River Muker Murray Sustainable Recreation

Site Planning and Implementation Guide



River Murray Sustainable Recreation Site Planning and Implementation Guide

Prepared for the Sustainable Recreation Steering Committee by

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River Murray Catchment Water Management Board

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Foreword















Foreword

The River Murray is vitally important to South Australia's economy and our life style, consequently, it is a resource that we need to nurture to ensure its long term future.

The River Murray has been subjected to a range of activities that has had, and is continuing to have, a detrimental impact on its health, to the extent that as a viable source of quality water for South Australia it is in jeopardy.

Reduced water flow, through increased diversions within the Murray-Darling Basin, is a major contributor to the decline in health of the River Murray. It is agreed that too much water is being taken from the river and that the key to improving its environmental health is to enhance flows.

Until recently recreation, in its many forms, both on and alongside the river, had not been addressed adequately as an activity impacting on the river. Whether the activity is passive, such as bird watching, or an active pastime, such as water skiing, it will have an impact.

Two years ago a group of people representing all Local Governments along the river from its mouth to the State border, a number of government agencies and community groups recognised the need to address the impacts of recreational activities and seek a common approach to solving them. They therefore agreed to develop a River Murray and Lower Lakes Sustainable Recreational Strategy.

The Strategy, published and widely circulated in April 2002, addresses two issues; managing existing recreation and its impacts and planning for new recreation activities. In order to support the Strategy and act as a catalyst for its 'on ground' implementation this comprehensive 'Site Planning and Implementation Guide' has been developed by the same group.

The Guide describes in detail, the planning and implementation process and is suitable for use by a wide range of people and organisations, from Local Government to community groups, who want to implement a sustainable recreation project.

The development of this Guide is a significant step towards helping restore the health of the River Murray through encouraging and assisting South Australians to implement a Sustainable Recreation Strategy throughout the length of the river.

Together we can achieve a healthy catchment through sustainable uses.

Hon David Wotton Chair: River Murray Catchment Water Management Board

Acknowledgements













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A sub committee chaired by Colin Hill (chair, River Murray Urban Users LAP) prepared the brief and managed the project. Sub committee members were:

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The structure for Section Ten Community Consultation was adapted from the Adelaide City Council Communication and Consultation Model developed by HASSELL and Sarkission and Assoc. Planners.

This document has been compiled by Taylor Culity Lethlean - landscape architects. Principal authors are Kevin Taylor and Damian Schultz with research assistance from Jo Neldner and graphics support by Paul Herzich and Ryan Sims.

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Introduction



Introduct



These guidelines provide practical information regarding the achievement of sustainable outcomes for those initiating recreation based projects along the River Murray and Lower Lakes within South Australia.

Contents

- 1.1 Purpose and Scope
- **1.2 Using the Guidelines**



1.1 Purpose and Scope

The River Murray and Lower Lakes Sustainable Recreation Strategy (2002) provides the framework for a wide range of policy, programming and development actions aimed at reducing the environmental impact of recreation activities and enhancing the river experience for users of the River Murray. The aim of this Guide is to provide practical information on the rehabilitation and redevelopment of recreation facilities along the River Murray, thus facilitating the implementation of a key set of recommendations set out in the Strategy. Generally, the recommendations of the Strategy should be implemented as a precurser to undertaking programs and projects as outlined in this Guide.

The Guide is designed for use within South Australia, however, much of its content is applicable to the whole length of the River Murray and its tributaries. Users of the Guide will include State and Local Government officers, LAP Groups, service clubs, recreation organisations, environmental groups and individual landowners.

Recreation related developments include a wide range of activities and facilities which occur on both land adjacent the river and on the river itself. These vary from passive activities such as bird watching, to active vessel based recreational pursuits such as house boating and water skiing. The environmental contexts within which redevelopments and rehabilitation projects occur also varies considerably from highly

sensitive sites with recognised conservation status, to significantly modified sites adjacent towns.

Given the complex array of activities, facilities and environmental site conditions, the Guide seeks to provide general information regarding the redevelopment and rehabilitation process, coupled with tools for assessing the site, and design guidelines to address the most common situations.

It is envisaged that the Guide will be useful to all those rehabilitating, initiating and designing recreation based facilities. Considerable emphasis

is placed on the process by which projects are initiated, sites assessed and developments planned, designed and constructed. The Guide is not intended to be a substitute for professional advice. In many cases it will be useful as a briefing and checking document for those utilising professional assistance. The Guide is designed to be equally valuable to those rehabilitating existing sites and those proposing new facilities on undeveloped sites.

As is outlined in Section Two, the River Murray and its immediate environs represents a major resource which is highly valued for cultural, heritage, economic, environmental and recreational reasons. While single recreation facilities may not be responsible for large negative environmental effects, the repetition of such facilities hundreds of times along the length of the river results in a significant aggregate impact.

"...careful site selection, planning and design can result in high quality recreation facilities with minimal environmental impact." As demonstrated by this document careful site assessment, selection, planning and design can result in high quality recreation facilities with minimal environmental impact. In a high proportion of cases, given the current degraded state of many recreation sites, the application of the guidelines will result in a significant improvement of the river environment as well as improved facilities for visitors.

1.2 Using the Guidelines

Prior to using these guidelines readers should familiarise themselves with: "A Sustainable Recreation Strategy for the River Murray and Lower Lakes in South Australia, River Murray Catchment Water Management Board, Berri, South Australia, QED Pty Ltd (2002)"

This Guide format contains both general and specific information thus providing a broad overview of issues common to all projects, while also outlining detailed guidelines relating to common situations.

Sections Two - Four provide contextual information on the River Murray environment, recreation activities and facilities, and the planning and management agencies with jurisdiction along the river.

Section Five outlines the project initiation process in detail. Many projects will utilise portions of this process rather than every step.

Section Six provides guidance in assessing sites. Checklists provide a systematic framework for analysing sites and gauging areas of potential environmental impact. These checklists are most useful in highlighting areas of concern. At sites with moderate to high conservation values an organisation or individual skilled in environmental assessment should be consulted.

Section Seven describes seven basic planning and design principles which apply in all situations when redeveloping recreation sites.

Section Eight is the most detailed section of the guide, providing a series of guidelines for the planning and design of campgrounds, water based activities and day visitor facilities. A wide range of facility types are addressed including roads, trails, campsites, toilets, shelters, furniture, vessel launch areas, houseboat facilities and jetties.

Section Nine describes three case studies which demonstrate the application of the contents of the guide.

"It is possible to utilise the document as a project initiation handbook, utilising all sections to sequentially work through the development process. It is equally possible to utilise particular sections to address specific issues regarding site planning, public relations or site assessment."

Section Ten provides a brief guide to community consultation and publicity.

Section Eleven provides a range of information regarding related reference material and contacts.

The scope of the guide does not extend to technical or structural details. Nor is the guide intended as a substitute for professional advice, which in many circumstances is necessary in the environmental assessment of sites and the planning and design of facilities.

The River Environment





Our relationship with the River Murray and Lower Lakes is expressed through the values we ascribe to the river environment. These are well documented and are testament to the paramount importance of the river to the Australian community. Recreation is a key means of interacting with the river and therefore an opportunity to create and demonstrate a sustainable relationship which will contribute to the improvement of river health.

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- 2.1 How We Value the River
- 2.2 Recreation and Sustainability



2. The River Environment

2.1 How We Value the River

The River Murray is an iconic landscape feature known to all Australians. The river and its basin is a complex living ecosystem which supports a unique variety of flora and fauna. For many, their recreation activity is based around their attraction to the natural environments associated with the river e.g. bushwalking, camping, boating, fishing and birdwatching.

The River Murray is an integral element in the lives of several Aboriginal language groups and nations who have lived near and on the river for thousands of years.

The river also has a rich heritage of European settlement including remnants of the great inland transport network of the nineteenth century and historic settlements.

Economically, the river system makes a significant contribution to the national economy through food production, and other industries. Increasingly recreation based tourism is an important component in local economics, with 15 million visitors a year attracted to the natural landscapes and towns within the River Murray Basin.

Importantly, the River Murray Basin is home to many thousands of South Australians, and a place regularly visited by hundreds of thousands more from metropolitan Adelaide.

The majority of those who live on, or visit, the river engage in some form of passive or active recreation activity whether land or water based. Recreation is thus a critical point of interface between the river and the community.



Figure 2.1.1 Natural environments provide opportunities for a variety of sustainable recreation activities.

2.2 Recreation and Sustainability

The environmental impact of recreation on the River Murray is incremental with many small adverse impacts contributing to the overall degradation of the river landscape. The achievement of sustainable recreation outcomes is therefore dependant on an equally incremental process of rehabilitating degraded sites, modifying visitor behaviours, transferring activities to more suitable sites, and changing management strategies and maintenance regimes.

These objectives will be achieved through a range of actions including;

- visitor education
- greater environmental awareness during site planning and design
- greater documentation and understanding of ecologically based site rehabilitation
- greater documentation and understanding of recreation activity and environmental impacts
- more integrated and comprehensive land management strategies
- improved resources for site maintenance.

Strategies and policies to achieve these goals are set out in the River Murray and Lower Lakes Sustainable Recreation Strategy. These guidelines seek to provide information which will facilitate sustainable project outcomes. It will illustrate to those who live on and use the river and environs as the setting for their leisure pursuits that recreation activities can co-exist with, and contribute to, a healthy river system.



Figure 2.2.1 Intensely used camping area

Planning and Management





The nature of the River Murray and its history has resulted in many government departments and authorities and non government organisations having jurisdiction and/or an interest in the river's management.

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- 3.1 Introduction
- 3.2 Planning and Management Context Matrix
- 3.3 Explanation of Terms and Roles of Organisations



3. Planning and Management

3.1 Introduction

The River Murray environs are subject to a wide range of Government Acts and regulations.

It is incumbent on project initiatiors to familiarise themselves with regulations which govern their actions in undertaking a recreation based rehabilitation or development project.

This section outlines those Government departments and authorities, and non-Government organisations who have a role in managing and developing the River Murray and its Lower Lakes. The principal starting point for regulatory information regarding all projects should be the local Council.

Section Eleven provides a list of Government \mbox{Acts} applicable to the River Murray.

"The principal starting point for regulatory information regarding all projects should be the local Council."

3.2 Planning and Management Context Matrix



Aboriginal Organisations	Houseboat Industry	H.H.O.A.	B.I.A.S.A.	Sporting & Rec'n Clubs
Resident	R.M.B.O.A.	Industry	L.A.P.	Service
Associations		Associations	Groups	Clubs

3.3 Explanation of Terms and Roles of Organisations

3.3.1 National

Non-regulatory Role



Murray-Darling Basin Commission

Environment Australia

Function

Executive arm of Murray Darling Basin Ministerial Council, which manages Murray River System and advises the Council.

Advises the Commonwealth Government on policies and programs for the protection and conservation of the environment, including both natural and cultural heritage issues.

3.3.2 State Government

Regulatory Role

D.E.H.	Department for Environment &	Policies, programmes and services for conservation, protection and enhancement of	
	Heritage	environmental resources, natural and built heritage	
E.P.A	Environment Protection Agency	Policy, pollution management under Environmental Protection Act	
Planning S.A.	Planning SA	Policy, assessment, funding; Development Plans and development assessment	
D.H.S.	Department of Human Services	Administers health regulations under the Health Act	
D.W.L.B.C	Department of Water, Land,and Biodiversity Conservation	Delivers policies, programs and advice for the integregated management of productive land and water resources.	

Function

Non-Regulatory Role		Function	
S.A.T.C. South Australian Tourism Commision		Policy, marketing, destination promotion, funding, research, development of tourism infrastructure and tourism products.	
Rec'n & Sport Office for Recreation & Sport		Policy, planning, funding, research, recreation and sport development programs, facility management.	
R.M.C.W.M.B.	River Murray Catchment Water Management Board	Policy implementation, consultation, research, management, promotion, and funding through the Water Resources Act 1997.	

3.3.3 Local Government

Regulatory Role



Function

Policy, management, funding through the Local Government Act and the Development Act

Non-Regulatory Role



Murray Darling Association

Function

Non political organisation, interacting with communities, governments and authorities.

3.3.4 Non Government Individuals, Groups, Companies, Organisations

Non-regulatory Role		Function
Resident Associations	Resident Associations	Planning, management and active participation in activities such as landcare, biodiversity conservation, effluent treatment and vermin control, and facility development.
Houseboat Industry	Houseboat Hirer's Association	Promotion, management, lobby and industry representative group
R.M.B.O.A.	River Murray Boat Owners Association	Promotion, liaison with State and Local Governments. Private and commercial members.
H.H.O.A.	Holiday Home Owners Association(s)	Management and freeholding of various settlements.
Aboriginal Org.	Aboriginal Organisation(s)	Represent rights and interests of Indigenous members of the community.
Service Clubs	Service Clubs: Lions, Apex etc	Develop, fund and manage community projects and facilities.
Sporting & Rec'n Clubs	Sporting & Recreation Clubs	Provide recreation and sport opportunities for their members and the community at large. In relation to the river they have an interest in maintaining and developing this recreation resource.
B.I.A.S.A.	Boating Industry Association of South Australia	Promotion, liaison with State and Local Governments.
L.A.P. Groups	Local Action Planning Groups	Collaboration of government and local community to achieve environmental sustainability in their region through joint action, community involvement, education and awareness.

Recreation Facilities





The River Murray and Lower Lakes support a wide variety of recreation activities. Each activity has facilities and management requirements which combined with the activity itself have a degree of impact on the river environment.

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- 4.1 Introduction
- 4.2 Facilities required for Activities Matrix
- 4.3 Activity Sustainability



4. Recreation Facilities

4.1 Introduction

Every recreational activity whether it be recreational fishing or jet skiing requires facilities which provide access to sites and accommodate the needs of users. It is essential in considering long term management and sustainability to implement strategies which consider both the adequate provision of facilities and their appropriate siting and design to minimise environmental impact and ongoing maintenance and management costs.

The following matrix lists the facilities generally required for a range of recreational activities that take place along the River Murray and on the Lower Lakes. In all cases refer to the regulations, management plan, and policies of the relevant land owner and/or manager in finalising the list of facilities appropriate for the site. It is suggested that where a complex arrangement of activities occur in a single site that a suitably qualified professional be used to assist in the project planning.

The Activity Sustainability Table is a description of recreational activities and the potential issues and possible responses associated with each activity.

"Matching appropriate facilities with activities minimises environmental impacts."

4.2 Facilities required for Activities Matrix

The following matrix is to be used as a guide only. Each site has its own specific requirements and policies regarding facilities for recreational activities. A thorough investigation of policies should be included in addition to the use of this chart.



4.3 Activity Sustainability

The recreational activities in the Facilities and Activities Matrix are all legitimate uses of the river and with good management and design can have minimal impact on the environment. However, the sustainability of each activity will vary depending on how well it is managed and the environmental sensitivity of the location in which it occurs. The following table provides a list of activities and points to issues that should be considered in assessing whether a potential use is sustainable. It also provides design and management responses to these issues.

It should be noted that the issues presented in the following table are not exhaustive; highlighting that processes should be put in place to ensure that all possible issues are addressed. Although this guide is primarily concerned with environmental sustainability, the social impacts of recreational activities should not be ignored. Therefore all activities should also be assessed against the following criteria:

- Impact on neighbours
- Environmental nuisance (noise, waste disposal, smoke, dust, aesthetics)
- Compatibility with other river users
- Safety
- Compliance with social norms

Section Six – Site Suitability provides a framework for more detailed assessment of the site, while Section Eight – Facility Design Guidelines provides further information on site planning and design to assist in assessing the impact and suitability of recreation activities for particular sites.

Water based activities					
Activity	Issues	Design / Management Response	Reference		
Canoeing Kayaking Rowing Recreational non power boating House boat users River cruisers and launches with sleeping accomod'n	Bank erosion and vegetation loss at launch sites Parking and vehicle access Degradation of banks and vegetation Waste disposal including hard waste, black and grey water	Response Locate launch sites away from banks that are unstable and susceptible to erosion. Provide launch sites with adequate parking and vessel preparation space. Image: Image of the section 8.2.1 Provide a range of mooring facilities to suit expected recreation user needs e.g. remote, and adjacent town facilities Provide waste removal facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image: Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image: Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users Image: Image of mooring facilities at adequate intervals to ensure they can reasonably be utilised by all houseboat users	Canoe Guides for the River Murray Canoeists Environmental Code Canoeists Safety Code Canoeists Safety Code See Section 11.2 "Canoe SA Inc." Houseboats on the River Murray: SA Ecological Impact Report 2001 Code of Practice for Vessels on Inland Waters See Section 11.2 "Environmental Protection Agency" "House Boat Hirers Association Code of Conduct" "River Murray Boat Owners Association Code of Conduct for Boat Owners" "Marine Safety Rules"		
			"Boat Drivers License"		

Water based activities				
Activity	Issues	Design / Management Response	Reference	
Swimming	Degradation of popular locations Parking and vehicular access Public safety	Adequate signage Rotate sites to allow rehabilitation when degraded Provide well sited and designed access and parking See Section 8.1.1	National Water Safety Plan See Section 11.2 "Australian Water Safety Council 1998"	
Water Skiing Wake Boarding Jet Skis Recreational Power Boating	Noise Potential bank erosion Parking and access Launching Refuelling spillage and pollution	Locate away from bird nesting sites and other native fauna habitats Locate away from unstable banks susceptible to wave action Formalise car parking and provide designated access points See Section 8.1.1	Code of Practice for Vessels on Inland Waters See Section 11.2 "Environmental Protection Agency" "River Murray Boat Owners Association Code of Conduct for Boat Owners"	

Land based activities					
Activity	Issues	Design / Management Response	Reference		
Bird Watching	Siting and design of bird hides and trails	Site trails to avoid sensitive sites susceptible to compaction and soil erosion. Site bird hides to minimise visual impact. See Section 8.3.1	Australian Standard 2156 Walking Tracks		
Camping (small groups) Caravans	Bank erosion and vegetation loss Vehicle access and parking Waste Disposal	Adequate signage on rules of use. Provide wood and designated sites for campfires Limit vehicle access to designated areas. Provide well sited access roads Maintain 20m setback	Planning and Design Guidelines for Visitor Facilities in South Australian Parks See Section 11.2 "Department for Environment and Heritage, National Parks and Wildlife South Australia"		
Camping (large groups)	As above	Locate beyond canopy of trees Provide toilets and bins as appropriate As above Maintain to high standard to reinforce public care and ownership See Section 8.1			

Land based activities					
Activity	Issues	Design / Management Response	Reference		
Cycling (off road)	Transportation of weeds. Soil compaction / erosion. Sharing trails	Consider bike wash down points. Avoid low lying areas, erodable soil and areas of significant habitat. Provide adequate signage Refer to trail design guidelines.	Mountain Bike Codes of Practice Trails Strategy - a practical guide book I.M.B.A. Conflicts on multiple use tracks Recreational Trail development and management Manual (Draft)		
Fishing - recreational (land based) Yabbying	Bank erosion and vegetation loss due to overuse in popular locations Vehicle access and parking	See Section 8.3.1 Rotate sites to allow rehabilitation when degraded Provide well sited and designed access and parking Image: Comparison of the section 8.1.1 for guidelines on road siting	See Section 11.2 "Bicycle SA" "Office for Recreation and Sport" Recreation Fishing Guide Code of Conduct for Recreational Anglers in South Australia (Draft) See Section 11.2 "Primary Industries & Resources South Australia Fisheries" "SA Recreational Fishing Advisory Council Inc."		

Land based activities					
Activity	Issues	Design / Management Response	Reference		
Four Wheel Drive Use	Transportation of weeds Soil Compaction and erosion Vegetation & Habitat loss Access roads	Restrict access after rainfall and flooding Restrict access beyond designated tracks	Code of Conduct Australian National Four Wheel Drive Council Four Wheel Drivers Code of Ethics Driver Training Unit See Section 11.2 "South Australian Assoc. of Four Wheel Drive Clubs Inc." "Department of Conservation and Land		
Horse Riding	Transportation of Weeds Soil compaction and erosion	Site trails to avoid low lying areas, erodable soils, significant habitats and unstable banks Adequate signage See Section 8.3.1	Trail Riders Code of Conduct Code of Practice for the Horse Industry (draft) Recreational Trail Development and Management manual (Draft) See Section 11.2 "Horse SA" "Australian Horse Industry Council)" "Office for Recreation and Sport"		

	Land	d based activities	
Activity	Issues	Design / Management Response	Reference
Hiking Walking Orienteering	Bank erosion Vegetation loss	Site trails to avoid low lying areas, erodable soils, significant habitats, and unstable banks See Section 8.3.1	Australian Standard 2156 Walking Tracks Recreational Trail Strategy for South Australia 2002-2010 The Bushwalkers Code Bushwalking Strategy (draft) Corporate policy for Orienteering and Rogaining
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	See Section 11.2 "Standards Australia" "Office for Recreation and Sport" "The Confederation of Bushwalking Clubs NSW inc." "Department for Environment and Heritage National Parks & Wildlife SA" "Forestry SA" "Murray Darling Association"		Guidelines for Producing Trail Signage Recreational Trail Development and Management Manual (Draft) River Murray Trail Project
Interpretation Research Education	Bank erosion and vegetation loss due to overuse of commonly used locations Vehicle access and parking Waste disposal	Rotate sites to allow rehabilitation when degraded Limit numbers & frequency of use to avoid degradation Provide well sited & designed access & parking Provide toilets & bins as appropriate See Section 8.3.2	

Land based activities				
Activity	Issues	Design / Management Response	Reference	
Motorbikes	Transportation of weeds Noise Soil compaction and erosion Vegetation loss Parking and access Sharing trails Habitat loss Fauna disturbance	Discourage use in the river environs Restrict to designated areas where impacts are manageable Provide adequate access, parking and fencing Provide noise and visual buffers from adjacent uses		
Photography	Visual intrusion of lookouts Vehicle access and parking	Locate lookouts to provide vistas while not dominating the surrounding landscape Provide well sited and designed access and parking See Section 8.3.2	Australian Standard 2156 Walking Tracks Recreational Trail Strategy for South Australia 2002-2010 See Section 11.2 "Standards Australia" "Office for Recreation and Sport"	

Land based activities				
Activity	Issues	Design / Management Response	Reference	
Sight Seeing Picnicking	Bank erosion and vegetation loss due to overuse of popular locations Waste disposal Inappropriate trails	Rotate sites to allow rehabilitation when degradedProvide well sited and designed access and parkingProvide toilets and litter bins where appropriateUtilise vehicle barriers to prevent incursions into surrounding areasProvide trails to known destinations to reduce the desire to walk through sensitive areasProvide picnic and BBQ facilities as appropriateProvide signage to inform users of site rules of use.Maintain to high standard to reinforce public care and ownershipImage: Section 8.3.1 and 8.3.2	Planning and Design Guidelines for Visitor Facilities in South Australian Parks Department for Environment and Heritage - National Parks and Wildlife South Australia	
Land based activities				
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Activity	Issues	Design / Management Response	Reference	
Socialising Group Parties and Events	Bank erosion and vegetation loss due to overuse Vehicle access and parking Waste disposal	Rotate sites to allow rehabilitation when degraded. Provide well sited and designed access and parking Provide toilets and litter bins where appropriate Provide picnic and BBQ facilities where appropriate See Section 8.3.2		
Recreational Duck Shooting	Vehicle access and parking	Provide well sited and designed access and parking at popular locations	Waterfowl Identification test South Australian Firearms regulations Information on Duck Season and Bag Limits See Section 11.2 "Department for Environment and Heritage" "Sporting Shooters Association"	

Project Initiation and Management Process





The sensitivity of the river environment and the complexity of the planning and development context requires the careful consideration of many factors when planning and designing for recreation activities.

A thorough project initiation process greatly assists in addressng these issues and producing sustainable and functional outcomes.

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- 5.2 Project Inception Process Summary
- 5.3 Phase One Proposal
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- 5.8 Phase Six Construction
- 5.9 Phase Seven Evaluation
- 5.10 Phase Eight Maintenance of Future Use



5.1 Introduction

A thorough project initiation process is essential in ensuring that project outcomes meet user needs, are sustainable and minimise impacts on the environment.

The following charts document each phase of the process posing questions to be addressed at each stage.

It is intended that project initiators whether rehabilitating existing sites or developing new sites, will utilise the charts as a guide, using those stages appropriate to their circumstances.

A key decision in each project is the degree to which professional assistance is utilised across areas such as building and landscape design, environmental assessment, engineering design and project management. The charts provide guidance as to when consideration should be given to professional input. This requirement is a function of the environmental sensitivity of the site and the complexity of activities envisaged.

Section 4.2 provides information on the issues likely to be associated with particular activities, while the checklists in Section 6.0 provide a framework for assessing site sensitivity.

"A thorough project initiation process is essential in ensuring that project outcomes meet user needs, are sustainable and minimise impacts on the environment."

5.2 Project Inception Process Summary

Proposal

The initial project brief that defines and guides the project throughout its life cycle.

Feasibility

Establishes the viability of the project proposal through the investigation of physical, social, economic and environmental variables.

Decision

Combines the conceptual feasibility of the project with its financial capacity to be viable. This also identifies an initial timeframe for completion of the works.

Program

Builds upon the financial program and adds complexities involving all levels of the construction process to formulate a detailed program.

Design

Sets a brief and program for professionals and/or others to deliver detailed designs and contract documents to the client for construction.

Construction

Determines who will supervise, build and complete construction of the project ready to handover to the client/owners.

Evaluation

Allows for a review of the project from proposal to construction and an analysis of post construction use and operation.

Maintenance & Future Use

A means of evaluating ongoing maintenance, and projecting future trends, and making judgements from lessons learnt.



Figure 5.2.1

5.3 Phase One - Proposal

New Project Idea

Write down a draft of your initial ideas for a new recreation activity or upgrade of existing facilities. Include in your draft a list of goals, objectives and proposed outcomes.

Site Identification

Identify a suitable site capable of absorbing any impacts from the proposed project.



See Section 5.4 Phase Two - Feasibility "Environmental Impact"

Assessment of project needs

What are the requirements for the new or existing activity to operate successfully.

Initial Site Assessment

Undertake an initial assessment of the site to ascertain its boundaries and its ecological sensitivity i.e. significant vegetation and fauna, bank condition, drainage problems, eroding soils etc.



See Section 6.0 Site Suitability

Review of existing site provisions

What elements from the existing site can be reused or modified for reuse in the new project? What elements need to be replaced?

Community Consultation

Are there any site statistics available about its current use patterns and the communities vision for the site? If not conduct consultation through surveys, questionaires, public displays etc...



See Section 10 Community Consultation



Figure 5.3.1

Establish Project Management Structure

Establish a project steering committee or other appropriate group to oversee the project. Bring together people with a range of skills preferably covering financial management, design, construction, community development and environmental management.

Identify site opportunities

Are there any opportunities to appropriately integrate other recreation activities?

Review of appropriate development legislation

What legislation and acts apply to the project? What approvals are needed from State, Local Governments or Associations/ Organisations? Are there any initiatives or education programs that are appropriate to the potential users of the facility.

> See Section 3.3 Organisation Roles





Review Similar Projects

Check other similar projects to ascertain opportunities, solutions and failures which inform your proposal.

Development of proposal brief

Revise your draft project proposal, by detailing your goals and objectives, new and existing requirements, and take into account any consultation data, site opportunities or development legislation constraints discovered.

Feasibility



See Section 5.4 Phase Two - Feasibility

5.4 Phase Two - Feasibility

Proposal

See Section 5.3 Phase One - Proposal

$\langle \rangle$

Determine Feasibility of Project

Assess the viability of the project by preliminary investigations that analyse possible environmental impacts, initial capital costs to design/modify and build the project, as well as the future costs through ongoing maintenance and management of the site.

Capital Cost

Develop an initial budget that includes costs for consultants, construction budget and future costs of ongoing maintenance and management by a governing body.

Environmental Impact

Determine the environmental impact the new activities will have on the site upon completion, through built infrastructure and use. Review the environmental value and sensitivity of the site through the use of checklists or suitably qualified personnel.



Future Maintenance & Management

Who will be responsible for future maintenance and legal liabilities relating to the site? Upon completion of the project, what are the basic requirements for the site to be sustainable? How often will maintenance be required, who will perform the maintenance and what other managerial roles need to take place to ensure long term use? What is the anticipated life cycle of the project?

Initial Concept Plan

Develop a basic concept plan which identifies the elements to be integrated and costed. Assess the appropriateness of the design with respect to environmental standards and checklists, basic development guidelines and Acts. Use this plan to help decide on which people will be required to successfully complete the project.



Figure 5.4.1

Feasibility Analysis

Evaluate the project from the results of prior investigations and decide where the project requirements, cost, location or planning requires further development.

Decision



See Section 5.5 Phase Three - Decision

5.5 Phase Three - Decision

Feasibility

See Section 5.4 Phase Two - Feasibility



Decision on Feasibility

Following thorough investigations, decide on the projects status.

Implement Project

If proceeding with the project prepare a strategy outlining all project components to be investigated in more detail and identifying who is responsible for each task.

Abandon Project

If abandoning the project, write down where the project was found to be unsuccessful so it may be undertaken differently in future.

Amend Project

Amend relevant components of the development proposal to improve its viability and following this review the feasibility of the revised concept.

Confirm Funding

Following the investigation of the approximate costs of the project determine the sources and exact amounts of funding for all phases of the project from implementation through to construction, maintenance and management.

Private Investment

Are there any private investors who will benefit from the project? Determine if there are any associated risks involved, i.e.; when is the funding available? Will it be available in full or part amounts during the project? Are the investor's finances for this project dependant on any other investments?

Sponsorship

Are there any organisations willing to sponsor the project? Are there ways of fundraising to aid the project?



Figure 5.5.1

Government Funding

What government grants are available and how do you apply for them? What are the special conditions?



Community Volunteers

Can some of the costs be offset by the use of local community groups and volunteers? What are the potential risks and liabilities associated with this?

Project Budget

Following funding investigations, document all funding sources and details of when, from whom and how it is available, including any special conditions. Compare the available funding with the approximate funding required from the feasibility stage and propose a funding strategy for the project whether it be, part, whole or postponed. Determine if the proposed facilities will generate funds through the charge of a fee for use.

Wholly Funded

If the project has full backing from a range of funding bodies arrange a report outlining amounts, sources, availability, special requirements and when it is available.

Staged Development

If funding sources do not match your requirements you may be able to stage the development. Funding may be split into stages over different financial years or based upon the requirements of grants. Prepare a report that outlines how much is available at each particular period and establish key phases in the funding. If you have special grant funding ensure that they will be available at the time you are wishing to use them. Allow for unforseen circumstances in planning your funding.

Postpone

If your funding requirements out-weigh your available funding, review the project and other funding avenues to achieve your goals.

Program



See Section 5.6 Phase Four - Program

5.6 Phase Four - Program

Decision

See Section 5.5 Phase Three - Decision

Develop Project Program

Draft a proposed project program by seeking advice from Government authorities regarding necessary approvals, details of timeframes for financial approvals (if necessary) and estimate the anticipated design timeframe.

Design Program

Prepare a detailed program for the design process allowing sufficient time for the documentation of the required works. Set dates for major meetings with the client / governing project officer/s. Refer to Design for a suggested range of consultants, that may need to be involved in the project.



See Section 5.7 Phase Five - Design

Construction Program

Prepare a detailed program for construction to take place allowing for a range of contingencies to cover unforeseen circumstances to occur during the period of construction. Note critical points and set preliminary dates during construction such as staging, completion points etc. Begin programming detailed criteria as discussed in section 5.8 Construction.



Maintenance Program

Propose a preliminary schedule for future maintenance and the ongoing life cycle of materials used in the project.

Financial Program

Establish a financial program throughout the duration of the project covering design, construction and future works.



Figure 5.6.1

Design

Program and assign finances for design. Program the breakdown of funding for each phase of design.



See Section 5.7 Phase Seven - Design

Construction

Program and assign finances during the construction phase. Use this breakdown in conjunction with future cost plans associated with the project.

Future

Establish a continual budget program for future maintenance at monthly and yearly intervals.

Approvals

Establish a timeframe for submission and expected dates of approvals required.

Projected Timeframe

Combine all program information to complete a detailed preliminary program for the duration of the project.

Design



See Section 5.7 Phase Five - Design

5.7 Phase Five - Design

Program

See Section 5.6 Phase Four - Program



Community Consultation

Consult with stakeholders and the community to ascertain their requirements in relation to the proposed activity and site. See Section 10.



See Section 10 Community Consultation

Design Project Brief

- Write a project brief that outlines the following;
- Project goals
- · Identification of environmental constraints
- · Outputs required
- Project timelines
- · Budgets
- · Outline of approvals required
- · Details of public/community consultation
- Provision of any background material, eg surveys,
- Project Steering Committee details
- · Site Requirements
- Listings of legislation and local guidelines to follow

Design Team

What type of experienced people will be required to design the project? See below for suggestions;

- · Architects
- · Landscape Architects
- Environmental consultants
- Engineers Civil, Structural, Hydrological, Traffic
- · Irrigation consultants
- · Horticulturalists
- · Community Consultation
- Marketing
- · Quantity Surveyors
- · Land Surveyors
- · Financial Advisers
- Geologists
- Tree specialists
- · Graphic designers for signage



Figure 5.7.1

Site Analysis

Complete a detailed analysis of the site. See below for suggestions

- · Cultural heritage and historical analysis
- Macroclimate analysis
- Microclimate analysis including storm events
 Access, pathways, traffic (pedestrian and
- vehicular)
- Views
- Activities
- · Degradation
- · Barriers
- · Topography
- · Drainage & Waterways
- Vegetation
- · Site Amenities
- · Land use / ownership
- Habitat

 \Diamond

See Section 6 Site Suitability

Community Evaluation

Provide stakeholders and the community with an opportunity to evaluate options and provide feedback.

Design Options

Complete concept design options that address the brief and assess the advantages and disadvantages of each option to determine the best design outcome. Use the same site analysis criteria to assess each option. The steering committee should judge which option should proceed to design development.

Design Development

Using the preferred concept design, further detail is required in the design to ensure that it meets a range of criteria for the project to be successful. Such criteria may include;

- · Material selection
- · Levels and drainage
- · Lighting
- Irrigation
- · Vegetation selection
- Assessment of design against relevant Australian Standards
- Approvals of design by any relevant authorities
- · Traffic changes
- Approval to proceed to documentation from steering committee

Contract Documentation

Document the above design for tender and then construction.

- Documentation of tender drawings and production of project specification
- Sign off of drawings by steering committee and relevant authorities

Construction



See Section 5.8 Phase Six - Construction

5.8 Phase Six - Construction

Design

See Section 5.7 Phase Five - Design

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Determine type of contractors to build work

With the completed drawings and project specifications determine who will be responsible for constructing the proposed works.

Council

If the project will be built primarily by council assess how much of the project will be built both internally and externally. Consider what internal departments will be responsible for each section of work.

Review Internal Construction Budget (Council)

If to be built by Council, check that each department has adequate funding and can complete the project for the costs allowed. Set a project contingency sum to allow for any changes within construction.

Assign Construction Personnel (Council)

List all staff members who will be constructing the project, and appoint a supervisor to act as the primary project contact.

Community / Service Clubs

Arrange a working party of all participating groups and assign specific roles for each group based on their experience. If possible assign experienced people as representatives of the group and mix those with less experienced personnel. These people will be responsible to reporting to the project manager.

Determine capabilities of volunteers

Within each work team determine the skills of each member and assign suited tasks as necessary.

Determine extent of volunteer and contractor budgets

Some projects will need the assistance of external contractors to complete the task. Identify within the project the extent of work requiring external contractors and set aside budgets for this work from the project budget.



Figure 5.8.1

Contractors

If the project will be let as a contract to contractors, check that the drawings and project specification have been signed off and advertise for interested contractors as a registration of interest. The registration of interest should ask for details such as company resources, a statement of capability, OH&S standards and recent relevant experience.

Tender & Evaluation

From the registration of interest, establish a shortlist of suitable companies and invite them to tender on the project. Upon receiving the tenders evaluate each using a matrix that judges each tender equally on price, reputation, experience, suitability, choice of sub contractors, resources, program, OH&S etc.

Appointment of contractor and project manager

Upon selection of a contractor appoint a project manager to oversee the contract. Choose an appropriate contract and ensure all legal requirements are fulfilled.

Construction Environmental Management Plan

Prepare a plan detailing how the site will be managed to minimise environmental damage during construction e.g. drainage, waste, soil and water contamination etc.

Construction

Carefully oversee construction through to completion.

Handover to landowner

At practical completion hand site back to landowner, but ensure that the defect liability period (if applicable) is observed until final completion.

Publicity

Prepare a press release and notify media outlets of the completed project and proposed opening date.

In the case of minor projects notify stakeholders and the local community or user groups.



See Section 10.5 Media Publicity

Evaluation

See Section 5.9 Phase Seven - Evaluation

5.9 Phase Seven - Evaluation

Construction

See Section 5.8 Phase Six - Construction



Evaluation

Upon Final Completion review the project process and document any areas that could be improved for future projects. Visit the site regularly and review its operation as a recreation facility. In particular, assess whether environmental goals have been met.

Maintenance

Ensure the programmed maintenance of the facility is adhered to and make any improvements as necessary. Maintenance of the facility is essential for longevity of materials and the provision of a high level of public safety.

Construction

Review the construction process for improvements. Is there an alternative construction method that would have been easier to achieve the same result?

Project Budget

Review the project budget. Was the budget allocated appropriate for the expected outcomes?

Operation of Facility

Review the facility in terms of its usage and operation on a regular basis to check if there are any changes in pattern of use, and whether the design is still appropriate.

Management Plan

Prepare a plan which addresses the ongoing management of the site including visitor usage, maintenance and environmental protection

Ongoing Evaluation

Program regular reviews of the site. Engage with users to gain further understanding of the site and how it is used.

Maintenance and Future Use



See Section 5.10 Phase Eight - Maintenance & Future Use



Figure 5.9.1

5.10 Phase Eight - Maintenance & Future Use

Evaluation

See Section 5.9 Phase Seven - Evaluation



Ongoing Assessment

Several years after construction and maintenance, regular reviews will have identified clear results as to the performance of the design and materials.

Patterns of Use

Has the patterns of use changed since the upgrade/ installation of the facility. Was the design of the facility influential in the change?

Environmental Impact

Has the new/upgraded facility had a positive impact on the environment? What changes have occurred to the environment since the project's inception? Are there any further opportunities to enhance the quality of the river environs now?

Maintenance

Has the programmed maintenance been successful in sustaining the facilities and their environs in a safe, well presented, and environmentally healthy state? What have been the main issues in terms of maintenance that could be improved?

Future Trends

From the regular review is it possible to predict the future growth in visitation, changing needs of users etc? What would need to happen to ensure the site can cope with these changes?

Review

Review the project data relating to current use and determine if there are new projects required to ensure the sites suitability for the desired/continued activities.



Figure 5.10.1

Site Suitability





Every site has a different capacity to accommodate recreation activites and facilities. Careful assessment of the site is a critical step in ensuring a sustainable fit between the site environment and proposed activities.

Contents

- 6.1 Introduction
- 6.2 Strategic Planning Checklist
- 6.3 User Needs Analysis Worksheet
- 6.4 Site/Route Analysis Worksheet
- 6.5 Carrying Capacity Information Worksheet
- 6.6 Example Site Analysis



6.1 Introduction

A critical element in the achievement of a sustainable recreation outcome is the minimisation of environmental impacts both during construction and throughout the life of the development.

A primary goal in the planning of every project is the matching of the activities and facilities with the capacity of the site to sustainably accommodate any resultant impacts.

The following checklists and worksheets provide a means of assessing the needs of users and their rates of usage, and analysing the site to determine those issues, opportunities and constraints to be addressed in the planning and design of the project. The checklists are equally applicable to existing sites to be rehabilitated and new sites to be developed. Where rehabilitation is to be undertaken the impact of existing activities, facilities, management policies, and maintenance regimes can be utilised as a basis for assessing the sites overall environmental sensitivity, and the identification of critical environmental issues to be addressed in the rehabilitation process.

The checklists and worksheets are not intended as a substitute for local knowledge and expert environmental advice which will be required to adequately assess the majority of sites.

> "A primary goal in the planning of every project is the matching of the activities and facilities with the capacity of the site to sustainably accommodate any resultant impacts."

6.2 Strategic Planning Checklist

P	roject			
4	ssessor	Date		
1. Maja	or Issues and Needs			
Have the	major issues and needs underlying the problem or idea be	een explored?		
(Conside for this e) Issues ma	r inviting the involvement of key stakeholders vercise). ay include (please tick 1 for yes, and	See Section 3 Planning and Man	agem	nen
describe	Ecological			
Ē	Social			
Ē	Functional			
Ē	Constructional			
[Perceptual			
[Financial			
E	Political			
[Management related			
E	Safety / risk related			
2. Regi	onal Context			
s the ide	a in accordance with wider planning strategies that have	been undertaken?	Y	1
lar the l	dea been considered in a realonal perspective? ie: Do sin	nilar recreational		

What benefits	will the facility deliver to the local community?
is the project r	necessary in a regional context?
3. Example	s
Are there any offer useful pro	planned or completed projects, either locally or further a field which Y N ecedents? If yes, where?
4. Constrain	nts onstraints been identified?
	Physical/environmental (eg. Limited availability of water, significant vegetation or wildlife, access,
	seasonal flooding and stormwater issues) Management related (eg. inadequate resources for long-term maintenance, unacceptable risks)
	Policy or legal (eg. Aboriginal significance, native vegetation)
	Political (eg. public values)
	Financial (eg. funds inadequate/not guaranteed)
	Time related (eg. deadlines, seasonal limitations)
	Planning (eg. Is the project in accordance with the provisions of the relevant Developmer Plan and other Management Plans which affect the site?)

(eg. Electricity, reticulated water, waste collection, sewer)	
5. Alternative Options	
Are there alternative ways of meeting needs which might: (If yes, please describe)	
Have less impact upon the natural environment?	YN
Be more sympathetic to the character of the landscape?	YN
Be more resource effective?	YN
6. Is the idea still feasible? Why/Why not?	YN

6.3 User Needs Analysis Worksheet

Site Location			
Project			
Assessor			Date
1. Expected Numb	per of Users		
Existing Peak Periods	people/month Futu	re Peak Periods	people/month
Existing Average Use	people/month Futu	re Average Use	people/month
Recrea	tional Non-Power Boating [tional Power Boating [ins [ing - Large Groups [ing - Small Groups [ch / Education / Interpretation [raphy [ing - Group Parties / Events [A wheel Drive Motor Bikes House Boat Use Site Seeing and Yabbying Fishing - Recrea Bird Watching Water Skiing Cycling (inc. Million)	rs I Picnicking Itional
Swimmi	ng [Canoeing and	Kayaking
Recrea	tional Duck Hunting	Other	
Oriente	ering		
Horse R	iding		

3. Conflicts of use

Are there any potential conflicts of use/ (eg. noise and habitat modifications etc)

4. Type and Ability of Users	
Prodominant age range of users (please tick \checkmark for years	es)
O-18 years old	31-50 years old
19-30 years	51+ years old
Mobility of users (please tick 🖌 for yes)	
Active	Disabled access required
5. User Group Types and Sizes	
Types of groups and sizes (please tick \checkmark for yes)	
Single person users	Tour Groups
Families	School Groups
6. Length of stay/rate of turnover	
Typical length of stay (please tick \checkmark for yes)	
Hourly	Weekend
Day Visitor	Weeks
Overnight	Months
7. Major Use Periods	
Typical types of usage (please tick 🖌 for yes)	
Seasonal	Spread over the year
Peak Periods (holidays)	Other
8. Expectations and Interest of users	
Typical types of experience sought (please tick \checkmark for	ryes)
Solitude	Sport
Tranquility	Adventure

pes of facilities required (please tick \checkmark for y	ves) See Section 4.2 Facilities for Activities Matrix
2 Wheel Drive Access	Rescue points
4 Wheel Drive Access	Walking Tracks
Bus Access	Proximity to river
Caravan Access	Access to River
Parking	Houseboat Mooring
Disabled Use	Boat Launch
Toilets	Camp Sites
Usable Water	Jetty
Shade Trees	Sewerage Disposal
Shelter Structure	Wood supply
Picnic Tables	Fire Rings
Gas BBQ	Rubbish Bins
Interpretive Information	Signage
Safety Information	Other
. Stakeholder Interests	
olease tick 🖌 for yes)	
Conservation	Local Community
Recreation	Other
Business	
Tourism	

6.4 Site/Route Analysis Worksheet

Site Location Project Assessor Date

Note:

Only collect information which is relevant to the project. Consider use of graphic representation of information. Seek expert assistance if unable to answer any of the questions; this is especially critical for questions 1.4 - 1.8.

1. Physical and Environmental Attributes

Describe the attributes of the following physical and environmental qualities of the site. Some of these qualities may be best described by graphic representation. Attach to rear of Worksheet.

1.1 Land Use

1.1.1 Current lan	id uses		
110 548			
1.1.2 Existing dev	veiopment	umoninoinnonnauna	******

1.1.3 Existing serv	vices		

1.1.4 Surrounding land uses	1
	÷
	÷
1.1.5 Special attractions	3
	2
1.1.6 Previous land uses and evidence	÷,
	2
1.1.7 Site significance (Traditional owner/European)	2
	÷
	÷
1.2 Circulation and Access	
1.2.1 Vehicle	7
	÷.
1.2.2 Pedestrian	
	10
	-

1.2.3 Carparking	
1.2.4 Caravan / camper parking	
1.2.5 Boat mooring / launch area	
1.2.6 Other	***************************************
1.3 Existing Facilities	
1.3.1 Shelters	
1.3.2 Picnic tables and seats	
133 BBO	
10.0 000	

1.3.4 Si	gnage
1.3.5 Lo	pokout
1.3.6 Bi	ns
1.3.7 D	rinking water
1.3.8 Fi	eplaces
1.3.9 C	ampsites
1.3.10 .	letty
1.3.11 1	ollets
1.3.12	Vood supply

1.4 Landform

1.4.1 Steepness	
1.4.2 Aspect	
1.4.3 Special features / attraction	15
1.5 Vegetation	
1.5.1 Vegetation community type (see "Your Wetland: Monitoring M	es anual' for wetland / floodplain areas)
1.5.2 Age, size, density and cond	ition
1.5.3 Significant species	
1.5.4 Distribution over the site	
1.5.5 Resilience	

1.5.6 Woody weeds	
1.5.7 Threatened species	
1.5.8 Disease / dieback	
1.6.1 Significant species	******
1.6.2 Habitat	
1.6.3 Movement patterns	
1.6.4 Threatened species	
1.7 Soils 1.7.1 Type	
1.7.2 Susceptability to compaction	

1.7.3 Susceptibility to waterlogging	
1.7.4 Bank susceptability to wave action damage	
1.7.5 Capacity to support roads / structures	
1.7.6 Depth to bedrock	
1.7.7 Susceptability to erosion	
1.7.8 Salinity	
1.8 Drainage 1.8.1 Drainage patterns	
1.8.2 Wetlands and water bodies (size, depth, location)	······
1.8.3 Depth to water table	
1.8.4 Water quality	

1.8.2 Wetlands and water bodies (size, depth, location)

1.9 Hazards

Describe potential hazards

Unstat	le slopes		
Floodi	g	 	
Subme	rged hazards	 	
Fires		 	
Other			

2.1 /	Microclimate
	Sun / shade charactaristics
	Agreeable breezes
	Unpleasant winds
	Air / drainage charactaristics

2.2 V	fiews
	Out of the site
	Within or through the site
	Along the route
2.3 S	ite Visibility
	Near
	Distant
2.4 N	loise
	Sources
	Level
\square	Duration
\square	Frequency
2.5 0	Character
	Dominant colours, materials, textures, forms and shapes
3 6	onstraints and Disadvantages
3.1 k	dentify major site / route constraints
viin.	

3.2 Identify major site / route disadvantages
4 Potentials and Advantages
4.1 Identify major site / route potentials
4.2 Identify major site / route advantages
5 Conclusion
5.1 Are the proposed activities suitable for the site?
5.2 Should the site be rehabilitated or closed?
6.5 Carrying Capacity Information Sheet

The carrying capacity of each site/route is dependent on the ecological characteristics of the site and its sensitivity to impact, the likely level of impact from proposed activities and facilities, the level of design and funding resources available, and the level of ongoing management of the completed project.

The following diagram illustrates the relationship between these factors:



Figure 6.5.1 - Carrying Capacity Diagram

Generally, the higher the ecological sensitivity, the lower the activity impact should be, and the higher the design, funding and management resources required to attain a sustainable outcome.

The lower the ecological sensitivity, the higher the activity impact that can be absorbed and the lower the design, funding and management resources required to achieve a sustainable result.

"The aim is to achieve an environmentally sustainable fit between the ecology of the site, the proposed activities and the available resources for design and management." As noted in the Site/Route Analysis Worksheet it is important to gain expert advice in assessing the ecological aspects of the site. Generally, only highly modified sites in a stable condition can be considered candidates for low ecological sensitivity in the River Murray environment given the widespread degradation of the river system and the critical importance of water quality in South Australia.

In many situations projects will be initiated to redevelop and rehabilitate existing sites. In these cases the existing usage patterns and the consequent impacts on the environment provide an indication of the ability of the site to sustain the proposed activities. In severely impacted sites, relocation of access and activities to other locations may be necessary. In some cases reorganisation of access and facilities can protect sensitive parts of a site and transfer activities to more robust locations within the overall development.

Design can often protect sensitive sites through delineation of alternative routes and the provision of new facilities which minimise impact. In other cases improved management and maintenance can result in significantly less on-going impact and degradation and therefore improved ecological health.

"...it is important to gain expert advice in assessing the ecological aspects of the site." It is recommended that a conservative approach be adopted to assessing site carrying capacity. Such an approach is characterised by the following:

- Choosing sites of low ecological sensitivity.
- Restricting usage rates to moderate levels.
- Utilising expert advice in the environmental assessment of the site.
- Utilising expert advice in the siting and design of facilities.
- Ensuring adequate resources exist to complete the project to a high standard.
- Ensuring adequate resources exist to maintain and manage the project after completion.

6.6 Example Site Analysis

Prepare a site analysis plan which summarises the issues which have been identified on the site. Use this as a catalyst for discussion with stakeholders and later to help delineate areas for rehabilitation and redevelopment





General Design Principles





Good design provides the means by which recreation activities can be more sustainably accommodated within the river environment.

Contents

- 7.1 Introduction
- 7.2 Environmental Sustainability
- 7.3 Character
- 7.4 Public Acceptance
- 7.5 Maintenance
- 7.6 Vandalism
- 7.7 Risk Mitigation
- 7.8 Recreation Setting



General Design Principles

7.1 Introduction

All recreation developments require planning and design in order to meet the needs of prospective users, minimise impacts on the environment and operate within available management and maintenance resources.

Section 5.7 outlines the design process while Section 8.0 contains a range of design guidelines applicable to recreation sites in the river environment.

The general design principles outlined in this section provide an overview of issues which are fundamental to the achievement of good design in recreation developments.

"The fundamental principle when planning and designing for recreation on the River Murray is the achievement of environmental sustainability."

7.2 Environmental Sustainability

A primary aim of any recreation development in the river environment should be to achieve long term ecological, social and economic sustainability.

This requires a thorough project planning and design process which explores all possible options and considers the development in the context of the broader landscape. Specifically, design can help to achieve sustainability by:

- Minimising soil erosion and bank disturbance
- Creating low maintenance landscapes
- Conserving vegetation and protecting and enhancing wildlife habitat
- Employing plant and equipment that does not require high resource input and which incorporates water and energy saving and generating technologies where possible
- Minimising or eliminating wastes
- Identifying the carrying capacity of use areas and implementing a limit of acceptable change approach to site environmental management as part of the site planning process
- Selecting building materials which are harvested and/or manufactured in an ecologically sound manner, and re-using building materials where possible
- Utilising local materials where possible
- Ensuring recreational and other activities can co-exist with minimal conflict.



Figure 7.2.1 This well designed boardwalk retains and protects the surrounding indigenous vegetation.

7.3 Character

Facilities should, through quality presentation and the demonstration of sustainable principles, indicate to visitors that the river is a special and unique environment which is worthy of conservation and that recreation and a sustainable river environment can co-exist. To this end, design should seek to retain and complement the natural or cultural qualities of a particular setting as far as possible.

This can be achieved both by maximising conservation of key elements in the landscape (eg. buildings, vegetation, existing landform) and also by careful regard to design details such as colour and form. Simplicity, robustness and permanence are words which describe an appropriate approach to design in the river environment generally, although it is important to realise that what is a suitable solution at one location may not be appropriate at another, even within the same region.



Figure 7.3.1 A well designed toilet facility set in natural landscape.

7.4 Public Acceptance



It is important that projects seek both to address the needs and expectations of the public as well as involving them in the decision making process. This promotes a sense of ownership and opens up a large and diverse pool of knowledge existing in the public which can deliver many benefits to projects. Seeking out long term local residents and tapping into their knowledge of site conditions can be especially beneficial.

For projects which will have a significant effect on users or stakeholders, it is especially important to invite their early involvement. Consultation can occur at the beginning of a project, during the design stages, or during and following implementation. The level and type of public involvement should be carefully considered to ensure an efficient and accountable process – in all circumstances, it is in the interests of project initiators to maintain control over the consultation process and indeed the project.

Section Ten describes a range of public consultation processes suitable for recreation based projects.



Figure 7.4.1 Community consultation involves all ages.

7.5 Maintenance

In most cases, design of facilities should aim to minimise maintenance requirements, consistent with management objectives. This can be achieved both through careful regard to the structural design and assembly of infrastructure, and also by consideration to the organisation and layout of a site.

When planning a facility, it may be useful to take an inventory of the likely maintenance tasks associated with its functionality so that informed design decisions can be made. Some common maintenance tasks include:

- Cleaning
- Garbage collection
- Sewage removal
- Repair and replacement of infrastructure
- Vegetation maintenance and management

Future resource requirements needed in relation to labour, materials and funding should also be assessed at this stage, in order to ensure the long term feasibility of the project.

Policies on issues such as garbage collection or visitors taking all waste out with them should be addressed as part of the design process.



Figure 7.5.1 A robust shelter well sited among existing vegetation.

7.6 Vandalism

Vandalism is a significant problem in many areas and a considerable amount of time and money is spent by facility managers repairing and replacing damaged infrastructure. There are, however, design approaches that can reduce these problems, as follows:

- Use vandal-resistant infrastructure (eg sturdy, fire-proof materials, tamper-proof fasteners)
- Design to enable a certain level of public surveillance of facilities
- Avoid dead-end spaces where possible incorporate facilities into the wider vehicle and pedestrian circulation system to provide random visitor activity patterns through and adjacent facilities.
- Provide a level of development which is consistent with the type of experiences people want to have at a particular location (eg overdevelopment in remote, wilderness areas may lead to vandalism if visitors believe that infrastructure is inappropriate)

A further note is that facilities which are tidy and well-kept tend to be less prone to vandalism.



Figure 7.6.1 A site information shelter designed to minimalise vandalism

7.7 Risk Mitigation

Risk mitigation is about making environments safer for visitors and the community, consequently minimising the liability of facility managers to claims in relation to personal injury and damage to personal property. This has implications for design, construction and management practices and procedures. Risks can be minimised by:

- Identifying potential hazards
- Understanding the needs and abilities of the users of the facility
- Complying with legal minimum standards and any appropriate Australian Standards or safety codes.



See Section 11.2 Standards Australia

- Choosing construction materials that reduce the risk of injuries (eg. No splinters or sharp protuberances; not prone to sudden breakage; non-slip surfaces)
- Using signs and barriers where appropriate e.g. to identify dangerous swimming locations
- Securing indemnity from users where possible
- Finding out about the experiences of operators of similar facilities
- Obtaining professional advice
- Clearly establishing responsibilities for public liability among project initiators and managers, and land owners.



Figure 7.7.1 Lookout with balustrade to improve public safety

7.8 Recreation Setting

Visitors have expectations about the type of recreation experience they are seeking. Visitors to popular day visit areas expect easy access, quality facilities and a safe environment. However, visitors to remote locations do not expect to be confronted with the same standard of facilities. In a remote context the identical facilities or standard of construction would appear over-designed and inappropriate. It is common sense to consider different design solutions depending upon the recreation setting encountered.

The recreation opportunity setting is the result of a combination of site factors and use patterns in a particular location. The issues to be considered when deciding the appropriate standard of facility (ranging from modern to primitive) include:

- Visitor numbers and use
- The profile of the site and how it is marketed to the public
- Proximity to urban areas, day visitor areas or camping areas
- The class of access road or category of walking trail
- Difficulty of site access (terrain and time)
- Whether the facilities are free or a fee is charged



Figure 7.8.1 Town river park

Facility Design Guidelines



Facility Design Guidelines

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Rules of thumb or guidelines based on past experience can assist in addressing common recreation issues which occur throughout the river environment.

Contents

- 8.1 Campgrounds
- 8.2 Water Based Activities
- 8.3 Day Visitor Facilities



8.1 Campgrounds



Camping is a common recreation pursuit along the River Murray and Lower Lakes, which occurs in a wide variety of settings. The expectations of campers vary from those desiring a bush experience to those wishing to be outdoors but with extensive support facilities.

Many camping areas have a long history of use, in some cases by generations of the same family.

The following guidelines provide information which aims to maximise the recreational opportunities for campers while protecting the ecological integrity of the river environment.

Contents

8.1.1 Access

- Roads
- Pedestrian paths
- Movement barriers

8.1.2 Campsites

Layout

8.1.3 Support Facilities

- Toilets / showers
- Site furniture

8.1 Campgrounds

8.1.1 Access - Roads

Objective

Access to camping areas to be via easily navigable tracks which minimise the impact of vehicles on the environment and result in minimal noise and visual impact on adjacent campsites.

Performance Criteria 1.

The overall road layout should be simple and easily readable by users.

Design Guideline

The use of one way loops or two way spurs simplifies the layout and increases the readability of the road system



Figure 8.1.1 Turnaround at end of spur. Spur runs parallel with riverbank.



Figure 8.1.2 Loop allows ease of numbering and access to each site.

Performance Criteria 2.

Road layout should assist campsite management.

Design Guideline

A series of linked loops or spurs allows for ease of control over campsite use.





Performance Criteria 3.

Pedestrian - vehicle conflicts should be minimised.

Design Guideline

The careful location of roads in relation to communal facilities and destinations such as the rivers' edge can assist in keeping the pedestrian crossing points to a minimum.



Figure 8.1.4 Communal facilities and rivers' edge easily accessible from both loops.

Performance Criteria 4.

Road alignment and design should minimise environmental impact.

Design Guideline A

Site roads to avoid sensitive vegetation, habitats, soil types, rock formations and drainageways.



Figure 8.1.5 Design Guideline A

Design Guideline B

Avoid steep sites where extensive excavation may be necessary to establish the road. Conversely avoid low lying areas where drainage problems may necessitate filling and extensive infrastructure.



Figure 8.1.6 Design Guideline B

Performance Criteria 5.

Road layouts should encourage low vehicle speeds.

Design Guideline Curved roads with small radius corners encourage low speeds.



Figure 8.1.7

Performance Criteria 6.

The visual impact of roads should be minimised.

Design Guideline A

Site roads in sympathy with the natural shape of the landscape. Avoid extensive earthworks and the resultant cut and fill banks. Generally curve roads to move around natural rises or dips. Maintain as much natural site vegetation as possible, and revegetate roadsides.

Design Guideline B

Utilise local materials to surface roads the same or similar colour to site soil.



Figure 8.1.8 Clear the minimum area to construct the road consistent with safety requirements. Retain existing vegetation.

8.1.1 Access - Pedestrian Paths

Objective

Pedestrian access within and near campgrounds to be via walking tracks which avoid environmentally sensitive areas, and maximise the scenic qualities of the site.

Performance Criteria 1.

The track system should be simple, direct and easily understood by users.

Design Guideline

Paths which provide reasonably direct access to destinations will be well used. Where indirect routes are necessary, site the track so as to provide an attractive and logical alternative.



Figure 8.1.9 Multi-use path provides direct access between campsite loops, to toilet and to river.



Figure 8.1.10 Generous loop takes natural curve away from wet area and provides view to river.

Performance Criteria 2.

Track alignment and design should minimise environmental impact.

Design Guideline A

On sloping sites track alignment and drainage is crucial to avoid the concentration of water and consequent erosion. Generally provide a constant crossfall of 3-5 % to disperse water from the path.



Figure 8.1.11 Keep track flush with natural ground to allow water to drain across path.



Figure 8.1.12 On sloping sites maintain a cross fall to minimise rutting of path.

Design Guideline B

Where appropriate utilise bridges and boardwalks to minimise trampling of vegetation, compaction of sensitive soils and damage to wet areas.



Figure 8.1.13 Place boardwalks and bridges at narrow points to minimise length.

Design Guideline C

Track alignment is a key mechanism to minimise site environmental impact.



Figure 8.1.14 Path location provides proximity to bank and views to river while avoiding sensitive sites.

Performance Criteria 3.

The visual impacts of tracks should be minimised.

Design Guideline

Utilise local materials to achieve a path surface which closely matches the site soil colour.

- Choose surface materials appropriate for the envisaged usage patterns of the track.
- In many cases compacted site soil is suitable for low use areas. Compacted local gravel if available will accomodate all but heavy usage.
- A spray-seal finish of local gravel rolled into liquid bitumen is suitable for most heavy use situations.
- In-situ concrete or pavers rarely complement natural settings.

8.1.1 Access - Movement Barriers

Objective

Vehicle and pedestrian movement should be limited to designated areas in a manner which is not visually intrusive.

Performance Criteria 1.

Barriers should protect environmentally sensitive areas.

Design Guideline

While road and track siting should be the major means of protecting environmentally sensitive areas, in some instances physical barriers will also be necessary.

Performance Criteria 2.

Barrier design should respond to the intensity and nature of expected usage.

Design Guideline

Barrier design will vary according to the sensitivity of the area to be protected and the intensity of the projected usage. A heirarchy of barrier types from most informal to most structured includes:

- screen planting
- level changes e.g. retaining walls
- boulders set into the ground
- large logs
- posts or bollards at 1.5m spacings
- post and rail fence, height may vary from 400mm to 1.0m
- post and wire fence, usually 800mm high with 2-4 strands of wire
- post and wire mesh fencing





Figure 8.1.15 Vegetated protection.

Figure 8.1.16 Level change discourages access.



Figure 8.1.17 Posts prevent car access. (Use treated pine in locations where removal for firewood is likely)



Figure 8.1.18 Post and rails prevent all vehicle access and deter pedestrians.



Figure 8.1.19 Post and wire fences prevent all vehicle and strongly deters pedestrian access.

Performance Criteria 3.

Barriers should not dominate the appearance of the site.

Design Guideline A

Where possible utilise natural materials from the site, vegetation and level changes to ensure that barriers are visually integrated with the site.

Design Guideline B

Where off-site materials such as timber, stone, steel or recycled plastics are used, ensure that their colour harmonises with that of the river environment.

8.1.2 Campsites – Layout

Objective

Campgrounds to be sited and laid out to minimise impact on the environment and respond to the needs of users.

Performance Criteria 1

Campground layout should minimise impacts on river banks, riverine vegetation, habitat and river water quality.

Design Guideline A

Vehicle access at individual campsites should be set back at least 20m from river banks.



Figure 8.1.20

Design Guideline B

Locate campsites adjacent low riverbanks or beaches.



Figure 8.1.21 Avoid high banks where river access is difficult and likely to accelerate erosion.

Design Guideline C

Locate campsites on firm ground above drainage ways.



Figure 8.1.22 Avoid wet or boggy soil in low lying areas.

Design Guideline D

Locate campsites away from the bases of large trees and clear of natural revegetation zones. In particular avoid campsites beneath the canopy of River Red Gums, Sugar Gums and other large trees known to shed limbs.



Figure 8.1.23 Campsites close to tree bases compact the soil and can damage roots.

Design Guideline E

In high impact camp locations cluster campsites into nodes, loops or spurs to allow rotation for environmental rehabilitation.



Figure 8.1.24 Close loop to allow vegetation and soils to recuperate.

Design Guideline F

Design campgrounds to respond to the character and environmental sensitivity of the site i.e.:

Bush campground:

- Very sensitive landscape
- Low visitor numbers
- Sites well spaced (30m centres)
- Low key road access and minimal facilities



Figure 8.1.25 Bush Campground

Semi-Developed Campground:

- Moderately sensitive landscape
- Sites at 15-20m spacing
- Sites designated with area for carparking
- Toilet facilities provided
- All sites for single group camping



Figure 8.1.26 Semi-Developed Campground

Developed Campground:

- Modified landscape
- Sites at 10-15m spacing
- Access road surfaced with gravel or bitumen
- Toilet and possible showers provided
- A range of site sizes to accommodate single and larger groups



Figure 8.1.27 Developed campground

Design Guideline G

Provide signage and other means of visitor education to encourage visitors to take litter away, dispose of washing waste in pits, and dig temporary pit toilets well back from the river (100m).

Performance Criteria 2

Campground layout and design should utilise the natural attributes of the site landscape to provide privacy and protection from the elements.

Design Guideline A

Locate camp sites in areas sheltered from prevailing winds and rain, with good drainage, and on firm soils with 2-5% slope.



Figure 8.1.28

Design Guideline B

Utilise the natural form and elements of the landscape to provide buffers between sites e.g.

- Vegetation
- Gullies
- Rock outcrops
- Level change



Figure 8.1.29

8.2 Water based activities



Water based activities vary considerably from kayaking and fishing to jet skiing and houseboating.

The following guidelines address the critical issues which primarily effect water quality and bank stability. Careful assessment of sites and good planning and design can result in solutions which fulfill recreational needs and protect sensitive river environments.

Contents

8.2.1 Vessel launch

- General
- Non-motorised vessels
- Motorboats

8.2.2 Houseboat Facilities

• Mooring

8.2.3 Jetties

8.2 Waterbased Activities

8.2.1 Vessel Launch - General

Objective

Locate launching facilities to maximise public safety.

Performance Criteria 1

Locate launch sites, moorings, jetties and wharves where they will be protected from strong winds and rough water.

Design Guideline

Locate launch facilities in areas protected from strong winds, i.e. predominantly South-Westerlies all year and Northerlies in Summer.



Figure 8.2.1 Landform protects mooring from winds

Performance Criteria 2

Locate launch facilities where the water depth and riverbed profile are suitable.

Design Guideline

Avoid underwater hazards such as rocks and sand and mud beds.

8.2.1 Vessel Launch - Non Motorised Vessels

Objective

Launching facilities to be located in areas where vehicle access, parking and launching facilities have minimal impact on the environment while providing safe access to the river.

Performance Criteria 1

Accommodate the needs of both day visitors and campers.

Design Guideline

Locate launch facilities at sites with both camping and day visitor areas.



Figure 8.2.2

Performance Criteria 2

Locate launch facilities where banks are low and stable.

Design Guideline

Utilise beaches and low banks to site launch ramps.



Figure 8.2.3 Take advantage of the natural shape of the bank

Performance Criteria 3

Launch facilities should be located to allow ease of vehicle access and be within close proximity to canoe and kayak destinations.

Design Guideline

Many cance and kayak destinations are sensitive water systems such as wetlands. Avoid the impacts of vehicle tracks and carparks by locating launching facilities adjacent or across the river.



Figure 8.2.4
Launch sites should provide adequate space for unloading, loading and preparing vessels for launching.

Design Guideline

Locate unloading and preparation space adjacent both the carpark and launching area.



Figure 8.2.5

8.2.1 Vessel Launch – Motorboats

Objective

Boat ramps to be located in modified environments with low ecological sensitivity, where all associated facilities can be accommodated with minimum visual and environmental impact.

Performance Criteria 1

New boat ramp sites or redevelopment of existing sites should seek to provide all related facilities within a designated well planned zone which addresses all environmental impacts and provides a safe boat launch experience.

Design Guideline A

Efficiently plan associated car/trailer parking and manoeuvring space to minimise the area of impact consistent with safety requirements.

Design Guideline B

Manage runoff from hard surface areas to avoid bank erosion and pollution of the River.

Design Guideline C

Plant shade trees around and within car/trailer park to reduce visual impact and improve biodiversity.



Figure 8.2.6

8.2.2 Houseboat Facilities - Mooring

Objective

Mooring facilities should be located to provide a variety of experiences and facilities for houseboat users, consistent with minimising impact on the river environment.

Performance Criteria 1

Match terrestrial facilities and the density of moorings with the ability of the river bank and adjacent environment to absorb activity impacts.

Design Guideline A

Locate moorings adjacent towns with access to shops, picnic facilities etc.



Figure 8.2.7 Denser moorings allow access to town facilities

Design Guideline B

Provide signage to identify suitable mooring sites in isolated locations.



Figure 8.2.8 Low bank allows easy access to campsite

8.2.3 Jetties

Objective

Site and design jetties to minimise environmental and visual impact while maximising public safety and supporting as wide a range of water based activities as possible.

Performance Criteria 1

Locate jetties in areas protected from strong winds, with sufficient water depth to service the expected vessel types.

Design Guideline A

Check local wind patterns and river bed profile when siting jetties.

Design Guideline B

Design jetties to achieve a 1.0m maximum height above normal high water level.





Design Guideline C

Locate signage prohibiting houseboat mooring at jetties.

Site and design jetties to achieve the minimum visual intrusion in the river landscape.

Design Guideline A

Where possible design as landings parallel to the waters edge rather than jutting out into the river.



Figure 8.2.10

Design Guideline B

Keep jetty length and width to a minimum consistent with the proposed usage and public safety.

Design Guideline C

Timber construction is preferable to visually fit with the river environment.

8.3 Day visitor facilities



Day visitors to the river and lakes engage in a wide range of recreational activities often requiring considerable infrastructure. The following guidelines primarily focus on siting and design issues related to the many structures which may be associated with various day visit activities.

Contents

8.3.1 Walking and Bicycle Trails

8.3.2 Support Facilities

- Toilets
- Picnic facilities
- Interpretive shelters
- Seats
- Lookouts
- Boardwalks
- Signage

8.3 Day Visitor Facilities

8.3.1 Walking and Bicycle Trails

Objective

Provide trails which meet the needs of prospective users and allow for a variety of experiences, while minimising impact on the environment.

Performance Criteria 1

Plan a logical hierarchy of trails which allow for a range of walk/ride lengths and landscape experiences.

Design Guideline A

Utilise looped systems where possible to allow choice of walk/ride length.



Figure 8.3.1 It is possible to close individual loops for rehabilitation while still keeping the system open

Design Guideline B

Construct the trail surface to suit the terrain and expectations of users e.g. boardwalks and sealed paths for those with disabilities. (See Australian Standards AS2156.1-2001 Walking Tracks - Classification and Signage and AS 2156.2-2001 Walking Tracks - Infrastructure Design)





Figure 8.3.2 Class 1 Boardwalks in flood prone areas

Figure 8.3.3 Class 4 Narrow track with natural ground surface for most minor trails





Figure 8.3.4 Shared bicycle/walking trail Maximum preferred grade 1:10

Figure 8.3.5 Class 1 Sealed path for disabled access Maximum preferred grade 1:20

Provide facilities such as trail heads, signage, seating, stairs etc as appropriate for the terrain and standard of trail. (See Australian Standard AS2156.1-2001 and Drew,G., Grock,C., Cahalan,P., 2003 'Guidelines for Producing Trail Signage', SATC, Adelaide, SA)

Design Guideline A

Within the trail network, utilise materials and facilities which form a cohesive suite which assists in identifying the trail.



Figure 8.3.6 Simple marker post with identifying symbol

Design Guideline B

Match infrastructure to the trail type e.g. provide boardwalks, seating and ramps as appropriate for paths to accommodate those with disabilities.



Figure 8.3.7 Short heavily utilised trail at day visitor site

Site trails to protect sensitive landscape areas and direct users to robust sites which can absorb managed impacts.

Design Guideline

Utilise trail routes to avoid significant habitat, flora, low lying areas, erodable soils and unstable banks.



Figure 8.3.8 Trail directs users to river edge while avoiding sensitive areas

8.3.2 Support Facilities – Toilets

Objective

Toilets should be provided at heavily used sites in a manner which minimises visual intrusion and avoids pollution of the river and groundwater.

Performance Criteria 1

Provide a minimum number of toilet cubicles to serve any given site. In many situations a single unisex toilet is adequate.

Design Guideline

Site toilets to enable day visitors and campers to share facilities.



Figure 8.3.9

Ensure toilets are sited above flood levels with a suitable disposal system to avoid pollution of the river.

Design Guideline A

Site toilets above the one in fifty year flood level



Figure 8.3.10

Design Guideline B

Utilise disposal systems which are either sealed or connected to a town or shared sewer treatment plant which processes effluent to acceptable standards.

Site toilets so that they are visible for potential users while avoiding elevated locations where the structure dominates views to and from the river.

Design Guideline

Utilise existing vegetation to form a backdrop thereby minimising the visual impact.



Figure 8.3.11

8.3.2 Picnic Facilities

Objective

Picnic shelters should be provided at heavily used day visitors locations where inadequate shade and weather protection is available.

Performance Criteria 1

Size facilities which cater for known user types e.g. – regular large tour bus groups, small eco-tour groups, large social groups, small groups or families.

Design Guideline A

Separate large group shelters from small individual group facilities.



Figure 8.3.12

Design Guideline B

Site and design shelters to allow multi-use of shared facilities such as BBQ's.



Figure 8.3.13 Seperate shelters share BBQ



Figure 8.3.14 Single shelter with shared BBQ

8.3.2 Interpretive Shelter

Objective

Utilise interpretation to educate recreation users regarding the environmental values of the River Murray and Lower Lakes.

Performance Criteria 1

Site interpretive information at key locations to highlight environmental and cultural heritage issues and features.

Design Guideline

Develop a hierarchy of interpretation opportunities which concentrates information at key locations such as trail heads and lookouts, and minimises signage along trails.



Figure 8.3.15 Trail Head conveys wide ranging general information about route



Figure 8.3.16 Low key interpretative signs highlight individual elements e.g. Plants



Figure 8.3.17 Shelter and interpretation information focusses visitors in one location and reduces impact on adjacent landscape

8.3.2 Seats

Objective

Site and design seats to provide resting opportunities for users and to minimise visual and environmental impact on the landscape.

Performance Criteria 1

Utilise local elements and materials where possible.

Design Guideline A

In bush locations use local logs or boulders as seats.

Design Guideline B

In more built-up locations design or select seats which respond to the character of the local environment.

- generally timber seats are more appropriate for the river landscape.
- avoid concrete seats since they often appear bulky and inappropriate.
- look for cues from the surrounding architecture and other major structures where they are well designed and have a strong character.

8.3.2 Lookouts

Objective

Site and design lookouts to provide an overview of the surrounding landscape, while minimising the visual and environmental impact of the structure.

Performance Criteria 1

Site lookouts to concentrate activity in areas which can absorb the impact, in order to reduce degradation in other more sensitive locations.

Design Guideline A

Assess alternative sites to make optimum use of existing infrastructure and avoid environmentally sensitive locations.



Figure 8.3.18 Site 1 - Avoid • Unstable cliff edge

Site 2 - Lookout

- Close to existing road
- Cliff top stable
- Lookout can be set back from edge while still providing excellent views.
- No significant vegetation nearby

Site 3 - Avoid

• Stand of significant vegetation nearby

Design Guideline B

Site and design lookouts utilising materials which harmonise with the local landscape.



Figure 8.3.19

Set lookout back from edge of cliff to reduce risk and visual impact. Locate fence/barrier to reduce public risk.



Figure 8.3.20 Colour of lookout barrier harmonises with cliff face. e.g.

- local stone
- weathered timber
- pre-rusted and coated steel

8.3.2 Boardwalks

Objective

Site and design boardwalks to protect sensitive environments and provide all weather access to important locations.

Performance Criteria 1

Site boardwalks to protect soils and vegetation in boggy and low lying areas, where alternative routes are not available.

Design Guideline

Only utilise boardwalks across sensitive landscapes where alternative routes around these locations are not available, and access to the desired destination is considered essential.



Figure 8.3.21

Site and design boardwalks to provide access for people with disabilities in appropriate locations.

Design Guideline

Utilise boardwalks to provide all weather, high quality access for those with disabilities.

Performance Criteria 3

Site and design boardwalks to minimise their visual impact.

Design Guideline

Site boardwalks as close to natural ground level as possible consistent with protecting adjacent vegetation and providing the desired level of access.

Performance Criteria 4

Site, design and construct boardwalks to minimise environmental impact on the route. (See Department of Lands, Parks and Wildlife, Tasmania 1987, 'Walking Trail Management Manual).

Design Guideline A

Site boardwalks to take the shortest route across sensitive landscapes.

Design Guideline B

Utilise construction techniques which minimise site impact.



Figure 8.3.22 Confine construction impacts to as narrow a width as possible.



Figure 8.3.23

Elevated boardwalk with posts and footings. Most common in areas subject to inundation or with uneven ground surface.



Figure 8.3.24 Raft boardwalk for wet boggy soils.



Figure 8.3.25 Duckboarding suitable for sandy and other stable soils with good drainage and relatively low user numbers.

8.3.2 Signage

Objective

Utilise signage to increase visitors understanding of the environment, achieve management goals, provide direction, announce destinations and convey regulatory information; without dominating the appearance of the locale.

(See Drew,G., Grocke,C., Cahalan,P. 2003 'Guidelines for Producing Trail Signage', SATC, Adelaide, South Australia).

Performance Criteria 1

Design and site signage to interpret the historical, ecological and cultural aspects of the landscape.

Design Guideline A

Develop an interpretive plan which identifies the target audience, theme and messages you wish to convey.

Design Guideline B

Develop a signage system which has a heirarchy of elements suited to the landscape and desired experience of visitors.



Figure 8.3.26

Design Guideline C

Design and site signs to allow ease of viewing of both the sign and the element to be interpreted.



Figure 8.3.27

Design Guideline D

Keep signs to the minimum size consistent with effectively conveying the desired information. Utilise materials and colours that are in character with the surrounding landscape. Unless the sign is a major entry sign, do not make a feature of the structure which supports the sign.

Performance Criteria 2

Design and site signage to communicate site management information to visitors.

Design Guideline

Utilise signage to communicate visitor requirements related to waste disposal, wood collection, protection of significant vegetation, habitat and fauna, protection of river banks and drainageways and other environmental management strategies for the site.

Design and site signage to provide direction to visitors and facilitate their ability to find their way around the site.

Design Guideline

Design a simple to follow directional signage system which follows a logical sequence through the site. Where appropriate utilise standard signage linked to those used locally or regionally for this purpose.

Performance Criteria 4

Site regulatory signs to meet the relevant Australian Standards.

Design Guideline

Where possible support regulatory and management signs with back-up explanatory information as part of adjacent interpretive messages in order to educate users on the environmental principles behind regulations and management strategies.

Case Studies



Case Studies

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The study of recent examples of recreation development provides insights into how the project initiation, design, construction and management process influences the achievement of sustainable outcomes.

Contents

- 9.1 Campground Tenbury-Hunter Reserve, Swan Reach
- 9.2 Water Based Activities Fred's Landing, Tailem Bend
- 9.3 Day Visitor Facilities Berri Town Centre



9.1 Campground - Tenbury-Hunter Reserve, Swan Reach



Contents

- 9.1.1 Introduction
- 9.1.2 Project Overview
- 9.1.3 Brief
- 9.1.4 Documentation
- 9.1.5 Images

9.1 Tenbury-Hunter Reserve - Swan Reach

9.1.1. Introduction

The Tenbury-Hunter Reserve is a popular camping spot. It is sighted next to the Swan Reach ferry along the main road to the Barossa Valley. It has large Eucalypts and is a safe area for swimming.

Due to frequent use and lack of facilities the reserve was severely eroded in large areas and was impacted detrimentally by the presence of litter, the indiscriminant use of the site for temporary camping and camping fires and visitors' pets.

The project was an initiative of the River Murray Sustainable Recreation Committee as a demonstration site for rehabilitation of a degraded site. The reserve was redeveloped to improve and manage its function as a camping ground, and to revegetate degraded areas and retain existing natural vegetation. This included the formalisation and reduction in width of the quarry rubble road way and the delineation of appropriate camping sites.

Tenbury-Hunter Reserve, formerly known as Brown's Reserve, has been renamed after two Indigenous families of the area.

9.1.2. Project Overview

Project Title

Sustainable Recreation Strategy for the River Murray and Lower Lakes Demonstration Site

Tenbury-Hunter Reserve

Site Location

North western edge of Swan Reach on the opposite side of the River Murray

Client

Mid Murray Council and Mid Murray Local Action Planning Association

Managing Authority

Mid Murray Council and Mid Murray Local Action Planning Association

Project Initiation Process

The project was initiated by the River Murray Sustainable Recreation Committee

Project Funding

National Heritage Trust	\$46,000
Tourism SA	\$20,000
Mid Murray Council	\$32,500
Sustainable Recreation Committee	\$12,000
Swan Reach Lions Club	\$2,500
Mid Murray L.A.P.	\$2,500

It should be noted that the contributions made by the Mid Murray Council, Mid Murray L.A.P., Swan Reach Lions and the Sustainable Recreation Committee were made in kind.

Timeframe

October 2001 - Ongoing

Cost

\$95,500

Maintenance

Revegetation of the site by the Lions Club with trees provided by Mid Murray $\ensuremath{\mathsf{LAP}}$

Installation of irrigation to aid in establishing new plantings Monitoring of site conditions by Mid Murray LAP and Mid Murray Council

9.1.3. Brief

This project is the first Demonstration Site chosen by the River Murray Sustainable Recreation Committee to illustrate their aims to protect the local environment, enable a wide range of recreational users to enjoy the River Murray and promote environmentally sustainable use of the River Murray.

More specifically the project had six main objectives:

To improve visitor awareness of the site's environmental values and to develop sustainable recreational use and behaviour.

To enhance the visitors experience of the natural landscape of Swan Reach and the River Murray,

To reduce the impacts of visitors' recreational use on the site and to improve water quality and soil conservation,

To enhance and conserve the site's biodiversity and habitat values,

To recognise the site's heritage values and integrate these into interpretive resources,

To provide a landscape that has low recurrent management cost and has self sustaining environmental function.

9.1.4. Documentation

Figure 9.1.4.1 Site Assessment Plan



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Site Assessment

Vehicle Circulation Access

- Develop strongly defined access road and carpark areas
- Develop one way circulation in eastern camping area
- Provide bold directional signs use natural materials
- Ensure stormwater flows are intercepted into pond swales
- Retain existing fenced western picnic area
- Retain service vehicle access

Recreational Facilities

- Develop defined picnic and camping sites using tree logs, local stone and soft ground material for tent use
- Provide rubbish bins to suit a natural site character
- Ensure intrusions into adjacent revegation areas do not occur
- Develop walking tracks that provide visitors with a river edge experience including rest areas
- Develop an interpretive signed track. Focus on the site's local heritage and environment values

Revegetation and Habitat

- Reinforce existing indigenous (local native) vegetation create a multi layer ecosystem
- Shallow rip or tyne compacted soils and abandoned roads. Replace lost topsoil where required
- Import ground mulch material and use shrubs that will give wildlife food, cover and nest building materials
- Commence a weed management program
- Revegate new planting areas

Adjacent Landuse

- Investigate the management of the river boat waste service facility particularly the soakage trench function
- Investigate the potential for connection of a site toilet facility to the river boat facility
- Review the waste rubbish collection and the impact of rubbish bin overflow
- Investigate boat launching on or adjacent to the site


9.1.5. Images *Prior to Construction*



Figure 9.1.5.1 View towards campsites prior to rehabilitation.

After Construction



Figure 9.1.5.2 View along reserve through revegetated campsites alongside delineated road. Figure 9.1.5.3 View into refurbished campsite.

9.2 Water Based Activities - Fred's Landing, Tailem Bend



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- 9.2.1 Introduction
- 9.2.2 Project Overview
- 9.2.3 Documentation
- 9.2.4 Images

9.2 Freds Landing - Tailem Bend

9.2.1 Introduction

Fred's Landing is used primarily for its camping and boat ramp facilities. It is a river frontage site that is popular with visitors who enjoy its rugged character and basic amenities. When the number of visitors was low the lack of facilities was not necessarily causing any degradation to the site. At times of peak use, such as Easter and the October long weekend, this lack of facilities led to problems such as excessive vegetation damage and erosion.

Over a seventeen month period Fred's Landing was redeveloped to provide upgraded facilities and amenities to reduce damage to the site while retaining its character, which is so appealing to its visitors. Changes to Fred's Landing included delineated and sealed roadways, revegetation using native species, delineated car parking for cars and trailers and a new boatramp.

The changes to Fred's Landing have resulted in positive feedback from site users and the wider community. Further upgrades have been planned for the future.

9.2.2. Project Overview

Project Title

Freds Landing, Tailem Bend

Site Location

Section 116 HD of Seymour

Client

Coorong District Council

Managing Authority

Coorong District Council

Project Initiators

Coorong District Council

Project Brief

To construct a new boat ramp and associated facilities at Fred's Landing to replace the existing facilities.

Project Initiation Process

The project was undertaken and managed by Council using Council staff and equipment in the construction process. Engineers Terry Magryn & Associates Ltd were employed as the consultants for the design work. Fifth Creek Studio provided the landscape and planting plan.

Project Funding

The Coorong District Council funded the design costs and 50% of the construction costs with the balance of the construction being met by the boating facilities fund.

Timeframe

Initial Planning and Site Assessment - 12 months Design - 2 months Construction - 3 months

Cost

Design Costs	\$20,000
Construction Costs	\$77,171
Construction Boating Facilities Fund	\$70,863

Management & Maintenance

The project management of construction was carried out by council staff and is being maintained by council.

Evaluation

Feedback from the community and the Boating Facilities Committee has been positive with the finished project photograph being used on a promotion pamphlet put out by the Boating Facilities Committee.

9.2.3. Documentation

Figure 9.2.3.1 Documentation Plans for Freds Landing.



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9.2.4. Images *Prior to Construction*



Figure 9.2.4.1 Freds Landing prior to upgrade.

After Construction





Figures 9.2.4.2 & 9.2.4.3 Freds Landing after the upgrade of the boat landing and surrounding facilities.

9.3 Day Visitor Facilities - Berri Town Centre



Contents

- 9.3.1 Introduction
- 9.3.2 Project Overview
- 9.3.3 Documentation
- 9.3.4 Images

9.3 Berri Town Centre - Berri

9.3.1. Introduction

The Berri River frontage includes the development of two major projects, being the Riverfront Park and the Berri Visitor Information Centre.

The Riverfront Park redevelopment was implemented by The Berri Barmera Council, and the Visitor Information Centre was a collaborative project between The Berri Barmera Council and the Berri Resort Hotel.

The Berri Visitor Information Centre features an Interpretive display of the region's history, cultures and produce, and incorporates Redgum Cafe with indoor and outdoor dining areas. The building is part of an extensive redevelopment of the riverfront, including bank stabilisation, conversion of the former ferry ramp into a boat ramp, and the introduction of floating wharves for houseboat and historic paddle steamer mooring. The building is integrated into this significant site, with its design and construction incorporating historic links with the River Murray and the thriving riverboat industries of the past.

9.3.2. Project Overview

Project Title - Development 1

Berri Visitor Information Centre

Site Location

Riverview Drive, Berri

Client

Berri Barmera Council and Berri Resort Hotel

Managing Authority

Berri Barmera Council and Berri Resort Hotel

Project Initiators

Berri Barmera Council

Project Initiation Process

Riverfront Development Advisory Committee formed by Council. Consultants interviewed to prepare preliminary building concept plan. Consultant "Graeme Hopkins Architect" appointed to work with committee.

Project Funding

Berri Barmera Council funded all except \$50,000 Tourism Development Grant from the South Australian Tourism Commission. Berri Resort Hotel pay council for area leased as cafe.

Timeframe

Initial Planning and Site Assessment - 12 months Design - 6 months Construction - 6 months

Cost

Building (inc. Architect fees)\$873,000Paving etc.\$45,000Internal Fitout (Visitor Information Centre)\$120,000

Maintenance

Joint by Berri Barmera Council and Berri Resort Hotel.

Project Title - Development 2

Berri Riverfront Park

Site Location Riverview Drive, Berri

Client

Berri Barmera Council and Berri Resort Hotel

Managing Authority

Berri Barmera Council and Berri Resort Hotel

Project Initiators

Berri Barmera Council

Project Initiation Process

Riverfront DevelopmentAdvisory Committee formed by Council. Consultants interviewed to prepare riverfront masterplan. Consultants Fifth Creek Studio appointed to work with committee.

Project Funding

The Berri Barmera Council and Transport SA (Marine and Harbours) funded the floating wharves. Council funded the bank stabilistaion and park redevelopment works.

Transport SA funded the ferry ramps restoration and conversion to a boat ramp.

Timeframe

Initial planning and site assessment - 12 months Design - 12 months Construction 18 months

Cost

Ferry ramp earthworks	\$72,000
Floating Wharves	\$198,000
Riverfront Park St 1- Landscaping &	
stabilisation	\$198,000
Artist balustrades and irrigation	\$10,000

Maintenance

The Berri Barmera Council

9.3.3. Documentation

Figure 9.3.3.1 Masterplan for Berri Riverfront Park.



9.3.4. Images *After Construction*



Figure 9.3.4.1 (left) River edge elevation of The Berri Visitor Information Centre

Figure 9.3.4.2 (below) Street frontage of The Berri Visitor Information Centre



Community Consultation





Community and stakeholder consultation and ownership is an imortant factor in project success.

Contents

- 10.1 Introduction
- **10.2** Information and Consultation
- 10.3 Working with Small Groups
- **10.4 Consultation Resources**
- 10.5 Media Publicity



10. Community Consultation

10.1 Introduction

Each project involves a range of stakeholders and communities of interest. The level of involvement of the community and stakeholders should be determined at an early stage and the consultation methods planned to match the complexity of the project, the available consultation resources, and the desired level of input.

There are many degrees of community consultation, participation and involvement. These range from informing people about the project without inviting comment, through to facilitating community control and ultimate ownership.

This section provides assistance in assessing the appropriate level of consultation for a particular project. A brief outline of the principles of community consulation and an introduction to basic consultation methods is included along with references for further information.

"Community involvement in a project generally leads to a broader information base, greater political support, a more informed decision making process, and greater ownership of the finished product."

10.2 Information and Consultation



Figure 10.2.1 Community Consultation

10.2.1 Principles and Assumptions

The following principles and assumptions underly the practice of community consultation. (adapted from Maywald, S(1989) 'Consulting with your Community')

- Equitable that is, it is shown to be fair and just in facilitating access to those people most often excluded from influencing decision making processes.
- Effective that is, it establishes goals and objectives for change which are most likely to be useful and acceptable.
- Efficient that is, adequately resourced, with clear aims and objectives.
- Generally people want to be asked, informed and consulted on matters of relevance to them and their well being, especially if they believe they can influence decisions.
- For each consultation, define 'the community' that is to be targeted. A variety of different consultation mechanisms and processes will be required when consulting with each group or sub-group within a community.
- The size and magnitude of a project, program or development, should not deter organisations from consulting with communities.
- Decisions made by an informed project goup will be more credible, acceptable and effective.
- A variety of consultation techniques may be appropriate within one project.
- Community participants will introduce specific knowledge either professional and/or experiential. They will also bring skills which enable them to mobilise support for the project.
- Community consultation is only a tool. It does not supplant ultimate management and decision making practices.
- The process of consulting should be interesting, adequately resourced in time, people, skills and money, well organised, sensitive, and monitored to ensure no groups or interests dominate.
- The process can be as important as the product of the consultation. It depends on building trust and goodwill. Those conducting a consultation process should recognise the expertise and value of others in the community as, for example, gatekeepers, mediators, volunteer facilitators and organisers, or professionals skilled in a particular field.
- Consultation requires a commitment to take action. A process of reporting back is required, in response to the interest and ideas provided by participants.
- Consultation will not eliminate conflict. If poorly managed, it will escalate emotions.
- Consultation is pragmatic, as people will be more likely to support a program or policy if they have been involved in its planning and implementation.
- Consultation is often not a choice of project initiators, it is assumed by stakeholders and community members who become involved whether invited or not.

10.2.2 Timing

Community involvement can occur at any stage in the project initiation process. The most common stages for input are:

Phase One - Proposal

Consult with the community and stakeholders to develop the project proposal. This will involve getting to know the community's needs and attitudes, and developing an understanding of the community resources available as well as constraints and issues which could impact on the project.

Phase Five - Design

Consultation will assist in the development of the project brief. This stage can provide project initiatiors with detailed information on local site issues and ideas for site redevelopment.

Further consultation is most beneficial in evaluating design options. This is a common consultation process whereby stakeholders and the community can respond to design options and provide feedback to designers for refinement prior to selection of the preferred design. It is common for community input to identify strong preferences which assist in making final design decisions.

10.2.3 Consultation or Information

(adapted from HASSELL and Sarkission and Assoc. Planners (1998) 'ACC Communication and Consultation Model')

It is important at an early stage to establish the ultimate aim of your community involvement program.

Are you informing people, or the target interest groups, about an activity or project about which the decision has already been made to proceed? If so, you will engage in a communication process.

Are you seeking input or advice from the community on an activity, project or policy which can be influenced or changed by that input? If so, you will engage in a consultation process. When your consultation has been completed and a decision made, you will need to communicate that decision to the people who were consulted and other people who need to be informed of the decision.

10.2.4 Consultation

(adapted from HASSELL and Sarkission and Assoc. Planners (1998) 'ACC Communication and Consultation Model')

Selection of those to be consulted.

Ensure accountability and representativeness by being clear and open about how members of the community are selected e.g.

- Self selection (open public invitation).
- Targeted approach to those you have identified.
- Random selection surveys.
- Representation invitation to members of key community groups, organisations or business sectors.

Identification of people likely to be affected and their concerns

- Who are the people who are likely to be affected?
- What level of interest do you think each interest group will have in your subject area?
- What are the issues most likely to be of concern/interest to each interest group?

(complete table opposite)

Make sure you address the following issues in identifying all of those likely to be affected.

- Include all people within your group with an interest in this activity.
- Seek help of the local council in identifying external interests to target.
- Make sure you will also hear the quiet voices. Have you considered:
 - young people?
 - older people?
 - people with disabilities?
 - people for whom English is not their first language?
 - indigenous people?
 - non residents?

Identification of People Likely to be Affected and their Concerns		
Interest Group	Likely Level of Interest Low/Medium/High	Issues most likely to be of concern or interest

Analysis of the Complexity of the Project

How complex is the project?

Level of design and technical difficulty high, medium or low?

Level of political and community interest/sensitivity high, medium or low?

Understanding the Needs of Different People

How well do those to be consulted understand the issues related to this project? What kind of relationship to they currently have with your organisation?

Do they need:

- Direction (emphasis on communication and limited interaction processes).
- Persuasion (education, awareness raising, talking and listening to build relationship).
- Partnership (two way communication, shared support and planning).
- Delegation (minimal input and advice from your organisation, those consulted have skills and authority).

Selection of Appropriate Methods for Consultation

What methods of consultation will you use to reach the different interest groups within the community?

Listed below are some of the methods which may be used to reach different interest groups.

Individual

- Discussion/Interview
- Submission written
- Submission verbal
- Survey
 - telephone
 - street
 - door to door
- Telephone hotline

Group

Meetings with:

- Existing groups
- Public meetings
- Search conference
- Workshop
- Seminar/forum
- Design-in

Community wide

- Display/exhibition
- Community event

Representative

- Community forum
- Advisory committee
- Management committee
- Board/Authority

In selecting the method make sure you:

- Match the method to the complexity of the project
- Check the method against the budget and time frame for consultation on the project
- Match the method to the needs of the community

Determination of the Time Frame, Contact and Resources Required

Ensure that adequate time is allowed in the project program for community input at the appropriate stages of the project.

Identify Resources Required

What resources are available?

- Organisation staff or volunteer time
- Budget for external consultants.
- Budget for costs associated with consultation e.g.
 - printing, mail outs etc.
 - venue hire, refreshments
 - preparation of display
 - feedback of results.

Who will be the key contact person within your organisation?

Who will act as backup for that person?

10.2.5 Implementation of the Process

(see Maywald, S (1989) 'Consulting with your Community' for more information on utilising specific consultation processes)



See Section 10.4 "Working with small groups" and Section 10.5 "Resources

Pay special attention to organisational details such as venues, catering etc.

Provide written feedback to all those who participated in the consultation process.

Preparation of the Outcome Report and Decision

Prepare a report containing recommendations based on the consultation and stating clearly how your recommendation has been influenced by the input of those consulted. If your report's recommendations are different from views expressed during the consultation process, provide clear reasons why this has occurred.

Feedback to those Affected

Provide information on the outcomes of the process to all those who participated via one of the following methods:

- Personal letter
- Newsletter
- Telephone
- Meeting
- Circular/letterbox drop
- Article in local newspaper
- Internet
- Other.

10.2.6 Communication

(adapted from HASSELL and Sarkission and Assoc. Planners (1998) 'ACC Communication and Consultation Model')

Select the Appropriate Communication Methods

Determine the content of information to be provided.

What methods of communication will you use to reach the different interest groups within the community?

Written

- Advertisement
- Letter
- Newsletter
- Flyer
- Internet
- Editorial

Verbal

- Phone call
- Door knock

Physical

- Sign
- Display

Media

- Media release
- Radio
- Television
- Drawings/plans/models
- Others (please specify)

Identification of Resources Required and Primary Contact

What resources have been allocated to this project, e.g.

- Time in developing contact lists, preparing material
- Production of printed material
- Media strategy
- Distribution
- Provision of additional information.

Who will the key contact person within your organisation?

Who will act as backup for that person?

Implementation of the Communication Process

Prepare material and implement communication.



Provision of Detailed Information on Request

Check that the information you have provided to people has been understood.

Conduct random surveys of people who have received information to check that they understood. Make sure the information includes details of who to contact to ask questions or seek clarification. These surveys can be conducted in person, by telephoning or by writing.

Consider how will you answer people's questions, clarify your message so it is understood and make available additional, more detailed information.

Ensure additional material is provided to those who request it in a range of ways (see list below).

Ways of providing additional material:

- Verbal
- Telephone
- Internet
- Available for collection
- Posted
- Faxed
- Emailed
- Library or other community facilities
- Other.

Where consultation involves bringing people together it is desirable to form small discussion groups to maximise the opportunity for participant input. Small groups can be invited to focussed discussion sessions or alternatively members of a larger meeting can be divided into small groups to discuss concerns and ideas as part of a broader agenda. The following techniques have been devised to encourage input in small group discussions.

(The following descriptions are adopted from Maywald, S (1989) 'Consulting with your Community')

Brainstorming

Brainstorming is an excellent technique for use in small groups to bring together a variety of perspectives and ideas on an issue. All comments given should be recorded without value statements given by other participants. While much of the material may not be pertinent the exercise will draw on people's creativity and ideas.

A Round

A round is a good technique to begin a group discussion or meeting. Each member identifies themselves and/or provides some information about their role or why they have attended the meeting. Each member in the small group circle contributes.

Force Field Analysis

Force field analysis is a useful technique to help analyse a problem and work out ways to solve it. To begin with, identify the problem. Assess the factors that are promoting change and list them. Then identify the blocks or restraining factors, and list them. Having identified the positive and negative forces that are impacting on the problem, think of strategies which might increase the facilitating factors and decrease the restraining factors. Finally, specify an action plan to reduce the blocks and negative factors.

Scenario Writing or Analysing

This is a creative small group technique where participants are invited to discuss details of a specific development or problem, and construct a scenario depicting their proposed strategies for change. Alternatively, a group can discuss a prepared scenario. Where possible raise difficulties and problems which the group may be familiar with.

A Buzz Session

This is another small group technique where participants at a large meeting are divided into small groups to discuss a topic. The emphasis is on informality, as people may simply turn their chairs towards each other. Participants are usually not asked to report back to the larger group. It is a useful technique to begin discussion and raise enthusiasm at a larger meeting.

10.4 Consultation Resources

A key component in the success of consultation processes is good preparation and resourcing. The following items are commonly required. (Adapted from Maywald, S (1989) 'Consulting with your Community')

Finance

To plan the budget identify up front costs, then estimate the minimum number of participants required to make a consultation worthwhile, either in terms of money to be recouped through registrations, sale of items etc. or in terms of efficiency of contacting and consulting numbers of people. Get all quotes in writing and get commitments of anticipated expenditure from supporting organisations and authorities in writing.

Personnel Skills

Determine the personnel skills that will be required from practitioners and assistants, secretarial and administrative staff, group leaders, interviewers, consultants, minute takers, tea makers and equipment operators.

Venue

Examine the venue and related access issues – for example, disabled access, childcare, kitchen facilities.

Transport

Transport issues might include either a volunteer or council run bus service, details of public transport connections and mileage or taxi costs for invited guests.

Interpreting Services

Interpreting services may be required prior to the consultation when preparing publicity material, during the consultation itself, and after the consultation to assist with report writing and follow up letters.

Information

It is important to have information that is clear, understandable and free of jargon. Consider presenting information in the form of, for example, displays using large coloured plans and maps, slides, videos and overhead projection material, and three-dimensional kits for either display or use by participants.

Insurance

A range of insurance options should be examined including, for example, public liability and rain insurance.

Electrical and Audio Visual Resources

This includes public address systems, video and projection equipment or overhead projectors. Always ensure extra extension cords and double adaptors are available, and check all equipment beforehand.

Printing, Computing and Photocopying

Consider using a skilled illustrator and design and layout artist when requiring publicity, information and reports to be produced – their skills can be invaluable.

Media Contacts

Identify key people and their interests, and know the dates of publications of community newspapers for both press releases and paid advertisements, and the format required for community radio announcements.

Food and Refreshments

When working out a budget decide on catering requirements and suitable refreshments.

Time

Time may be the most valuable resource that you can negotiate. Consider the time that will be required to organise, print and advertise and the time other staff or helpers will have to give to the consultation. To estimate the time each step will take, it is useful to propose a time schedule then multiply it by three. As practitioners will agree, community work can be very time consuming, and completing a consultation prior to a due date is much less stressful for participants and organisers than having it run over time.

10.5 Media Publicity

Working positively with the local media and developing a public profile can be important component in achieving project success.

Evaluate which forms of media are most appropriate to contact for your organisation and the project you are initiating. Consider local television, radio, and newspapers. Nominate a person within the organisation who either has experience in dealing with the media or is a confident speaker well versed in the project.

Research media contacts, timelines, and deadlines to establish opportunities for exposure through interviews, news items, or features.

In preparing a media release consider the following points: (adapted from Maywald, S. (1989) Consulting with youur Community')

- research media contacts, time lines and deadlines
- follow journalistic conventions by putting the most important points first
- keep the release interesting and avoid elongated and complex sentence structures
- briefly note who, what, when, where and why
- ensure the release is timely, information should be released as soon after the event as possible or well before (if before, include times for release of the news item)
- ensure the information is reliable
- provide contact names, phone numbers, and time when your contacts will be available. Ensure your contacts are well briefed to provide further information and are easily contactable.

Further Information and Contacts



There are a wide range of sources of information relevant to recreation development along the River Murray.

Contents

- 11.1 References
- 11.2 Contacts
- 11.3 Legislation, Acts, Initiatives and Education
- **11.4 Funding Programs**
- 11.5 List of Figures

Further Information and Contacts

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11.2 Contacts

Aboriginal Lands Integrated Natural Management Plan

Contact Executive Officer (08) 8260 0266 www.pir.sa.gov.au

Animal and Plant Control Commission

Contact Soil and Water Environs Centre (08) 8303 9500

Assistance Foundation for Rural and Regional Renewal

Contact (03) 9207 3040

Australian Heritage Commission

Contact (02) 6274 2111 www.ahc.gov.au

Australian Horse Industry Council

Contact the Secretariat on (03) 9258 4374 www.horsecouncil.org.au

Bicycle SA

Cycling Information Centre Contact (08) 8232 2644 www.bikesa.asn.au

Boating Industry Association of South Australia Inc

Contact (08) 8373 0511

Bushcare

Contact State Coordinator (08) 8204 8752 See website for Regional Facilitators / Bush Management Advisers www.ea.gov.au/land/bushcare

Canoe SA Inc

Contact (08) 8240 3294 www.canoesa.asn.au

communitybuilders.nsw

www.communitybuilders.nsw.gov

Confederation of Bush Walking Clubs NSW Inc

Bushwalking Australia

www.bushwalking.org.au Contact (02) 9294 6797

Conservation Volunteers Australia

General Enquiries: 08 8212 0777

Department for Environment and Heritage

General Enquires (08) 8204 9000 www.environment.sa.gov.au

Department of State Aboriginal Affairs (DOSAA)

Level 1, Centrepoint Building, 22 Pulteney Street, Adelaide SA 5000 General Enquiries (08) 8226 8900 www.dosaa.sa.gov.au

Department of Sustainability and Environment (VIC)

www.nre.vic.gov.au

Department of Water, Land and Biodiversity Conservation

General Enquiries (08) 8463 6809 www.dwr.sa.gov.au www.dwlbc.sa.gov.au

District Councils

Alexandrina District Council General Enquires (08) 8555 7000 www.alexandrina.sa.gov.au

Berri Barmera District Council General Enquiries (08) 8582 1922 www.berribarmera.sa.gov.au

Coorong District Council General Enquiries (08) 85751008 www.coorong.sa.gov.au

City of Murray Bridge General Enquiries (08) 8539 1100 www.rcmb.sa.gov.au

Loxton Waikerie District Council General Enquires (08) 8584 7221 www.lga.sa.gov.au/public/councils/loxton.htm

Mid-Murray District Council General Enquiries (08) 8569 1600 www.mid-murray.sa.gov.as

Renmark Paringa District Council General Enquiries (08) 8586 6609 www.renmarkparinga.sa.gov.au

Environment Protection Agency

General Enquiries (08) 8204 2000 FREECALL (country callers only) 1800 623 445 www.epa.sa.gov.au

Environment Protection and Heritage Council

Council Secretariat (08) 8419 1200 www.ephc.gov.au
Frog Census

FREECALL 1800 623 445 www.environment.sa.gov.au/epa/frogcensus

Forestry SA

Contact (08) 8724 2888 www.forestry.sa.gov.au

GrantsLINK

Commonwealth Department of Transport and Regional Services General Enquiries (02) 62747111

Greening Australia

Contact; (08) 8372 0120 www.greeningaustralia.org.au

Heritage SA

General Enquiries (08) 8207 1868 www.heritage.sa.gov.au

Horse SA

Contact (08) 8294 2460 www.horsesa.asn.au

Houseboat Hirers Association

Contact (08) 8395 0999 www.Houseboat-centre.com.au

KESAB Environment Solutions

Contact (08) 8234 7255 www.kesab.asn.au

Local Action Planning Groups

www.lm.net.au Berri Barmera L.A.P. General Enquiries (08) 8582 1922

> Coorong and District L.A.P. General Enquiries (08) 8575 1008

Eastern Hills and Murray Plains L.A.P. General Enquiries (08) 8531 2077

Goolwa to Wellington L.A.P. General Enquiries (08) 8536 4551

Loxton to Bookpurnong L.A.P. General Enquiries (08) 8584 7188

Local Action Planning Groups (continued)

Mannum to Wellington L.A.P. General Enquiries (08) 8531 3222

Murray Mallee L.A.P. General Enquiries (08) 8531 2066

Renmark to the Border L.A.P. General Enquiries (08) 8586 6633

Riverland West L.A.P. General Enquiries (08) 8541 2611

Local Agenda 21

Contact your local council

Murray Darling Association Inc

Contact (08) 8226 0582 www.mda.asn.au

Murray-Darling Basin Commission

Contact Commission Office (02) 6279 0100 www.mdbc.gov.au

National Action Plan for Salinity and Water Quality

Contact Commonwealth Regional Information Service Contact 1800 026 222 www.napswq.gov.au

National Heritage Trust

Information Line 1800 065 823 www.nht.gov.au National Native Title Tribunal Contact 1800 640 501 www.nntt.gov.au

National Parks and Wildlife SA

Contact The Environment Shop (08) 8204 1910 environmentshop@saugov.sa.gov.au Murraylands Region Office, Berri (08) 8595 2111

Office for Recreation and Sport

Contact (08) 8416 6677 www.recsport.sa.gov.au (to locate State Sport and Recreation Associations www.southaustraliantrails.com

Pastoral Board

Contact Pastoral Board / Pastoral Program (08) 8204 1400 www.rangelands.sa.gov.au/pastoral_board.htm

Planning SA

General Enquiries (08) 8303 0600 www.planning.sa.gov.au

Primary Industries and Resources South Australia

General Enquiries (Metro Area) (08) 8226 0222 Suggestions and Comments FREECALL 1800 622 921 Fisheries Enquiries (08) 8226 2311 www.pir.sa.gov.au

Public Health SA

Department of Human Services General Enquiries (08) 8226 8800 www.dhs.sa.gov.au/pehs/

River Murray Boat Owners Association

Contact: (08) 8388 8516

River Murray Catchment Water Management Board

Head Office (Berri) (08) 8582 4477 www.rivermurray.sa.gov.au

River Murray Urban Users LAP

Contact (08) 8204 9100 www.murrayusers.sa.gov.au

Save The Murray

Savethemurray Project Manager (08) 8403 0300 www.savethemurray.com

SA Water

Head Office (08) 1300 650 950 Riverland Office (08) 8595 2222 Murray Mallee Region (08) 8532 8211 www.sawater.com.au

South Australian Catchment Water Management Boards

Northern Adelaide & Barossa (08) 8285 2033 Onkaparinga (08) 8374 6000 Torrens & Patawalonga (08) 8271 9190 www.catchments.net

South Australian Dryland Salinity Committee

Contact the Executive Officer (08) 8303 9345

South Australian Association of Four Wheel Drive Clubs Inc

Contact (08) 8359 0627 Driving Training Unit - see website or contact main office for details www.saafwdc.asn.au

South Australian Health Commission

Department of Human Services Central Office (08) 8226 8800 www.dhs.gov.au

South Australian Murray-Darling Basin Integrated Natural Resource Management Group

Contact the INRM Group for the SA Murray Darling Basin (08) 8532 1432

South Australian Native Vegetation Council

Council Secretariat (08) 8204 8888

South Australian Rcreational Fishing Advisory Council Inc

Contact (08) 8132 0430

South Australian Research and Development Institute

General Enquiries to Waite Research Precinct (08) 8303 9400 www.sardi.sa.gov.au

South Australian Tourism Commission

General Enquires (08) 8463 4500 www.tourism.sa.gov.au

Sporting Shooters Association

National Spokesperson Gary Fleetwood 0407 616 218 South Australian State President Janine Baker 0427 186 184 www.ssaa.org.au

Standards Australia

Customer Service Centre 1300 654 646 www.standards.com.au

State Heritage Authority

Contact Heritage South Australia (08) 8204 9262 www.environment.sa.gov/heritage/authority.html

Trees for Life Contact: (08) 8372 0150 www.treesforlife.org.au

Watercare

FREECALL 1800 420 820 www.watercare.net

WaterWise

Contact Project Officers (08) 8226 0511

Waterwatch South Australia

River Murray Waterwatch (Riverland) (08) 8595 2670 River Murray Waterwatch (Lower) (08) 8532 3573 See website for other catchment contact details www.sa.waterwatch.org.au

11.3 Legislation, Acts, Initiatives and Education

11.3.1 Federal Government

Aboriginal and Torres Strait Islander Heritage Act 1984

This act was created to protect places, areas and objects of particular significance to Indigenous Australians. Under the Act the relevant Federal Minister has the power to declare protected any place or object of significance that is under serious or immediate threat of injury or desecration. Applications for declaration may be made to the Minister orally or in writing on behalf of or by Indigenous groups. The act also outlines offences towards places and objects protected that can incur penalties, and the necessary legal proceedings for prosecution. These powers are extended by the act to every external Territory of Australia.

Australian Heritage Commission Act 1975

The object of the Australian Heritage Commission Act was to establish the Australian Heritage Commission. The main function of the Commission is to conserve and improve places that it identifies as having aesthetic, historic, scientific or social significance to the present and future communities of Australia.

Environmental Protection and Biodiversity Act 1999

The Environmental Protection and Biodiversity Act was created to provide protection for the environment. It is mainly concerned with issues of national environmental significance, and also promotes ecological sustainable development through conservation and sustainable allocation and use of natural resources.

Native Title Act 1993

The Native Title Act recognizes the right to and defines the principles of native title. It also sets out the process by which native title may be established or withdrawn. For further information on native title or the Native Title Act contact the Native Title Tribunal or the Department of State Aboriginal Affairs. Contact information is available from chapter 11.2 in the contact details list.

11.3.2 State Government

Animal and Plant Control (Agricultural Protection and other purposes) Act 1986

The Animal and Plant Control Act sets out provisions for the control of animals and plants to protect agriculture and the environment, and to ensure the safety of the public. The Act creates the Animal and Plant Control Commission and its subsequent boards. The functions of the commission are to establish boards where necessary and make recommendations as to the actions they should take to control various plants and animals.

Coast Protection Act 1972

The object of the Coastal Protection Act is to conserve and protect the beaches and coastline of South Australia. The Act establishes the Coast Protection Board. The duties of the Board are to restore coastline that has been damaged by erosion, pollution and misuse and to develop and manage coastline to improve facilities and aesthetics. The board also carries out research into protection, restoration and development of the South Australian coast.

Country Fires Act 1989

The Country Fires Act was created for the prevention, control and suppression of fires and to protect life and property in fires and during other emergencies. The Act outlines the roles of the Country Fire Service, the South Australian Bushfire Prevention Advisory Committee, Fire Prevention Officers and their respective powers. In addition it provides measures for fire prevention such as the Fire Danger Season, Total Fire Bans and various precautions against fire such as fire safety at premises

Crown Lands Act 1929

The Crown Lands Act sets out the powers of the Governor of South Australia and the relevant Minister of the South Australian Parliament to allocate Crown Land to specific users or activities. This includes provisions for various forms of leases and agreements, transfers, sale and granting of Crown Lands.

Development Act 1993

The Development Act provides for the regulation of development and planning in South Australia. It also regulates the use and management of land and buildings, their design, construction, maintenance and conservation. The Act founds the Development Assessment Commission, the Development Policy Advisory Committee and sets out rules for the creation of development strategies and policies.

Environmental Protection Act 1993

This Act establishes the Environment Protection Authority (EPA) and defines its objectives. These objectives include the promotion of the use, development and protection of the environment in a manner which minimises or reduces environmental harm, while recognising the need for people and communities to use the environment to provide for their economic, social and physical welfare. The EPA encourages and assists industry, public authorities and the community to meet these objectives and has the power to allocate costs and responsibility for environmental protection and restoration where necessary.

Forestry Act 1950

This Act was established for the creation and management of State forests. It describes the rights of the Governor and the relevant Minister of government to declare and revoke Crown Lands as forest reserve and conserve, develop and manage forest reserves. The Act provides for appointing Forest Wardens and defines the purpose and conditions under which forestry material may be used, such as milling of timber.

Heritage Act 1993

This Act established the State Heritage Authority, the State Heritage Fund and the State Heritage Register. The function of the State Heritage Authority is to administer the State Heritage Register and to allocate funds from the State Heritage Fund. The Authority's powers include the issuing of certificates of exclusion, removal of places or items from the State Heritage Register and issuing Emergency Protection or Special Protection to places of Geological, Palaeontologic or Archaeological significance.

Murray-Darling Basin Act 1993

This Act recognises and provides the measures for carrying out an agreement between the Commonwealth, New South Wales, Victorian and South Australian Governments in regard to water, land and other environmental resources in the Murray-Darling Basin. It establishes the Murray-Darling Basin Commission and outlines their function and powers, such as the authorisation to enter and occupy land, to pay compensation and to carry out the construction of works

National Environmental Protection Council (SA) Act 1995

The National Environmental Protection Council is founded by this Act. The function of the council is to prepare national environmental protection measures and report to the relevant Minister. The council was established as part of the Intergovernmental Agreement on the Environment, which is a joint agreement between the Commonwealth, the States, the Australian Capital Territory and the Northern Territory Governments. This agreement creates national environmental protection measures through joint legislation.

National Parks and Wildlife Act 1972

The National Parks and Wildlife Act describes the role and powers of the Minister responsible for National Parks and Wildlife. These powers include the right to acquire land, charge anyone responsible for committing an offence towards wildlife or on National Park land. The Minister also has the right to apply funds from the Wildlife Conservation Fund, which this Act establishes.

This Act also establishes the National Parks and Wildlife Council whose role is to advise the Minister on any matter relating to issues such as planning and management of reserves, conservation of wildlife and community awareness and participation.

Native Vegetation Act 1991

The Native Vegetation Act provides incentives and assistance to landowners to aid in the preservation of existing native vegetation and to control future clearance of native vegetation. The Act establishes the Native Vegetation Council and the Native Vegetation Fund. The Council also seeks to encourage research into preservation and management of native vegetation and the revegetation of previously cleared areas in the State. In addition the Act recognises that a Heritage Agreement is made between the relevant Minister and landowners who specify areas of their property for revegetation or protection. This agreement releases the landowner from payment of all taxes and rates for that land.

Pastoral Land Management and Conservation Act 1989

This Act makes provisions for the management and conservation of pastoral land. The objects of the Act are to ensure that all pastoral land in South Australia is well managed and is being used for purposes that are not detrimental to the land and its resources. It does this through the establishment of the Pastoral Board and the relevant Minister. The Act provides for effective monitoring of the condition of pastoral land, the prevention of degradation of native flora and fauna and the rehabilitation of damaged land. The rights of Indigenous people to follow traditional pursuits on pastoral land are also recognised.

Public and Environmental Health Act 1987

The Public and Environmental Health Act is administered by the Public and Environmental Health Council. The functions of the council are to report any matter relating to Public Health to the relevant Minister and to initiate and conduct programs or activities to improve and promote public and environmental health.

Recreational Greenways Act 2000

The Recreational Greenways Act 2000 has been established to secure public access over corridors of land that form part of a recreational trail. The Act allows the Minister to enter into an agreement with the landowner. The Greenways are established by proclamation and becomes an encumbrance on the land title. This provides for trails with security of tenure and provides indemnity to the land owner for public injury.

River Murray Act (2003)

The object of the Act is to build on existing legislation and statutory and non-statutory bodies to achieve a greater level of coordination towards the common goal of a healthy working River Murray system. The Act also gives new powers to the relevant Minister that are aimed at increasing their ability to protect the River Murray.

Soil Conservation and Land Care Act 1989

The objects of this Act are to recognise land, soil, vegetation and water as South Australia's most important natural resources and set up provisions for their protection and management.

This includes creating a system to ensure that conservation of land becomes an integral part of land management practices in the state in a manner that involves the wider community as much as possible. The Act also outlines the duties of the relevant Minister to establish the Act, the duties of land owners and the Soil Conservation Land Care Fund.

Water Resources Act 1997

The object of the Water Resources Act is to ensure the use and management of water resources to the community, and that these resources will be able to meet the foreseeable needs of future generations. It is also the object of the Act to protect ecosystems that depend on the same water resources. The Act establishes the Water Resources Council and links councils, the relevant Minister, catchment water management boards, municipal and district councils, the court and any other individuals or bodies involved in administering the Act.

11.3.3 Local Government

Local Government Act 1999

The object of the Local Government Act is to promote local government systems and to encourage the participation of the community is their processes. It provides a legislative framework for effective, efficient and accountable local governments and defines the powers and duties of its members and officials.

Wrongs Act 1936

The Wrongs Act defines actions that constitute a wrong which are pursuable under civil law and may incur charges of damages or liability. These wrongs include acts such as defamation, personal injury, liability for animals and racial victimisation.

11.3.4 Initiatives (SA Only)

Biodiversity Plan for the South Australian Murray Darling Basin

The Murray-Darling Basin Biodiversity Plan, completed in 2001, is the second regional plan produced for South Australia. The plan contains details of the biology, distribution, threats and management of selected native flora and fauna. It also includes maps of the habitats for 17 fauna species.

The Plan outlines the necessary projects and actions required to maintain and protect biodiversity of plants and animals in the Murray Darling Basin area in South Australia. Some of the suggested priority projects to be implemented include retention, restoration and re-establishment of habitat in the river corridor and conservation of Major Mitchell's Cockatoo in the Murray Mallee and the South Olary Plains.

Integrated Natural Resource Management (INRM) Bill

Integrated Natural Resource Management Groups are regional groups who develop Natural Resource Management Plans in conjunction with State and Federal government to realise a more strategic and effective approach to the management of the South Australia's natural resources. They work with and consult local communities, primary producers, environmental groups, landholders and other stakeholders to achieve inclusive and integrated outcomes.

SA Dryland Salinity Strategy

The South Australian Dryland Salinity Committee was created by the Soil Conservation Council to oversee the SA Dryland Salinity Strategy. The objectives of the strategy include reporting to the relevant Minister on the progress made against salinity, to encourage innovation in salinity management and prevention, and to communicate to the community the implications of salinity to the economy, environment and society.

SA River Murray Catchment Plan

The South Australian River Murray Catchment Plan is implemented by the River Murray Catchment Water Management Board, in conjunction with communities and stakeholders in the catchment area, to ensure the future health of the River Murray. The board aims to meet a balance between the economic, environmental and social needs of catchment communities and the role of the river as South Australia's 'water lifeline.'

SA River Murray Salinity Strategy

The South Australian River Murray Salinity Strategy has established a 15 year vision to maintain the salinity levels of the river. They aim to maintain current levels of salinity in the short term, with a long term plan to restore a sustainable balance between the economic, environmental and social issues that affect the river.

SA River Murray Water Allocation Plan

The South Australian River Murray Water Allocation Plan is a legally binding document that allocates water from the River Murray to all users in South Australia. It aims to ensure that the levels of water used are sustainable and that they do not adversely effect on other land and water resources.

11.3.5 Education Programs

Codes of Practice – House Boat Owners Association

The Environmental Protection Authority has developed a Code of Practice for Vessels in Inland Waters. The code addresses issues such as blackwater, greywater, fuel spills and antifoulant. For further information or a copy of the code contact the Environmental Protection Authority. See 11.2 Contacts for contact details.

Environmental Solutions – KESAB

A non-profit organisation that provides interactive programs and resources to South Australian communities to preserve, improve and restore the South Australian environment. See 11.2 Contacts for contact details to receive further information.

Frog Census – D.E.H. and E.P.A.

The Frog Census is managed by the Environmental Protection Authority and relies on community participation to monitor frog numbers throughout South Australia. See 11.2 Contacts

General Education and Awareness Programs – R.M.C.W.M.B.

The River Murray Catchment Water Management Board is responsible for education and awareness programs about economic, environmental and social sustainable approaches to the future of the River Murray. See 11.2 Contacts for contact details to receive further information.

Local Agenda 21 – Local Councils

Local Agenda 21 is part of a global agreement from the UN Conference on Environment and Development held in June 1992. Local Agenda 21 aims to bring a strong partnership between local councils and the communities they represent to achieve sustainability in development in relation to environmental issues. For further details contact your local council.

Local Government Training Authority – Local Councils

Local governments provide numerous forms of education and training. These could include programs to increase awareness and provide skills that promote sustainable use of the environment and natural resources, or to provide training in a variety of fields such as planning and management skills. For further details contact your local council.

National Water Week – Dept. for Water Resources

National Water Week is coordinated by the Department of Water, Land and Biodiversity Conservation and provides South Australians with the opportunity to reinforce their commitment to the ongoing protection and management of South Australia's water resources. See 11.2 Contacts for contact details to receive further information.

Save the Murray – Dept. of Premier and Cabinet

Save the Murray is a non-profit initiative of the Governor's Leadership Foundation Alumni, a project of the South Australian Business Vision 2010 and is supported by both the South Australian and the Commonwealth Governments. It encourages individuals to work with Local Action Planning groups and local government to achieve a sustainable future for the River Murray. See 11.2 Contacts for contact details to receive further information.

Status of Litter Management and Issues in South Australia: March 2003 (draft)

This report looks at the current status of litter management and its related issues in South Australia. It was prepared by KESAB and is currently in its draft stages. Contact KESAB for further information. See 11.2 Contacts for contact details.

Stormwater Pollution Prevention Codes for the Community – D.E.H and E.P.A.

The Stormwater Pollution Prevention Project aims to improve water quality in catchment areas in South Australia. The Project provides education on various levels to the community and works in conjunction with local councils and the Environment Protection Authority.

Watercare – Dept. for Water Resources

Watercare is an internet based resource. Its object is to aid education in conveying its essential message about the necessity of a sustainable future for the water resources of South Australia. See 11.2 Contacts for contact details to receive further information.

Water Conservation Partnership Program – D.E.H.

The vision of the Water Conservation Partnership Program is to decrease the dependency on water sourced from the River Murray in South Australia. It aims to do this by working with communities, state and local governments to increase water efficiency and encourage the use of sustainable alternative water sources.

Water Watch – D.E.H. and E.P.A.

Waterwatch is a national community water monitoring program. The objects of the program are to achieve greater community awareness and involvement in water catchment care. See 11.2 Contacts for contact details to receive further information.

Waterwise – Murray Darling Association

The Waterwise project is an initiative of the Murray Darling Association. The aims of the project are to reduce the demand on the River Murray as a water resource and to provide education to achieve a greater level of water conservation. See 11.2 Contacts for contact details to receive further information.

11.4 Funding Programs

11.4.1 General

This section lists a collection of funds that are available but is not exhaustive. Seek further advice on funding from peak bodies, local government and other organisations.

11.4.2 Funding Types

BHP Community Trust

The BHP Community Trust is an independent philanthropic trust. It assists organisations which provide a diverse range of services to their local community. Contact the BHP Community Trust for details on eligibility and the processes of application.

Bushcare

Bushcare is funded by the National Heritage Trust. It supports community involvement in management, protection and rehabilitation of native vegetation. Contact Bushcare for details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list.

Cultural Heritage Projects Program

The Cultural Heritage Projects Program promotes the control and management of Indigenous cultural heritage by Indigenous Australians. Contact the Department of State Aboriginal Affairs for more information, or for details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list.

Department for Environment and Heritage grants

The Department for Environment and Heritage offers a range of grants to projects that are related to improvements made to the community, heritage and the environment. Contact the Environment Protection and Heritage Council for details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list.

Foundation for Rural and Regional Renewal Funding Program

The Sidney Myer foundation created the Foundation for Rural and Regional Renewal Funding Program to mark its centenary. It provides funding for projects that stimulate the renewal of whole regional communities, or addresses issues such as the economic and social aspirations of Indigenous Australians, cultural projects that the create a sense of community identity and many more. Contact the Sidney Myer Foundation for details on eligibility and the processes of application.

Health Promotion through the Arts Program

The objective of this program is to promote good health through the financial support of activities of cultural and community groups and organisations in South Australia. It offers support under general and specific programs such as the Community Arts Program and the Brass Band Program. Contact Arts SA for more information, or for details on eligibility and the processes of application.

National Action Plan for Salinity and Water Quality (NAP)

The National Action Plan for Salinity and Water Quality provides funding to communities to assist in actions against salinity and the deterioration of water quality. This is available through block funding provided by the Commonwealth and State Governments. Contact the National Action Plan for Salinity and Water Quality for details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list.

National Heritage Trust

The National Heritage Trust delivers funding through The Australian Government Envirofund, Regional Investments and National/State Investments. Contact the National Heritage Trust for details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list.

Office for Recreation and Sport

The Office of Recreation and Sport provides financial assistance for sporting and recreation facilities to eligible organisations, schools and local governments. One of the most relevant funding programs available is the Community Recreation and Sport Facilities Program. This program is intended to assist local government and community based organisations in developing and improving the standard of recreation and sport facilities at community and regional levels. Amounts between \$20,000 and \$150,000 are available under the program.

Regional Open Space Enhancement Subsidy (ROSES) Program

This subsidy is available from Planning SA to councils within the state for projects that assist in the preservation, enhancement and enjoyment of features containing natural beauty, conservation significance and / or cultural and amenity values. Funding is available only to projects where there is no impairment of public enjoyment through charges of entrances fees and other charges. It is also mandatory that councils contribute towards the cost of the project on a dollar for dollar basis with the ROSES Program. Contact Planning SA for further details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list. Fred's Landing, discussed as a case study in Chapter 9, was a recipient of funding from the ROSES Program.

River Murray Catchment Water Management Board Community Grants Program

The River Murray Catchment Water Management Board offers grants for seven different project areas such as Salinity, Flow Management and Biodiversity. Funding is available for suitable sustainable recreation development under the Water Quality Program. Contact the River Murray Catchment Water Management Board for details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list.

SA Tourism – "Tourism Development Fund"

The Tourism Development Fund is comprised of the Minor Infrastructure Fund, the Major Infrastructure Fund and the Outback Infrastructure Fund. Each supports tourism projects and infrastructure under their respective titles. SA Tourism also works in partnership with various other organisations and individuals to provide funding to tourism related projects. Contact the Tourism Infrastructure Group for further information and details on eligibility on (08) 8463 4500, or direct general enquires to the South Australian Tourism Commission. Contact information is available from the chapter 11.2 contact details list.

State Heritage Fund

The State Heritage Fund is administered by the Department of Environment and Heritage to fund projects under the categories of State Heritage Place, Heritage Cemeteries and Volunteer Projects. Contact Heritage SA for details on eligibility and the processes of application. Contact information is available from the chapter 11.2 contact details list.

Threatened Species Network

The Threatened Species Network is part of the World Wide Fund for Nature. It provides grants that are funded by the National Heritage Trust to communities for threatened species conservation. Contact the World Wide Fund for Nature for more information, or for details on eligibility and the processes of application.

Various Local Council Community Grants

Contact your local council for details of grants available and the details of eligibility and process of application required.

Various trusts and foundations including:

James N Kirby Sidney Myer Ian Potter Perpetual Foundation

For further information on grants available for various projects, communities and organisations refer to GrantsLINK to search for relevant Commonwealth grants. Contact information is available from the chapter 11.2 contact details list.

World Wide Fund for Nature Grants

The World Wide Fund for Nature provide a variety of grants for projects that deal with a range of conservation issues. Contact the World Wide Fund for Nature for more information, or for details on eligibility and the processes of application.

11.5 List of Figures

Cover and Internal Chapter Dividers

Designed by Taylor Cullity Lethlean (Kevin Taylor, Kate Cullity, Damian Schultz and Ryan Sims) Images provided by: The South Australian Tourism Commision

2. The River Environment

Figure 2.1.1 Image provided by Planning SA (photography by Ben Ellickson)

Figure 2.2.1 Image provided by: Taylor Cullity Lethlean

5. Project Initiation and Management Process

Figures 5.2.1, 5.3.1, 5.4.1, 5.5.1, 5.6.1, 5.7.1, 5.8.1, 5.9.1 and 5.10.1 Flow charts designed by: Taylor Cullity Lethlean

6.Site Assessment

Figure 6.5.1 Carrying Capacity Graph designed by: Taylor Cullity Lethlean

Figure 6.6.1 Sample Camping Ground - Site Analysis designed by: Taylor Cullity Lethlean

7. General Design Principles

Figures 7.2.1, 7.5.1 and 7.7.1 Images provided by: Planning SA (photography by Ben Ellickson)

Figures 7.3.1, 7.4.1a, 7.4.1b, 7.6.1 and 7.8.1 Images provided by: Taylor Cullity Lethlean

8. Facility Design Principles

Figures 8.1.1 to 8.1.29, Figures 8.2.1 to 8.2.10, Figures 8.3.1 to 8.3.25 and 8.3.27 Diagrams designed by: Taylor Cullity Lethlean

Figure 8.3.26 Signage hierarchy flow-chart designed by: Taylor Cullity Lethlean

9. Case Studies

Figures 9.1.4.1 and 9.1.4.2 Site Assessment and Site Concept Plans by: Franek Savarton & Associates, Willunga, South Australia

Figures 9.1.5.1 and 9.2.4.1

Images sourced from:

PPK Environment & Infrastructure Pty Ltd (1998) Sustainable Recreation Area Management Strategy Report, Local Action Planning Association of Mannum to Wellington, Mid Murray and Riverland West, South Australia.

Figures 9.1.5.2 and 9.1.5.3, Figures 9.3.4.1 and 9.3.4.2 Images provided by: Taylor Cullity Lethlean

Figure 9.2.3.1 Documentation Plans for Freds Landing by: Terry Magryn & Associates Pty. Ltd.

Figures 9.2.4.2 and 9.2.4.3 Images provided by: Coorong District Council

Figure 9.3.3.1a and Figure 9.3.3.1b Masterplan for Berri Riverfront Park by: Fifth Creek Studio, Montacute, South Australia

10. Public Relations Guide

Figure 10.2.1 Image provided by: Taylor Cullity Lethlean