA representatives and Traditional Owners on 1/07/2010..... 29

Figure 14. Meeting with heritage professionals and Traditional Owners meeting at area in need of conservation works..... 29

Figure 15. Workshop with Shire reveg guru Mark Parre and Noongar TAFE crew..... 30

Figure 16. Traditional Owners and heritage professionals meeting along the Denmark River on 25/07/2010..... 30

Figure 17. Traditional Owners on Country on 25/07/2010..... 31

Figure 18. Consultation meeting with Traditional Owners and landowners (06/02/2011)..... 31

Figure 19. One of main target areas in need of conservation work including weed control and revegetation..... 36

Figure 20. Fallen trees and logs regularly occur in the river and can become threats to recreationists if unmonitored..... 40

Figure 21. Discussing ideas for Meeting Place. .... 41

Figure 22. Traditional Owners are disturbed by large-scale impacts to this registered and *legally-protected* Site 27936 - Kwoorabup Corroborree Ground. .... 42

Figure 23. Area in need of revegetation along the banks of the Denmark River..... 44

Figure 24. Landowner pointing to blackberry outcrops along the river that he believes should be part of regular control programmes..... 44

Figure 25. Wetland/ pond in need of weed control and revegetation to restore it to its natural state. .... 45

Figure 26. Traditional Owners and Landowners share many common ideas on river management (meeting on 06/02/2011)..... 46

Figure 27. Restoration of old bridge, site of which is shown here. .... 47

Figure 28. Kwoorabup Community Park Concept Plan..... 48

Figure 29. Map showing the Kwoorabup Walk Trail path..... 50

Figure 30. Some walk trails require ongoing monitoring and maintenance..... 51

Figure 31. Key areas in terms of management recommendations/ actions..... 57

**Tables**

Table 1. Environmental systems in the study area..... 6

Table 2. Registered sites in the vicinity of the project area. .... 13

Table 3. List of consultation meetings and representatives..... 24

Table 4. Summary of Projects and Actions..... 54

## Acknowledgements

This report has been developed in collaboration with, and under the direction of, the Traditional Owners. Uncle Wayne Webb, Aunty Toni Webb, Aunty Vernice Gillies, and Joey Williams greatly assisted the consultant in all aspects of the coordination and delivery of the project.

Harley Coyne, Graham Townley and Robert Reynolds (Department of Indigenous Affairs, Albany) provided invaluable assistance and guidance regarding matters of community engagement, legislative processes, and management processes.

Cindy Simpson and Yvette Caruso (Shire of Denmark) have greatly assisted the consultant in the development of the project, community engagement, and technical and administrative support, as well as providing advice from their considerable expertise in planning and natural resource management.

Basil Schur (GreenSkills Inc) facilitated meetings and advice on environmental management and associated practical aspects of land care.

Brad Goode (Brad Goode and Associates) provided detailed ethnographic background information and advice on anthropological matters.

Cover Photo: A section of Kwoorabup Belie – the heritage site that is the Denmark River.

# ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN KWOORABUP BEELIA (DENMARK RIVER)

A REPORT FOR THE SHIRE OF DENMARK AND  
DEPARTMENT OF INDIGENOUS AFFAIRS

## BACKGROUND

This document is an Aboriginal cultural heritage management plan for Kwoorabup Beelia (Denmark River) which flows in a north-south direction from Pardelup for a length of approximately 60 kilometres and drains into the Wilson Inlet, at the township of Denmark, Western Australia. The River is registered as a site of mythological importance with the Department of Indigenous Affairs (Denmark River Site ID 22081).

The River is located in a beautiful part of south-western Australia and has been used by people for over ten thousand years, evident by the varied cultural places and archaeological sites located on its banks and throughout the region. The river is an important cultural place for the Traditional Owners, and the area is unique in creating a “sense of place” and history because of its associated oral histories, cultural features, and aesthetic values provided by the striking landform configurations. The River currently requires management in the form of environmental and heritage protection, recreational use, town planning, and rehabilitation.

The plan is intended to act as an information resource to the Shire of Denmark to streamline the preparation of Regulation 10, Section 16, and Section 18 permits under the *Aboriginal Heritage Act 1972* for a range of specific projects taking place within the heritage site corridor; that currently extends to 30 metres either side of the high water mark of the river and its tributaries. The defined study area is that section of the River shown in Figure 1.



Figure 1. Aerial view of the section of the River relevant to this Management Plan.





## EXECUTIVE SUMMARY

The objectives of this Plan are to provide:

1. An inventory audit to identify all Aboriginal heritage sites within the study area.
2. Recommendations on statutory and strategic planning mechanisms to assist in protection of Aboriginal Heritage Value of the Denmark River foreshore.

There are also two associated objectives:

3. Maintain and enhance heritage values of the area.
4. Foster involvement and engagement of the community in regard to management of the area.

This Plan reflects the need to become strategic in cultural heritage management and implement landscape-scale assessments and plans. This plan identifies a number of management themes and processes as identified by the consultant and the community, listed here and discussed below.

1. Heritage Conservation and Land/Waterway Management
2. Communication and Consultation
3. Research, Training and Education
4. Interpretative signage
5. Access to funding and support from relevant agencies
6. The implementation of statutory and strategic planning mechanisms
7. Monitoring

It then discusses the more specific management actions and development activities occurring in the study area, and relevant processes required. These include:

1. Protection of Traditional Ceremonial Ground and Meeting Place
2. Archaeological Investigations at the Shell Midden Site
3. Conservation and Land/Waterway Management
4. Wetland/Pond Restoration
5. Working with Private Landowners
6. Bridge Restoration
7. Community Park Developments
8. Berridge Park
9. Walk Trails
10. Denmark Rivermouth Recreational and Boating Facilities and Environmental Protection
11. Land Development
12. Fire Management

This document outlines the policies and procedures to be agreed upon by all parties in the implementation of the various management actions outlined here. The Aboriginal Cultural Heritage Management Plan has been completed with consideration given to the wider planning framework for the Denmark River foreshore and development activities that are likely to impact on the study area in the future.



Figure 2. View of old bridge crossing on Denmark River.

Further to this, this document establishes and sets out objectives for the identification, protection, conservation, presentation and transmission of the heritage values of this waterway under the heritage provisions of the Aboriginal Heritage Act (1972) and also using industry standards and methodological approaches endorsed by the Burra Charter and other management guides. A process for ensuring on-ground community engagement and joint management arrangements are also identified.

## KWOORABUP: WATERWAYS AND CULTURAL LANDSCAPES

“Running rivers were described as being like the blood of our ancestors, when people came out of Nityang [the spirit world], they would travel along the rivers to meet for ceremonies on the big inlets. At these ceremonies people would observe rites to totem species that had a kinship relation to our ancestors, as such not all people could eat certain natural species associated with their blood line, others could eat them, this way natural species were preserved from over exploitation at gatherings” — Wayne Webb 2007

The assessment of cultural heritage values associated with such areas emphasizes methods of integrating cultural heritage into the existing monitoring and management programs being coordinated and/or developed for this River. This also provides for a greater opportunity to acquire resources for both research and monitoring of these large pristine waterways, in the context of an increasingly degraded and pressurized environment throughout the wider South West and South Coast, where impacts have degraded both the natural and cultural values of many waterways. In this sense, the significance of the Denmark River is heightened by the fact that a segment of largely undisturbed cultural places and features is conserved along the banks, providing an opportunity to examine the integrated cultural landscape.

During the study no water body was identified as more important than the rest. All water sources in the study area were defined to have the same value. South Coast Noongar people hold that the health of the natural world is of vital importance to the preservation and continuance of their culture. Without a healthy natural world – including the region’s rivers, lakes, wetlands, springs and inlets – Noongar people believe they will forfeit their identity as traditional owners of the land. Losing access to and diminishing the value of the region’s water sources was defined by Noongar people as being similar in impact on Noongar culture as the alienation of the lands were at settlement (Goode et al 2008: 163).

Essentially, this Plan is focused on the methods for identifying, protecting and managing cultural resources associated with waterways, and so inherently focuses on the integration of ecological management and cultural landscapes. Waterways are a key component of the spiritual landscape of Noongar people, and so conservation and management methods linked to entire waterways inherently address conservation and management of the cultural landscape.

Water is an essential resource in the natural and human environment and its responsible management for the total benefit of the region is of paramount importance. Water is, in effect, the critical mineral (EPA (1976) System 2 (plus 1, 3 and 5).

When understood here as a “critical resource” it suggests that programmes aimed at the protection and management of this resource should be well developed and across the board. However, problems of multiple land tenure, competing interests, confused and ineffective legislation, and a dearth of well executed water management programmes at the catchment level, has led to a situation of rapidly degrading river and creek systems. In such situation, it would seem wise to adopt aspects of the Traditional Concept of waterway use and management. This Plan identifies methods of re-defining our approaches to waterway management, by ensuring cultural heritage assessments and methods of protection are well integrated with environmental management plans and processes.

## DESCRIPTION OF THE STUDY AREA

The study area extends from the Denmark River Mouth (at Wilson Inlet) extending northward for approximately five kilometres to East River Road (see Figure 51). The study area was defined by the Shire of Denmark as the area which is already developed and likely to be under pressure from future urban development, and where maintenance of reserves and management of river foreshore is required.

Many of the heritage and environmental values have been highlighted in the *Kwoorabup Walk Trail Heritage Management Plan* prepared by the Department of Indigenous Affairs (DIA) (2010), demonstrating a continuing relationship and connection to country on the part of the Traditional Owners. As mentioned, the most significant aspect of this area is the configuration of the natural and cultural features that captures the essence of the heritage values. This section provides a basic description of the natural features before a statement on the inter-relationships of the landform features that is an important aspect of the area’s heritage value. This section provides a brief overview of the environmental setting and the heritage significance of the waterway.

### Location

The Denmark River is in the Denmark Catchment which encompasses a land mass of 800 square kilometres and comprises of the Denmark, Hay and Sleeman Rivers and their tributaries. The Denmark River rises in the north from Pardelup and flows south for 60 kilometres where it drains into the Wilson Inlet at the Denmark townsite. The catchment area has an average rainfall of 650mL in the northern section to 1100mL along the coast (<http://www.rivercare.southcoastwa.org.au>).

## Geology, Geomorphology and Soils

The area falls within the Albany-Fraser geological province comprised of a basement of Precambrian granitic bedrock overlain by Tertiary sedimentary rock and Quaternary sands and laterites. Areas of weathered granite form sheets of sedimentary rock with a surface covered by a variety of silts, sands and clays formed over a million years of weathering. Much of the soil in the catchment has poor drainage and as such salt builds up in the deep soil profile. The water levels then rise in cleared areas which lead to high salinity levels. A description of the major landform types are listed here.

Table 1. Environmental systems in the study area.

Name	Description
<b>King System</b>	Dissected siltstone and sandstone terrain, on the southern edge of the Albany Sandplain Zone, with shallow gravel, sandy gravel, grey sandy duplex and pale deep sand. Jarrah-marri-sheoak woodland and mallee-heath.
<b>Redmond System</b>	Undulating plateau with scattered depressions, in the east of the Albany Sandplain Zone. Sandy gravel, pale deep sand, non-saline wet soils and grey sandy duplex. Marri-jarrah forest, swamp yate-paperbark-sheoak woodland and heath.
<b>Torbay System</b>	Narrow swampy coastal plain, on the southern edge of the Albany sandplain Zone. Non-saline wet soil and pale deep sand. Sedgeland, ti-tree heath and wattie-paperbark thickets.
<b>Broke System</b>	Poorly drained plain with low granitic rises, along the coast of the Warren-Denmark Southland. Non-saline wet soil and pale deep sand. Sedges, ti-tree heath and paperbark-banksia woodlands.
<b>Caldyanup System</b>	Poorly drained plain with low granitic rises, in the east of the Warren-Denmark Southland. Wet soil (sometimes saline), deep sand and gravel. Sedges, heathland, paperbark woodlands and jarrah-marri forest.
<b>Kentdale System</b>	Undulating rises formed on sandstone and siltstone, in the south-east of the Warren-Denmark Southland. Sandy gravel, non-saline wet soil, pale deep sand and grey deep sandy duplex. Heath and jarrah-marri forest and woodlands.
<b>Kent System</b>	Undulating lateritic plain with lakes and poorly drained flats. Duplex sandy gravels, loamy gravels, grey deep sandy duplexes semi-wet soils and wet soils.
<b>Nullakai Dunes System</b>	High dunes, on the southern coast of Warren Denmark Southland. Calcareous deep sand and pale deep sand. Coastal scrub and peppermint-jarrah-marri woodland.
<b>Roe Hills System</b>	Granitic hills and low hills, in the east of the Warren-Denmark Southland. Loamy gravels, sandy gravels, loamy duplex and loamy earth. Jarrah-marri forest and woodland.
<b>Walpole Hills System</b>	Granitic hills and low hills, in the south of the Warren-Denmark Southland. Loamy gravel, loamy earth, sandy gravel and loamy duplex. Jarrah-marri-karri forest and woodland.
<b>Wilgarup Valleys System</b>	Valleys, in the north-east of the Warren-Denmark Southland. Loamy gravel, sandy gravel, loamy earth, stony soil and loamy duplex. Marri-jarrah-wandoo forest and woodland.

## Flora and Fauna

The Denmark region is well known for its tall Karri and Jarrah forests, the beautiful spring wildflowers and its diverse array of wildlife, including birds, reptiles and marsupials. The bird species present in Denmark include Fairy-wrens, Emus, Australian White Ibis, Australian magpies and Australian Ringnecks. Reptiles such as tiger snakes, dugites, carpet pythons, skinks, among many more can be found here along with marsupials such as the Western Grey Kangaroo, Quokka, Southern Brown Bandicoot and common Brushtail Possum.

Much of the coastal sand dune country is covered by Peppermint (*Agnosis flexuosa*) scrub or woodland with some open heath. Inland from the dunes, stands of Karri (*Eucalyptus diversicolor*) with Red Tingle (*E. Jacksonii* and *E. guilfoylei*), Marri (*Corymbia calophylla*) or Jarrah (*E. marginata*) dominate higher ground, depending on the soils. Lower sand ridges carry banksias woodland, while low ground cover is occupied by Paperbark (*Melaleuca*) woodland and sedge swamps (Hodgkin and Clark 1988:4).

These iconic trees are all cultural plants that have traditional names and uses (see Kalotas 2010). The variety of shrubs and plants that comprise the under-storey of the forest contain numerous medicinal, food, and resources for people that are still procured today. The knowledge of these cultural plants, their traditional uses, and methods for procurement are passed down to the younger generations in culturally appropriate ways.

The area contains a number of plants/trees that the Traditional Owners demonstrated support a diversity of “life” in symbiotic relationships and the water body supports a microenvironment that includes a range of cultural plants and animals with totemic affiliations.

## Land Use History

The land has been sustainably managed for at least 18,000 years before present (Ferguson 1985), as part of a complex social landscape, embedded within a hunting-fishing-gathering economic system. From the 1800s the area was intensively used by whalers and sealers, largely tethered to the offshore islands and coastal strip. Exploration and sporadic settlement occurred in the 1820s and 1830s, with permanent European settlement in Denmark commencing in 1910. Some parts of the southern catchment operate as dairy farms, and logging activity have been widespread through the surrounding forests. However, most of the land south surrounding the estuaries and rivers near the town is forest reserves and National Parks. The reserved natural bushland and landscape is a key feature of the area that serves to conserve and protect much of the natural and cultural heritage landscape.

## Current Uses

The River itself is currently used for water for farming – irrigation and water sources for stock - for both farm lands on the northern section of the river and the Denmark Agricultural College. It also has many recreational uses, with access for kayaks, canoes and motor boats, people coming up and down the river from Wilson Inlet. There is a jetty near the townsite which allows for access to the town of Denmark. People also use the river for fishing and crabbing at the Rivermouth (Wilson Inlet).

The River adds to the beauty and popularity of Denmark, with its natural and aesthetic feel being a major drawcard for tourists to the region. The ongoing maintenance and conservation work is a necessity to maintain the water quality and natural and cultural values of the river and the overall catchment. In recent times housing estates have been developed on the river’s edge without the establishment of vegetation buffer and hence impact the registered site, the Denmark River.

## CULTURAL HERITAGE BACKGROUND

The Denmark River is often cited as a territorial “boundary” between the Bibbulmun and Minang tribal groups. For any project associated with this River, consultation and engagement of both Bibbulmun and Minang Traditional Owners is required, who often refer to being one within a “Noongar Nation”.



Benson (1982:14) states that there is considerable historical evidence to support this view and that there is a clear ecological division at the **Denmark River** and that ecological zones often became the boundaries of cultural groups who specialized in the exploitation of these zones. Benson (1982) also states that observations from the region's explorers suggest a division in ownership between the groups across the Denmark River. He says, for example, that when Mokare led Wilson's group west of Albany he made a strong case not to cross the Denmark River saying that these were "bad lands". Benson adds that contemporary Albany Noongars are also reluctant to cross this river (Wilson 1833:16, cited in Benson 1982:15). This ambiguity over the definite boundaries of different language groups may in some instances be attributable to a loss of knowledge, but it may also be a result of "boundaries" between groups being traditionally fluid in nature (Dortch 2002:4). According to Gibbs (1995:18) "in many respects the nature and degree of movement of Noongar groups, especially beyond the boundaries of their own communities, depended on their economic, social and kin relationships with their neighbours." There is now not enough ethnographic information to resolve this debate; however, it is clear that the study area at the time of settlement was occupied by a number of Noongar groups that shared a common language, custom rituals and practices. It is also apparent that these groups would come together at certain times of the year to conduct business and trade and as such can be seen as a coherent group or, as Bates (1985) refers to as a Noongar nation (Goode et al 2005:25).

For a detailed anthropological background of traditional cultural connections and life ways focused on South Coast waterways, including the Denmark River, see Goode et al (2008).

Archaeological evidence in the Albany-Denmark area indicates a history of occupation and use by social groups extending from at least 18,000 years before present (Ferguson 1985). People adapted to, and shaped the natural environment, embedding systems of movement, settlement, and subsistence that exists today in the form of archaeological places and features that dot the landscape. The Denmark area is particularly rich containing a number of such places, including stone artefact scatters, fish traps, gnamma holes, lizard traps, quarry sites, scarred trees, burials, rock art sites, hearths/camps, and associated features.

There is vast body of ethno-historical information detailing the complex knowledge and associations of people using this area associated with hunting, fishing, settlement and seasonal movement, and large gatherings of people at certain times of the year. The rich ethnographic and ethno-historical literature pertaining to the region clearly documents a complex settlement-subsistence system, with well integrated paths, camping areas, meeting places, procurement areas, and ceremonial/social places.

From an analysis of the data collected from research and consultations it can be stated that most major rivers systems running through the study area were occupied by both traditional and historical Noongars in an intensive and continuous manner. This occupation was centred on the customary use of resources obtained within the riparian zones of these systems. Rivers in the study region were also identified as clan boundaries between cultural groups (Hay/Denmark River to Pallinup River bordering the Minang) and as major seasonal paths of migration for traditional Noongar groups travelling to coastal estuaries for ceremonial activities in the summer. Rivers such as the Frankland (Brooke Inlet), the Hay, the Denmark (Wilson's Inlet), the Kalgan (Oyster Harbour) and the Pallinup River (Beaufort Inlet) were identified as traditional paths that connected to fish traps or other coastal areas of significance. A large inventory of recorded archaeological sites associated with these rivers shows intense usage of these systems, as do ethno-historical accounts from the region's first explorers (Goode et al 2008:113).

Dortch (2002) has classified the diverse range of sites throughout the region into categories of either 'congregative' or 'dispersive', reflecting the 'periodic congregation and dispersal of families, local descent groups, and bands' (Dortch 2002:13). These contrasting settlement/mobility systems create contrasting archaeological signatures that, at the regional scale, provide evidence for notions of 'group mobility, dispersal, and amalgamation through reciprocal agreements on land access and usage' (Dortch 2002: 13).

Dortch (1999) investigated the formation of south coast estuaries by dating submerged tree stumps at Broke, Stokes and Wilson Inlet, providing evidence to indicate their formation around 6,500 to 7,300 years ago. He argues that groups along the South Coast had developed fishing and procurement methods of resources associated with estuaries into a specialized and systematic strategy, using such evidence as **Katelysia Rockshelter** near Wilson Inlet, with large amounts of burnt shell and fish bones in an occupation deposit at least 2,000 years old.

No open site in Walpole-Denmark region has been dated to the Pleistocene. However, several open air sites in coastal dune blow-outs from Broke Inlet to Point D'Entrecasteaux (100km west of Walpole) that include artefacts made from fossiliferous chert, suggests that Aboriginal groups were present in the region well before glacio-eustatic sea-level rise submerged the sources of this important raw materials. (Dortch and Garnder 1976, Glover 1984). Investigations of submerged artifact scatters on the floors of Lake Jasper and Broke Inlet affirm an Aboriginal presence that, in part, pre-dates mid Holocene glacio-eustatic sealevel rise (Dortch and Godfrey 1990; Dortch 1997a). Near these artefact scatters are large tree and grass tree (*Xanthorrhoea* sp.) stumps in growth position, the remains of the preinundation landscape. Preliminary analysis of wood from the stumps near the submerged sites suggests that people here camped in mixed woodland or open forest, that included Jarrah, peppermint, banksias spp., and Karri.

On the Southern Ocean coastline, two limestone rock shelters have sandy floor deposits containing stone artefacts and abundant food remains. At Nookanellup Rock Shelter, 100km west of Walpole, a few hundred stone artefacts and thousands of emu eggshell fragments are dated 2,600-700 years before present (Dortch and Kelly 1997). Other faunal remains include fragments of marsupial bone, claws of freshwater crayfish, marine fish-bones, and marine shell fragments. Virtually all of the faunal material is interpreted as derived from (human) meals, indicating a diverse diet based on exploitation of nearby swamps, creeks, and littoral rock platforms; and short-term winter and summer occupations (Dortch 1998).

Factors associated with preservation, disturbance, ground cover, traditional material culture and modes of adaptation ensure that the archaeological signature associated with the long and complex history of the people occupying present-day South Coast region will always pale in comparison to the richness described via oral history and ethno-historical sources. However, regional models document aspects of the socio-economic system, and archaeologists have identified generalized patterns pertaining to the region. This area provides an opportunity to develop these generalized models further, and examine a true, integrated landscape, in the analysis of the archaeological features, and potential movement corridors.

## Heritage values

Indigenous cultural and spiritual values may relate to a range of uses and issues including spiritual relationships, sacred sites, customary use, the plants and animals associated with water, drinking water or recreational activities" (Jackson 2006).

There is no single definition of “heritage value” as the term often has a number of associated components relevant to a particular area and a particular individual or group(s).

We must always remember that we conserve cultural heritage places not for themselves but for the significance that they have for people...In acknowledging the in-principle right of Aboriginal people to ownership of their own heritage, we recognise that the social significance of their heritage places is primarily determined by their own communities (Guilfoyle 2006:2).

The following list outline the various heritage “values” attributed to the Denmark River.

**Cultural:** The place is valued as a significant cultural place that exudes the actions and continued presence of the Ancestors. In this way it describes the Traditional Owner’s connection to the past and present, and contains meaning at a number of different levels.

**KWOORABUP BEELA and CORROBOREE SITE**

(This was told to me by my Grandmother of Bridgetown) by Wayne “Wonigii” Webb.

The Denmark River or Kwoorabup Beelia, as it has always been known to us, is one of the important travel route’s, pathways or bidi’s, that have been provided by Boodjera our Mother Earth for our Noongar people. As with many rivers, it guided the inland and hill people, towards the coast, to meet with the Salt Water and Pibulumun People. The Kwoorabup is nestled between two other very special rivers. To the west is the Kordabup River is the place of the Heart and is where the Women prepared themselves for their marriage ceremonies. To the east is the Ghennalup or Hay River which is the Ghenna or foot crossing of the Southern or Minang People. The Kwoorabup was born during the “mooditch boongarung” the great earth shaking and was created by the Spirit Snake or Warkel. So great were the creation spirits that they provided, food, water and shelter for all its inhabitants, so by following these rivers all our needs were met and foods and medicines made available to provide it’s people with nourishment but also goods to use to trade and barter with, upon meeting their cousin tribes. While the Women and children gathered their foods, such as bulbs and berries and shellfish such as gilgies, periwinkles and mussels. They conducted their dances and ceremonies and made their decorations and preparations for any marriages. All this, took place, in and around the Kordabup and surrounding Inlets. Meanwhile the Men had their special place on the bank of the Kwoorabup. This is the Men’s area, we now call the corroboree ground and like the Kordabup for Women, this site, at Kwoorabup, was used to initiate Boys into Men, teach important songs and dances, Elders solved any “Lore/Law Business”, which had been broken. Spear wood, unique stone and different animal skins and bones, different plants and medicine were traded, future marriages were arranged, and any land disputes were settled. Leadership problems were sorted and new rules decided, between all the different tribal groups. All this took place over a couple of weeks and although the Men and Women had their special ceremonial sites, when they took breaks from their rituals, everyone would fish and crab, they would hunt and teach the younger ones their skills, new tools were made with traded stones and woods and more importantly new friendships and Love’s were found. Feasts of shell fish where cooked and their shells discarded nearby creating mounds or middens of cockles, periwinkle, oyster and mussel. The Inlets, mountain, of brightly coloured, ochre’s were quarried to decorate ornaments, implements and themselves. Many Karla’s or fires with large flickering flames, seemed to reach to the stars along the Wilson Inlet shoreline.

The Humpy's looked like large boulders on the beaches and the singing and dancing of the people were only heard intermittently between the laughing and splashing of the children, playing in the shallow waters of the bay. The smells of roasting fish and meat would eventually entice families and children back to their own kaleeps, where the soft brush of the ti-tree covered by the skins of kangaroo and possum, coaxed everyone to lay down their heads and get some sleep, only to dream of days gone by and also of the days to come. These are the stories give a general view of how the Kwoorabup was used, the rituals and ceremonies, cannot be written but have been passed on to the Men and Women of our families and will continue to enrich our future generations, ensuring that they shall always be a part of our land, our country, our Boodgera.

From a management perspective, these values are included as the landscape setting and protection of the integrity of the variety of features and places that are associated with this river. It also requires understanding the landscape-level connections of the place with surrounding features.

The Deep River, the Denmark River and the Marbellup Brook were described as "special places" to contemporary Noongar people because of their ecological values. Because these catchment areas largely remain in a natural state their ecological values are of high importance. They maintain high water quality through the catchments feeding the inlets along the coast in which Noongar people continue to use as places to camp and fish. These rivers' systems are described as "supermarkets for Noongars" (Wayne Webb 2007).

**Social:** The place itself is a central component to community identity as it provides a sense of belonging, historical association, and is part of the ongoing cultural practice of "Caring for Country".

The Denmark River was described as a "special place" to contemporary Noongar people because of its ecological values and its value for fishing. The Denmark River in contemporary times is used as a place for swimming, picnics, camping and BBQs (Goode et al 2005:65).

The social value of places is an important consideration for cultural heritage management, with the notion that heritage is not static or fixed, but requires active participation.

The fact that a local community, indigenous or non-indigenous, may live in a landscape which is scattered with places where physical traces of past occupation are present, does not in itself create an identity association between those traces and the community. The association comes about through certain activities. These may include the work carried out to protect the traces from erosion or vandalism, the taking of visitors out to see the traces as part of a local cultural tourism venture. It may consist of a community member talking to a class at the local school about the traces, or it may consist simply of the reminiscences about the place which appear in an autobiography written by a community member (Byrne et al 2003:66-67).

**Archaeological:** As mentioned the banks of the River and surrounds contain a number of heritage features/places/values, as discussed below.

**Lizard Traps:** Atop granite outcrops exist numerous lizard traps that are a common feature of the South West. These features are constructed from slabs of granite, and with smaller stones used to pedestal the slabs and so creating a small enclosure. Presumably, these devices functioned as "traps" when people would move across outcrops scattering reptiles into these enclosures, to facilitate their capture.

**Gnamma Hole:** A series of natural holes atop the numerous granite outcrops also function as gnamma holes, or freshwater sources. Noongar people utilised natural holes in granite surfaces and also created their own water sources by firing/cracking/grinding out small depressions and then capping them with stone slabs.

**Stone Artefact Scatter:** The main camping area and surrounding bushland is associated with extensive stone artefact scatters, comprising a diverse assemblage of formal implements, debris associated with stone artefact manufacture and maintenance, and core reduction/shaping flakes. There are likely to be more scatters along the river banks, however these are currently obscured by thick ground cover.

**Shell Midden:** This site is located on the banks of the Denmark River, below the bridge in the middle of the Denmark town site. The site has undergone extensive disturbance due to development and use of the area in recent times. Shell middens were formed when people exploited shell fish and other marine resources and then left the remains such as bones and shells in a pile, which then built up over years and even decades of use. These types of sites are much more common on the north coast than the south coast, however this may not be a reflection of lack of marine exploitation but a reflection of site preservation and disturbance.

**Historical:** The area has continued to be used by Bibbulmun and Menang People throughout the post-contact period. In the earliest days of settlement, such areas provided a “refuge” for accessing traditional resources and maintaining traditions in a context of increasing segmentation of the landscape into farming properties, as the region’s European population increased and restricted patterns of traditional movement and settlement.

**Wild Resource Use:** Procuring and preparing cultural plants, wild animals, bush tucker, medicines, ochre, and other materials is a key component of Traditional practice. The community is active in this regard and maintains detailed knowledge of seasonality and uses of wild resources. The River provides an opportunity to provide access for this continued cultural activity, and has the potential to serve as a “store-house” for re-establishing certain cultural plants for ongoing procurement and use. Throughout the historical period, wild resource use procurement has become increasingly difficult for people and is often limited to narrow, roadside conservation corridors. Restrictions in national parks, reserves, and private land mean that the land area for obtaining resources in a traditional manner is quite low. This area provides an important opportunity and is a key component of the management plan. It raises issues related to land management, regulations of use and activity in Nature Reserves, but there is evidence to suggest that traditional wild resource use is an important component of maintaining biodiversity that has quite often been overlooked in conservation and land management policy. Rehabilitating the waterway will protect the many plants and animals associated with it and will improve the water quality.

It was stated that Noongar people continue to use traditional knowledge for fishing and continue to pass this knowledge of how to fish on to younger generations. Noongar people continue to cook their fish on the side of rivers and inlets in the coals of a fire or on a wire. In their opinion “food tastes better in the bush”. Cooking their fish in the spot they caught them was how the “old people used to do it” and is continued today as an important and constant cultural link with the “old people” and the traditional past (Goode et al 2008:162).



## HERITAGE SITES OF THE STUDY AREA AND SURROUNDS

There are a number of previously recorded sites in the area that demonstrate the intensive use of this area in the past. Given the inter-connections of heritage places and features, the Denmark River has a number of associated site components.

Table 2. Registered sites in the vicinity of the project area.

SITE ID	Site Name	Site Type	UTM Easting	Northing
18947	Denmark River Midden	Midden & ceremonial ground	532692	6131546
22081	Denmark River	Mythological	525893	6145210
4436	Poddy Point Burial	Skeletal Material/ Burial [Closed Site]	n/a	n/a
4483	Lake Bileveld	Artefacts/ Scatter	520740	6127246
4484	Amarillup Swamp	Artefacts/ Scatter	527640	6159647
4486	Lake Williams	Artefacts/ Scatter	524640	6125146
4553	Blue Lake/ Kockellup Spring [Archaeological Deposit]	Artefacts / Scatter	525140	6152647
4580	Denmark Quarry	Quarry, Artefacts / Scatter	532399	6128054
4643	Springdale Arrangement	Man-made Structure	536300	6130087
4668	Katelsia Rock Shelter [Archaeological Deposit]	Artefacts / Scatter, Midden/ Scatter	529740	6124296
4910	Lights Beach	Artefacts/ Scatter	524840	6124496
4946	William Bay	Artefacts/ Scatter	522640	6123646
5150	Wilson's Inlet	Rockshelter	530640	6127646
5707	Wilson's Inlet	Man-made Structure [Other: Food Resource]	531640	6128646
18948	Inlet Drive Granite Outcrop	Artefacts/ Scatter	532524	6128289
27936	Kwoorbup Corroborree Ground	Ceremonial, Historical [Meeting Place]	532563	6131496
-	Kockellup Springs	Traditional Camp and Hunting Place	523042	6153399
5475	Youngs Lake	Fish Trap, Artefacts/ Scatter	542640	6124646
22557	Koirchekup Hill (Youngs Siding)	Ceremonial	Closed	
4545	Youngs Siding Burial	Skeletal Material/ Burial	544640	6123646
5187	Kitsons Farm	Artefacts/ Scatter	544533	6125555
4600	Marbalup Fish Traps	Human-made structure, Fish Trap, Artefacts/ Scatter	542344	6126266
4554	Crusoe Beach Arrangement	Human-made structure, Fish Trap	539040	6128546



## Registered Sites Associated with the Denmark River

The following summaries are from Goode et al (2008)

**Site ID 22081 Denmark River** is registered as a mythological site and water source (recorded by Australian Interaction Consultants in 2005). The site extent was recorded as 30m from the normal high water mark. The Denmark River in its entirety was identified as a site of spiritual and cultural significance. The Aboriginal informants advised that the river was attributed with mythological significance in association with the Mardjít and also acknowledged as a past and present resource procurement area for Noongar people. This site is on the Interim Register and is yet to be assessed under the Western Australian Aboriginal Heritage Act (1972). If the site meets the criteria of the Act it will be entered upon the register under sections 5b as a place of mythological significance and a place of customary use. The entire Denmark River and its tributaries were identified as places of ethnographic significance as a resource gathering area and path of migration.

**Site ID 18947 Denmark River Midden** is an archaeological site with ethnographic features was recorded by the Denmark Environment Centre and reported by Mr Wayne Webb in 2002. The site is located within an area of public open space between the Denmark River and South Coast Highway. The site was reported as a ceremonial area of historical significance with a midden located approximately 5m from the banks of the Denmark River. Oral history from local non-Aboriginal residents advised that the area was a corroboree area in the 1900s and camps were located in the area. Local residents also advised that the Aboriginal people who camped in the area used to sell clothes and props in town and also bring Boronia to the site to sell to Perth via the train. Also located was a midden with shell material eroding from a track cutting on the eastern side of the Denmark River, approximately 5m from the river banks opposite the wooden jetty. Some of the shell located at the midden had clear evidence of burning. This site has a recorded 50m site extent and is on the Interim Register, yet to be assessed under the Western Australian Aboriginal Heritage Act (1972). The site represents a prehistoric camp on the margins of a large river that was in continuous use well into European settlement. The site was a ceremonial area reported to be still in use into settlement history.

**Site ID 22081 Denmark River Massacre Site** is reported to be located at the bridge where the Denmark River is crossed by the South Coast Highway. It was reported through oral history that a massacre occurred at this site and that today this place is Warra and that most Noongars are reluctant to go across the bridge after dark. No historical documentary evidence exists to support this report.

## Registered Sites linked to the Denmark River

**Site ID 4668 Katelysia Rock Shelter** is an archaeological site originally recorded by Charles Dortch and Kate Morse from the WA Museum in 1984. This site is 30m from Ocean Beach Road, adjacent to the "Prawn Channel", at the foot of the limestone cliffs at the point where they come closest to the paved road. A sandy deposit formed within the rock shelter is approximately 1m of dark organic sand. The lower 50cm of dark sand is a late Holocene midden deposit with stone artefacts, estuarine/marine fish bones, marine shells and charcoal. This site has been assessed by the APMC and is on the Permanent Register under sections 5(a), 5(c), 39.2(b) and 39.2(c) of the Western Australian Aboriginal Heritage Act (1972). The site represents an occupation area near a resource rich inlet.

**Site ID 4580 Denmark Quarry** is an archaeological site recorded by Geoff Evans from the Denmark Environmental Centre in 1997. This site is 3.7km south of the central intersection in Denmark town site, approximately 20m from a paved road running from the town site past Poison Point. The site is an outcropping dolerite dyke through granite showing evidence of low level utilisation. The number of artefacts found was 100 plus, including cores and flakes. Artefacts of this kind were dated 1500-2000BP at nearby Katelysia Rock Shelter. The site extent is recorded as 40m E/W x 60m N/S. This site has been assessed by

the ACMC and placed on the Interim Register due to insufficient information being provided. The site represents an occupation area near a resource rich inlet.

**Site ID 5707 Wilson's Inlet Denmark** is an archaeological site (fish trap) recorded by W. Dix in 1974. It is on the west side of Wilson's Inlet, half way between Denmark township and ocean beach near Two-Acre Island. The fish traps are described as comprised of series of irregular shaped yards or corrals of very weathered rocks, placed on top of one another, two to three feet high. The yards have inlets and outlets. This site has been assessed by the ACMC and is on the Permanent Register under sections 5(a) and 39.2(c) of the Western Australian Aboriginal Heritage Act (1972). This site represents a man-made structure used by traditional Noongar people to catch fish.

**Site ID 18948 Inlet Drive Granite Outcrop** is an archaeological site recorded by the Denmark Environment Centre and reported by Mr Wayne Webb in 2002 as an artefact site. The site's central point is located 30m on the west side of Inlet Drive with a site extent of 25m radius. The site contains numerous dolomite flakes over a granite outcrop. Over 500 flakes were located on site, including cores, flakes, a small number of quartz flakes and balls of Balga gum. The site also contained holes that may have been used for water. This site is on the Interim Register and is yet to be assessed under the Western Australian Aboriginal Heritage Act (1972). The site represents an occupation area near a resource rich inlet.

**Site ID 5150 Wilson's Inlet** is an archaeological site recorded by Nicolas Green for the WA Museum in 1981. It is above a large limestone bluff within Wilson Inlet, approximately 50m west from Wilson Inlet Road. The site is described as limestone rock shelter approximately 25m x 4m in size. Burnt mussel and whelk shell were located on the floor and around what appeared to be a recent hearth. Old ground glass and edge flaked brown and green glass was scattered around the floor. Small quartz flakes and chips were found on top of the shelter with an oyster shell. A blackened ceiling was found in the shelter due to carbon and fungal growth. This site has been assessed by the ACMC and placed on the Interim Register due to insufficient information being provided. The site represents an occupation area near a resource rich inlet.

**Site ID 22557 Koirchekup Hill** (Young's Siding) is an ethnographic site recorded by Brad Goode in 2005. This is a site of ceremonial significance associated with men's initiation rites. The site is within a rocky peak on Koirchekup Hill Reserve 24823, which is a low wooded hill directly south of Lake Sadie and Thompson Roads. The area was formerly a City reserve that was used as a rubbish tip and was closed in 1997. The extent of the site encompasses the entire reserve. As the site is restricted no ethnographic information about the sites cultural details can be given. This site is on the Interim Register and is yet to be assessed under the Western Australian Aboriginal Heritage Act (1972). The site represents a camp and ceremonial area located near permanent potable water.

**Site ID 4484 Amarillup Swamp** is an archaeological site recorded by Charles Dortch from the WA Museum in 1991. It is north of Blue Lake and is located in Clear Hills State Forest on Clear Hill's road. The site is recorded as a small shallow lake surrounded by low eucalypt forest. Stone artefacts were scattered along the periodically exposed western shoreline of the Lake. The site extent is recorded as 400m x 300m. It was noted in the site file that the lake was likely to have been an important water source and provider of aquatic food. This site has been assessed by the ACMC and placed on the Interim Register due to insufficient information being provided. The site represents a traditional camp associated with a permanent focal water source.

**Site ID 4553 Blue Lake/Kockellup Spring** is an archaeological site with ethnographic features originally recorded by Charles Dortch in 1988. Blue Lake is located at the intersection of Granite Road and Blue Lake Road. A scatter of quartz artefacts and granite fragments were located on the eastern shoreline of the lake. This site's extent was recorded as 50m x 10m. Blue Lake was re-recorded by Myles Mitchell in 2006. The site was reported as an important camping place and valuable resource gathering area. Within the vicinity and west of Blue Lake on a granite outcrop up to 50 lizard traps were located. This granite outcrop area also has a large open space, which was suggested to possibly have been a traditional



corroboree ground. One of the informants advised that the unusual amount of lizard traps and the cleared area on a granite outcrop and closeness to freshwater was consistent with those used for corroborees or large inter-tribal interactions. This site was originally assessed by the ACMC and placed on the Interim Register due to insufficient information being provided. However, the new information provided in 2006 has not yet been assessed, so the site's registration could change. Mitchell in 2006 did not provide location or extents for the site. During our current survey the ethnographic features for Blue Lake and the granite dome containing lizard traps was re-recorded, as was Kockellup Springs. These springs are actually north of Blue Lake but are associated with the lake. This site was reported as an important traditional camp site, water source and mythological site on the Denmark River system. It was also stated that Noongars still visit and camp at Blue Lake.

**Kockellup Springs** was reported by Wayne Webb as a traditional camp site, water source and hunting place. Mr Webb and Mr Erik Krakouer reported that Noongars continued to camp and hunt in this area well into the historical period (dates not specified). Mr Webb said that the "old people" talk about the area's traditional use. The spring is centred upon 523042mE and 6153399mN with the camping area reported as a 50m radius.

While the archival data and results from regional surveys provide some use for generalized predictive statements about the character of archaeological resources in certain areas, what is lacking is an attempt to connect networks of sites and features with group territoriality, patterns of movement/interaction, and landform configurations at the sub-regional level. Ethnographic accounts and ethno-historical data describe a dynamic picture of past use and occupation of this area based on seasonal movement and complex understandings of the region's ecosystems, and as more archaeological work is completed, more evidence of this dynamic adaptation will be revealed.

## CONDITION OF THE HERITAGE VALUES

### Human Impacts

Tracks and access routes providing for recreational activities such as trail bike riding, powered boats, land use clearing, runoff from chemicals and fertilisers, and other activities can potentially negatively impact upon cultural features and native vegetation.



Figure 5. Section of run-off channel acting as a filtration system.



## Weed Infestation

Weeds overrun much of the river banks and the potential for further colonisation of weeds is a significant threat. Invasive weeds if not controlled, will over time, degrade the sites ecological, biodiversity, cultural and heritage values. At least 16 species of grass, herb, trees and shrubs are considered weeds. The Shire of Denmark is working with a number of organisations and community groups to carry out ongoing weed eradication and control activities.

## Rubbish and Runoff

Access to the river is not always controllable, and can lead to contamination through littering and chemical run-off which affects the whole waterway and catchment. Further littering occurs from passing traffic on south coast highway. Submerged logs and branches pose threats to recreationists if not regularly monitored.

## Erosion

The gentle slope of the banks of Denmark River makes them susceptible to wind and water erosion which can undermine the associated cultural features. Revegetation along the river banks will form contours, thus reducing the likelihood of gullying and erosion.



Figure 6. Eroding banks and cleared land within the protected site area.

## Introduced and Feral Animals

The area is home to populations of rabbits and foxes that impact the native flora and fauna. Environmentally sensitive baiting and control methods should be established, in collaboration with surrounding landowners. This should occur in tandem with the planned revegetation works to ensure protection of the new shoots and seedlings.

## Noise Pollution

The bordering highway is a source of noise pollution that impacts the spiritual qualities and aesthetic appeal of the place. Revegetation plans should consider denser planting as a noise barrier.

## LEGISLATION AND POLICIES TO MANAGE THE HERITAGE VALUES

River catchment systems are areas rich in natural resources and therefore there is a very high likelihood of encountering cultural heritage sites within these places. In this light, the cultural heritage values identified here in association with the River should be considered significant. All Indigenous cultural heritage places - recorded, unknown or un-assessed - are protected under the provisions of the Aboriginal Heritage Act (1972). This Act acknowledges traditional, historic and archaeological significance and is administered by the Department of Indigenous Affairs. Other Acts of relevance are the Commonwealth's *Native Title Act 1993* and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1993*.

### Aboriginal Heritage Act (1972)

The Western Australian Aboriginal Heritage Act (1972) protects all places of importance and significant to Aboriginal people. This Act provides legal protection to sites of significance and provides processes for ensuring sites are not at risk or disturbed from specific projects or activities.

Places associated with or significant to Aboriginal people are classified as sites and are protected under the *Aboriginal Heritage Act 1972*. This applies to all sites whether or not they have been formally registered with the Department. Indeed heritage approval is needed for any activity within the boundaries of an Aboriginal site.

A brief extract from the Department of Indigenous Affairs web page explains the process (see [www.dia.wa.gov.au](http://www.dia.wa.gov.au)).

When anyone wants to use some land for a development, maybe a new mine, a factory, tourist centre, bridge, road or houses, they must find out if there is an Aboriginal heritage site on the land. The developer could be an individual, a company or a government agency. Under the Act it is an offence for anyone to excavate, damage, destroy, conceal or in any way alter an Aboriginal site, or any object, without the Minister's permission. The Minister is advised on heritage matters by the Aboriginal Cultural Material Committee (ACMC) which is made up of Aboriginal men and women representing different parts of the state. When anyone wants to use land which might disturb an Aboriginal site or object they are advised to undertake detailed anthropological and archaeological heritage surveys to find if there are any sites or objects in the area. These include searches of the Sites Register and should also involve discussions with Aboriginal groups who have an interest in the sites or objects. If the land does contain sites or objects which would be disturbed by the development, the developer must apply under the Aboriginal Heritage Act to get permission from the Minister for Aboriginal Affairs to get ahead with the development.

This Act therefore protects cultural places and objects and places the onus on the land manager/developer to adhere to the legislation.

Section 5 of the AHA defines an Aboriginal site as;

- a) Any place of importance or significance where people of Aboriginal descent have, or appear to have, left any object, natural or artificial, used for, or made or adapted for use for, any purpose connected with the traditional cultural life of Aboriginal people, past or present;
- b) Any sacred, ritual or ceremonial site, which is of importance and special significance to people of Aboriginal descent;
- c) Any place which, in the opinion of the committee, is or was associated with Aboriginal people and which is of historical, anthropological, archaeological or ethnographical interest and should be preserved because of its importance and significance to the cultural heritage of the State; and
- d) Any place where objects to which this Act applies are traditionally stored, or to which, under the provisions of the Act, such objects have been taken or removed.

As a result of this definition a breach of Section 17 of the AHA occurs when a person excavates, destroys, damages, conceals or in any way alters any Aboriginal site; or who deals with in a manner not sanctioned by relevant custom, or assumes the possession, custody or control of, any object on or under an Aboriginal site, commits an offence unless he is acting with the authorization of the Registrar under Section 16 permit or the consent of the Minister under a Section 18 consent notice.

The Department of Indigenous Affairs assist in advising how any proposed works or planned events may breach any section of the Aboriginal heritage Act (1972). For major impact or development this requires ministerial consent under the Section 18 process of the Act. Research work including archaeological excavation can be carried out with the consent of the Registrar of Aboriginal Sites under section 16 of the Act, while non-deleterious work or land care activities that will enhance the cultural values of the site can occur with the under the new Regulation 10 permit system. Details of these processes can be found on the DIA web site. However if permits are obtained but additional cultural features are identified during the project, work should cease, the area should be isolated, and representatives from AHRGAC and DIA should be notified. The processes for legislative compliance specific to the Denmark River are detailed below.

The Aboriginal Heritage Act 1972 provides for the preservation, on behalf of the community, of places and objects customarily used by or traditional to the Aboriginal people of Western Australia. Before reviewing the list of current projects and plans relevant to the River requiring heritage management and legislative compliance, this section briefly reviews the relevant Sections and processes to be followed for different types of development.

The *Aboriginal Heritage Act 1972* ("the Act") protects all Aboriginal sites in Western Australia whether they are known to the Department of Indigenous Affairs ("DIA") or not.

Prior to any proposed development/activity, so that no site is damaged or altered (which would result in an offence under **Section 17** of the Act) the proponent is advised to consult with the relevant members of Noongar community. If an Aboriginal heritage ethnographic and archaeological survey has not already been completed then it is advisable to engage suitably qualified consultants to conduct ethnographic and archaeological surveys of the area. This should ensure that all Aboriginal interest groups are consulted so that all sites on the designated land are avoided or identified. Such a survey would involve archival research, consultations and on the ground inspections. A survey should also ensure that the provisions of the Act are met.

It is DIA's preference that any development plans are modified to avoid damaging or altering any site. Should this not be possible, and in order to avoid committing an offence under the Act, the landowner may seek the Minister for Indigenous Affairs' prior written consent to use the land. This is done by submitting a notice in writing under **section 18** of the Act ("a section 18 Notice") to the Aboriginal Cultural Material Committee.

Guidelines for lodging a section 18 Notice are available from DIA's website at <http://www.dia.wa.gov.au/Heritage/Standardsweb/s18Notice/s18Toc.aspx>.

### **ACMC Assessment**

The Act establishes the Aboriginal Cultural Material Committee (ACMC). Its functions include considering applications under section 18 of the Act by owners of land to use land on which Aboriginal sites or objects are located and recommending to the Minister for Indigenous Affairs whether consent should be given to the use of the land for the purpose sought. After considering the recommendations of the ACMC and having regard to the "general interest of the community", the Minister may either consent to the use of the land for the purpose sought or refuse to consent. If the Minister consents, he/she may attach conditions to the use of the land.

Each Notice will only be presented to the ACMC when the Registrar assesses that the Notice (and associated information) enables the ACMC to make an informed assessment under the Aboriginal Heritage Act 1972. Each Notice must at least enable the ACMC to:

- form an opinion as to whether there is any Aboriginal site on the land subject to the Section 18 Notice, and;
- form an opinion as to whether the purpose described in the Notice would result in a breach of section 17 of the Act unless the Minister gives consent under Section 18;
- evaluate the importance and significance of any such site;
- make recommendations to the Minister for Indigenous Affairs as to whether the Minister should consent to use the land for the purpose described in the Notice; and
- recommend any or to what extent conditions should be placed on the consent.

### **Section 16**

The right to excavate or to remove anything from an Aboriginal site is reserved to the Registrar. If you want to conduct a detailed investigation of an Aboriginal site that may result in a site disturbance you need to apply for a Section 16 permit. A Section 16 permit is designed to enable detailed investigation primarily of archaeological sites.

### **Archaeological monitoring**

A permit is necessary to undertake monitoring of development works where archaeological material might be present. Archaeological monitoring is applied particularly in situations where there is reason to suspect that burials are present and/or sub-surface cultural resources.

### **Historic sites**

Many historic sites (such as missions, pastoral homesteads, train-lines, gaols and cemeteries) have direct associations with Aboriginal people. Many others, such as shire depots, rail yards and hospitals may have indirect associations. When investigating such places, possession of a Section 16 will ensure that works do not result in a breach of the law when you uncover Aboriginal cultural materials.

### **Regulation 10**

Where proposed activity is planned that will impact on a site but the nature of the work is such that it is unlikely to be deleterious to the preservation of that site an application under Regulation 10 may be sought. This will still require evidence of consultation with Traditional Owners. Approval is given by the Registrar of

Aboriginal sites and a response to the application is usually received within a matter of days. Regulation 10 applications are usually suitable for heritage protection and interpretation activities and environmental management work. Where the proposed activity has a deleterious purpose, such as construction or development, another more appropriate form of consent may be appropriate, such as consent under section 18 of the Aboriginal Heritage Act 1972 (WA). Please contact the Department of Indigenous Affairs for appropriate advice.

### **Unforeseen events**

In the event that unforeseen discoveries or disturbances to the heritage features are identified, an impact statement should be prepared and submitted to the DIA and Traditional Owner representatives. Unforeseen discoveries may include the emergence of information on potential threats to heritage values or new information about the nature of those values. It is advisable that a heritage impact statement template is developed and provided to all staff and workers, allowing a wider level of monitoring to take place as the range of activities are carried out.

### **Environment Protection and Biodiversity Conservation Act 1999**

The Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the Act as matters of national environmental significance. There is potential to have this regional, integrated landscape listed within the EPBC Act given the unique, natural and cultural heritage conservation values

### **Native Title Act (1993)**

The property falls within the Region 4 Wagyl Kaip Native Title Claim. Claimants and their representatives from the South West Aboriginal Land and Sea Council should be kept informed of property developments and events. It is suggested that the history of land acquisition and community management demonstrated here is a process that could benefit native title negotiations. The programme has already delivered desired native title outcomes, albeit at a small scale.

### **Aboriginal and Torres Strait Islander Heritage Protection Act 1993**

This Act preserves and protects from injury or desecration, areas and objects in Australia that are of particular significance to Aboriginal people in accordance with Tradition. This Commonwealth Act provides additional protection for places of heritage significance over and above that offered by state legislation. Under this Act, Aboriginal people can apply to the Commonwealth Minister for Aboriginal Affairs for a declaration prohibiting activities that, in their opinion, negatively impact on Aboriginal sites.



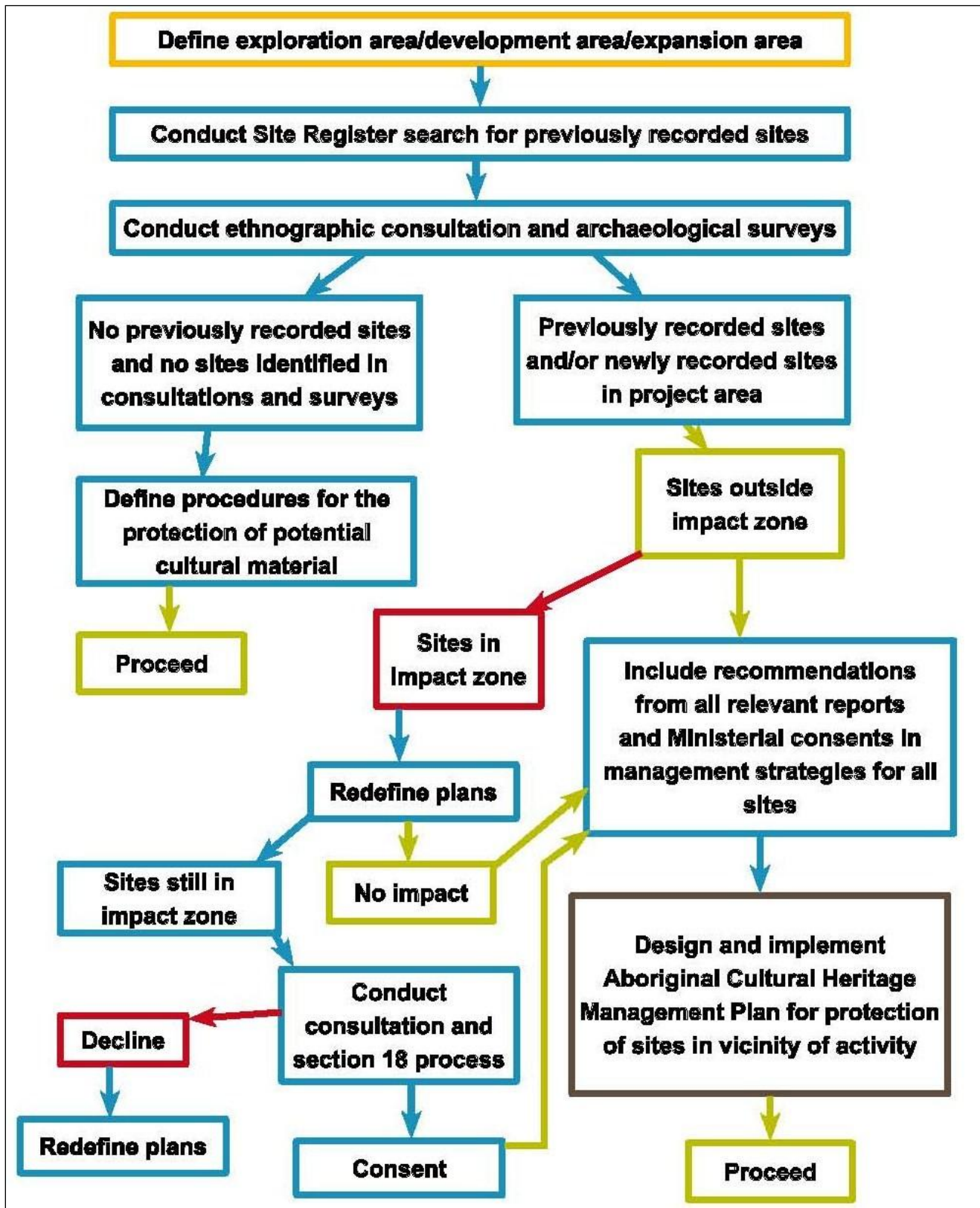


Figure 7. Guidelines for the development of a heritage management plan and actions (DIA).

## COMMUNITY AND STAKEHOLDERS CONSULTATIONS

### Methodology

An integral part of the method for assessing the values was through consultation with Traditional Owners and relevant stakeholders. The representative bodies are listed below and information has been provided to all these individuals and groups pertaining to each project and management plan action. The consultation process methodology involved a holistic, diverse approach, including:

- One-on-one interviews with Traditional Owners
- Cultural mapping surveys and meetings
- Field trips with Traditional Owner Groups
- Public Meetings
- Meeting with heritage agency representatives (e.g. DIA)
- Meetings with Shire NRM officers and planners
- Review of previous ethnographic and planning reports relevant to the region.

Table 3. List of consultation meetings and representatives.

Date	Location	Description	Attendees	Affiliation
15/09/2010	Denmark Office	Shire Project Planning Meeting	Cindy Simpson Yvette Caruso	Shire Planner Shire NRM Officer
01/07/2010	Denmark Office	Meeting with landowners, Shire officers, DIA representatives and Traditional owners to discuss the project and plan.	4 Landowners Joey Williams Wayne Webb Robert Reynolds Cindy Simpson Diane Harwood	Landowner Traditional Owner Traditional Owner DIA Shire Denmark Weed Action
25/07/10	Denmark River	Meeting with Bibbulmun/Wardandi representatives to discuss project and identify management actions	Wayne/Toni Webb Isaac Webb	Traditional Owner Traditional Owner
28/07/2010	Denmark River	Meetings with Elders and GreenSkills to survey key areas and discuss management actions.	Jack Williams Joey Williams Basil Schur	Traditional Owner Traditional Owner GreenSkills Inc.
10/08/2010	DIA Albany	Meeting with the Albany Reference Group Aboriginal Corporation discussing the project and key management issues/actions.	Vernice Gillies Lynette Knapp (Winnie) Larsen Mary Wynne Stan Loo Kelvin Penny Averill Dean Edith Penny	Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner
12/09/2010	Denmark River	Meeting and survey with Elders to discuss management issues.	Wayne/Toni Webb Joey Williams Ryan Humphries	Traditional Owner Traditional Owner Traditional Owner
15/09/2010	Denmark River	Meeting with NRM officers and TAFE to discuss environment projects.	Mark Parre Joey Williams Ryan Humphries TAFE students	Shire Traditional Owner Coordinator TAFE
18/11/2010	DIA Albany	Meeting with heritage officers to discuss legislation, compliance and overall heritage management plan.	Harley Coyne Robert Reynolds	DIA DIA
23/11/2010	Denmark River	Meeting on-site with representatives of all Traditional Owner families as a cultural mapping exercise, survey, and development of management actions.	Vernice Gillies Lynette Knapp Jack Williams Winnie Larsen Mary Wynne Aden Eades Oscar Colbung	Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner

			Stan Loo Bill Woods snr Bill Woods jnr Kelvin Penny Averill Dean Edith Penny Diane Coyne Lindsay Dean	Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner
28/11/2010	Denmark River	Meeting with Bibbulmun/Wardandi representatives to discuss project and identify management actions	Wayne/Toni Webb Isaac Webb	Traditional Owner Traditional Owner
14/12/2010	Albany Aboriginal Corporation Centre	Meeting to review draft plan and include feedback from Traditional Owners.	Vernice Gillies Lynette Knapp Winnie Larsen Mary Wynne Aden Eades Oscar Colbung Stan Loo Bill Woods jnr Kelvin Penny Averill Dean Edith Penny Dallas Coyne	Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner Traditional Owner
28/01/2011	Denmark River	Meeting with Bibbulmun/Wardandi representatives to discuss project and identify management actions	Wayne/Toni Webb	Traditional Owner
06/02/2011	Denmark River	Meeting with Traditional Owners and Landowners to discuss waterway management	Wayne Webb Bruce Smith	Traditional Owner Landowner
07/02/2011	Department of Water	Meeting with DoW officers to discuss plan the agency requirements and input.	Murray Gangell Kirsty Alexander	DoW DoW
07/02/2010	Shire Office	Meeting with landowners, Shire officers, DIA representatives and Traditional owners to discuss the project and plan.	Cindy Simpson Yvette Caruso Wayne and Toni Webb Dianne Harwood Melissa Howe 4 x Landowners	Shire Shire Traditional Owners Denmark Weed Action Denmark Weed Action Landowners

## Identification of Spokespeople and Representative Bodies

Traditionally, the Denmark River is a shared zone between the Bibbulmun/Wardandi and the Minang. For a discussion on traditional boundaries and associated ethnographic information see Appendix C. Informants were selected by Ms Vernice Gillies (Minang) and Mr Wayne Webb, both active members of their communities, and with detailed knowledge of heritage management issues and methods. Ms Gillies organised representatives from each of the 12 families belonging to the Albany Heritage Reference Group Aboriginal Corporation (AHRGAC), and with associated Native Title Working Party affiliations. Advice from the DIA indicated that this was a well-represented consultation group who can inform and guide the development of this management plan. The Traditional Owners that participated in the various project meetings and field work are listed in Table 3.

Several attempts to address the South West Aboriginal Land and Sea Council (SWALSC) working party did not eventuate due to very busy Native Title meeting agendas. However, it was resolved that with the purpose of developing a heritage management plan, the local representatives available would provide the appropriate level of guidance and input. The management plan would then be officially submitted to SWALSC for review. Any implementation of the plan would require formal consultation and input of the Working Party. In addition, the consultant sought advice from the following local groups and agencies.

### **Albany Heritage Reference Group Aboriginal Corporation**

The Albany Heritage Reference Group Aboriginal Corporation was established in late 2006 in order to protect and conserve the natural and cultural values of the Albany region. Subsequent to the formation of the AHGRAC a 30 ha property was purchased adjacent to the Lake Pleasant View near the Many Peaks townsite on the south coast of Western Australia. Since then the Group has been actively managing a diverse number of heritage projects and remain active in the region as an avenue for heritage consultation and guidance. The current management structure within the Albany Heritage Reference Group Aboriginal Corporation and the Dowark Foundation provide an effective mechanism for ensuring protocols are maintained and information is distributed to community for decision making and discussion. It also provides an important framework for researchers and interested parties to discuss proposals and events with the Group, and so receive appropriate guidance at the earliest stages of a proposal.

### **Dowark Foundation Members**

The Dowark Foundation has been established to conserve and interpret the Indigenous heritage values of the South West of Western Australia, the Traditional Country of the Bibbulmun and Wardandi People. The objective is to maintain and protect the environment, culture and heritage values of the South West. The Foundation does this by coordinating a number of inter-connected educational and conservation projects as the platform for ongoing sustainable management of the Region's history, heritage and cultural landscapes. The administration, auditing and insurances are provided by the National Trust (W.A.), that ensures local community groups and supervisors can get on with the on-ground business, critically important in the formative stages of this long-term programme, and ensures effective and high-level Programme Management.

### **Department of Indigenous Affairs (South Coast)**

This government agency has been directly involved with the Indigenous communities of this region for several years, and is providing direct support to facilitate heritage compliance permits and obligations, mapping and database resources, staff time for workshops and training. DIA officers in Albany can guide persons and organisations on appropriate levels and methods of community consultation and heritage legislation compliance.



Figure 8. Consultation meeting with AHRGAC members on 23/11/2010.





Figure 9. Meeting with Traditional Owners, archaeologists and TAFE trainees in regards to heritage and environmental management actions on 15/09/2010.



Figure 10. Traditional Owners identifying target areas for conservation works on 23/10/2010.





Figure 11. Traditional Owners and heritage professionals meeting at significant cultural meeting place on the banks of the River on 23/10/2010.



Figure 12. Planning meeting 28/07/2010.



Figure 13. Public meeting with landowners, environmental groups, DIA representatives and Traditional Owners on 1/07/2010.



Figure 14. Meeting with heritage professionals and Traditional Owners meeting at area in need of conservation works.





Figure 15. Workshop with Shire reveg guru Mark Parre and Noongar TAFE crew.



Figure 16. Traditional Owners and heritage professionals meeting along the Denmark River on 25/07/2010.





Figure 17. Traditional Owners on Country on 25/07/2010.



Figure 18. Consultation meeting with Traditional Owners and landowners (06/02/2011).

**Previous Consultations: Denmark River**

It was stated that the Traditional owners have previously been consulted regarding their values and management recommendations specific to the Denmark River. The outcomes of these consultations are include here, and incorporated into this plan. A recurring issue that Traditional Owners have raised is the pattern of repetitive consultation without formal integration and follow-up. As such, it was suggested that comprehensive consultations specific to the Denmark River (by Goode et al 2008) be incorporated here.

**Department of Water Study – Brad Goode and Associates 2008**

The Denmark River was identified as a sacred and special place to Noongars spiritually. No specific mythological associations with regards to the Denmark River “sacredness” were recorded but the informants did state that it is their firm belief that the Mardjit, the South Coast water snake, was responsible for the creation and maintenance of the health of this river and it is believed that Noongar people have a cultural responsibility to maintain and protect this waterway.

The Noongar informants identified that the embankment of the Denmark River near the bridge on the South Coast Highway is Warra, an avoidance area due to the occurrence of bad spirits. It is believed that a historical massacre occurred at this place sometime after settlement. The Denmark River was also identified as a “**special and important place**” to Noongars for fishing and other aspects of customary use associated with the collection of **bush foods and medicinal plants**. Noongars identified that deep and permanent pools along the Denmark River are important **camping and fishing sites**. These locations have value as places for **recreational and family gatherings**.

The Scotsdale Brook was also identified as a special and important place to Noongar people as this brook feeds the Denmark River and the Wilson Inlet. It was advised that instead of paying local landowners on an ad hoc basis to erect **stream fencing** within their own properties, a more **strategic and regional policy approach** was needed. The group stated that **weed infestation** throughout the catchment is a major threat to stream health. The group said the weeds in the upper catchment of the Denmark River and Scotsdale Brook are spreading downstream into the forested areas and are diminishing the natural values of these watercourses riparian zones. A strategic approach to fencing of streams and rehabilitation through agricultural areas is needed to maintain the **natural values** of these waterways. It was identified that Noongar corporations could be commissioned to implement large scale rehabilitation programs, particularly on government and Shire controlled land. It was identified that the construction of dams along the Scotsdale Brook and other waterways in the Denmark catchment was a major threat. The building of dams diminishes the value of all waterways as reduced stream flow ultimately affects the Wilson Inlet. Mr Webb said that dams “starve the rest of the country downstream of water” and activities such as this are **culturally inappropriate** and go against Noongar values of **sustainability**. The group identified self interest as the main motive behind building dams: “everybody is looking after themselves”.



In terms of threats to the Denmark catchment, the group believed that **lack of local planning regulations and control** (Shire) and the lack of mechanisms within state water legislation to enforce control on damming is the largest single threat to the health of the Denmark catchment. Mr Eric Krakouer made the statement: “The dams stop water from reaching the estuary and that would kill our country. If the water is stopped all the country will die.” The group identified that **unregulated construction of infrastructure and urbanisation** along the margins of watercourses within the Denmark catchment is a major threat to the maintenance of Noongar cultural values. Construction activities that destroyed riparian zones and the bed and banks of streams are seen to contribute to the reduction of food habitat and the increase in downstream pollution due to sedimentation.

By way of example, a bridge being constructed by a farmer on the Scotsdale Brook had caused considerable damage to riparian vegetation by excavation for abutments and had caused pollution by steel supporting structures being concreted into the stream’s bed. The group said: “driving pylons into the Scotsdale Brook was like spearing our mothers gut”. Another example identified as a threat to riparian zones from inappropriate urban development is the construction of the new Denmark hospital adjacent to the Denmark River. To address these issues it was suggested by the Noongar informants that the Shire should enact **by-laws that prevent and regulate construction activities on the margins and within local waterways**. This would be the most effective way of encouraging environmentally and culturally appropriate activities. As a part of these policies, Noongar values of sustainability should be incorporated into infrastructure designs such as not blocking flow, not polluting and protection of the riparian zone.

### Discussion

Several observations can be made from the above consultations with representatives of the Noongar community with regard to the values associated with the waterways within the Denmark catchment. At a broad philosophical level the language used nicely conveys Noongar cultural values and the **reverence they hold for water sources**. Terms used to describe the flow of water across the landscape and ultimately into the estuaries were that the water feeds the country, that rivers are the **veins feeding the heart** (the estuaries) and the streams from these rivers are the capillaries nourishing the landscape (the body). To Noongars, to block the flow of water is to starve the country (fish, animals, trees) and to reduce or stop the flow of water would kill the country. It was particularly stated that to block the flow of water in the rivers and main streams would kill the estuaries and by extension would destroy Noongar culture.

Rivers observed to be in a poor condition were described as suffering from a slowing down of life and were dying off. Rivers in a highly degraded state with few or no natural features left intact were described as being dead. The use of these terms indicates a strong belief in the water being a **source of nourishment and life**. The **landscape as a whole is seen a living thing**, an entity that Noongars are a part of, related to, but not separate from. This view and the language used very much sums up the ecological metaphysical paradigm of Noongar culture and its reverence for the natural world. The importance to Noongar culture of preserving the natural world, in particular the waterways, cannot be overstated.

### Traditional Owner Recommendations for Denmark Catchment

- Noongar consultants felt all government agencies, including Denmark Shire need to form a **partnership** in order to create a more strategic policy structure to protection of waterways within the Denmark catchment.
- The Noongar participants recommend that a **strategic rehabilitation policy** with regard to private land owners is created and the management of waterways through their properties. Measures such as riparian zone fencing and river restoration should be done on a catchment wide level rather than on an ad hoc basis by individual land owners. Funding could be directed to a local Shire initiative by which local restoration contractors could be employed to conduct the work. This could include the participation of Noongar corporations. This approach would then have a much more widespread effect in a much shorter time, protecting what is left of the region's waterways before they are degraded beyond help.
- The establishment of legislation for private land holders to protect riparian zones within the Denmark catchment should be enacted. **Protection measures** would include fencing within a specified distance of a waterway, weed control, measures to control clearing in the upper catchment, measures to control salinity and pollution entering water systems from the catchment.
- Urban development should be restricted and conservation **boundary zones increased** within close proximity to all watercourses and riparian zones within the Denmark catchment.
- Urban development adjacent to the shores of the Wilson Inlet should not be privatised into exclusive estates fringing the waterways, thereby denying access to the Noongar community and the public.
- Noongar values should be incorporated into infrastructure designs on structures that affect waterways in the Denmark catchment. Infrastructure designs should follow consultation with the Noongar community.
- All developments near waterways need to consider Noongar values and heritage issues by means of ethnographic and archaeological surveys prior to works taking place.
- The Noongar community has recommended that the local Shire, in consultation with the DIA, set up a workable protocol arrangement with regards to **appropriate Noongar consultation** in the Denmark area. The model of a reference group that is now having considerable success in Albany was suggested as a possible way forward. Any initiative to set up such a group would have to be community driven in order to succeed.
- The Noongar community recommend that no more water abstraction take place from surface and groundwater sources within the Denmark catchment. It is the view of the Noongar community that waters that flow into the Wilson Inlet have already diminished to a level that threatens the sustainability of the system.
- It was recommended that a more **sustainable water management policy** be developed within the Denmark catchment. This would focus upon recycling and the harvesting of rainwater should be initiated, rather than reliance upon continually extending supplies for growth.

## VISION

The vision for the Denmark River Foreshore is as follows:

- Recognising that the Foreshore is a much loved asset of our community in the heart of our town.
- Protecting and enhancing the environmental and heritage values of the Denmark River Foreshore Reserve whilst balancing the recreational needs and aspirations of the community.
- Developing the Denmark River Foreshore to the north east of the town road bridge which protects the Traditional Meeting Place whilst considering other recreation uses of this area.
- Management of this area being done in a culturally sensitive manner that meets the Shire's legal obligations under the Aboriginal Heritage Act 1972.

## MANAGEMENT THEMES

This section outlines the overall management considerations as defined by the Noongar community and which stems from the detailed management actions and projects outlined by the Traditional Owners and the Shire. The objective is to integrate natural and cultural heritage management actions for the protection of a landscape heritage site that is the Denmark River.

The management themes are as follows:

- Conservation and land/waterway management
- Communication and consultation
- Research, training and education
- Interpretative signage
- Access to funding and support from relevant agencies
- The implementation of statutory and strategic planning mechanisms
- Monitoring

The Traditional Owners have indicated that the primary avenue for maintaining the cultural integrity of the area is to ensure the quality of the water and surrounding native vegetation. They indicated that the main threats were related to water quality (run-off, algae), the invasive weeds, inappropriate recreational use, and ineffective planning/approval mechanisms. It was recommended that the river be provided with a wide vegetation buffer, fenced off from stock, undergo a process of weed and feral animal control, and regularly maintained/monitored.

“Caring for Country” is a central element of traditional custodianship, identity and cultural practice. Looking after the “bush” is as important today as it ever has been for the Traditional Owners. An agenda that focuses on maintaining the cultural resources associated with this area has great potential to provide an effective process for ongoing ecological/biodiversity management, with a number of flow-on effects in the realm of public education and community engagement in the process.

Cultural heritage management is focused on people. Mechanisms are required to ensure that community processes are embedded in all aspects of planning, management and associated actions. This is because heritage values are derived from how people interact with heritage, history and landscape, and so to not have people actively involved poses threat to the cultural values of the area.

## 1. Conservation and Land/Waterway Management

This River is a registered site. To protect the cultural values associated with this river, a conservation buffer and ongoing environmental management works (weed control, revegetation etc) are required. A clear **long-term management recommendation** is to secure stands of remnant vegetation that also correlates with the boundary of the heritage site. This would assist in protecting the inherent natural and cultural values of the area, in the context of a developed zone.

Many of the cultural features have undergone extensive damage, some irreversible. As mentioned, restoring the cultural values of the river involves carrying out environmental management operations (weed control and revegetation), but with the added social outcomes related to community events. Many people speak of the place “healing”, not only from the restoration work, but the fact that people are using the area and involved in the programme.



Figure 19. One of main target areas in need of conservation work including weed control and revegetation.

Vegetation buffers are a necessary feature to maintain the quality of the waterways and river catchments. The vegetation ensures that a certain level of drainage is maintained through the soils and avoids a build-up of salts and water table rises that may lead to ongoing problems of salinity and nitrification. Conservation buffers trap pollutants from entering the waterway, protect fish and birdlife habitats, essential elements of this registered site and associated cultural values.

For protecting the specific cultural features like stone artefact scatters, revegetation and stabilization of the environment serves as the most direct method of conservation. This requires due consideration of the spatial distribution and extent of certain features as a result of archaeological investigations. In some instances, direct restoration actions may take place, such as restricting access and/or revegetation of the Corroborree Ground for both cultural and educational reasons.

## 2. Communication and Consultation

Effective communication and engagement is required for effective cultural heritage management. It is important to note the knowledge of Indigenous cultural heritage is rightfully owned by the Traditional Owners, and agencies and organisations should respect this and develop their own culturally-appropriate processes for engagement and discussion. When working effectively, consultation processes should be in reverse, whereby the community are in control of, and managing, cultural heritage projects and stakeholders are engaged by the community. However, many regions are far from achieving this ideal scenario. Thus, beyond

even an effective consultation policy, an approach is required to ensure that all facets of project planning and development consider aspects of Indigenous cultural heritage. Working closely with communities demonstrates that it is the landscape-level from which the river needs to be managed, given the interconnections of places and pathways. This also matches methods required to maintain biodiversity and restore degraded landscapes. In the same way as ecological mapping, a landscape-level study can provide the context for understanding how specific sites are integrated within a larger area of significance; individual sites then can be managed in a strategic and community-relevant way (Guilfoyle 2006).

Along this river, the two-way exchange between Traditional Owners, government agencies, heritage consultants, and land care officers is essential to land restoration and to identify the River catchment's ecological connectivity that mirrors the traditional cultural connections across the wider area. By integrating cultural heritage issues into land-management agenda, associated environmental values, and management and control methods, are embedded within the process. The natural and cultural values of the area are being restored, and the community remains in control of the cultural connections and knowledge associated with the area.

### 3. Research, Training and Education

The River provides an opportunity for ongoing research and education for both natural and cultural heritage management. It is recommended that management actions are linked to training workshops where possible, as well as long-term research-level studies on aspects of the area's ecology, archaeology, and methods of management.

For cultural heritage management, the outcomes of any plan are secondary to the process of implementing a management plan, that when designed appropriately, can provide for ongoing community and social outcomes beyond the range of targets set.

Resources must be secured to ensure research, education and training continues so that knowledge, management and technical skills are available to allow improved management and to meet the objectives of the management plan. The inherent nature of this plan lies within the realm of "adaptive management" whereby actions are continually assessed and monitored and fed back into amended patterns of management.

The conservation and study of cultural landscapes within wilderness and reserves provides both a yardstick with which to measure environmental change when compared to less modified natural systems and the highly modified landscapes in other regions. This contributes to our knowledge of ecological and environmental processes, and increases our understanding of human interactions with natural systems...this will help us devise more harmonious and sustainable landscape management regimes for the future (Lennon and Mathews 1996).

It is recommended that a Menang/Bibbulum project manager and relevant specialist (e.g. heritage consultant) is appointed to work with all stakeholders (as Heritage Project Team) to source funding for the heritage management components and develop the implementation strategy for the heritage management plan, via a training programme. This would serve to streamline the Shire's processes and responsibilities outlined in this document.

This should involve engaging a Registered Training Provider (RTO) to work with the Heritage Project Team and develop a training program that provides opportunities for local Indigenous youth to learn skills, gain experiences, while carrying out associated assessment work, rehabilitation, erosion control, weed control, and facility design and development, as part of the project. This would then provide a cost-effective outcome in the process of the ongoing planning and development of the management plan. The RTO would be engaged



to construct the facilities and carry out ongoing land care and monitoring work, while delivering a specific range of units relevant to cultural and natural heritage management.

This ensures the project includes aspects of the broader cultural heritage landscape. These processes also facilitate community involvement in the design, construction and management of the projects, heritage trails, restoration work, and lead to associated outcomes of the integration of local government, stakeholders and the Indigenous and non-Indigenous community within the wider community.

#### **4. Interpretive Signage**

Consultations with the Noongar community indicated that there is a good opportunity for interpretive signage for education and awareness of the cultural landscape. The accessibility of heritage values and need for interpretation/ promotion plans are an effective, long-term protection and conservation measure. Community art and design projects should be implemented and interpretive signage placed at strategic locations to enhance the visitors' experience. Some of the key themes that pertain to this area for interpretation and education are listed below. These interpretive themes should be integrated and structured across the River to facilitate education and heritage tourism as a social and economic benefit for the community.

Opportunities for interpretive signage are:

- At each entrance point to the Kwoorabup community park to explain the significance of the trails within the park representing the original tracks that the people used to get to the meeting place – tribes from the East, West and North all used their own tracks and had their own rules and rituals for crossing the boundary from their country to the meeting ground country.
- Rehabilitation of a small pond located on the western bank of the River which should include natural site rehabilitation (planting of sedges, rushes) and interpretive signage connecting the area to the larger Kwoorabup Community Park.
- The Bibbulmun Track, Mokare Walk Trail, and Munda Bididi Trail require interpretive signage to connect the walkways to the larger Denmark River heritage landscape, for education and awareness of the cultural landscape. The river offers much in the way for creating public awareness of the heritage values of the place and measures taken to protect them. The number of walk trails and private lands on the river mean there is easy access to the river's edge.

#### **5. Access to funding and support from relevant agencies**

The implementation of the recommendations contained in the report relies on access to funding and support, in-kind or otherwise, from relevant stakeholders involved. Funds can be sourced from various agencies and programmes. Grant writing is a time-consuming exercise and quite often unrewarding and requires constant development and discussion. This report may be used as a resource for the community, the Shire, DIA and other partners to extract information to develop site-specific or regional funding applications. It would be recommended that regular meetings are held to determine who is responsible for specific grant applications. This requires regular communication with the Traditional Owners and their representatives – a major theme of this management plan.

## **6. The implementation of statutory planning mechanisms.**

The protection and management of the Denmark River Aboriginal Heritage Site can be achieved in part through the implementation of statutory planning mechanisms as provided for under the *Planning and Development Act 2005* where it relates to private land as follows:

- Planning applications: Provide an advice note on all development approvals which advise landowners of the heritage site and their obligations under the Act.
- Under referral of subdivision applications, recommend to the WAPC that the land be ceded as foreshore reserve.

## **7. Monitoring**

A major aspect to all management plan actions is to establish a monitoring system yet is often an obvious gap in management of cultural places and waterways. There have been a number of preventable site disturbance incidents in this region in recent times, causing great damage to the cultural values but also the non-renewable archaeological landscape. Study and management of this area should not occur in a reactive manner when problems occur and it is critical to ensure that monitoring and study occurs regardless of whether specific problems have arisen or not.

A clear management action is to ensure there is a nominated person responsible for implementing the plan. This role should use such existing documents as a reference, ensure actions are implemented, report on conditions and community liaison, facilitate events and stakeholder involvement, and update and develop the management plan. Monitoring is also required from time to time during activities identified in this Plan. Monitors may have the authority to stop machinery working if that machinery is at risk of encroaching into the heritage site boundary. An annual survey is required at minimum to determine whether the condition of the river, restoration works, and cultural features in general are being maintained, improved, or is in decline. These include the monitoring and reporting of:

1. Condition of the cultural features
2. Monitoring of on-ground works
3. Recreational use (boats,
4. Report on weed species occurrence and extent of infestation
5. The condition of the native vegetation
6. Assess fuel load build up and access for fire control
7. Feral animal activity
8. Maintenance needed for rubbish and paths (including material in waterway – fallen logs)
9. Reporting on any unforeseen discoveries or disturbances



Figure 20. Fallen trees and logs regularly occur in the river and can become threats to recreationists if un-monitored.

A nominated person should be responsible for monitoring and reporting and for acting on this information. The person will be the main point of contact between the Shire, Traditional Owners, and wider community in relation to the implementation of this CHMP. The sub-contractors or developers may also nominate a Cultural Heritage Advisor, who may act on the Developers behalf.

#### **Monitoring Management Considerations:**

- There is a need to establish an effective monitoring and management system for the River and surrounding area.
- This requires employment of at least one Indigenous Liaison Officer or Heritage Ranger specific to this location, and supported by all relevant stakeholders.
- Employ monitors on a project by project basis during on-ground works.

## IDENTIFIED PROJECTS, PROCESSES AND CONSULTATION OUTCOMES

This section outlines the specific management actions and projects identified by the Traditional Owner community (Category 1) and the Shire (Category 2), and include a process for implementation and strategic management. The projects and actions are divided into two categories:

### **Category 1: Conservation and Rehabilitation**

The Traditional Owner representatives agreed that the proposed list of management actions and rehabilitation works are necessary and are likely to minimise impacts to the natural environment and any associated cultural resources by restoring the degraded land. Protecting the river and the regional conservation values will also protect assist to protect the area's important heritage and cultural values. This is in regard to the following projects:

- Protection of a Traditional Meeting Place
- Archaeological Investigations
- Conservation and Land/Waterway Management

- Wetland/Pond Restoration
- Working with Private Landowners
- Bridge Restoration
- Walk Trails

## Category 2: Developments and Land Management

The Traditional Owner representatives wish to review concept plans, developments and land developments during the earliest planning stage, and request proper engagement via the policies and procedures determined by the Aboriginal Heritage Act (1972). This is in regard to the following projects:

- Community Park Developments
- Berridge Park
- Denmark Rivermouth Recreational and Boating Facilities and Environmental Protection
- Land Development
- Fire Management

### 1. Traditional Meeting Place and Corroboree Ground

The Noongar community propose to bollard an area under the main bridge crossing the River (South Coast Highway), being a traditional meeting place, and prevent further disturbances to the area. The work requires bollards and localised re-vegetation. The registered and legally-protected site is continually impacted by vehicles.



Figure 21. Discussing ideas for Meeting Place.

**Recommendations:** The Shire, in consultation with stakeholders undertake the preparation of a concept plan which shows how foreshore reserves 15022 and 22944 can be developed taking into account the protection of the Traditional Meeting Place and accommodation of other uses being pedestrian walkways (Kwoorabup) and other trails , boat launching, car parking and picnicking and improving access to the site.

**Actions:** Council and DIA to source funds to implement the recommendations.



Figure 22. Traditional Owners are disturbed by large-scale impacts to this registered and *legally-protected* Site 27936 - Kwoorabup Corroborree Ground.

## 2. Archaeological Site – Shell Midden

Archaeological information is an important consideration for any type/level of environmental management. This is because the current landscape, its condition, and mechanisms of management, relates directly to processes of change and adaptation over thousands of years. Human-environment relations are an important part of the ecological systems that environmental managers are involved in protecting and conserving. This site has been previously disturbed in the construction of the walking and bike trails. The area requires archaeological test excavations to identify undisturbed deposits and add to the knowledge of past use.

Shell middens are places where the debris from eating shellfish and other food has accumulated over time. They can contain shellfish remains; bones of fish, birds, and land and sea mammals used for food; charcoal from campfires; tools made from stone, shell, and bone. Shell middens tell us a lot about Aboriginal activities in the past. The types of shells in a midden can show the type of marine environment that was used, and the time of year when Aboriginal people used it. Shell middens are found throughout Australia, usually close to a shellfish source. They are generally found on the coast, but can be around inland lakes, swamps, and river banks. Middens are on headlands, on sandy beaches and dunes, around estuaries, swamps and the tidal stretches of creeks and rivers, and along the banks of inland rivers, creeks, and lakes. Middens are usually in the best possible spot - a pleasant place, that's easy to get to, where there are plenty of shellfish. They are often fairly close to fresh water on a level, sheltered surface. Middens range from thin scatters of shell to deep, layered deposits which have built up over time. Riverbank middens tend to be smaller than estuarine and coastal middens. Such small sites may show short-term occupation. They can even be the debris from a single meal. Few middens are comprised of only one species of shellfish, although many sites south of Newcastle contain species from just one habitat: rock platforms. Common species in rock platform middens include limpets, turban shells, periwinkles, nerites, tritons, and cartrut shellfish. Some of these species are also found in estuaries.



Middens containing only estuarine species are uncommon. The major estuarine species found in middens are bivalves, including cockles, whelks, mud oysters, rock oysters, and both edible and hairy mussels. Shell middens also contain evidence of other Aboriginal activities. They can include the remains of hearths and cooking fires; tools made from stone, bone or shell; bones from land and sea animals used as food; burials. Middens often contain the remains of fish, sea birds, sea mammals, and sometimes land mammals. Bones can indicate the use of particular environments. For example, fish bones in middens of rock platform species are usually from reef species such as snapper. Estuarine middens may contain the bones of estuarine species such as flathead or bream. Bird bones found in sites can show us the season during which the middens were occupied. For example, shearwaters are only hunted during their spring migration to the south. Mammal bones, for example from seals or wallabies, can indicate that Aboriginal people concentrated on marine or land resources at a particular site. Middens may contain evidence of stone working and stone artefacts. Stone will often have come from a very different area, showing that it was traded or transported. Scientists occasionally find shell or bone artefacts, such as fish hooks or barbs, in the upper layers of shell middens (Department of Environment and Climate Change).

**Recommendations:** Shire and DIA endorse archaeological research and provide in-kind support and community engagement for educational purposes.

**Actions:**

- Consideration given to the archaeological investigations being undertaken in conjunction with Archeology Week
- Archaeological investigations to ensure no long-term permanent impact occur on Shire infrastructure eg. walk trial and reinstatement.
- Archaeologist submits Section 16 permit to DIA with attached letters of support from Traditional Owners.

### 3. Conservation and Management (Vegetation Buffers, Weed Control, Water Quality Monitoring)

Traditional Owners articulated the need for ongoing conservation programmes (focussed on revegetation and weed control) and regular monitoring of the water quality. The Group supported ongoing processes developed and delivered by Green Skills Inc. and the Denmark Weed Action Group is to maintain a conservation buffer and to protect the river from erosion and to maintain water quality. Several discrete areas have been targeted within land adjacent to the Agricultural College. This includes organizing for 2256 plants of suitable local under-storey species to be grown in local nurseries, herbicide control of kikuyu (3 applications between September 2010 and May 2011), site earth preparation for planting (tractor), and planting in June 2011 in conjunction with Denmark High School and local community. This process has direct outcomes for the river catchment and associated biodiversity values, and provides a workable model for similar conservation programmes adjacent to, or within, a registered site area. The Traditional Owner community have agreed to this proposal and support all re-vegetation and weed control work along the Denmark River.



Figure 23. Area in need of revegetation along the banks of the Denmark River.



Figure 24. Landowner pointing to blackberry outcrops along the river that he believes should be part of regular control programmes.

**Recommendations:** That the Shire endorses ongoing revegetation and weed control and offer support to source grant funding in the future and in kind support to the project.

**Actions:** GreenSkills has been funded from this project to commence work and will submit Regulation 10 permit to DIA and project plan and schedule to the Shire. Greenskills will endeavour to engage the Noongar community in the on-ground works.



## 4. Degraded Wetland

A small pool located on the western bank of the River is targeted for rehabilitation. This will serve to create an animal habitat at the same time as serving as a natural run-off filtration zone. The rehabilitation of this pond is more important in light of the planned developments of the community park. The work will include natural site rehabilitation (planting of sedges, rushes) and interpretive signage connecting the area to the larger Kwoorabup Community Park.



Figure 25. Wetland/ pond in need of weed control and revegetation to restore it to its natural state.

### Recommendations:

- The Shire to develop the wetland area as per the Kwoorabup Community Park Concept Plan.
- That the Shire support community engagement for educational purposes.

**Actions:** A landscaping/rehabilitation plan to be prepared in consultation with relevant stakeholders including the Kwoorabup Community Park Working Group.

## 5. Working with Landowners

Effective cultural heritage management on private land is based on processes that allow community members to manage land and the associated tangible and intangible features. Traditional Owners involved in the

recording, assessment, monitoring, evaluation and management of their own cultural heritage sites is the main component. This would be the same level of engagement for a person managing their own personal or family histories. In general, the works associated to protect cultural resources on properties are those same methods aimed at sustainable land use, erosion and salinity control, biodiversity fencing and waterways protection. These actions are also those that are required to ensure the protection and conservation of the region's non-renewable cultural resources.



Figure 26. Traditional Owners and Landowners share many common ideas on river management (meeting on 06/02/2011).

Many cultural resources and sites not recognised by landholders or land managers are susceptible to loss via on-ground activities. However, with the increasing efforts of sustainable land management and conservation measures, that are usually associated with activities having relatively low impact, many cultural heritage sites will remain intact in the landscape. The impact to the sites and the regional heritage landscape depend on the type of sites, as does the protection measures required. Given that heritage values are manifest as both the spiritual or social relationship that a particular group might have for a certain site or area, as well as from the opportunity to be able to monitor and protect resources ('Caring for Country'), land care plans must concentrate on achieving a balance between land use interests against the values for protecting the physical cultural heritage items. In a context of sustainable property management there is great potential for this balance to be readily achieved, and a first step towards effective integration of biodiversity and cultural heritage conservation projects.

As stated above, the most immediate recommendation is to fence and re-vegetate a conservation corridor along either side of the river to serve as a buffer zone to maintain the water quality, wildlife, fragile archaeological resources, and historical landscape. However, actions to control regional processes of environmental degradation and threats are hard to manage when undertaken by individuals. Thus, the properties bordering the waterway within the management zone covered here requires an integrated management approach. Waters-edge housing is popular for its aesthetic and natural appeal; however, the existence of a vegetation buffer would serve to protect the registered site, continue to maintain the water quality, and add to the river's aesthetic value – and likely increase the value of the land.



**Recommendations:**

That the Shire incorporates the following statutory mechanisms to protect the heritage site as follows:

- Under referral of subdivision applications, recommend to the WAPC that the land be ceded as foreshore reserve.
- Provide an advice note on all development approvals which advise landowners of the heritage site and their obligations under the Act.

**Actions:** Work with landowners (workshops, consultation) and assist with funding to develop a vegetation buffer within the 30 metre zone within their properties and ensure compliance under the Aboriginal Heritage Act 1972.

## 6. Bridge

This traditional and contemporary crossing point (river and tributary) requires bridge reconstruction to prevent ongoing erosion and impacts to the heritage area. The results of the consultations suggest that the proposed works will have no direct impact on the archaeological resources of the area and the utility of the project will serve to maintain the natural environment and any un-identified cultural resources, with the need to provide appropriate access routes with minimal disturbance and to accommodate visitors.



Figure 27. Restoration of old bridge, site of which is shown here.

**Recommendations:**

1. Shire reviews the plans and assists in in-kind support and identifying funding avenues.
2. Shire acknowledges the traditional crossing point proposal has merit however determines it needs to be considered in context with the potential east-west link road in this vicinity.

**Actions:** The Shire to consider the potential east-west link road as part of the planning and approval processes for the river crossing.

## 7. Kwoorabup Community Park

A detailed concept plan for the development of a community park between the new hospital and the river has been developed. The project requires a full ethnographic and archaeological assessment. It will also require monitoring and clearance of on-ground works (installation of power, pipes) to ensure minimal impacts to cultural material. Before on-ground works commence, it is deemed necessary to undertake a full-scale mapping, surface analysis, and test-pitting across the area to accurately determine the nature and distribution of the cultural resources associated with the zone, and to minimise disturbance to any un-documented cultural feature. This forms the basis of a detailed heritage report of the area, including associated interpretations to be integrated into the management plan. Importantly, it would clearly direct the associated design plans and form the basis of a Section 16 and Section 18 application.

Management of any heritage sites potentially impacted by the proposed development must involve discussions with the Traditional Owners, implementation of agreed management measures, and where necessary, clearance obtained under the Aboriginal Heritage Act (1972).



Figure 28. Kwoorabup Community Park Concept Plan.

It is noted here that the community has been engaged by the Shire of Denmark regarding this project. The Concept Plan was adopted by Council in September 2009 following a public consultation period (minutes of these minutes and consultations are on file with the Shire of Denmark). Based on advice from DIA, the Shire would need to submit engineering design drawings of the proposed boardwalk with a Section 18 application. A Section 18 is required because of the location of the boardwalk (on the river bank) and the requirement for

excavation works (for footings) in the river bed. The Shire may still need to apply for a Section 18 outside of the registered Aboriginal Heritage Site (the river) due to the high potential for in situ, stratigraphic (sub-surface) archaeological deposits. However, it would be recommended that Section 16 investigations are commissioned for the entire area that will provide enough information to address impacts arising from the development from both the boardwalk and others works outside the 'site' area. This subsequent report would then form the basis of a Section 18 application for the overall project, and prove a cost effective, strategic management approach for the Shire.

Consultations with the Noongar community indicated that there is a good opportunity for different interpretive pieces at each entrance point to the community park to explain the significance of the trails within the park representing the original tracks that the people used to get to the meeting place – tribes from the East, West and North all used their own tracks and had their own rules and rituals for crossing the boundary from their country to the meeting ground country.

**Recommendations:**

- 1. The Shire to undertake continued ongoing consultation in regards to implementation of the Concept Plan.**
- 2. Appropriate interpretative works are undertaken that will commemorate the significance of the Development Area to its Traditional Owners.**
- 3. Full ethnographic and archaeological assessment to be conducted in accordance with Section 18 where it impacts on the heritage site.**

## 8. Berridge Park

This existing public park is regularly improved and serviced. As that part of the park within 30m of the river bank is within the registered site boundary, the Shire should ensure that on-ground works are managed by submission of regular Regulation 10 permits be given the responsibility for sending information to Noongar community of planned works, organising monitors, if required, and preparing and submitting Regulation 10 notices to DIA.

**Recommendation:** Ongoing consultation between the Shire and Indigenous community representatives in regards to required Regulation 10 and Section 18's for development approval.

## 9. Walk trails/ Crossings

Designated access paths and parking areas can also assist in minimizing inappropriate use of this fragile environment. However, prior to the on-ground works, including the rehabilitation efforts, several conditions should be adhered to relating to both the results and the limitations of the survey (previous disturbances) and the likelihood for additional archaeological material/features to be located if the proposal proceeds.

The Bibbulmun Track, Mokare Walk Trail, and Munda Biddi Trail require interpretive signage to connect the walkways to the larger Denmark River heritage landscape, for education and awareness of the cultural landscape. The river offers much in the way for creating public awareness of the heritage values of the place and measures taken to protect them. The number of walk trails and private lands on the river mean there is easy access to the river's edge. The accessibility of heritage values and need for interpretation/ promotion plans are an effective, long-term protection and conservation measure. Community art and design projects should be implemented and interpretive signage placed at strategic locations to enhance the visitors' experience. Some of the key themes that pertain to this area for interpretation and education are listed



below. These interpretive themes should be integrated and structured across the River to facilitate education and heritage tourism as a social and economic benefit for the community.

Even the most pristine land or seascape can only be understood in terms of a history of human contact, exploitation and protection, understanding and promotion (Heritage Council of Western Australia 2006:11).

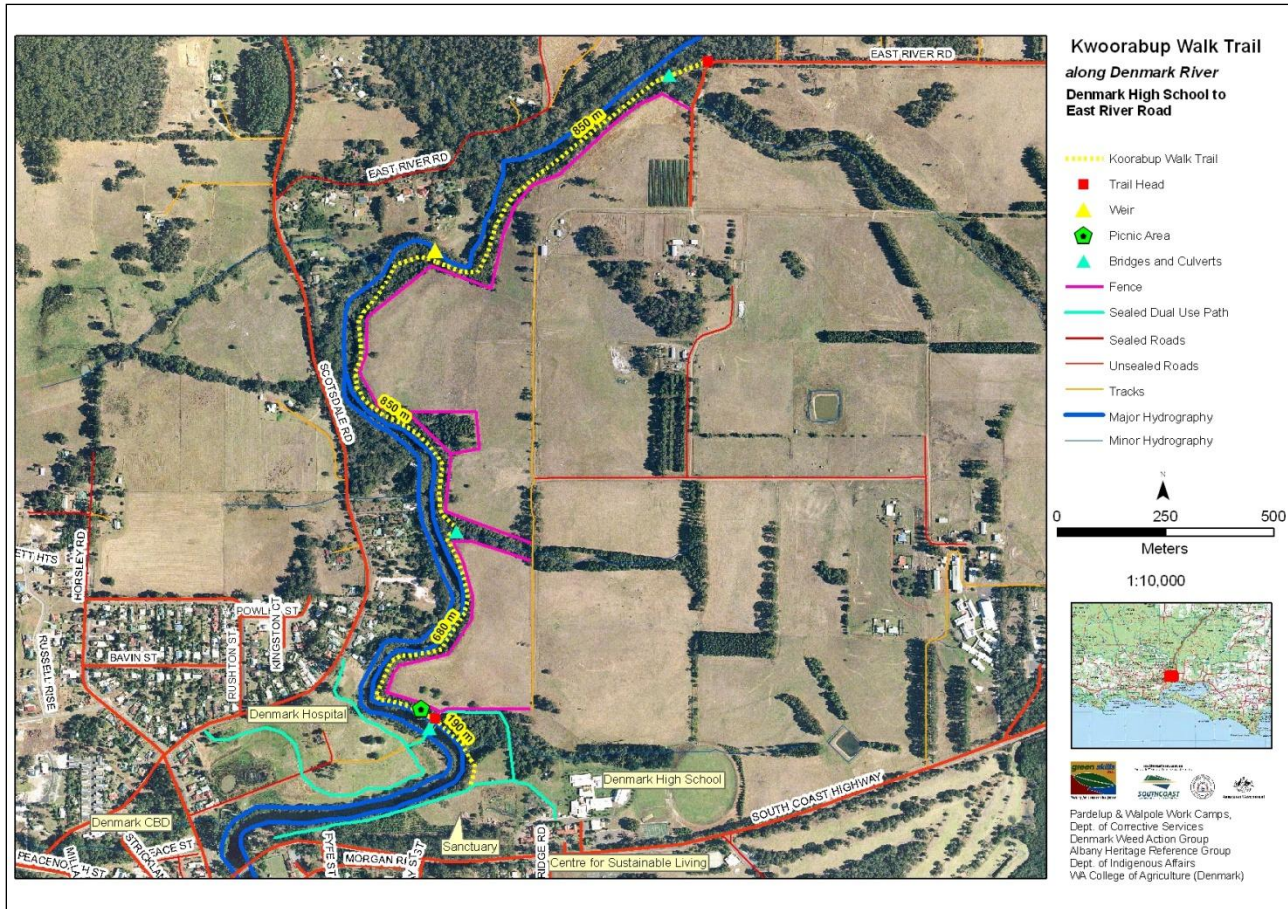


Figure 29. Map showing the Koorabup Walk Trail path.

**Recommendation:** Consultations with the Noongar community indicated that there is a good opportunity for different interpretive signs at each entrance point to the planned community park to explain the significance of the trails within the park representing the original tracks that the people used to get to the meeting place – tribes from the East, West and North all used their own tracks and had their own rules and rituals for crossing the boundary from their country to the meeting ground country. As such, Shire and partners should source funding and develop a community design and signage project.

**Actions:** Consultation with PATAAC (Paths and Trails Advisory Committee) and Noongar Community to develop interpretation signs plan for all walk trails along the Denmark River.





Figure 30. Some walk trails require ongoing monitoring and maintenance.

## 10. Denmark Rivermouth Recreational and Boating Facilities and Environmental Protection

Generally, the foreshore reserve at the mouth of the River is used for recreational purposes (jetty/moorings) and requires work to protect bank from erosion, remove old structures, and general conservation actions to protect native flora and fauna.

Areas for the construction of a formal canoe/kayak jetty to allow recreational access in a controlled manner and not cause impacts/erosion in other (informal) areas along the river.

The Denmark Strategic Boating Plan provides strategise for management of current uses and activities and planned construction of additional facilities.

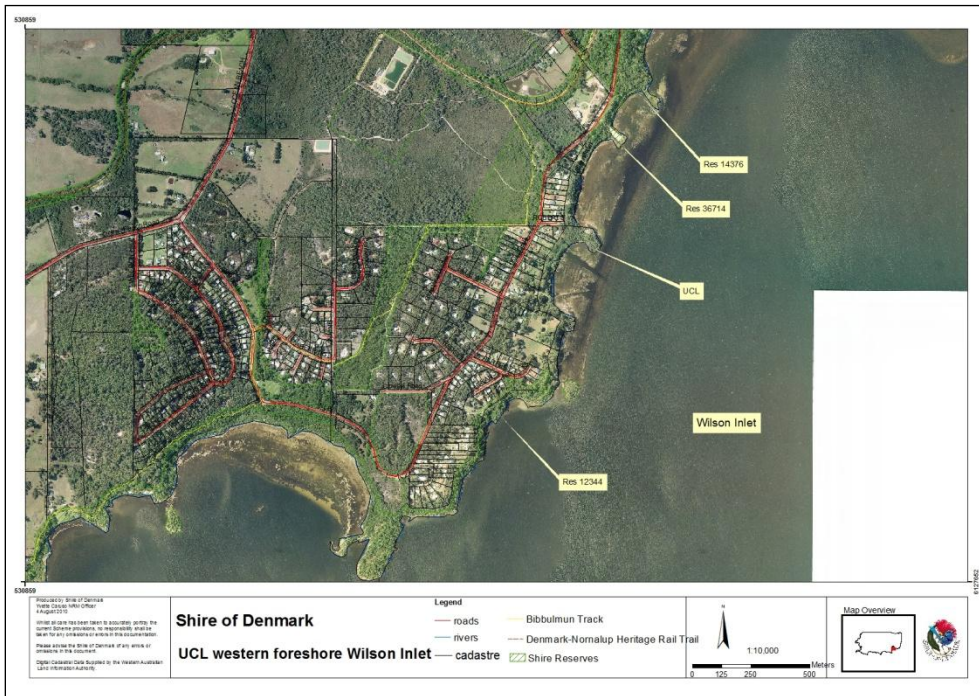
**Recommendation:** Shire to provide plans to Noongar community and DIA and fund relevant compliance-based heritage assessments.

**Actions:** Shire to work in consultation with stakeholders including the Noongar community to investigate ways in protecting the river bank and undertake appropriate Regulation 10/Section 18 approvals.

## 11. UCL Land Development Management

The Shire requested that two land management notices be considered in this report. Council wish to seek vesting of two parcels of UCL land and maintain the current status quo of maintenance purposes (i.e. mowing etc.) as it serves as a public open space.

1. UCL between Reserves 12344 and 36714 on western foreshore of Wilson Inlet



2. Lot 826 corner of Ocean Beach Road and Blackburn Streets, Denmark



**Recommendations:** Support the Shire seeking vesting to allow for management whilst acknowledging provisions of the Aboriginal Heritage Act (1972).



## 12. Fire Management

The Traditional Owners often feel fire management regimes are inappropriate and would prefer to have some voice in the fire management strategies and planning. Fire management is a central traditional custom and detailed knowledge of fire intensity, regularity, and seasonality forms part of traditional knowledge. People often enjoy surveying newly burnt areas that may uncover cultural resources.

Leighton (2009; as cited in Janicke 2010) makes the following comments about using fire to improve regeneration.

“It is not recommended to try and stimulate further regeneration through the use of frequent fire, although this must be weighed up against reducing leaf litter loads and overall fire risk to the property. Fire can often cause the bush to be more exposed and open to weed intrusion around its edges. It can also increase diversity of those species that survive fire and decrease the number of species that are fire-sensitive. To try and stimulate growth with the use of fire, very careful patch burning within the remnant and not out near the edges would be the preferred method.”

**Recommendation:** Examine the feasibility of patch burning in forested areas of Shire Reserves.

**Action:** Seek Noongar community input into Shire Fire Management Strategy.

**ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN KWOORABUP BEELIA (DENMARK RIVER)**

Table 4. Summary of Projects and Actions.

Map Ref.	Component/ Project	Description	Processes/Consultations Required	Recommendations	Actions	Permits Required
1	Protection of Traditional Meeting Place	Noongar community propose to bollard an area under the bridge being a traditional meeting place and prevent further disturbances to the area to be used regularly for community event, dances, and educational workshops.	Noongar community have agreed to this proposal.  Submission of design plans to Shire and DIA	The Shire, in consultation with stakeholders undertake the preparation of a concept plan which shows how foreshore reserves 15022 and 22944 can be developed taking into account the protection of the Traditional Meeting Place and accommodation of other uses being pedestrian walkways (Kwoorabup) and other trails , boat launching, car parking and picnicking and improving access to the site.	Council and DIA to source funds to implement the recommendations.	Reg 10
2	Shell Midden	Noongar community wishes to conduct archaeological investigations at the Shell Midden site to explore the past settlement and economic land use patterns associated with the River.	Noongar community have agreed to this proposal.  DIA submission	Shire and DIA endorse archaeological research and provide in-kind support and community engagement for educational purposes.	<ul style="list-style-type: none"> <li>Archaeologist submits Section 16 permit to DIA with attached letters of support from Traditional Owners.</li> <li>Consideration given to the archaeological investigations being undertaken in conjunction with Archaeology Week.</li> <li>Archaeological investigations to ensure no long-term permanent impact occur on Shire infrastructure eg. walk trial and reinstatement.</li> </ul>	Section 16
3	Conservation and Land/Waterway Management	Ongoing conservation and land/waterway management is required. Green Skills is proposing to conduct ongoing weed control and revegetation within the 30 metre buffer zone along specific areas adjacent to the Agricultural College. Greenskills have been funded from this project to commence work.	Noongar community have agreed to this proposal and support all re-vegetation and weed control work.  DIA submission	That the Shire endorses ongoing revegetation and weed control and offer support to source grant funding in the future and in kind support to the project.	<ul style="list-style-type: none"> <li>Greenskills to submit Regulation 10 permit to DIA and project plan and schedule to the Shire.</li> <li>Greenskills will endeavour to engage the Noongar community in the on-ground works.</li> </ul>	Reg 10
4	Wetland (located within the Kwoorabup Community Park)	Rehabilitate small pond within the 30m buffer zone to protect waterfowl and assist filtration systems.	Noongar community have agreed to this proposal. Plan developed by GreenSkills students submitted to Shire and DIA	The Shire to develop the wetland area as per the Kwoorabup Community Park Working Group.  That the Shire support community engagement for educational purposes	A landscaping/rehabilitation plan to be prepared in consultation with relevant stakeholders including the Kwoorabup Community Park Working Group.	Reg 10



**ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN KWOORABUP BEELIA (DENMARK RIVER)**

Map Ref.	Component/Project	Description	Processes/Consultations Required	Recommendations	Actions	Permits Required
5	Landowners	Work with landowners (workshops, consultations) and assist with funding to develop a vegetation buffer within the 30metre zone within their properties and ensure compliance under the Aboriginal Heritage Act 1972	Noongar community have agreed to this proposal.  Ongoing consultations and workshops; funding applications.	That the Shire incorporate the following statutory mechanisms to protect the heritage site as follows:  <ul style="list-style-type: none"> <li>Under referral of subdivision applications, recommend to the WAPC that the land be ceded as foreshore reserve.</li> <li>Provide an advice note on all development approvals which advise landowners of the heritage site and their obligations under the Act.</li> </ul>	Work with landowners (workshops, consultation) and assist with funding to develop a vegetation buffer within the 30 metre zone within their properties and ensure compliance under the Aboriginal Heritage Act 1972.	Reg 10
6	Bridge	Traditional and contemporary crossing point requires restoration to minimise impacts to river banks.	To be considered further when the planning for the potential east-west link road in this vicinity is progressed.  Ongoing consultations and workshops as required.  Funding applications	Shire reviews the plans and assists with in-kind support and identifying funding avenues.  Shire acknowledges the traditional crossing point proposal has merit however, determines it needs to be considered in context with the potential east-west link road in this vicinity.	The Shire to consider the potential east-west link road as part of the planning and approval processes for the river crossing.	Reg 10
7	Kwoorabup Community Park		Distribute design plans to community for review, comment; ensure heritage surveys are commissioned; ensure heritage monitoring during on-ground works.	<ul style="list-style-type: none"> <li>The Shire to undertake continued ongoing consultation in regards to implementation of the Concept Plan</li> <li>Appropriate interpretative works are undertaken that will commemorate the significance of the Development Area to its Traditional Owners.</li> <li>Full ethnographic and archaeological assessment to be conducted in accordance with Section 18 where it impacts on the heritage site.</li> </ul>	<ul style="list-style-type: none"> <li>The registered Aboriginal Heritage site will be impacted on under Stage 5 (2014/15) of the implementation plan i.e. construction of the boardwalk at which stage a Section 18 application will be lodged.</li> <li>Stage 3 (2012/13) propose interpretive signage and bush tucker garden under which it is intended to consult further with the Noongar community.</li> </ul>	Section 18
8	Berridge Park	The cultural values, management issues and processes (legal and cultural) to be followed in regard to ongoing maintenance/management /development of Berridge Park.	Develop a process based on that outlined here.	Ongoing consultation between the Shire and Indigenous community representatives in regards to required Regulation 10 and Section 18's for development approval.		Reg 10
9	Walk Trails	Several walk trails cross the River and require ongoing maintenance and integration of signage with Noongar heritage and historical information.	Develop a process for ongoing maintenance. Commission an integrated walk trail and information resource for the area.	As such, Shire to provide support for funding applications and partners should source funding and develop a community design and signage project.	Consultation with PATAC (Paths and Trails Advisory Committee) and Noongar Community to develop interpretation signs plan for all walk trails along the Denmark River.	Reg 10

**ABORIGINAL CULTURAL HERITAGE MANAGEMENT PLAN KWOORABUP BEELIA (DENMARK RIVER)**

<b>Map Ref.</b>	<b>Component/ Project</b>	<b>Description</b>	<b>Processes/Consultations Required</b>	<b>Recommendations</b>	<b>Actions</b>	<b>Permits Required</b>
10	Denmark Rivermouth Recreational and Boating Facilities and Environmental Protection	<p>This foreshore reserve at the mouth of the River is used for recreational purposes (jetty/moorings) and requires work to protect bank from erosion, remove old structures, and general conservation actions to protect native flora and fauna.</p> <p>The Denmark Strategic Boating Plan provides strategies for management of current uses and activities and planned construction of additional facilities.</p>	The development at this part of the site would require a Regulation 10, which is designed for revegetation/ rehabilitation works.	Shire to provide plans to Noongar community and DIA and fund relevant compliance-based heritage assessments.	Shire to work in consultation with stakeholders including the Noongar community to investigate ways in protecting the river bank and undertake appropriate Regulation 10/Section 18 approvals.	Reg 10
11	Land Development (individual maps in report)	Shire proposes to seek management over UCL Land (593121, 591342, 591328) between Reserves 12344 and 36714 on western foreshore of Wilson Inlet and Lot 826 corner of Ocean Beach Road and Blackburn Streets.	Shire wishes to maintain continue to maintain the current status quo of maintenance purposes (i.e. mowing etc.) as it serves as a public open space.	Support the Shire seeking vesting to allow for management whilst acknowledging provisions of the Aboriginal Heritage Act.		N/A
12	Fire Management (not mapped)	Requires community engagement to review the Shire's fire management strategy.	Seek community input and feedback	Examine the feasibility of patch burning in forested areas of Shire Reserves.	Seek Noongar community input into Shire's Fire Management Strategy.	N/A

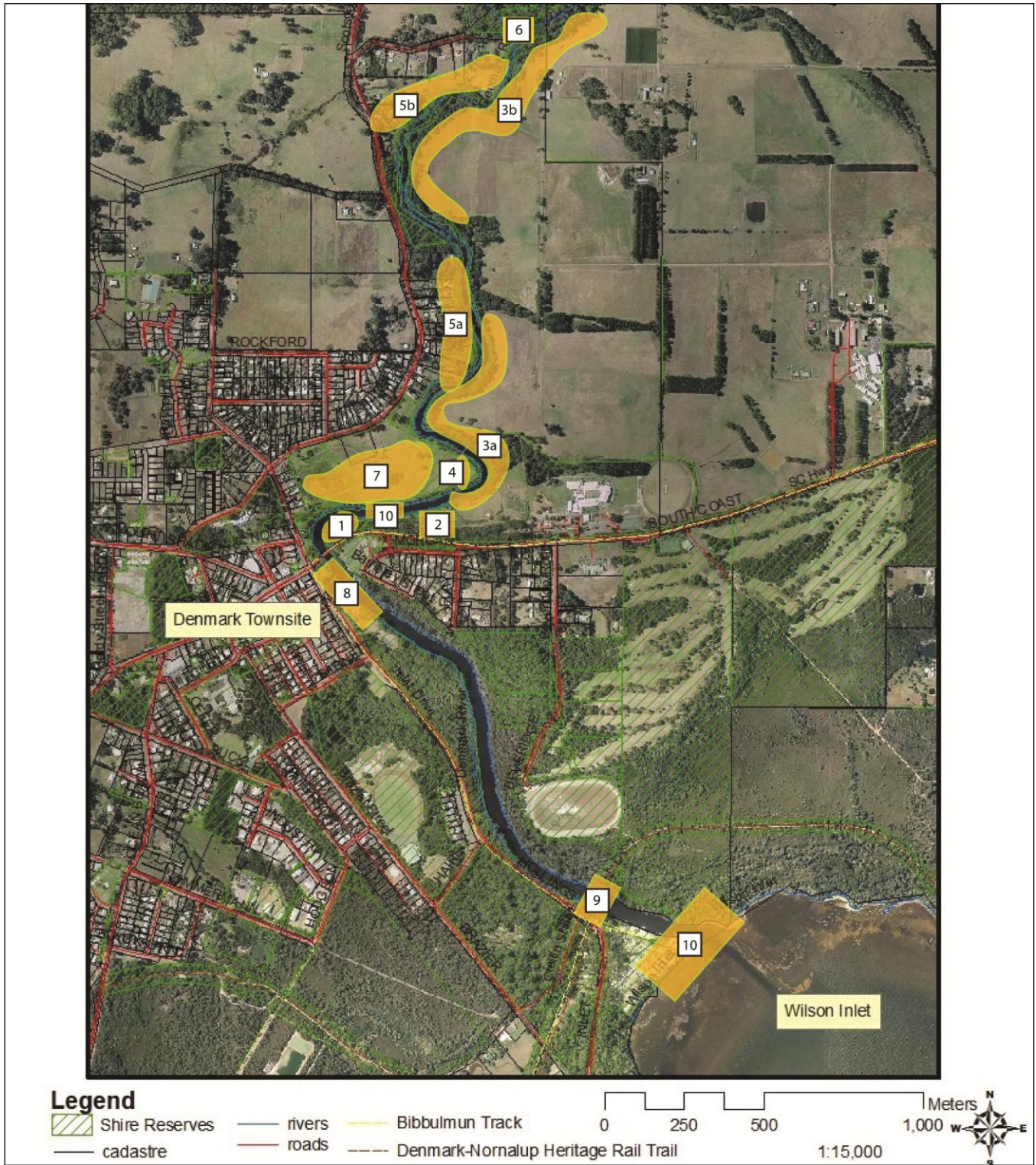


Figure 31. Key areas in terms of management recommendations/ actions.



## SUMMARY

The management and conservation processes outlined here are to ensure implementation as well as effective daily management, but as with all recommendations, these may change or alter depending on community priorities or changing circumstances. The Shire and DIA acknowledge that there may be a need for future heritage planning and restoration work on completion of the Heritage Management Plan, including:

- Incorporating Community Feedback into the Plan
- Implementation of planning recommendations arising from this study;
- Identifying interpretation themes for Noongar Heritage values in the area.
- Preparation of strategy for Denmark River Aboriginal site restoration
- Additional heritage planning for the Denmark River north of the study area to its source near Mount Lindsay; and
- The identification of any potential roles and employment opportunities for the Aboriginal community in heritage restoration and management

In addition to those recommendations outlined throughout the document, the implementation of this Plan necessarily entails the good faith and dedication of stakeholders to develop a joint management arrangement with the community organizations. Each nominated stakeholder should allocate time from an existing position to assist in the development of a joint management agreement that is resourced and has direct conservation and social outcomes.

The Shire of Denmark will first need to agree to engage and support the list of management actions and provide a mechanism for the Traditional Owners to be involved in the land care and heritage management programme, ensure compliance under the Aboriginal Heritage Act 1972, improve the inventory of Indigenous heritage sites, and minimise any negative impacts to cultural features that may arise as the on-ground works proceed.

In the protection of cultural resources and heritage values associated with this river system, management processes should focus on the dual conservation of the natural and cultural features. In many ways, this simply means integrating the actions required to maintain the ecological and biodiversity values of the local system with the integrated cultural heritage landscape. This also means providing opportunities for community-driven rehabilitation and management. The creation of this 'landscape' of dense native vegetation will assist in preventing associated erosion, threats from weeds and run-off, provide for a more aesthetic appeal to the area, protect a segment of the non-renewable archaeological landscape, and also protect the associated social and cultural values of the area. The process from which these actions should take place should also provide for social outcomes, given that Caring for Country is a central element of traditional heritage value.



## REFERENCES

- Amorosi, L. and A. Murphy. 2000. *City of Monash Aboriginal Cultural Heritage Assessment*. Report prepared by Tardis Enterprises Pty Ltd.
- Balme, J. & A. Paterson, 2006. *Archaeology in Practice: A Student guide to Archaeological Analysis*. Blackwell Publishing, Carlton, Australia. pp.387-409.  
<http://www.rivercare.southcoastwa.org.au/infodata/denmarkc/denmarkr/denmark.html> [Accessed on: 27/9/2010]
- Bishop, F. 2007. *Indigenous Histories of the Southern Forests*. A report to the Walgenup Aboriginal Corporation and Restoring Connections Project.
- Brearley, A. 2005. *Ernest Hodgkin's Swanland: Estuaries and Coastal Lagoons of South-western Australia*. University of Western Australia Press, Nedlands.
- Brown, S. 2005. Heritage Management and Community Engagement (Chapter 5), In *Aboriginal Cultural Heritage Data Audit*. Cultural Heritage Division, NSW Department of Environment and Conservation
- Byrne, Denis, Brayshaw, H., and T. Ireland. 2003. *Social Significance: A discussion paper*. Research Unit, Cultural Heritage Division, New South Wales National Parks and Wildlife Service. Hurstville.
- Collie, A. 1834. *Anecdotes and remarks relative to the Aborigines of King George's Sound*. The Perth Gazette and Western Australian Journal. Albany Public Library Local Studies Collections.
- Department of Indigenous Affairs. 2010. *Kwoorabup Trail Heritage Management Plan*. Report prepared by Graham Townley, DIA, 2010 for South Coast Heritage Restoration Project (SCNRM, DIA).
- Dortch, C.E. 1974. A twelve thousand year old occupation floor at Devil ' S Lair. *Mankind* 9: 195-205.
- Dortch, C.E. 1976. Two engraved stone plaques of Late Pleistocene age from Devil's Lair, Western Australia. *Archaeology and Physical Anthropology in Oceania* 3:32-44.
- Dortch, C.E. 1984. *Devil's Lair – a study in prehistory*. Western Australian Museum, Perth.
- Dortch, C.E. 1999. Archaeological assessment of Aboriginal estuarine fishing on the Southern Ocean coast of Western Australia. In J. Hall and J. McNiven (eds) *Australian coastal Archaeology*. ANH Publication, Canberra, pp. 25-35.
- Dortch, C.E. 2002 Modeling past Aboriginal hunter-gatherer socio-economic and territorial organisation in Western Australia's lower South-west. *Archaeology in Oceania* 37:1-21.
- Dortch, J. 2000. *Paleo-environmental change and the persistence of human occupation in southwestern in southwestern Australian forests*. Unpublished PhD, Department of Anthropology, UWA, Perth.
- Ferguson, W. 1985. *A mid-Holocene depopulation of the Australian south-west*. Unpublished PhD. Department of Prehistory and Anthropology. Australian National University, Canberra.
- Gibbard, P.L., S. Boreham, K.M. Cohen and A. Moscardiello, 2005, [Global chronostratigraphical correlation table for the last 2.7 million years v. 2005c.](#), PDF version 220 KB. Subcommission on Quaternary Stratigraphy, Department of Geography, University of Cambridge, Cambridge, England.

- Goode, B et al. 2005. 'Kinjarling' *The Place of Rain*. The City of Albany and Department of Indigenous Affairs Aboriginal Heritage Survey.
- Goode, Brad. 2008. *Aboriginal Cultural Values Study of Water Resources for the South Coast Region of Western Australia*. Report submitted to the Department of Water, Albany. Brad Goode and Associates.
- Guilfoyle, D. 2005. *Aboriginal Cultural Heritage Regional Studies: An Illustrative Approach*. Department of Environment and Conservation (NSW), Hurstville.
- Hallam, S.J. 1975. *Fire and Hearth: a study of Aboriginal usage and European usurpation in southwestern Australia*. Canberra: Australian Institute of Aboriginal Studies.
- Hallam, S.J. 1977. Recent Archaeological Research in Western Australia. *Australian Archaeology*, 6: 3-27
- Hallam, S.J. 1987. Coastal does not equal Littoral. *Australian Archaeology* 25: 10-29.
- Heritage Council of Western Australia. *A Heritage Tourism Strategy for Western Australia*. Prepared by the Heritage Council of Western Australia in partnership with Tourism Western Australia.
- Jackson, S. 2006. *Recognising and Protecting Indigenous Values in Water Resource Management*. A report from a workshop held at CSIRO in Darwin NT, 5-6th April 2006.
- Kalotas, Arpad. 2010. *Noongar Plant Use in the Denmark River region*. For the South Coast Heritage Restoration Project Department of Indigenous Affairs, Southern Region.
- Lane, P. 2007. *Geology of Western Australia's National Parks*. 2<sup>nd</sup> Edition, Peter Lane Publishing, Margaret River, Western Australia.
- Lennon, J. and S. Mathews. 2006. *Cultural Landscape Management: guidelines for identifying, assessing and Managing Cultural Landscapes in the Australian Alps National Park*. Jane Lennon and Associates [for] Cultural Heritage Working Group, Australian Alps Liaison Committee.
- Matter C.J. and Harris, J. 2004. *Archaeological Assessment of Proposed Expansion Areas for Boddington Bauxite Mine*. Prepared for Worsley Alumina Pty Ltd. on behalf of Artefaxion Pty Ltd.
- McDonald, Hales and Associates. 1994. *Aboriginal Heritage in the Southern Forests Region, Southwest Western Australia*. Prepared for the Australian Heritage Commission.
- Murphy, P. 2009. *Lake Pleasant View, Many Peaks*. National Trust of Australia (W.A.) Covenant Site Assessment Form.
- Nind, S. 1831 Description of the Natives of King George's Sound (Swan River Colony) and adjoining Country, *Journal of the Royal Geographical Society* 6, 21-51.
- O'Connor, R. and Quartermaine, G., and A. Yates. 1995. *An Investigation into the Aboriginal Significance of Wetlands and Rivers in the Busselton – Walpole Region*. Prepared for the Water Authority of Western Australia.
- O'Halloran, C. & Spennemann, D. H.R. (2002). Wave Action Impact on Archaeological Sites in a Freshwater Reservoir at Lake Hume, New South Wales. *Australian Archaeology* vol. 54, 6–12.
- Smith, M. (1984). *Aboriginal Sites in Crown Land between Cape Le Grand and Cape Arid National Parks: A preliminary survey*. WA Museum.

Smith, M. (1993). *Recherche a L'Esperance: A prehistory of the Esperance region of south western Australia*. PhD Thesis, University of Western Australia.

Turney, C.S.M., Bird, M.I., Fifield, L.K., Roberts, R.G., Smith, M., Dortch, C.E., Grun, R., Lawson, E., Ayliffe, L.K., Miller, G.H., Dortch, J. & Cresswell, R.G. 2001. Early human occupation at Devil's Lair, southwestern Australia 50,000 years ago. *Quaternary Research* 55: 3-13.

United States Department of Agriculture. 2000. *Conservation Buffers Work: Economically and Environmentally*, Program Aid 1615, Revised September 2000.

## APPENDIX A: – GLOSSARY OF TERMS

### Heritage Terms

Artefacts - Objects modified or made by people, may include stone artefacts (formal implements used as tools or waste products created during manufacturing processes) including grindstones, axes and manuports; wood implements such as boomerangs, spears and shields; glass and ceramic artefacts made or used in the historic period (Brown 2005)

B.P. – Before Present. The ‘Present’ is defined as 1950 (Amorosi & Murphy 2000).

Burials - Locations where people have been buried, and/or where human remains have been found. Burials may occur pre or post-contact age and may occur in shell middens, sandy soils, caves or historic cemeteries, and they may or may not be marked by scarred trees, stone arrangements or headstones (Brown 2005)

Ceremonial Ground - Spiritual/ story places or landscapes where no physical evidence of previous use of the place may occur. Such places include natural landscape features, ceremonial locations, men’s/women’s places, creation stories and tracks, and birth, marriage and burial places (Brown 2005)

Cultural Landscapes - A distinct geographical region, property or nominated area either shaped or highly valued by people, containing inter-related cultural and natural values (UNESCO).

Caring for Country - An Aboriginal term for the traditions derived from the individual and group identities obtained from their own particular area of land and sea, often referred to as Country. Throughout life Aboriginal people retain their cultural association with, and responsibilities to look after their traditional country – even though they may no longer have ownership or even access to it. It is this sense of responsibility to Country that makes Indigenous groups particularly keen to be involved in land management (Guilfoyle 2006).

Corroboree - Ceremonial dance or enactment based on spiritual beliefs or stories. There are a number of historical accounts from Europeans who have viewed Corroborees throughout the Southwest (Jones 2006 cited in Bishop 2007).

Ethnography/ Ethnographical Accounts - Oral Histories and cultural information provided to anthropologists/ archaeologists by Traditional Owners relating to traditional lifeways, cultural practices, places and objects (Balme & Patterson 2006 pp.387-409).

Ethno-history - Information taken from historical documents such as diaries, official documents, correspondence etc. Can be used to corroborate archaeological evidence or provide information about places and objects (Balme & Patterson 2006 pp.387-409).

Fish Traps – constructed stone or brush weirs or walled enclosures designed to catch fish. Can be located along coastlines or in watercourses (Brown 2005).

Gnamma Hole – hole or depression most commonly found on granite outcrops, usually capped with a flat slab of granite, used to catch and contain fresh water. Gnamma holes can be natural water catchments or created by people by firing and chipping out the granite to create a depression.

Hearths/ Camps – A fireplace or campsite represented archaeologically by concentrations of charcoal, ash, and/or hearth stones or discoloured burnt earth or other materials such as heat-treated stone fragments (Brown 2005).



Lizard Trap – A flat slab of granite, varying in shape and size, propped up one or more pedestals of stone, most commonly found on granite outcrops throughout the southwest. Reptiles would use these ‘traps’ to shelter under on hot days, people would either kick out the pedestal to trap the reptile underneath or catch the reptile as they ran out from under the ‘trap’.

Mythological – A place that is connected to the spirit ancestors who are part of the Dreamtime, which is of importance and significance to people of Aboriginal descent (<http://www.dia.wa.gov.au/en/Heritage-and-Culture/Aboriginal-heritage/Aboriginal-sites/Aboriginal-site-types/>)

Quarry (Stone) – Rock/ Stone outcrop with evidence of human utilisation, including evidence of sourcing raw material in order to manufacture stone implements and sometimes debitage from this manufacturing process.

Rock Art – Visual images created on rock surfaces in rockshelters or on rock platforms. Can include images created using pigments (paintings, drawings and stencils) or engraved images created by pecking, pounding, abrasion and/or scratching (Brown 2005).

Scar/ Modified Trees – Trees into which designs are carved into whether for symbolic or practical reasons. Modified trees can be associated with burials, ceremonial grounds or territorial markers. Scar Trees may contain a scar(s) where wood or bark was removed to make a canoe, shield or container, or notches were carved into a tree to gain access to resources such as honey or possums (Brown 2005).

### **Environmental Terms**

Alluvial – Loose, unconsolidated soil or sediments, eroded, deposited and reshaped by streams or creeks. Poorly defined drainage lines (Guilfoyle 2006).

Colluvial – deposit of slope processes, usually sheet flow, accumulating on the lower slope, below a soil mantled or rocky slope. Slopes range from steep (>15 degrees) to very low (<1 degree). Colluvium Slopes towards the creekline from the slope, distinguishing it from alluvium which slopes down the valley parallel to the creek. Highly susceptible to erosion, especially where vegetation has been disturbed (Guilfoyle 2006).

### **Geological Terms**

Granite - Light coloured, coarse grained igneous rock (Lane 2007).

Holocene - Geological epoch beginning around 11,700 years ago until present, the most recent part of the Quaternary period (Gibbard et al 2005).

Metamorphic – rock that has undergone changes or transformations through natural agencies such as heat or pressure (Lane 2007).

Pleistocene - Geological Epoch running from 2,588,000 to 12,000 years before present. Also part of the Quaternary period. (Gibbard et al 2005)

Precambrian - Major division of geological time, from approximately 5 billion to 570 million years ago. Divided into Archean and Proterozoic eras. Comprised 85% of earth's history and marked by first appearance of primitive life forms (Lane 2007).

Proterozoic – a geological eon, spanning from 2500Ma to 542Ma (million years ago), during which time sea plants and animals first appeared (<http://www.palaeos.org/Proterozoic>).

Quaternary - The most recent period of the Cenozoic Era, spanning from 2.6 million years until the present. Subdivided into the Pleistocene and Holocene epochs (Gibbard et al 2005).

Sedimentary rocks - Rocks derived from the erosion of other organic material/ rocks (sandstone), organic deposition or chemical action (salt) (Lane 2007).

**Aboriginal Heritage Act (1972) Glossary:**

For more information see - <http://www.dia.wa.gov.au/en/Section-18-Applications/Heritage-management/Aboriginal-Heritage-Act/>

5. Definition of Heritage Site Types:

5 (a) Any place of importance or significance where people of Aboriginal descent have, or appear to have, left any object, natural or artificial, used for, or made or adapted for use for, any purpose connected with the traditional cultural life of Aboriginal people, past or present

5 (b) Any sacred, ritual or ceremonial site, which is of importance and special significance to people of Aboriginal descent

5 (c) Any place which, in the opinion of the committee, is or was associated with Aboriginal people and which is of historical, anthropological, archaeological or ethnographical interest and should be preserved because of its importance and significance to the cultural heritage of the State.

5 (d) Any place where objects to which this Act applies are traditionally stored, or to which, under the provisions of the Act, such objects have been taken or removed.