

MID-BRISBANE RIVER OUTDOOR RECREATION MASTER PLANS

AUGUST 2008



MID-BRISBANE RIVER: OUTDOOR RECREATION MASTER PLANS

Final Report
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Prepared by



John Wood Consultancy
Services



Chenoweth Environmental
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Queensland Outdoor
Recreation Federation

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The Queensland Government provided \$55,000 to Somerset Regional Council for the Mid Brisbane River Outdoor Recreation Master Plan study to get more Queenslanders active through sport and recreation.

Project Steering Committee

The project was guided by a Project Steering Committee comprising:

Somerset Regional Council

- Scott Aurisch, Sport, Recreation and Planning Officer and Project Manager.
- Brad Sully, Manager Planning and Development.
- Vim Balachandran, Manager Operations.
- Craig Orchard, Natural Resources Officer.
- Graeme Lehmann Mayor.

Sport & Recreation Queensland

- Kylie Crocker, Acting Senior Advisor.

Consultant Planning Team

- John Wood of John Wood Consultancy Services was the team leader and outdoor recreation planner.
- Stephen Palmer, Bridget White and Monique Howard of Chenoweth EPLA provided the Landscape Architectural support.
- Kathy Kingsford and Andrew Barkham of QORF provided input on river based activities.

Maps and Airphotos

The maps shown in Figure 1 are reproduced with Permission from Universal Publishers Pty Ltd, Licence # DG 11/07.

The airphotos, site plans, property details and tenure plans were supplied by Somerset Regional Council.

The site master plans were produced by Chenoweth EPLA based on site contours supplied by Somerset Regional Council.

ABBREVIATIONS

Term / Abbreviation	Explanation
CBD	Central business district
Chenoweth EPLA	Chenoweth Environmental Planning and Landscape Architecture
Council	Somerset Regional Council
CPTED	Crime Prevention Through Environmental Design
GIS	Geographic information system
JWCS	John Wood Consultancy Services
MBR	Mid Brisbane River
NR	No response
QORF	Queensland Outdoor Recreation Federation
SEQ	South East Queensland
SKM	Sinclair Knight Merz
SRC	Somerset Regional Council
SRQ	Sport and Recreation Queensland
SWOT	Assessment of strengths, weaknesses, opportunities and threats

EXECUTIVE SUMMARY

This report recommends that the Somerset Regional Council redevelops the five Mid Brisbane River recreation reserves in line with the development strategy outlined in Section 4.1 and with the outdoor recreation site master plans as illustrated below.

The total combined cost is likely to be \$4.5 million if all stages are developed (\$2.2 million in the short term, \$1.045 million in the medium term and \$1.268 million in the long term). Council does not have the funds necessary to develop, manage and maintain these regional recreational and tourist resources to the standard required to ensure the protection of other values, particularly river water quality. So the master plans will be used to gain support for grant applications from Federal, State and private sources to provide the capital funds necessary to achieve the vision for each site.

The order of development will depend on funding opportunities and partnerships, so the reserves are presented in the order they are presented in this report, namely: 1 - Lowood Bend; 2 - Fielding Reserve ; 3 - Twin Bridges; 4 - Savages Crossing; and 5 - Hills Reserve.



Lowood Bend:

a.) Statement of Intent:

Lowood Bend Reserve is to be developed as a regional recreational park with the main focus on river based activities including day use, picnicking, canoeing, kayaking, boating, fishing, nature appreciation, cycle rest stop and ecotourism. Proposed development is to retain the rural / semi- natural character of the site.

b.) Order of Cost Estimate

	Short-term	Mid-term	Long-term
Total costs	\$596,750	\$267,740	\$289,960

Note 1: The costs for all site master plans exclude GST; connections to services; technical studies and consultant design fees.

Note 2: Enlarged plans are included in Section 4 of this report and have been supplied to Council as AutoCAD files.



Fielding Reserve

a.) Statement of Intent:

Fielding Reserve is to be developed as a local conservation area with minimal development and the main focus on walk-in day use and river based activities including nature appreciation, river side stop and fishing. The semi- natural character of the site is to be enhanced by sensitive landscape planting with minimal facility development.

b.) Order of Cost Estimate

	Short-term	Mid-term	Long-term
Total costs	\$100,750	\$64,110	\$11,850



Twin Bridges:

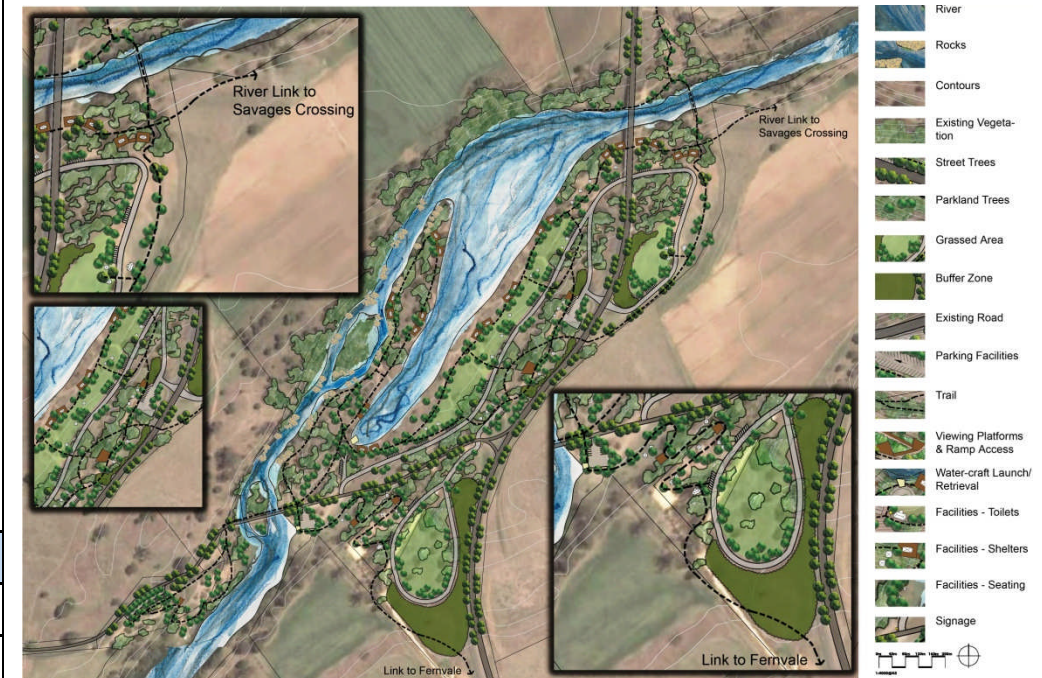
a.) Statement of Intent:

Twin Bridges is to be developed as a regional riverside recreational park with the main focus on day use, picnicking, beach and water play, canoeing, kayaking, boating, nature appreciation, fishing, roadside rest stop, ecotourism and dog exercising (in designated area). Council's preferred development option is to have the river bed rehabilitated after river sand mining to incorporate a self flushing lake with white water structures placed in the river bed. A proposed walking / cycle / horse circuit trail connecting with Fernvale and Savages Crossing is to be constructed over time. The landscape character will be semi-developed with high quality facilities and good river accessibility.

b.) Order of Cost Estimate

	Short-term	Mid-term	Long-term
Total costs	\$795,620	\$516,380	\$770,380

Note: River sand mining is dependent on State Government approvals.



Savages Crossing

a.) Statement of Intent:

Savages Crossing is to be developed as a district recreational park on both sides of the river with the main focus on day use, picnicking, beach and water play, canoeing, kayaking, boating, nature appreciation and fishing. A proposed walking / cycle / horse circuit trail connecting with Fernvale and Twin Bridges. The landscape character will be semi-developed with quality facilities and good river accessibility.

b.) Order of Cost Estimate

	Short-term	Mid-term	Long-term
Total costs	\$324,950	\$140,070	\$159,440



<p>Hills Reserve</p> <p>a.) Statement of Intent:</p> <p>Hills Reserve is to be developed as a limited access, supervised riverside camping area with basic facilities for overnight camping by river users with the main focus on canoeing, kayaking, boating, nature appreciation, fishing, walk-in day use and ecotourism. The landscape character will be semi-natural with low key facilities.</p> <p>b.) Order of Cost Estimate</p> <table border="1"> <thead> <tr> <th></th> <th>Short-term</th> <th>Mid-term</th> <th>Long-term</th> </tr> </thead> <tbody> <tr> <td>Total costs</td> <td>\$381,950</td> <td>\$57,070</td> <td>\$36,400</td> </tr> </tbody> </table>					Short-term	Mid-term	Long-term	Total costs	\$381,950	\$57,070	\$36,400				
	Short-term	Mid-term	Long-term												
Total costs	\$381,950	\$57,070	\$36,400												

The all up cost for the staged development of all 5 reserves is anticipated as being:

	Short-term	Mid-term	Long-term
Total combined costs (5 Reserves)	\$2,200,020	\$1,045,370	\$1,268,030

Council will require the support of the State government and local communities to ensure each reserve receives regular supervision, management and maintenance to maintain a quality setting. The master plans incorporate Crime Prevention Through Environmental Design (CPTED) principles that will discourage anti-social behaviour. While increased visitation should also act as a deterrent as well, there is no substitute for regular ranger patrols to enforce local laws.

It will be vital to monitor the success or otherwise of these Master Plans. The indicators contained in Table 11 are suggested as a means by which performance over time can be monitored so that timely decisions can be made to rectify concerns before they become major problems.

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1. INTRODUCTION



1.1 Background

The Somerset Region is situated in the Brisbane Valley in South East Queensland and is home to Wivenhoe Dam and a large section of the Brisbane River. With its southern boundary less than an hour from the Brisbane CBD, the Somerset Region combines a mix of rural and semi-rural living.

Given its geographical location, the Somerset Region is within easy reach of several rapidly growing population bases (i.e. Brisbane, Ipswich, Gold Coast and Sunshine Coast). As these centres continue to grow, so too has the demand for a wide range of satisfying recreational opportunities.

In the context of South East Queensland, the Somerset Region is one of the local government areas just outside the current urban development fringe of the Brisbane-Ipswich corridor and the coastal development belt. It is not under immediate pressure from rapid urban development, which leaves the physical attributes of the Region largely undeveloped. The Somerset Region's unique setting offers a diverse range of rural, natural and cultural landscapes, which are becoming increasingly sought after by growing urban populations.

Fernvale and Lowood are the two major towns in the south, near which numerous access points to the Mid-Brisbane River exist. While historically these sites have been extremely popular and often troublesome, it is believed they hold enormous potential for servicing the outdoor recreation needs of local residents and visitors alike.

1.2 Purpose of the Project:

The purpose of this project is to:

- Develop five detailed outdoor recreation master plans for a number of sites along the Mid-Brisbane River that provide Council with a coordinated and strategic approach to the development and management of the subject sites (refer Figure 1);
- Incorporate the Queensland Government's proposed Brisbane Valley Rail Trail into the master planning process;
- Incorporate the recommendations of the master planning process into Council's corporate and operational plans by way of policy and strategy development;
- Demonstrate the outdoor recreational potential of these sites for the purpose of securing external funding and also guiding Council in future budget allocations;
- Formulate a prioritised one (1) and five (5) year implementation plan (incorporating short to long term actions) for each site with respect to future development opportunities.

1.3 Need for Project:

The Mid-Brisbane River is set within an attractive rural, semi-natural landscape and is the only freshwater river in SEQ that maintains flows at an appropriate level to support recreational use all year round. This landscape is inviting to increasing numbers of recreational users who canoe, boat, camp, swim and enjoy themselves in their thousands along the shaded river beds and banks.

In 2004, Esk Shire Council worked collaboratively with Ipswich City Council, Brisbane City Council and SEQWater in the formulation of the *Mid-Brisbane River Recreation Management Plan*. This joint project collated information from all previous research efforts, expanded further where necessary and formulated a set of recommendations designed to ensure the long-term sustainability of this unique area.

One of the most important outcomes of this project was the recognition of the Mid-Brisbane River as a regionally significant outdoor recreation open space and the need for a coordinated approach to the management, maintenance and future development of this invaluable natural resource.

The importance of protecting the integrity of our water catchment areas is also highlighted in the *Draft Esk Shire Planning Scheme*. The Mid-Brisbane is contained in the Category A list of sub-catchments and is given special mention as the primary local and regional water supply conduit. The protection and maintenance of the quality of water in this sub-catchment is matter of regional significance, recognised by State and local Government.

Unfortunately many people visiting these sites frequently engage in anti-social and inappropriate activities. While the presence of these 'visitors' may provide some short-term financial benefits to local businesses, the current patterns of use are neither acceptable nor sustainable.

While the many problems associated with these sites have been clearly identified and are now well documented, it is important that Council take the next step in the process of facilitating the potential of the Mid-Brisbane River as a regional recreational resource.

Through the acquisition of the necessary funding, an appropriate level of planning and the cooperation of all key stakeholders, the specified public access points along the Mid-Brisbane River can be re-developed to a standard that is not only more manageable, sustainable and user-friendly, but also financially beneficial to the surrounding community.

The proposed outdoor recreation master plan study will build on all previous work undertaken on the study areas and is therefore a logical progression in Council's efforts to capitalise on the regional recreational value of these sites.

1.4 Scope of Study:

The master plan study will focus on five key access points along the Mid-Brisbane River (refer Figure 1), namely:

- Lowood Bend
- Fielding Reserve
- Twin Bridges
- Savages Crossing
- Hills Reserve

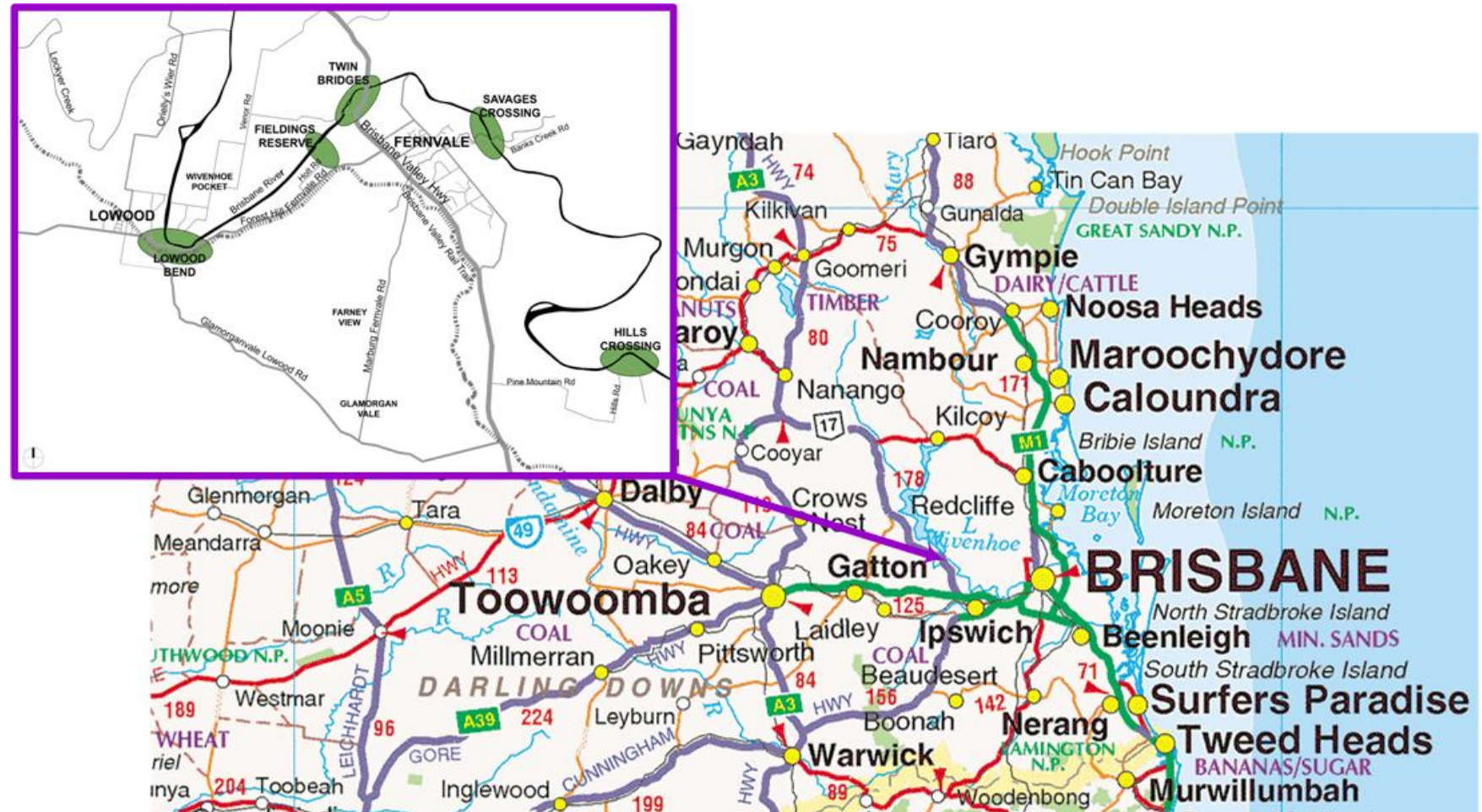
It is expected that the resultant master plans will contain practical guidelines and recommendations for immediate and long-term implementation. They should also include a conceptual visual representation of each site. Specific project outcomes are:

- A plan that goes beyond a landscape solution and embraces the principles of strategic outdoor recreation planning and design, and social development;
- A plan that includes the Outdoor Recreation Opportunity Spectrum Concept, by incorporating the Environmental Protection Agency, Queensland Parks and Wildlife Service's Landscape Classification System for Visitor Management;
- A plan that identifies and investigates linkages between the sites (where possible) and with adjoining trails and open space;
- A plan that maximises the outdoor recreational potential of the Mid-Brisbane River while considering other important issues such as water quality and local ecology;
- A plan that includes a detailed site inventory compatible with Council's GIS systems;
- A plan that outlines draft guidelines for outdoor recreation service standards and infrastructure provision (i.e. design standards by settings);
- A plan that provides realistic and achievable, sustainable and environmentally friendly designs which take in all associated environmental considerations;
- A plan that has been developed in consultation with all local user groups and community members to ensure that the outdoor recreational needs of Esk Shire residents are met;
- A plan that facilitates visitation to the area by providing outdoor recreational opportunities that go some way towards meeting the unmet demands of SEQ residents;

- A plan that identifies external funding opportunities to assist Council in implementing the recommended strategies and infrastructure;
- A plan that integrates with existing planning documents relevant to sport and recreation including the Esk Shire Recreation Framework and the Mid-Brisbane River Management Plan;

- A plan that considers riparian restoration and pest management issues;
- A plan containing designs in sufficient detail from which Council/contractors can construct;
- A plan that considers CPTED (Crime Prevention Through Environmental Design) principles;
- A plan that identifies potential site management options.

Figure 1: The location of the 5 sites along the Mid Brisbane River



1.5 Description of Properties

A detailed description of the properties associated with each of the 5 sites examined in this report is provided in Appendix 6.2. Table 1 highlights the different land ownerships affecting each of the sites. It is recommended that Council apply to have the areas managed and used for recreation purposes, except actual Road Reserves, combined under one tenure, to be managed by a single authority.

Table 1: A summary of land tenures at each Reserve

Reserve	Tenures Present
Lowood Bend	<ul style="list-style-type: none"> Riparian corridor - Department of Natural Resources and Water Road Reserve, Main Roads Department - managed by Somerset Regional Council Rail Reserve – Queensland Rail
Fielding Reserve	<ul style="list-style-type: none"> Riparian corridor - Department of Natural Resources and Water Freehold title - Somerset Regional Council
Twin Bridges	<ul style="list-style-type: none"> Riparian corridor - Department of Natural Resources and Water Road Reserve, Main Roads Department - managed by Somerset Regional Council Freehold title - Somerset Regional Council
Savages Crossing	<ul style="list-style-type: none"> Riparian corridor - Department of Natural Resources and Water Freehold title - Somerset Regional Council
Hills Reserve	<ul style="list-style-type: none"> Riparian corridor - Department of Natural Resources and Water Freehold title - Somerset Regional Council

1.6 Jurisdictional Matters

No single agency has overall responsibility for ensuring continuity of services within the Mid-Brisbane River corridor. The relevant legislative, statutory and policy instruments in place for this section of the river and its riparian zone are well summarised in the Brisbane River Recreation Management Issues Paper prepared by Sport and Recreation Queensland in June 2001. Extracts from this report are presented in Table 2 below to illustrate the complexity of overlapping jurisdictions and administering agencies. A full extract is presented in Appendix 6.3.

Table 2: An overview of relevant legislative, statutory and policy instruments

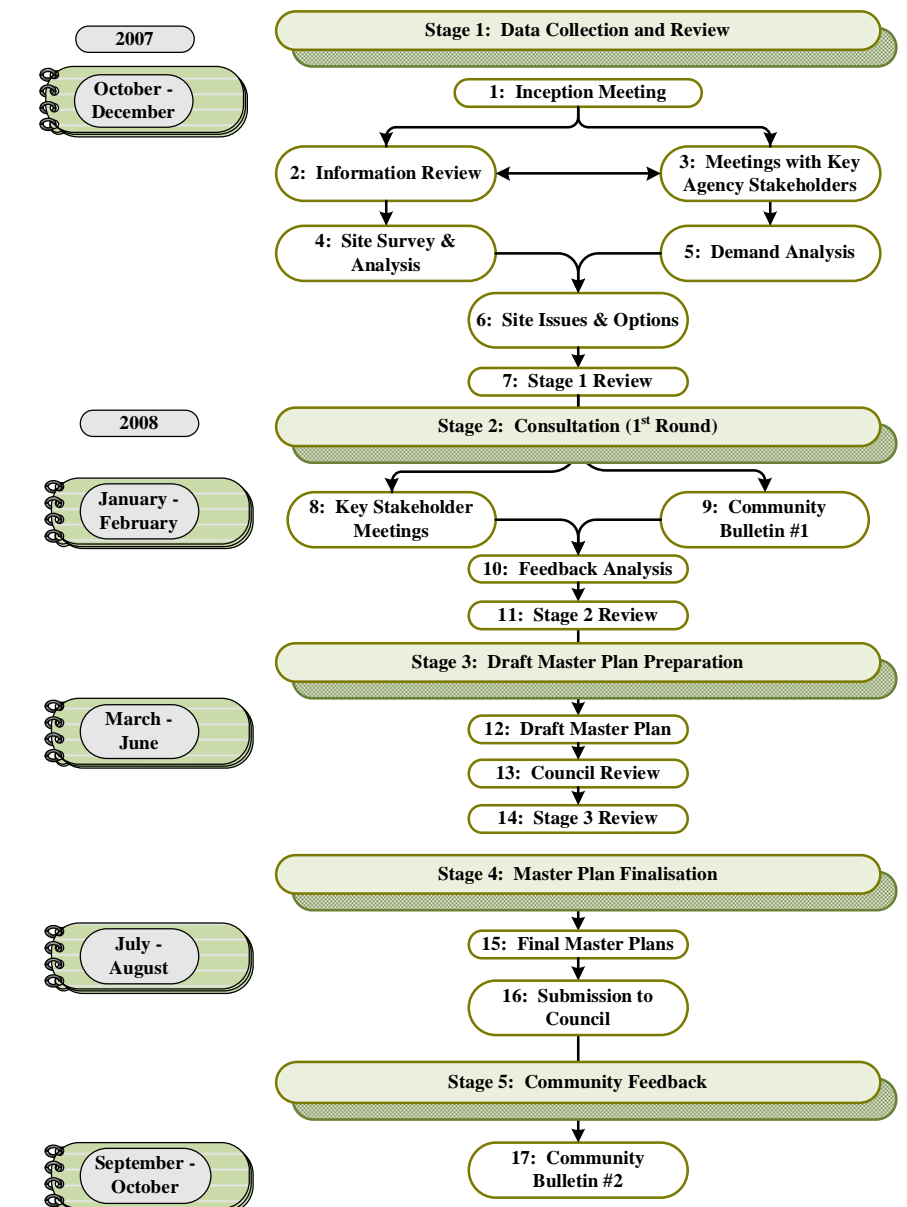
Legislative, Statutory or Policy	Administering Agency
Water Act 2000	Dept Natural Resources and Water
Water Resources Act 1989	Dept Natural Resources and Water

Legislative, Statutory or Policy	Administering Agency
Environmental Protection Act 1994	Environment Protection Agency
Environment Protection (Water) Policy 1997 (Pursuant to Environment Protection Act 1994 – Part 4, Chapter 2)	Environment Protection Agency
Environmental Protection Regulation(1998)	Environment Protection Agency
Nature Conservation Act (1992)	Environment Protection Agency
Cultural Record (Landscapes Queensland And Queensland Estate) Act (1987)	Environment Protection Agency
Coastal Protection And Management Act (1995)	Environment Protection Agency
South East Queensland Water Board (Reform Facilitation) Act 1999	South East Queensland Water Corporation
South East Qld Water Board By-law 1991 (Remain in force until 17.03.02)	South East Queensland Water Corporation
Fisheries Act 1994	Dept of Primary Industries & Queensland Fisheries Service
Fisheries (Freshwater) Management Plan 1999 (Pursuant to Fisheries Act 1994 – Part 5)	Dept of Primary Industries & Queensland Fisheries Service
Transport Operations (Marine Safety) Act 1994	Queensland Transport (Maritime Division)
Transport Operations (Marine Safety) Regulation 1995	Queensland Transport (Maritime Division)
Transport Infrastructure Act 1994	Queensland Transport /Dept Main Roads
Police Powers and Responsibilities Act 2000	Qld Police Service (inc Water Police)
Land Act 1994	Dept Natural Resources and Water
Brisbane Forest Park Act 1977	Brisbane Forest Park
Integrated Planning Act 1997	Dept of Local Government and Planning
Local Government Act 1993 (s25, 26)	Department Local Government and Planning
Esk Shire Local Law No 14 (Parks and Reserves)	Esk Shire Council
Esk Shire Local Law No 16 (Commercial Use of Roads)	Esk Shire Council
Ipswich City Local Law 30 (Camping Grounds)	Ipswich City Council
Ipswich City Local Law 17 (Parks and Reserves)	Ipswich City Council
Native Title Act (1993)	Premiers Department

1.7 The Process Followed

The study process is illustrated in Figure 2. The first stage of the project was commenced in October 2007 with concept site plans included in Community Bulletin #1 released for community review during January and February 2008. Feedback from the community was incorporated into draft master plans which were reviewed by Council in June 2008 before final master plans were submitted to Council for consideration and adoption in August 2008. A second Bulletin will then be released by Council to advise the community of the vision it will work to achieve at each of the 5 sites.

Figure 2: Mid-Brisbane River study process



2. CONTEXT AND SETTING



2.1 Values of the Mid Brisbane River

The Mid-Brisbane River between Wivenhoe Dam and Kholo Crossing is regionally significant (SKM 2004) because:

- the river channel conveys the region's potable water supply to Mount Crosby Weir where it is treated and distributed to Brisbane's urban population;
- it is the only freshwater river in southeast Queensland that maintains flows at an appropriate level to support recreational use all year;
- sections of the river support regionally endangered and of concern vine forest ecosystems, and mature riparian vegetation that supports koala populations; and
- rural and semi-natural landscape settings with river vistas within a half-hour's drive from a rapidly expanding urban metropolis.

The importance of the Mid-Brisbane River for tourism has been recognized by The Stafford Group (2008) in the Draft Brisbane City and Hinterland Regional Tourism and Investment and Infrastructure Plan 2008-2018. In particular the report recognises the importance of:

- the Wivenhoe / Somerset Dam / Mid-Brisbane River water sports precinct;
- adventure activities particularly river canoeing and kayaking;
- quality riverside facilities and destinations which provide opportunities for visitors to experience and enjoy the natural resources of the region.

The value of the Mid-Brisbane River for river-based outdoor recreational activities had been long recognised by fishermen, canoeists, locals and commercial operators. River recreational use patterns were documented through visitor surveys in 2000 by Sport and Recreation Queensland (SRQ 2000).

The SEQ Outdoor Recreation Demand Study (Kiewa, Brown and Hibbins 2001) highlights the value placed by SEQ residents on Recreation in the actual settings for such activities as:

- picnicking;
- walking/nature study;
- bicycle riding;
- horse riding;
- water activities; and
- riding on non motorised water-craft.

The high to very high participation rates (existing and latent) in these activities suggest that, if quality facilities are provided along the Mid-Brisbane River, they will be valued highly given that the closest equivalent river-based alternatives are approximately 250 km to the south in northern New South Wales. (Note: The SEQ Outdoor Recreation Demand Study was recently replicated but the results were unavailable before this report was finalised).

The main riverside recreation sites have been actively promoted in Council visitor guides and featured in booklets such as Places to Paddle (Effenev 2006).

Obviously maintenance of these values will require sound planning and management if the recreational and tourist needs of locals and visitors and outdoor recreation are to be balanced against the needs of the authority responsible for maintaining a viable water supply for South East Queensland.

2.2 Corridor Analysis

The Mid Brisbane River section is located in the Brisbane River Valley, which forms a natural valley corridor between Ipswich and Wivenhoe Dam.

Transportation: The Brisbane Valley Highway provides the main road linkage between Esk and Ipswich and also passes directly through Fernvale.

Urban Linkage: Three of the park areas are located near the urban centers of Lowood and Fernvale but have poorly defined connections, particularly for pedestrians and cyclists. However there are no direct connections to either Fielding or Hills Reserve, which are in more remote sections of the river.

Trail linkages: Both Lowood and Fernvale provide opportunities to provide linkage from the Brisbane Valley Rail Trail to the park areas on the Brisbane River. It may be possible to provide linkage from the other two parks, but this would not be direct. There is also an opportunity through the trails to provide linkage with B&Bs and other local accommodation facilities in the area.

Park linkages: Within each of the park areas a circulation network will be developed to facilitate people movement to destination points in the park. Twin Bridges and Savages Crossing Reserve are two parks where it is possible to link them externally via a pathway network along the Brisbane River.

Landscape settings and recreation opportunities: The landscape character types along the Mid Brisbane River have been mapped and described in detail in the Brisbane River Recreation Management Issues Paper (SRQ 2001). Table 3 summarises the overall assessments from this report.

Table 3: Landscape classification of the five Mid Brisbane River Reserves

Reserve	Landscape Classification	
	Overall Value	Description
Lowood Bend	5.6	Rural / semi natural
Fielding Reserve	5.8	Rural / semi natural
Twin Bridges	7.1	Rural / semi developed
Savages Crossing	7.1	Rural / semi developed
Hills Reserve	7.1	Rural / semi developed

Note: Overall landscape classification values can vary between 1 and 9, with lower scores indicating increasing natural integrity and higher scores indicating the greatest degree of change and human influence.

One of the findings from the landscape classification assessment was that there was little evidence of site management and maintenance. Given the high visitor use and reports of site impacts, vandalism and antisocial behaviour, it will be vital to ensure ongoing effective site supervision and management if quality recreational opportunities are to be maintained.

2.3 Associated Opportunities and Constraints

Opportunities:

The following items highlight opportunities which may be delivered in association with the staged development of the five reserves:

- **Local employment:** There will be opportunities to provide temporary employment through Council and Government agencies with the staged rehabilitation and enhancement of the five reserves. Long term employment opportunities could also be available to manage, service and maintain the upgraded reserves.
- **Tourism:** There will be opportunities for entrepreneurial eco-tourism activities that could offer a variety of supervised recreational experiences along the Mid Brisbane River and the Brisbane Valley Trail. Increased tourism should boost local employment opportunities as well.
- **Recreational opportunities:** The gradual upgrade of the recreation reserves will increase the attractiveness of each for different recreation experiences, which in turn will provide greater choice and increase the diversity of people attracted to the river
- **Conservation:** Portions of each reserve will not be developed. These areas will be rehabilitated and maintained for their environmental values. In particular, Fielding Reserve should be rehabilitated to enhance its natural values, with minimal facility provision.

Constraints:

There are a number of potential constraints that will impact on the delivery of the final reserve upgrades:

- **Funding:** The development of the reserves will be dependent on Council's ability to boost its limited parks development budget with additional funds from other sources. In particular, grants will be sought from both state and federal governments, and Council will encourage partnership arrangements with the private sector to deliver services and facilities where appropriate.
- **Maintenance and Servicing:** Council will require the support of the State government and local communities to ensure each reserve receives regular supervision, management and maintenance to maintain a quality setting.
- **Water Weed Infestations:** Water weeds develop seasonally and detract from the amenity of the river. They need to be managed so that levels remain low and do not invade areas frequented by visitors and river users.
- **Water Quality Issues:** Visitor use areas need to be managed so that there is no runoff or contamination of the river. Preferably visitors to the reserves should remove the rubbish and litter they bring in, or deposit it in the bins provided. Toilet waste should be stored and pumped out on a regular basis. Particular attention will be required during and after any river festivals and flood events.
- **Vandalism and Undesirable Behavior:** Antisocial behaviour is an ongoing problem in areas that are relatively isolated and the riverside reserves are no exception. CPTED principles have been incorporated into the design of each reserve to maximise passive surveillance so that vandalism and antisocial behaviour should be discouraged. Regular ranger patrols to assist and educate visitors and enforce local laws will be essential.
- **River Flood Events:** While the Somerset and Wivenhoe Dams mitigate flood events downstream on the Brisbane River, severe flooding of each of the reserves will occur from time to time. For this reason visitor facilities have been located outside the main river channel on the second or third river terraces. In addition visitor facilities should be designed so that they can either be temporarily removed or withstand infrequent inundation.

3. COMMUNITY REVIEW



3.1 The Process Followed

A Community Bulletin was prepared and distributed to all households in the Esk Shire in January 2008. In addition, advertisements were placed into local newspapers and on the Council website where copies of the bulletin could also be downloaded. A Community Bulletin response sheet facilitated feedback.

The following tables and graphs were extracted from the information collected from the 77 responses received up to 20/02/08 regarding the preliminary development concepts for the Mid-Brisbane River as presented in the Active and Healthy Esk Bulletin released for community review in February 2008. All responses were date stamped, assigned a registration number, copied and filed before being entered into an Excel data base (refer file - *MBR Round 1 V2 21-02-08.xls*). Details of the all additional comments raised on each response are presented in full in a separate consultation report submitted to Council.

All community responses were reviewed by the consultants. This resulted in several changes to the design of the master plan for each of the sites, as reflected in the final designs submitted to Council.

Notes

- 77 responses were received. The distribution of all responses is illustrated in graph form for each question.
- Not everyone responded to all questions. These were assigned to the “no response” tally for each question; and
- 7 people sent emails or posted submissions. Matters raised were treated as “additional comments” and have been included in the accompanying Word document.

3.2 Summary of Community Feedback

Overall there was strong support (between 44 and 54 of the 77 responses) for the majority of changes proposed in the preliminary concept plans.

There were 2 people who indicated they didn’t want any Council money spent on these sites and would prefer the money to be directed to improving the roads or other ratepayer priorities. (It should be noted that implementation of the development strategies and effective site management will depend on funding from external funding sources including the State government.)

Many respondents could see benefits as a result of the proposed developments. Overall benefits are listed below with specific benefits listed beside the response for each site in Tables 5-9.

Overall benefits

- Improved facilities and site management
- Increased visitation to the region
- Reduced environmental degradation and opportunities for rehabilitation
- White-water facilities will become a regional attraction
- Better access and use of the Brisbane River
- Improved walking trails
- Structured camping facilities will discourage trespassing
- Improved toileting facilities (bio loos)

There were a number of people who had concerns regarding certain aspects of the proposed developments. Overall concerns are listed below with concerns regarding individual sites listed beside the response for each site

Overall concerns

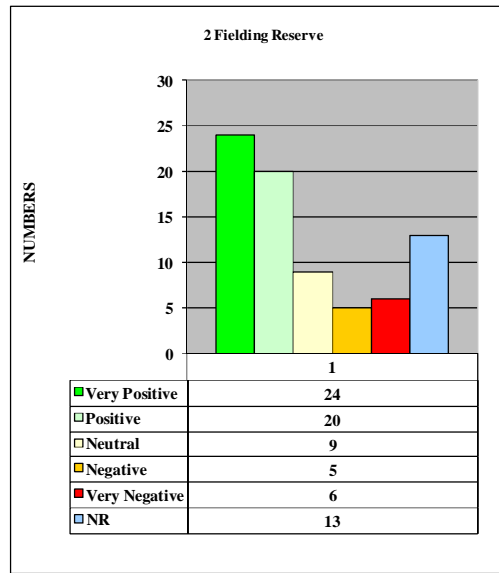
- Lack of provision for people with dogs
- Protection of private property and riparian water rights
- Council funding priorities (e.g. recreation facilities before roads)
- Lack of camping facilities
- Potential impact on native fauna
- Possible effect of river flooding on facilities
- Concerns regarding risks to water quality
- Ongoing, effective site supervision and maintenance
- Effective toileting

Table 4: Postcode of respondents

Post Code	# of Responses
4000	1
4006	1
4034	1
4036	1
4053	1
4067	1
4068	2

Post Code	# of Responses
4305	1
4306	37
4310	2
4311	13
4312	11
4519	1
No response	4

Table 5: Fielding Reserve – overall response summary



Response distribution:

- 44 positive responses
- 9 neutral
- 11 negative
- 13 no response

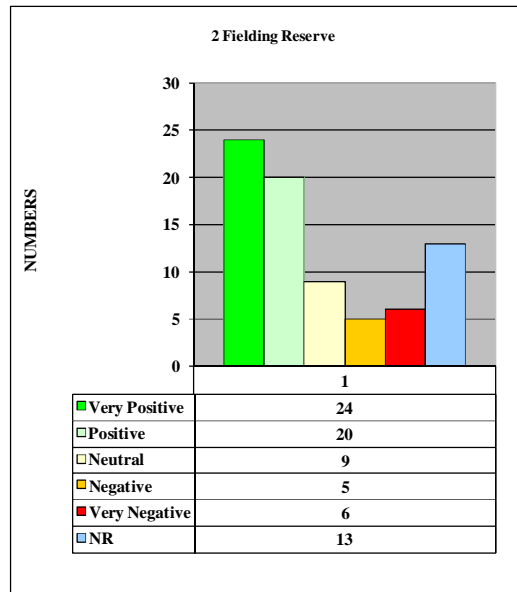
Main positive responses were:

- Enhancement of natural character
- Site rehabilitation

Main negative responses were:

- Lack of camping
- Poor access (distance from car park)
- Relatively low key development

Table 6: Lowood Bend – overall response summary



Response distribution:

- 44 positive responses
- 9 neutral
- 11 negative
- 13 no response

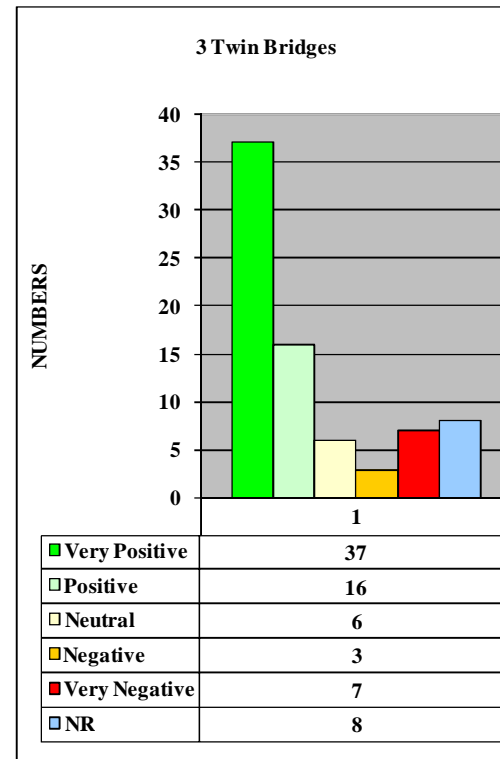
Main positive responses were:

- Improved facilities
- Site rehabilitation
- Whitewater opportunities

Main negative responses were:

- Proposal for camping facilities within Nerreman Reserve
- Road safety
- Proposed in river whitewater structures
- Loss of amenity for Nerreman Road residents
- Lack of consultation
- Protection of private property and riparian rights
- Threats to private property, security and safety
- Effective, ongoing site supervision and maintenance
- Potential for riverbank erosion

Table 7: Twin Bridges – overall response summary



Response distribution:

- 53 positive responses
- 6 neutral
- 10 negative
- 8 no response

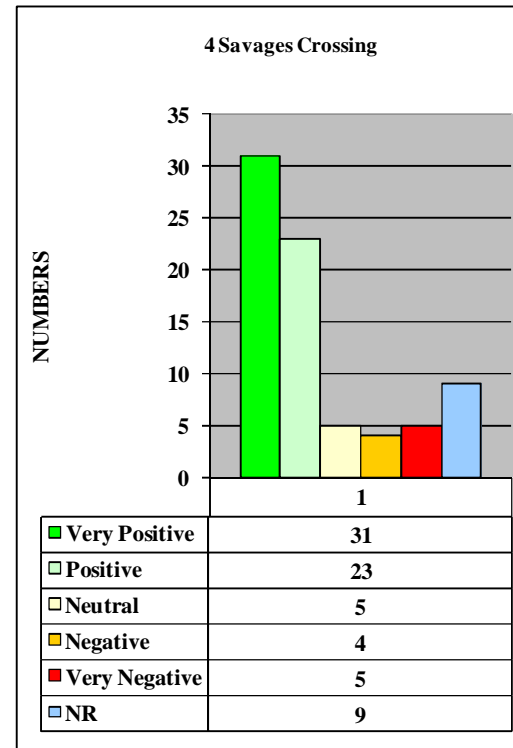
Main positive responses were:

- Improved facilities
- Site rehabilitation
- Whitewater opportunities
- Walking trails
- Swimming lake

Main negative responses were:

- Lack of camping facilities
- Possibility of sand mining over the central area
- Effective ongoing site supervision and maintenance

Table 8: Savages Crossing – overall response summary



Response distribution:

- 54 positive responses
- 5 neutral
- 9 negative
- 93 no response

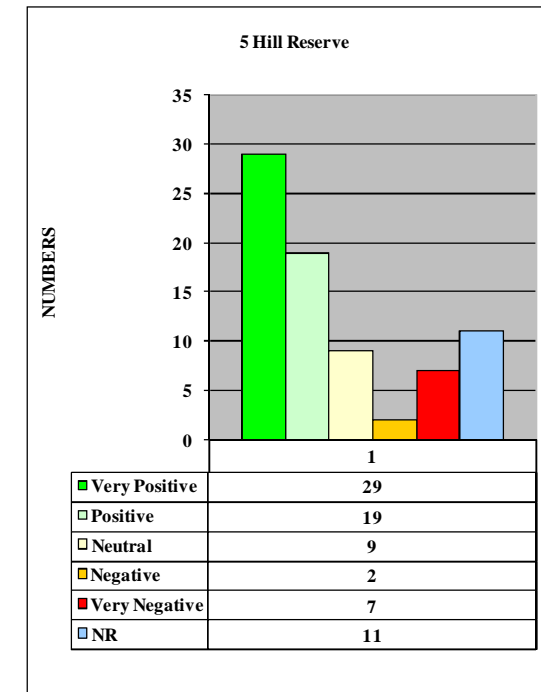
Main positive responses were:

- Improved facilities
- Site rehabilitation

Main negative responses were:

- Lack of camping facilities
- Need to upgrade Banks Creek Road

Table 9: Hills Reserve – overall response summary



Response distribution:

- 48 positive responses
- 9 neutral
- 9 negative
- 11 no response

Main positive responses were:

- Improved facilities
- Site rehabilitation
- Supervised river based camping

Main negative responses were:

- Concern about provision of camping facilities
- Potential conflict with key resource area
- Effective, ongoing supervision and maintenance
- Need to upgrade access road
- Threats to private property, security and safety

4. SITE PLANNING



4.1 Development Strategy

The development strategies underlying each of the site master plans are consistent with the following guiding principles:

Maintenance of Water Quality

- Proposed developments must have the potential to improve river water quality when compared with the existing situation.
- Only outdoor recreational activities which minimise risks to water quality will be encouraged i.e. river based activities including canoeing, boating, camping, day visits/picnicking, bushwalking, nature appreciation, fishing and cycling.
- Inappropriate activities include four-wheel driving, trail biking, use of high powered boats and jet skis.

Maintenance of Environmental Values

- Riparian vegetation will be protected and enhanced.
- Significant natural, cultural and historic values will be protected.
- The hydrologic and flooding functions of the river will not be impaired.
- Environmentally degraded areas will be rehabilitated.

Access and Equity

- Safe and convenient access will be provided between car parking areas and the river edge, consistent with the nature of the setting and the nature of the experience to be provided.
- All built facilities and main access paths will be designed to cater for people who are mobility impaired.

Diversity and Choice

- Each site will be developed so as to provide a diverse range of recreational opportunities consistent with the maintenance of water quality, the values present and the character of the landscape setting.
- Visitors will be provided with appropriate information to ensure they are made aware of the types of facilities and recreational activities which are appropriate in different locations.

Note: It should be realised that when considering specific recreational sites not all these principles will necessarily apply, and in fact some may be mutually exclusive. In these situations it may be necessary to consider accommodation of competing and conflicting uses by means of time and spatial zoning or reservation of some areas for particular uses.

Quality

- The emphasis will be on providing quality facilities that will maximise the visitor experience and satisfaction.

Safety

- Appropriate consideration of Australian standards regarding public safety will be given in the design, location, management, maintenance and use of all sites.

Connectivity

- Each site will remain accessible along the river corridor where land tenures permit.
- Each site should be linked to the wider regional trail network to facilitate pedestrian and cycle access.

Sustainability

- The type and level of development/activities proposed will be compatible with the long-term sustainability of the riparian corridor.

Community Involvement

- Community involvement in the planning, design, management, maintenance and rehabilitation of each site will be encouraged.

Partnerships

- Opportunities to work in partnership with the private and commercial sectors will be encouraged where improved environmental, facility or visitor services are likely, consistent with the values present and the character of the setting.

4.2 Caring For Our River

River Corridor Enhancement

Somerset Regional Council (formerly Esk Shire Council) has always sought to improve the reserves along the Mid Brisbane River and has recognised the importance of these areas in providing a valuable recreational resource for local communities and the wider SEQ region. This report provides guidelines for the continued enhancement of the river corridor through the gradual development of the recreation reserves along the river and ensures that the maximum range of recreational opportunities will be developed for the community. The structured development of the recreation reserves will provide a range of park types and development levels, from conservation areas through to regional recreational facilities. Along with the upgrade of the park areas, the replanting of vegetation within the reserves, will contribute to the stabilisation of the erosion prone areas within the riparian zone.

It should also be recognised that there are opportunities to strengthen community involvement and ownership of the river corridor. This could be achieved by extending existing community cultural events in Lowwood or Fernvale or by developing new events such as a 'celebration of the river' or 'river enhancement' day at either Twin Bridges Reserve or Lowwood Bend which have the greatest visitor capacity. Such events would also widen the tourism attraction of the area and increase overall visitation.

Corridor Signage and Public Art

Signage structures should be distinctive and clearly visible. They should identify the gateway points and provide directional guidance to assist with way finding and easy navigation to the recreation reserves. Signage should be coordinated so that they become part of a unified, easily identified directional network that guides visitors around the area and to their intended destination points. The signage could also be linked with other tourism initiatives, in particular the Brisbane Valley Rail Trail to provide a unified network. Within a reserve, locality specific signage will be required to assist in guiding the visitor to local features and providing facility information. Opportunities to include information about Indigenous values should be considered after consultation with local Traditional Owners and groups where appropriate. In addition, easily recognisable signage should also be placed along the river's edge to assist river users in the identification of the reserve resting stops. This signage could be in the form of distance travel markers and reserve names where they occur along the river.

There will be opportunities at each of the reserves for public and / or Indigenous art to be utilised to develop unique features that could become community icons or focal markers that will assist way finding and provide a unique destination place.

Landscape Amenity

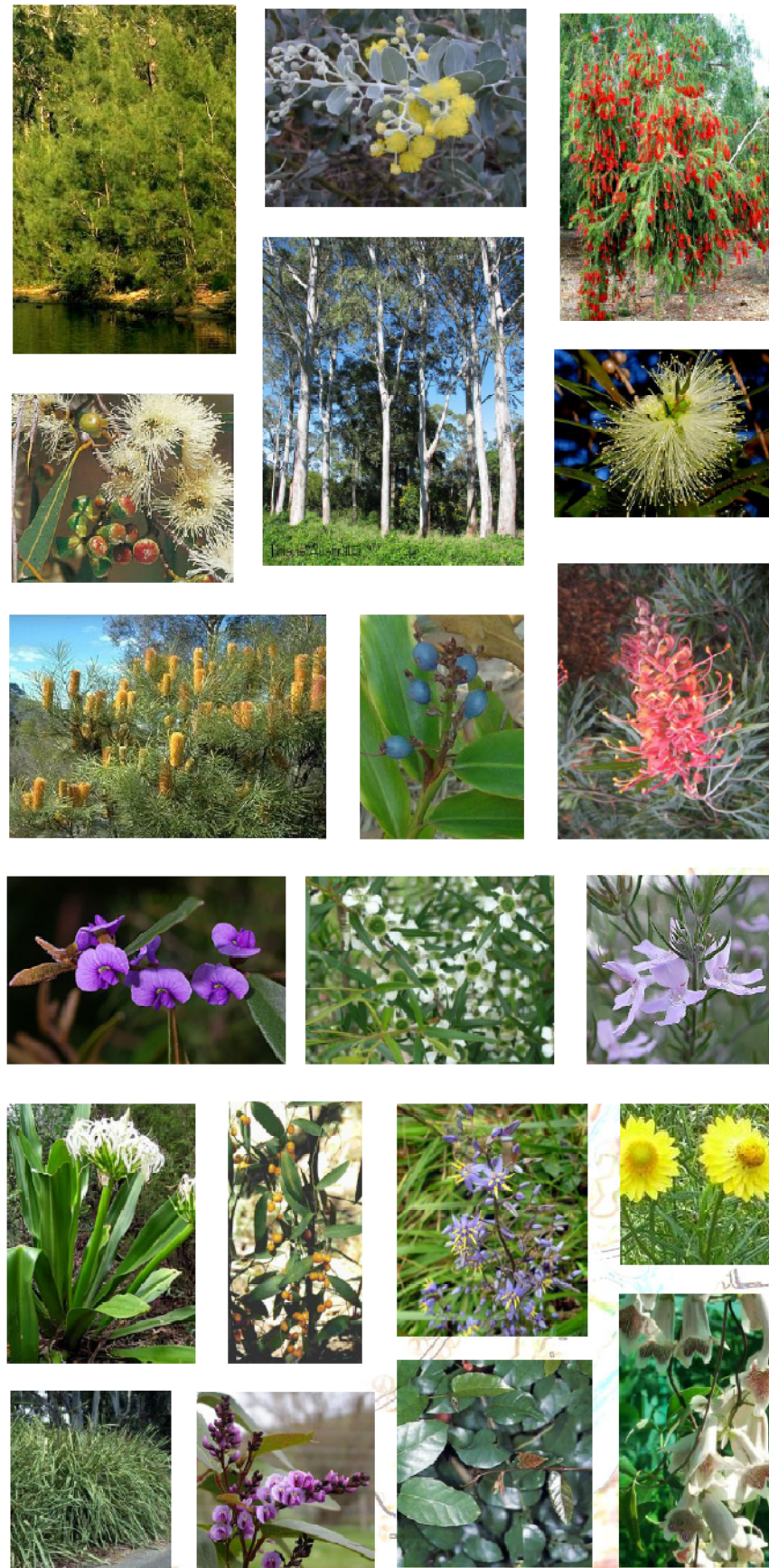
The tranquil nature of the Brisbane River and the surrounding rural backdrop contributes to the overall experience for the visitor. The reserves consist of open riverine vegetation along the river's edge and include pockets of established tall trees. All reserves have patches of bare earth and erosion that are contributing to the degradation of the landscape and require rehabilitation. The proposed gradual development of these recreation reserves is intended to enhance the amenity of each reserve and complement the existing rural outlook.

Intended Landscape Treatments

Figures 3 and 4 indicate the intended landscape treatments and materials that should be used to enhance the five recreation reserves. When considering these palettes, attention should be given to items that will ensure maximum service life. This will reduce ongoing maintenance costs. In particular, items were selected that can withstand periods of inundation during those times when the river floods.

The plant palette provides a selection of plants to enhance the existing vegetation and, once established, will be low maintenance and able to withstand drought conditions.

Figure 3: Planting palette



Trees

- Acacia iorata* subsp. *iorata*
- Acacia melanoxylon*
- Acacia podalyriifolia*
- Alphitonia excelsa*
- Angophora subvelutina*
- Aphananthe philippinensis*
- Araucaria cunninghamii*
- Backhousia angustifolia*
- Banksia integrifolia* subsp. *compar*
- Callistemon salignus*
- Callistemon viminalis*
- Casuarina cunninghamiana*
- Corymbia tessellaris*
- Eucalyptus microcorys*
- Eucalyptus propinqua*
- Eucalyptus tereticornis*
- Elaeocarpus reticulatus*
- Ficus coronata*
- Glochidion sumatranum*
- Grevillea robusta*
- Melaleuca bracteata*
- Waterhousia floribunda*

- Green Wattle
- Blackwood
- Queensland Silver Wattle
- Red Ash
- Broad-leaved Apple
- Native Elm
- Hoop Pine
- Narrow Leaved Backhousia
- Coast Banksia
- Willow Bottlebrush
- Weeping Bottlebrush
- River She-oak
- Moreton Bay Ash
- Tallow wood
- Grey Gum
- Forest Red Gum
- Blueberry Ash
- Sandpaper Fig
- Umbrella Cheese Tree
- Silky Oak
- Black Tea Tree
- Weeping Lilly Pilly

Shrubs

- Acalypha capillipes*
- Alpinia caerulea*
- Banksia spinulosa* var. *collina*
- Daviesia umbellata*
- Dodonaea triquetra*
- Gompholbium pinnatum*
- Grevillea banksii*
- Hibbertia aspera*
- Hibiscus heterophyllus*
- Hovea acutifolia*
- Jacksonia scoparia*
- Leptospermum microcarpum*
- Leptospermum petersonii*
- Leucopogon lanceolatus*
- Lomatia siliatifolia*
- Myoporum acuminatum*
- Plectranthus graveolens*
- Westringia eremicola*

- Small Leaved Acalypha
- Native Ginger
- Golden Candlesticks
- Northern Bitter Pea
- Forest Hop Bush
- Wedged Pea
- Dwarf Silky Oak
- Trailing Guinea Flower
- Native Rosella
- Pointed-leaved Hovea
- Dogwood
- Small-fruited Tea-tree
- Lemon-scented Tea-tree
- Lance-leaved Beard Heath
- Crinkle Bush
- Boobialla
- Native Coleus
- Slender Westringia

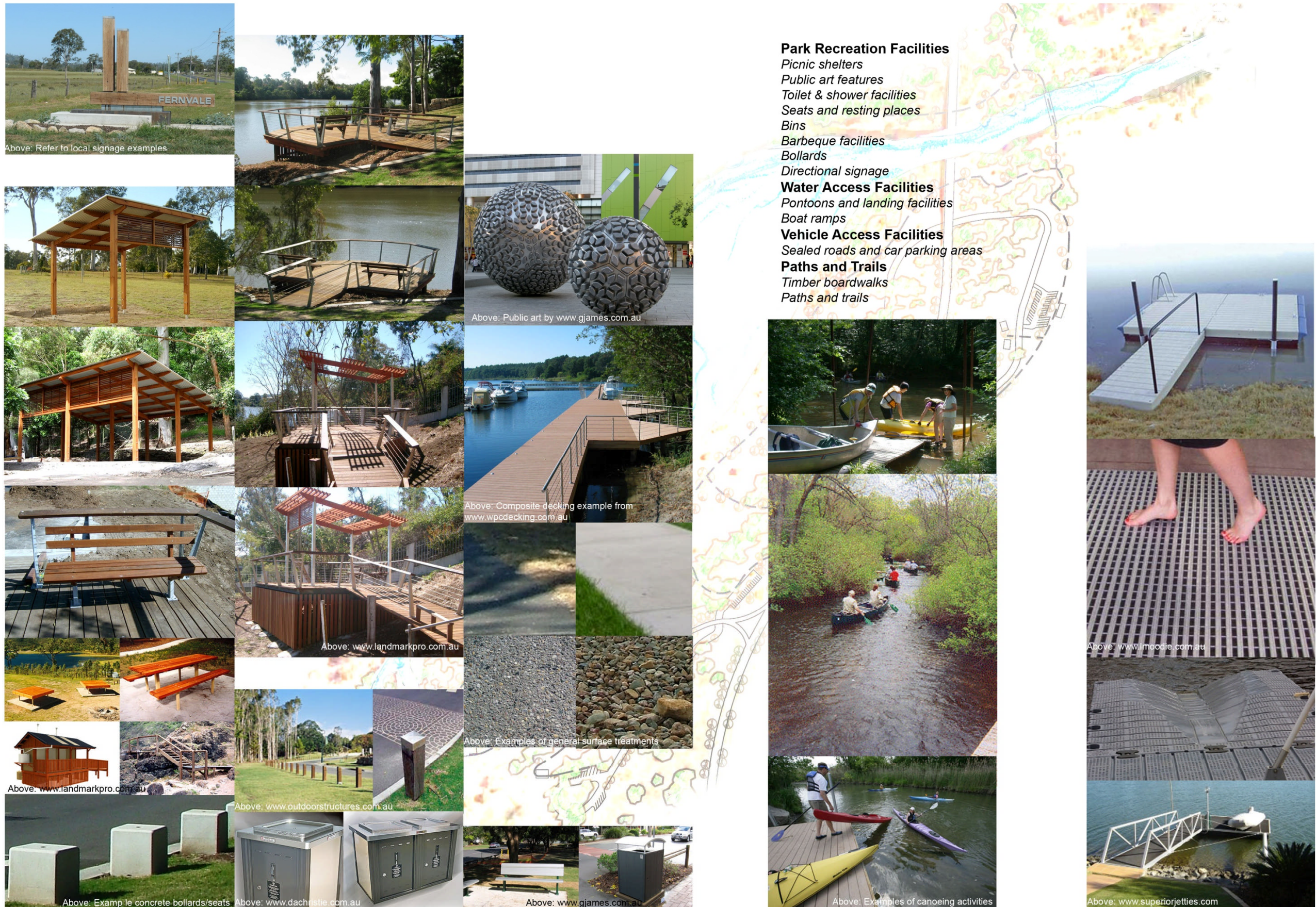
Groundcovers & Vines

- Carex polyantha*
- Cissus antarctica*
- Crinum pedunculatum*
- Cyperus rupicola*
- Cyperus vaginatus*
- Desmodium rhytidophyllum*
- Dianella caerulea*
- Eustrephus latifolius*
- Hardenbergia violacea*
- Helichrysum collinum*
- Lomandra hystrix*
- Lomandra longifolia*
- Pandorea pandorana*
- Xerochrysum bracteatum*

- Sedge
- Kangaroo Vine
- River Lily
- Cyperus
- Sedge
- Hairy Trefoil
- Blue Flax Lily
- Wombat Berry
- Native Sarsparilla
- Hill Daisy
- Matrush
- Long Leaved Matrush
- Wonga Vine
- Everlasting Daisy



Figure 4: Facilities and materials palette



4.3 Lowood Bend Reserve Master Plan

Statement of Intent

Lowood Bend Reserve is to be developed as a regional recreational park with the main focus on river based activities including day use picnicking, canoeing, kayaking, boating, fishing, nature appreciation and cycle rest stop. Proposed development is to retain the rural / semi- natural character of the site.

Current Situation

- Poor signage
- Uncontrolled vehicle access.
- Vegetation removal and site erosion.
- Illegal camping, camp fires and litter.
- Few visitor facilities, no toilets.
- Lack of site management and supervision.

Community Feedback

Main positive responses were:

- Improved facilities.
- Site rehabilitation.
- Whitewater opportunities.

Main negative responses were:

- Road safety.
- Proposed in river whitewater structures.
- Lack of consultation.
- Threats to private property, security and safety.
- Effective, ongoing site supervision and maintenance.
- Potential for riverbank erosion.
- Proposal for camping facilities within Nerreman Reserve.
- Loss of amenity for Nerreman Road residents.
- Protection of private property and riparian rights.

Desired Outcomes

- Reduced risk to water quality.
- Improved site management.
- Quality river based recreation experiences.
- Improved site facilities.
- Controlled vehicle access and parking.

Uses to be Catered for

- Day visits, picnicking.
- Canoeing, kayaking and boating.
- Nature appreciation.
- Fishing.
- Cycling rest stop.
- Ecotourism.

Specific Proposals

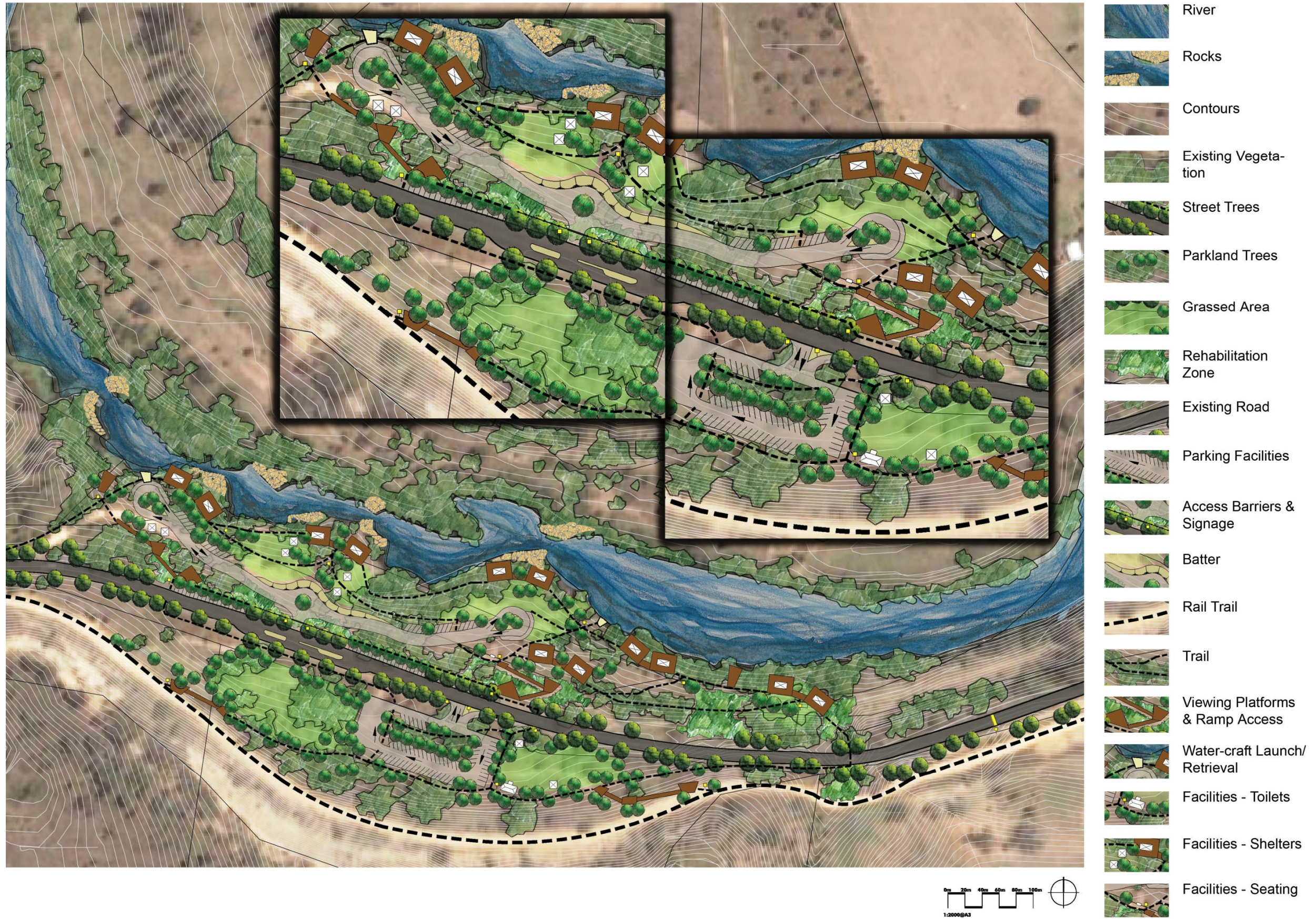
- Council to request a change of tenure to recreation reserve for those lands no longer required by Main Roads or Queensland Rail.
- Request Main Roads to reduce vehicle speed to 60KPH along this section of the Forest Hill / Fernvale Road to maximise visitor safety.
- Limit vehicle access to the north of Forest Hill / Fernvale Road for day use and water craft drop-off only. A boom gate should be located to prevent night time vehicle access and camping.
- Locate main car parking area to the south of Forest Hill / Fernvale Road.
- Place boulders in river to create white water rapids at various river flow levels.
- Investigate eastern pedestrian / cycle underpass when wooden bridge replaced.
- Undertake rehabilitation of the site with appropriate plant species.

Site Photos

Photo 1: Photos of Lowood Bend Reserve



Figure 5: Lowood Bend master plan



4.4 Fielding Recreation Reserve Master Plan

Statement of Intent

Fielding Reserve is to be developed as a local conservation area with minimal development and the main focus on walk-in day use and river based activities including nature appreciation, river side stop, and fishing. The semi-natural character of the site is to be enhanced by sensitive landscape planting with minimal facility development.

Current Situation

- Poor signage.
- Illegal camping and fires.
- No visitor facilities.
- Lack of site management and supervision.
- Little known.

Community Feedback

Main positive responses were:

- Enhancement of natural character.
- Site rehabilitation.

Main negative responses were:

- Lack of camping.
- Poor access (distance from car park).
- Relatively low key development.

Desired Outcomes

- Reduced risk to water quality.
- Improved site management.
- Quality nature based recreation experiences.
- Limited site development compatible with semi-natural setting.

Uses to be Catered for

- River side stop.
- Walk in day use activities only.
- Nature appreciation.
- Fishing.
- Ecotourism.

Specific Proposals

- Restrict vehicle access to car park adjacent to Fielding Road.
- Provide pedestrian and cycle access to river bank.
- Maintain as a semi-natural river side picnic facility with basic facilities only.
- Site rehabilitation with appropriate plant species.

Site Photos

Photo 2: Photos of Fielding Recreation Reserve



Figure 6: Fielding Reserve master plan



4.5 Twin Bridges Reserve Master Plan

Statement of Intent

Twin Bridges is to be developed as a regional riverside recreational park. Council's preferred development option is to have the river bed rehabilitated after river sand mining to incorporate a self flushing lake with white water structures placed in the river bed. A proposed walking / cycle / horse circuit trail connecting with Fernvale and Savages Crossing is to be constructed over time. The landscape character will be semi-developed with high quality facilities and good river accessibility.

Current Situation

- Poor signage.
- Uncontrolled vehicle access in some parts
- Vegetation removal and site erosion.
- Litter.
- Illegal camping and camp fires.
- Remote toilet facilities.
- Lack of site management and supervision.

Community Feedback

Main positive responses were:

- Improved facilities.
- Site rehabilitation.
- Whitewater opportunities.
- Walking trails.
- Swimming lake.

Main negative responses were:

- Lack of camping facilities.
- Possibility of sand mining over the central area.
- Effective ongoing site supervision and maintenance.
- No designated dog exercise area.

Desired Outcomes

- Reduced risk to water quality.
- Improved site management.
- Quality river based recreation experiences.
- Improved site facilities.
- Controlled vehicle access and parking.

Uses to be Catered For

- Day visits, picnicking, beach and water play.
- Canoeing, kayaking and boating.
- Nature appreciation.
- Fishing.
- Roadside rest stop.
- Dog exercising (in designated area).

Other Considerations:

- Potential river sand mining, subject to appropriate approvals and rehabilitation.
- Support overnight accommodation on adjacent private lands.

Specific Proposals

- Develop site as regional, day use river based recreational area and roadside rest stop.
- Restrict vehicle access to formalised tracks and carparks adjacent to day use areas.
- Provide for water-craft drop off and recovery.
- Provide site walking / cycle trails connected to Fernvale and Rail Trail.
- Develop a self flushing central lake for water based recreational activities post mining.
- Allow dog exercising in designated area.

Site Photos

Photo 3: Photos of Twin Bridges Reserve



Figure 7: Twin Bridges master plan



4.6 Savages Crossing Master Plan

Statement of Intent

Savages Crossing is to be developed as a district recreational park on both sides of the river. A proposed walking / cycle / horse circuit trail will connect with Fernvale and Twin Bridges. The landscape character will be semi-developed with quality facilities and good river accessibility.

Current Situation

- Poor signage.
- Uncontrolled vehicle access.
- Vegetation removal and site erosion.
- Litter.
- Illegal camping and fires.
- Few visitor facilities.
- Lack of site management and supervision.

Community Feedback

Main positive responses were:

- Improved facilities.
- Site rehabilitation.

Main negative responses were:

- Lack of camping facilities.
- Need to upgrade Banks Creek Road.
- No designated dog exercise area.

Desired Outcomes

- Reduced risk to water quality.
- Improved site management.
- Quality river based recreation experiences.
- Improved site facilities.
- Controlled vehicle access and parking.

Uses to be Catered For

- Day use and picnicking.
- Beach and water play.
- Canoeing, kayaking and boating.
- Nature appreciation.
- Fishing.
- Ecotourism

Specific Proposals

- Locate car parking away from river edge.
- Locate day use visitor facilities on middle river terrace.
- Provide for water craft drop off and recovery.
- Provide walking / cycle paths with future sub-division and Fernvale.
- Dog exercising in designated area.

Site Photos

Photo 4: Photos of Savages Crossing Reserve



Figure 8: Savages Crossing master plan



4.7 Hills Crossing Recreation Reserve Master Plan.

Statement of Intent

Hills Reserve is to be developed as a limited access, supervised riverside camping area with basic facilities for overnight stays with the main focus on river based activities. The landscape character will be semi-natural with low key facilities.

Current Situation

- Poor signage.
- Illegal vehicle access.
- Vegetation removal and site erosion.
- Litter
- Illegal camping and fires.
- Few visitor facilities.
- Lack of site management and supervision.

Community Feedback

Main positive responses were:

- Improved facilities.
- Site rehabilitation.
- Supervised river based camping.

Main negative responses were:

- Concern about provision of camping facilities.
- Potential conflict with key resource area.
- Effective, ongoing supervision and maintenance.
- Need to upgrade access road.
- Threats to private property, security and safety.

Desired Outcomes

- Reduced risk to water quality.
- Improved site management.
- Quality river based recreation and camping experiences.
- Provision of basic site facilities.
- Controlled vehicle access and parking.
- Effective site supervision and control.

Uses to be Catered For

- Supervised low key camping for river users.
- Canoeing, kayaking and boating.
- Walk in day use activities.
- Nature appreciation.
- Fishing.
- Ecotourism.

Specific Proposals

- Locate camping / day use facilities on middle river terrace.
- Provide for water-craft drop off and recovery.
- Provide internal walking / cycle paths with future links to regional trail network.
- Designate sites for river based camping groups on lower river terrace.
- Relocate dirt road to southern boundary.

Site Photos

Photo 5: Photos of Hills Crossing Reserve



Figure 9: Hills Reseve master plan



5. IMPLEMENTATION



5.1 Cost Estimates and Staging

Table 10 summarises the costs for staged development of each reserve. Detailed costings are provided in Appendix 6.4. The schedule of rates has been compiled from Rawlinson’s Australian Construction Handbook (Edition #26, 2008). Rates should be used as a guide only and are approximately accurate to within +/- 25% given the accuracy of the base mapping. Should more precise information be required, it is recommended that a professional cost planner be engaged to perform a detailed assessment based on surveyed plans of each reserve. The costs exclude: GST; connections to services; technical studies and consultant design fees.

Table 10: Summary costs for each reserve

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Lowood Bend Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
3. White water structures not costed.								
Facilities - South top and river park								
Subtotal				\$271,300		\$100,000		\$79,400
Access Facilities - South top and river park								
Subtotal				\$114,850		\$55,720		\$14,800
Vehicle Access Facilities - South top and river park								
Subtotal				\$165,600		\$106,800		\$186,900
Landscape Improvements - South top and river park								
Subtotal				\$45,000		\$5,220		\$8,860
Totals				\$596,750		\$267,740		\$289,960
Fielding Recreation Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
Recreation Facilities								
Subtotal				\$6,600		\$5,100		\$5,100
Access Facilities								
Subtotal				\$13,500		\$3,450		\$0
Vehicle Access Facilities								
Subtotal				\$58,400		\$53,400		\$0
Landscape Improvements								
Subtotal				\$22,250		\$2,160		\$6,750
Totals				\$100,750		\$64,110		\$11,850

Table 10 (continued)

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Twin Bridges Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
3. White water structures not costed.								
Recreation Facilities - south top, northern top, pocket road, lower spit area & lower escarpment area								
Subtotal				\$363,500		\$343,200		\$402,600
Path Access Facilities- south top, northern top, pocket road, lower spit area & lower escarpment area								
Subtotal				\$96,400		\$30,500		\$105,350
Vehicle Access Facilities- south top, northern top, pocket road, lower spit area & lower escarpment area								
Subtotal				\$297,400		\$133,500		\$186,900
Landscape Improvements- south top, northern top, pocket road, lower spit area & lower escarpment area								
Subtotal				\$38,320		\$9,180		\$75,530
Totals				\$795,620	\$-	\$516,380	\$-	\$770,380
Savages Crossing Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
3. Additional path connections to future subdivision and Fernvale not included.								
Recreation Facilities								
Subtotal				\$135,400		\$38,200		\$108,200
Path Access Facilities								
Subtotal				\$68,850		\$19,610		\$4,440
Vehicle Access Facilities								
Subtotal				\$94,500		\$80,100		\$40,050
Landscape Improvements								
Subtotal				\$26,200		\$2,160		\$6,750
Totals				\$324,950	\$-	\$140,070	\$-	\$159,440
Hills Crossing Recreation Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
4. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
5. Additional mid and long term stages assume a future proven demand for additional facilities.								
Recreation Facilities								
Subtotal				\$156,200		\$21,200		\$0
Path Access Facilities								
Subtotal				\$72,350		\$15,910		\$7,400
Vehicle Access Facilities								
Subtotal				\$123,900		\$17,800		\$22,250
Landscape Improvements								
Subtotal				\$29,500		\$2,160		\$6,750
Totals				\$381,950		\$57,070		\$36,400
Combined Totals (5 Reserves)				\$2,200,020		\$1,045,370		\$1,268,030

5.2 Funding the Development

Current information on possible funding sources is available on the web. As grant schemes are reviewed on a regular basis, and eligibility criteria change annually, information should be checked for currency before developing an application.

In summary, there are 8 major funding sources and numerous separate funding programs for environmental / recreation related projects, as illustrated below:

Natural Heritage/Cultural

- Commemoration of Historic Events and Famous Persons Grant-in-aid Program
- Department of Natural Resources and Water – Community Awareness Grants
- Federal Department of the Environment, Water, Heritage and the Arts - Caring for our Country

Infrastructure Grants

- Rural Living Infrastructure Program (RLIP)
- Security Improvement Program (SIP)

Community Capacity Grants

- Foundation for Regional and Rural Renewal (FRRR)

Arts and Festival Grants

- Regional Arts Fund
- Festivals Australia

Tourism Grants

- Australian Tourism Development Program

Sport and Recreation Grants

- Club Development Program
- Local Government Development Program
- Indigenous Community Development Program
- Major Facilities Program
- Minor Facilities Program

Miscellaneous

- Gambling Community Benefit Fund
- Jupiters Casino Community Benefit Fund

Web Site Links

Several websites host links to organisations that offer grants. Listed below are some of the more useful sites:

1. Our Community – <http://www.ourcommunity.com.au>
2. Australian Government Grants Link – <http://www.grantslink.gov.au/>
3. Queensland Government Funding Opportunities – <http://www.qld.gov.au/grants/discoverbywizard.action>
4. Australian National Council on Drugs Funding Opportunities – <http://www.ancd.org.au/funding/index.htm>
5. Queensland Government's Youth Affairs Website - <http://www.generate.qld.gov.au/>

5.3 Performance Monitoring and Review

It will be vital to monitor the success or otherwise of these Master Plans. The performance indicators shown in Table 11 are suggested as a means by which trends over time can be monitored so that timely decisions can be made to change direction, should that be required. Council should ensure that appropriate records are kept to facilitate annual reporting and review.

Table 11: Suggested performance indicators

Item	Possible Performance Indicator
Water quality	<ul style="list-style-type: none"> • Key water quality indicators e.g. E. coli and nutrient levels.
Community use & Events	<ul style="list-style-type: none"> • Annual visitation. • Number & type of activities. • Days utilised per year. • Revenue.
Sporting facilities	<ul style="list-style-type: none"> • Revenue. • Grants obtained. • Maintenance costs.
Quality of services and facilities	<ul style="list-style-type: none"> • Visitor satisfaction. • Number of complaints / compliments. • Number of repeat bookings.
Community involvement	<ul style="list-style-type: none"> • Consultation programs. • Community group support.
Funding	<ul style="list-style-type: none"> • Grants applied for / received. • Partnerships.
Master Plan	<ul style="list-style-type: none"> • Achievement of staged implementation targets.

Under normal circumstances, the Master Plans should be reviewed and updated approximately every 5 years. In unusual circumstances it may be necessary for Council to modify a component of a Master Plan to accommodate unanticipated opportunities; however the overall intent of the Master Plan should remain intact.

6. APPENDICES



6.1 Bibliography

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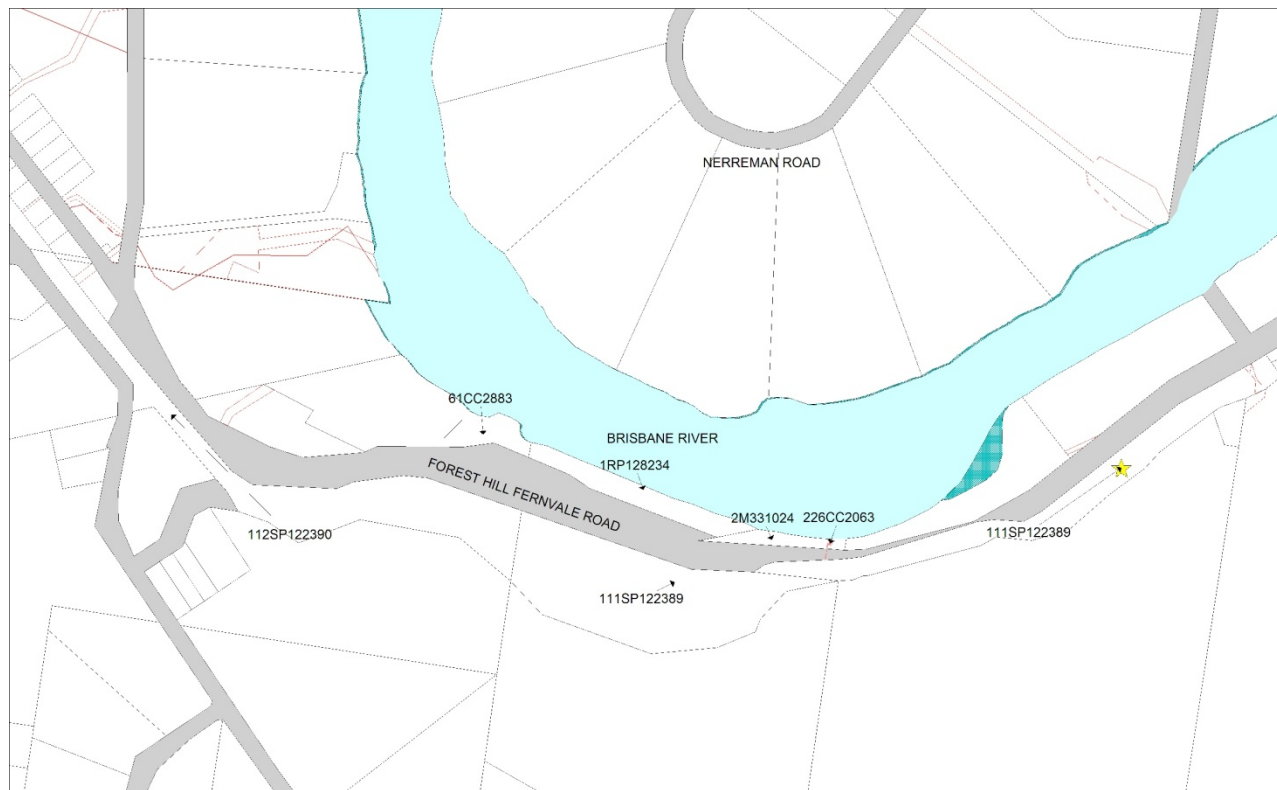
6.2 Description of Properties

Lowood Bend

Lowood Bend comprises the following properties (refer Figure 8):

Lot and Section	Area (ha)	Owner / Lessees
61CC2883	0.3329	Somerset Regional Council - reserve
1RP128234	0.6300	SRC - freehold
2M331024	0.2656	Qld Rail
226CC2063	0.0025	Ron James - leasehold
112SP 122390	2.8400	QR - freehold
111SP122389	6.200	QR - reserve
Riparian corridor	Not determined	Department of Natural Resources and Water

Figure 10: Properties covered by the Lowood Bend Site master plan



Fielding Reserve

Fielding Reserve comprises the following properties (refer Figure 9):

Lot and Section	Area (ha)	Owner / Lessees
27 RP 138054	3.654	Somerset Regional Council - freehold
Riparian corridor	Not determined	Department of Natural Resources and Water

Figure 11: Properties covered by the Fielding Reserve Site master plan



Twin Bridges

Twin Bridges comprises the following properties (refer Figure 10):

Lot and Section	Area (ha)	Owner / Lessees
123S 31230	1.5400	Somerset Regional Council - reserve
269 CC 3600	0.9100	Somerset Regional Council - reserve
79SL8561	Not determined	Land Administration Commission
6597 2	Not determined	Department of Main Roads
Riparian corridor	Not determined	Department of Natural Resources and Water

Figure 12: Properties covered by the Twin Bridges Site master plan

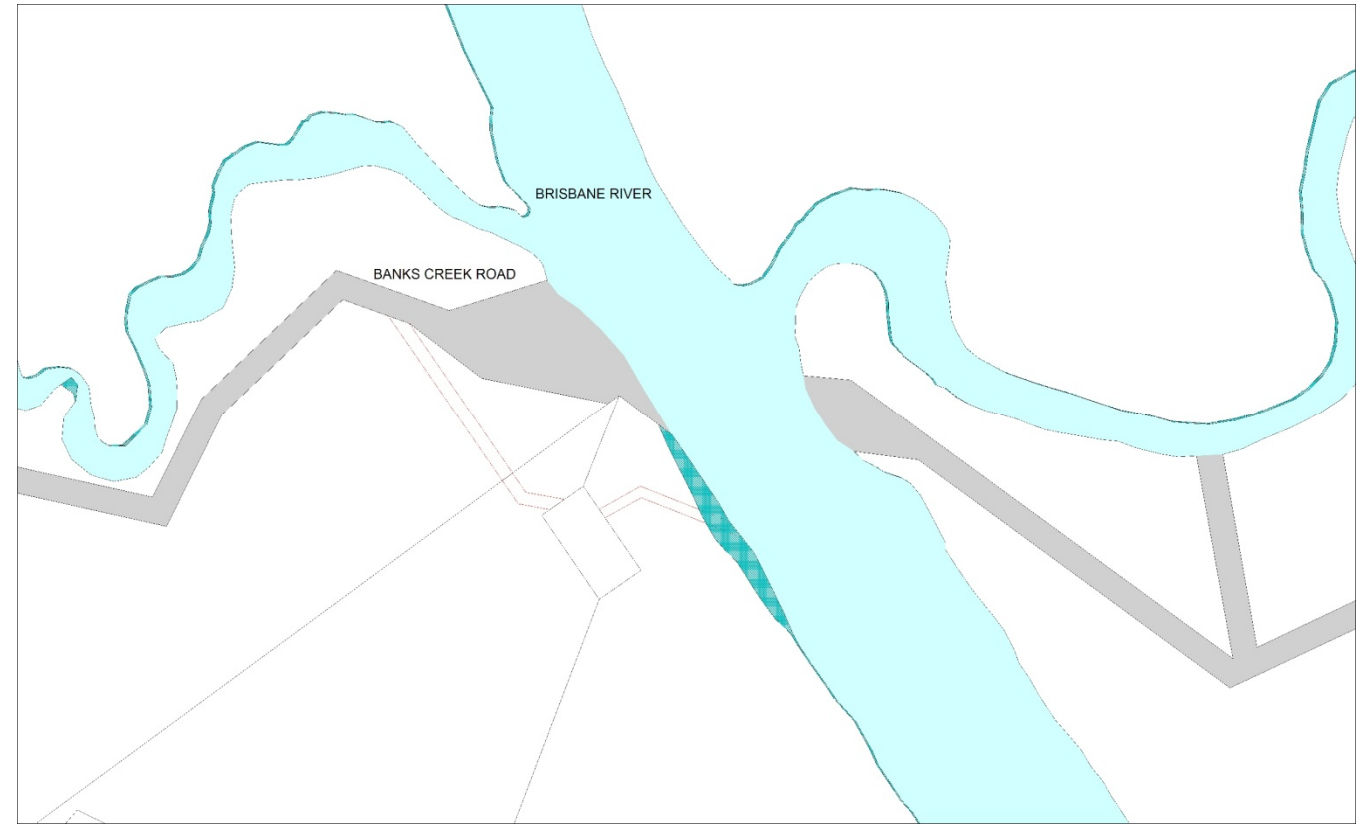


Savages Crossing

Savages Crossing comprises the following properties (refer Figure 11):

Lot and Section	Area (ha)	Owner / Lessees
Riparian corridor	Not determined	Department of Natural Resources and Water

Figure 13: Properties covered by the Savages Crossing Site master plan

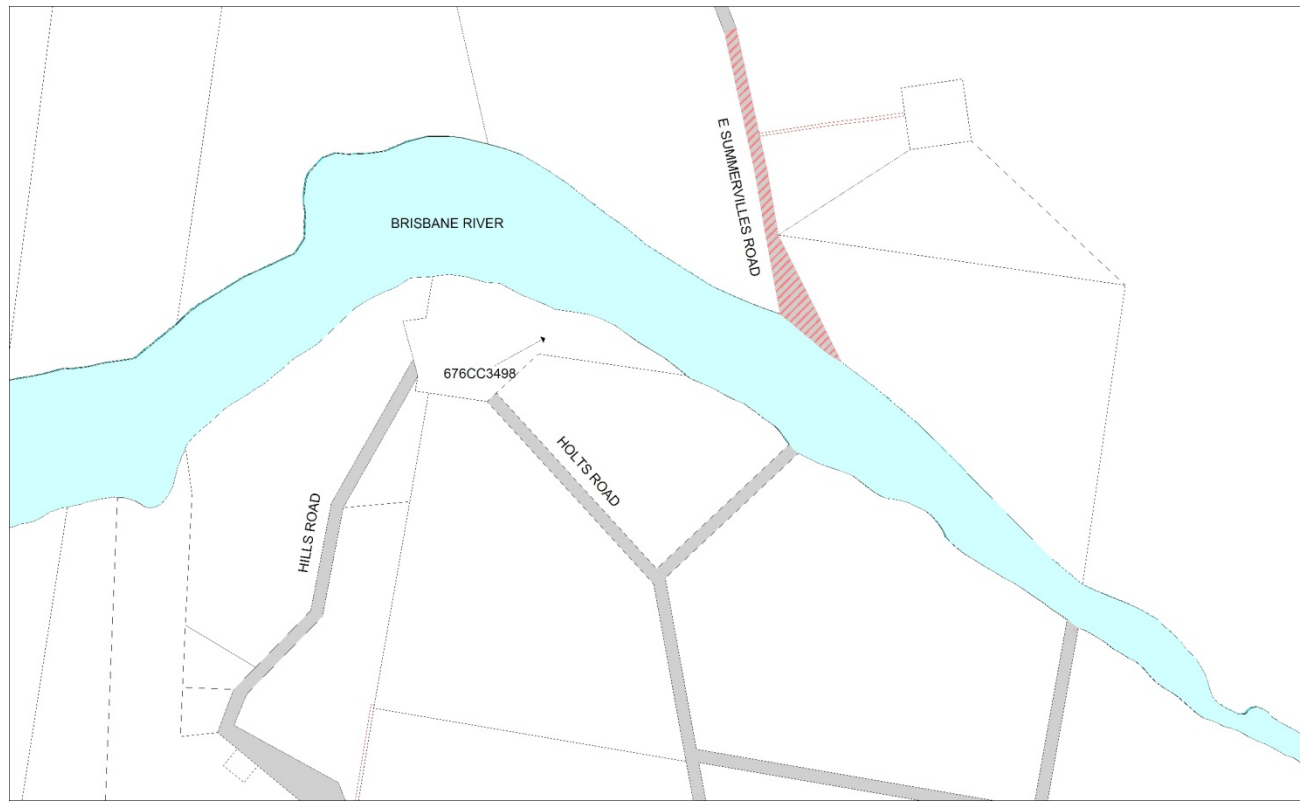


Hills Reserve

Hills Reserve comprises the following properties (refer Figure 12):

Lot and Section	Area (ha)	Owner / Lessees
676CC3498	4.39	Somerset Regional Council - reserve
Riparian corridor	Not determined	Department of Natural Resources and Water

Figure 14: Properties covered by the Hills Reserve Site master plan



6.3 Summary of Jurisdictional Matters

Please note: This information is extracted directly from Section 3.3 of the Brisbane River Recreation Management Issues Paper - Wivenhoe Dam Wall to Mount Crosby Weir report prepared by Sport and Recreation Queensland (June 2001)..

Legislation	Scope of Legislation	Administering Agency
Water Act 2000	To provide for the sustainable managements of water and other resources, and regulatory framework for providing water and sewerage services and the establishment and operation of water authorities, and for other purposes	Dept Natural Resources and Water
Water Resources Act 1989	Power of Board to make regulations and by-laws about recreational activities (s27, s156 and Schedule). An Act to consolidate and amend the law relating to rights in water, the measurement and management of water, the construction, control and management of works with respect to water conservation and protection, irrigation, water supply, drainage, flood control and prevention, improvement of the flow in or changes to the courses of watercourses, lakes and springs; protecting and improving the physical integrity of watercourses, lakes and springs; the safety and surveillance of referable dams; and for purposes incidental thereto and consequential thereon	Dept Natural Resources and Water
Environmental Protection Act 1994	To protect Queensland's environment • Regulation of environmentally relevant activities • Environmental standards and environmental protection in relation to water quality, noise and emissions.	Environment Protection Agency
Environment Protection (Water) Policy 1997 (Pursuant to Environment Protection Act 1994 - Part 4, Chapter 2)	The "environmental values" of waters to be enhanced or protected under this policy are: <ol style="list-style-type: none"> if the water is not a pristine water—biological integrity of a modified aquatic ecosystem; and suitability for recreational use; and suitability for minimal treatment before supply as drinking water; and suitability for agricultural use; and suitability for industrial use. 	Environment Protection Agency
Environmental Protection Regulation (1998)	Regulation of Environmentally Relevant Activities	Environment Protection Agency
Nature Conservation Act (1992)	The enable the conservation of nature by an integrated and comprehensive conservation strategy for the whole of Queensland that involves, among other things, the following: <ol style="list-style-type: none"> Gathering of information and community education etc.; Dedication and declaration of protected areas; Management of protected areas; Protection of native wildlife and its habitat; Use of protected wildlife and areas to be ecologically sustainable; Recognition of interest of Aborigines and Torres Strait Islanders in nature and their cooperative involvement in its conservation; and Cooperative involvement of land-holders. 	Environment Protection Agency

Legislation	Scope of Legislation	Administering Agency
Cultural Record (Landscapes Queensland And Queensland Estate) Act (1987)	To provide for the preservation and management of all components of Landscapes Queensland and the Queensland Estate; to foster dissemination of knowledge of Landscapes Queensland and the Queensland Estate; to promote understanding of the historic continuum evidenced within Queensland and for related purposes	Environment Protection Agency
Coastal Protection And Management Act (1995)	An Act about the protection and management of the coast, and for related purposes	Environment Protection Agency
South East Queensland Water Board (Reform Facilitation) Act 1999	To enable the South East Queensland Water Board to transfer its undertaking to a company wholly owned by the State and particular local governments and incorporated under the Corporations Law, to amend the Water Resources Act 1989, and for other purposes	South East Queensland Water Corporation
South East Qld Water Board By-law 1991 (Remain in force until 17.03.02)	Regulation of Board land • land based activities • water based activities	South East Queensland Water Corporation
Fisheries Act 1994	To manage, development and protection of fisheries resources and fish habitats and the management of aquaculture activities, and for related purposes	Dept of Primary Industries & Queensland Fisheries Service
Fisheries (Freshwater) Management Plan 1999 (Pursuant to Fisheries Act 1994 – Part 5)	To manage the taking of freshwater fish in a way that ensures: <ul style="list-style-type: none"> i.) their sustainability and maintains or improves their conservation status; and ii.) a fair division of access to freshwater fish among iii.) commercial, recreational and Aboriginal and Torres Strait Islander fishers; and iv.) manage the freshwater fishery to give optimal, but sustainable, community benefit; and (iv) minimise the risk of damage to freshwater fish and their dependant ecosystems from non-indigenous and noxious fisheries resources. 	Dept of Primary Industries & Queensland Fisheries Service
Transport Operations (Marine Safety) Act 1994	The overall objective of this Act is to provide a system that achieves an appropriate balance between: <ul style="list-style-type: none"> a.) regulating the maritime industry to ensure marine safety; and b.) enabling the effectiveness and efficiency of the Queensland maritime industry to be further developed. The objectives of this Act are— (<ul style="list-style-type: none"> a.) to allow the Government to have a strategic overview of marine safety and related marine operational issues; & b.) (b) to establish a system under which: <ul style="list-style-type: none"> i.) marine safety and related marine operational issues can be effectively planned and efficiently managed; and ii.) influence can be exercised over marine safety and related marine operational issues in a way that contributes to overall transport efficiency; and iii.) account is taken of the need to provide adequate levels of safety with an appropriate balance between safety and cost. 	Queensland Transport (Maritime Division)

Legislation	Scope of Legislation	Administering Agency
Transport Operations (Marine Safety) Regulation 1995	(1) The role of this regulation is to prescribe various matters for the purposes of the Act. (2) Some of the sections of this regulation specify various matters with which certain people must comply. (3) Compliance with the sections is in addition to any requirement under the Act to comply with a section of the Act, including, for example, the sections about the general safety obligations. (4) The role of the standards is to help people understand the general safety obligations.	Queensland Transport (Maritime Division)
Transport Infrastructure Act 1994	Development and maintenance of transport infrastructure	Queensland Transport /Dept Main Roads
Police Powers and Responsibilities Act 2000	An Act about the powers and responsibilities of police officers, and for other purposes.	Qld Police Service (inc Water Police)
Land Act 1994	Allocation of land for community purposes (reserves, trusts) including land below state waters	Dept Natural Resources and Water
Brisbane Forest Park Act 1977	The Act provides for the administration, management and control of the park and for related purposes	Brisbane Forest Park
Integrated Planning Act 1997	The purpose of this Act is to seek to achieve ecological sustainability by: <ul style="list-style-type: none"> a. coordinating and integrating planning at the local, regional and State levels; and b. managing the process by which development occurs; and b.) managing the effects of development on the environment (including managing the use of premises). 	Dept of Local Government and Planning
Local Government Act 1993 (s25, 26)	Each local government has jurisdiction to make local laws for, and to otherwise ensure, the good rule and government of its territorial unit. A local government's powers include an ability to make local laws with respect to any matter: <ul style="list-style-type: none"> a.) required or permitted to be prescribed under this or another Act; or b.) necessary or convenient to be prescribed or exercised for carrying out or giving effect to its local laws. To avoid any doubt, a local law may be made: <ul style="list-style-type: none"> i.) making it an offence to contravene a local law; and ii.) fixing a penalty for an offence against a local law (including different penalties for successive offences against a local law) of not more than 850 penalty units. 	Department Local Government and Planning
Esk Shire Local Law No 14 (Parks and Reserves)	Provides for the establishment of parks and reserves on land under the local government's control. Provide access to the parks and reserves and safety of users of the parks and reserves.	Esk Shire Council
Esk Shire Local Law No 16 (Commercial Use of Roads)	Regulates soliciting of business on roads and associated public places; and Regulates the use of roads and associated public places for the conduct of business.	Esk Shire Council
Ipswich City Local Law 30 (Camping Grounds)	Regulates camping to: <ul style="list-style-type: none"> a. land that is within-(i)a camping ground; or (ii)a lawfully established and operated caravan park; or b.) persons that have the local government's written approval to camp on the land. 	Ipswich City Council

Legislation	Scope of Legislation	Administering Agency
Ipswich City Local Law 17 (Parks and Reserves)	The local law is to: <ul style="list-style-type: none"> a.) provide for the establishment of parks and reserves on land under the local government's control; and b.) provide for appropriate public access to parks and reserves for active and passive recreation; and c.) protect the safety of persons using parks and reserves; and d.) preserve features of the natural and built environment and other aspects of the amenity of parks and reserves; and e.) regulate activities in parks and reserves and ensure appropriate standards of conduct. 	Ipswich City Council
Native Title Act (1993)	The Act (Section 10) provides for the recognition and protection of native title (in accordance with the Act) – of an existing common law right – by providing processes to facilitate its recognition and ensure it receives the same kind of legal protection as other titles. The Act specifically sets up a process for Aboriginal and Torres Strait Island people to come forward and have their native title recognised and recorded in a way that ensures the existing legal rights and interests of other parties in the same area are also protected. The Act also provides (Section 11) that native title is not able to be extinguished contrary to the Act. It creates no native title rights, these must flow from the Crown, and therefore can never be granted through government legislation (unlike land rights).	Premiers Department

6.4 Detailed Costs for Each Reserve

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Lowood Bend Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
3. White water structures not costed.								
South top								
BBQ shelter - Large 6x4m	item	1	\$17,000	\$17,000	0	\$0	0	\$0
Seating and Picnic Tables	item	2	\$1,800	\$3,600	0	\$0	0	\$0
Electric BBQ and fittings including power connection and service pole	item	1	\$16,000	\$16,000	0	\$0	0	\$0
Picnic Shelter - Large 6x4m		2	\$17,000	\$34,000	1	\$17,000	1	\$17,000
Seating and Picnic Tables	item	4	\$1,800	\$7,200	2	\$3,600	2	\$3,600
Toilets- Basic unit	item		\$70,000	\$70,000		\$0		\$0
Toilets- Sewer connection	item	1	\$15,000	\$15,000		\$0		\$0
Water Tank 20000 litre plus pump	item	1	\$5,000	\$5,000		\$0		\$0
Rubbish Bins	item	2	\$300	\$600	5	\$1,500	5	\$1,500
Signage - park	item	2	\$1,200	\$2,400		\$0		\$0
Signage - road traffic signage	item	10	\$300	\$3,000		\$0		\$0
River park								
BBQ shelter - Large 6x4m	item	1	\$17,000	\$17,000	1	\$17,000	0	\$0

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Seating and Picnic Tables	item	2	\$1,800	\$3,600	2	\$3,600	0	\$0
Electric BBQ and fittings including power connection and service pole	item	1	\$16,000	\$16,000	0	\$0	0	\$0
Picnic Shelter - Large 6x4m		3	\$17,000	\$51,000	3	\$51,000	3	\$51,000
Seating and Picnic Tables	item	3	\$1,800	\$5,400	3	\$5,400	3	\$5,400
Rubbish Bins	item	3	\$300	\$900	3	\$900	3	\$900
Signage - park roadside	item	2	\$1,200	\$2,400		\$0		\$0
Signage - river edge	item	1	\$1,200	\$1,200		\$0		\$0
Signage - interpretive	item	1	\$1,200	\$1,200		\$0		\$0
Subtotal				\$271,300		\$100,000		\$79,400
Access Facilities								
South top								
Path connections from parking to river park area	m	450	\$37	\$16,650	230	\$8,510		\$0
Path connections from rail trail	m	500	\$37	\$18,500	230	\$8,510		\$0
River park								
Path connections along river bank	m	400	\$37	\$14,800	200	\$7,400	200	\$7,400
Path connections river park parking areas	m	100	\$37	\$3,700	100	\$3,700	200	\$7,400
Path connections from south top down to river park	m	260	\$120	\$31,200	230	\$27,600		\$0
Water access - launch ramp	item	1	\$15,000	\$15,000		\$0		\$0
Water access - recovery ramp	item	1	\$15,000	\$15,000		\$0	0	\$0
Subtotal				\$114,850		\$55,720		\$14,800
Vehicle Access Facilities								
South top								
1. Car parking area	sqm	900	\$89	\$80,100	900	\$80,100	1500	\$133,500
River park								
Park access - western section	m	320	\$45	\$14,400	0	\$0	0	\$0
Park access - eastern section	m	280	\$45	\$12,600	0	\$0	0	\$0
Drainage swale - western section	m	320	\$25	\$8,000	0	\$0	0	\$0
Drainage swale - eastern section	m	280	\$25	\$7,000	0	\$0	0	\$0
1. Car parking area	sqm	300	\$89	\$26,700	300	\$26,700	600	\$53,400
Park road control access gateway	item	1	\$15,000	\$15,000	0	\$0	0	\$0
Canoe portage	m	40	\$45	\$1,800	0	\$0	0	\$0
Subtotal				\$165,600		\$106,800		\$186,900
Park Landscape Improvements								
South top								
Soft Landscape planting - Shrubs	sqm	100	\$45	\$4,500	0	\$0	0	\$0
Shade Landscape planting - Trees	item	30	\$190	\$5,700	15	\$2,850	10	\$1,900
Landscape re-afforestation	sqm	500	\$2	\$1,050	100	\$210	100	\$210
River park								
Soft Landscape planting - Shrubs	sqm	300	\$45	\$13,500	0	\$0	0	\$0
Shade Landscape planting - Trees	item	90	\$190	\$17,100	90	\$60	30	\$5,700
Landscape re-afforestation	sqm	1500	\$2	\$3,150	1000	\$2,100	500	\$1,050

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Landscape erosion repairs	sqm	1500	\$23	\$34,500	0	\$0	0	\$0
Subtotal				\$45,000		\$5,220		\$8,860
Totals				\$596,750		\$267,740		\$289,960
Fielding Recreation Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
Park Recreation Facilities								
Seating and Picnic Tables	item	2	\$1,800	\$3,600	2	\$3,600	2	\$3,600
Rubbish Bins	item	2	\$300	\$600	5	\$1,500	5	\$1,500
Signage - park roadside	item	1	\$1,200	\$1,200		\$0		\$0
Signage - river edge	item	1	\$1,200	\$1,200		\$0		\$0
Subtotal				\$6,600		\$5,100		\$5,100
Access Facilities								
Path connections from parking to river park area	m	900	\$15	\$13,500	230	\$3,450		\$0
Subtotal				\$13,500		\$3,450		\$0
Vehicle Access Facilities								
1. Car parking area	sqm	600	\$89	\$53,400	600	\$53,400	0	\$0
Park road control access gateway	item	1	\$5,000	\$5,000				
Subtotal				\$58,400		\$53,400		\$0
Park Landscape Improvements								
Shade Landscape planting - Trees	item	40	\$190	\$7,600	90	\$60	30	\$5,700
Landscape re-forestation	sqm	1500	\$2	\$3,150	1000	\$2,100	500	\$1,050
Landscape erosion repairs	sqm	500	\$23	\$11,500				
Subtotal				\$22,250		\$2,160		\$6,750
Totals				\$100,750		\$64,110		\$11,850
Twin Bridges Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
3. White water structures not costed.								
Park Recreation Facilities								
South top								
BBQ shelter - Large 6x4m	item	1	\$17,000	\$17,000	0		0	
Seating and Picnic Tables	item	2	\$1,800	\$3,600	0		0	
Electric BBQ and fittings including power connection and service pole	item	1	\$16,000	\$16,000	0		0	
Picnic Shelter - Large 6x4m		1	\$17,000	\$17,000	1	\$17,000	1	\$17,000
Seating and Picnic Tables	item	4	\$1,800	\$7,200	2	\$3,600	2	\$3,600
Toilets- Basic unit	item	1	\$70,000	\$70,000				
Toilets- Sewer connection	item	1	\$15,000					
Water Tank 20000 litre plus pump	item	1	\$5,000	\$5,000				
Rubbish Bins	item	2	\$300	\$600	5	\$1,500	5	\$1,500
Northern top								

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
BBQ shelter - Large 6x4m	item	1	\$17,000	\$17,000	1	\$17,000	0	
Seating and Picnic Tables	item	2	\$1,800	\$3,600	2	\$3,600	0	
Electric BBQ and fittings including power connection and service pole	item	1	\$16,000	\$16,000	0		0	
Toilets- Basic unit	item	0	\$70,000		1	\$70,000		
Toilets- Sewer connection	item	0	\$15,000		1	\$15,000		
Picnic Shelter - Large 6x4m		3	\$17,000	\$51,000	3	\$51,000	3	\$51,000
Seating and Picnic Tables	item	3	\$1,800	\$5,400	3	\$5,400	3	\$5,400
Rubbish Bins	item	3	\$300	\$900	3	\$900	3	\$900
Signage - park	item	4	\$1,200	\$4,800				
Signage - interpretive	item	1	\$1,200	\$1,200				
Signage - river edge	item	2	\$1,200	\$2,400				
Signage - road traffic signage	item	10	\$300	\$3,000				
Pocket road								
Picnic Shelter - Large 6x4m		1	\$17,000	\$17,000	3	\$51,000	3	\$51,000
Seating and Picnic Tables	item	2	\$1,800	\$3,600	3	\$5,400	3	\$5,400
Rubbish Bins	item	1	\$300	\$300	3	\$900	3	\$900
Lower Spit Area								
Picnic Shelter - Large 6x4m		2	\$17,000	\$34,000	2	\$34,000	2	\$34,000
Seating and Picnic Tables	item	2	\$1,800	\$3,600	2	\$3,600	2	\$3,600
Rubbish Bins	item	2	\$300	\$600	2	\$600	2	\$600
Lower Escarpment Area								
Toilets- Basic unit	item	0	\$70,000		0		1	\$70,000
Toilets- Sewer connection	item	0	\$15,000		0		1	\$15,000
Toilets - upgrade change room/shower facilities	item	0	\$80,000		0		1	\$80,000
Picnic Shelter - Large 6x4m		3	\$17,000	\$51,000	3	\$51,000	3	\$51,000
Seating and Picnic Tables	item	6	\$1,800	\$10,800	6	\$10,800	6	\$10,800
Rubbish Bins	item	3	\$300	\$900	3	\$900	3	\$900
Subtotal				\$363,500		\$343,200		\$402,600
Access Facilities								
South top								
Path connections from parking to river park area	m	300	\$37	\$11,100	0			
Path connection along escarpment area	m	200	\$37	\$7,400				
Northern top								
Path connection along escarpment area	m	300	\$37	\$11,100	500	\$18,500		
Path connections from top down to river park	m	100	\$120	\$12,000	100	\$12,000	150	\$18,000
Pocket road								
Path connections from parking to river park area	m	400	\$37	\$14,800	0			
Lower Spit Area								
Path connection along peninsula	m	0	\$37				850	\$31,450

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
area								
Rubbish Bins								
Lower Escarpment Area								
Path connection along escarpment area	m	0	\$37				700	\$25,900
Toilets- Sewer connection								
Water access - launch ramp - temp	item	1	\$5,000	\$5,000			0	
Water access - recovery ramp - temp	item	1	\$5,000	\$5,000			0	
Water access - launch ramp	item	1	\$15,000	\$15,000			1	\$15,000
Water access - recovery ramp	item	1	\$15,000	\$15,000			1	\$15,000
Subtotal				\$96,400		\$30,500		\$105,350
Vehicle Access Facilities								
South top								
Park access - circulation ring road	m	600	\$45	\$27,000				
Car parking area	sqm	300	\$89	\$26,700	300	\$26,700	0	
Northern top								
Park access - circulation ring road	m	700	\$45	\$31,500				
Car parking area	sqm	600	\$89	\$53,400	300	\$26,700	300	\$26,700
Pocket road								
Car parking area	sqm	300	\$89	\$26,700	300	\$26,700	600	\$53,400
Rubbish Bins								
Lower Spit Area								
Car parking area	sqm	300	\$89	\$26,700	300	\$26,700	300	\$26,700
Rubbish Bins								
Lower Escarpment Area								
Park access - circulation ring road	m	600	\$45	\$27,000				
Car parking area	sqm	600	\$89	\$53,400	300	\$26,700	900	\$80,100
Drainage swale - western section	m	500	\$25	\$12,500	0		0	
Drainage swale - eastern section	m	500	\$25	\$12,500				
Subtotal				\$297,400		\$133,500		\$186,900
Park Landscape Improvements								
South top								
Soft Landscape planting - Shrubs	sqm	100	\$45	\$4,500	0		0	
Shade Landscape planting - Trees	item	30	\$190	\$5,700	15	\$2,850	10	\$1,900
Landscape re-afforestation	sqm	500	\$2	\$1,050	100	\$210	100	\$210
Northern top								
Soft Landscape planting - Shrubs	sqm	200	\$45	\$9,000	0		0	
Shade Landscape planting - Trees	item	40	\$190	\$7,600	15	\$2,850	10	\$1,900
Landscape re-afforestation	sqm	1000	\$2	\$2,100	100	\$210	100	\$210
Pocket road								
Soft Landscape planting - Shrubs	sqm	50	\$45	\$2,250	0		0	

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Shade Landscape planting - Trees	item	30	\$190	\$5,700	15	\$2,850	10	\$1,900
Landscape re-afforestation	sqm	200	\$2	\$420	100	\$210	100	\$210
Lower Spit Area								
Soft Landscape planting - Shrubs	sqm	0	\$45		0		300	\$13,500
Shade Landscape planting - Trees	item	0	\$190		0		100	\$19,000
Landscape re-afforestation	sqm	0	\$2		0		1000	\$2,100
Lower Escarpment Area								
Soft Landscape planting - Shrubs	sqm	0	\$45		0		300	\$13,500
Shade Landscape planting - Trees	item	0	\$190		0		100	\$19,000
Landscape re-afforestation	sqm	0	\$2		0		1000	\$2,100
Subtotal				\$38,320		\$9,180		\$75,530
Totals				\$795,620	\$-	\$516,380	\$-	\$770,380
Savages Crossing Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
2. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
3. Additional path connections to future subdivision and Fernvale not included.								
Park Recreation Facilities								
Picnic Shelter - Large 6x4m		2	\$17,000	\$34,000	2	\$34,000	2	\$34,000
Seating and Picnic Tables	item	4	\$1,800	\$7,200	2	\$3,600	2	\$3,600
Toilets- Basic unit	item	1	\$70,000	\$70,000		\$0	1	\$70,000
Toilets- Sewer connection	item	1	\$15,000	\$15,000		\$0		\$0
Water Tank 20000 litre plus pump	item	1	\$5,000	\$5,000		\$0		\$0
Rubbish Bins	item	2	\$300	\$600	2	\$600	2	\$600
Signage - park roadside	item	2	\$1,200	\$2,400		\$0		\$0
Signage - river edge	item	1	\$1,200	\$1,200		\$0		\$0
Subtotal				\$135,400		\$38,200		\$108,200
Access Facilities								
Path connections along river bank western	m	700	\$37	\$25,900	200	\$7,400	0	\$0
Path connections river park parking areas eastern	m	200	\$37	\$7,400	100	\$3,700	120	\$4,440
Path connections from toilet area down to river park	m	150	\$37	\$5,550	230	\$8,510		\$0
Water access - launch ramp west	item	1	\$15,000	\$15,000		\$0		\$0
Water access - launch ramp east	item	1	\$15,000	\$15,000				
Subtotal				\$68,850		\$19,610		\$4,440
Vehicle Access Facilities								
Car parking area west	sqm	450	\$89	\$40,050	450	\$40,050	450	\$40,050
Car parking area west	sqm	450	\$89	\$40,050	450	\$40,050	0	\$0
Car parking area east	m	320	\$45	\$14,400	0	\$0	0	\$0
Subtotal				\$94,500		\$80,100		\$40,050
Park Landscape Improvements								
Soft Landscape planting - Shrubs	sqm	50	\$45	\$2,250	0	\$0	0	\$0
Shade Landscape planting - Trees	item	60	\$190	\$11,400	90	\$60	30	\$5,700

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Landscape re-forestation	sqm	500	\$2	\$1,050	1000	\$2,100	500	\$1,050
Landscape erosion repairs	sqm	500	\$23	\$11,500				
Subtotal				\$26,200		\$2,160		\$6,750
Totals				\$324,950	\$-	\$140,070	\$-	\$159,440

Park Recreation Facilities	Unit	QTY	Rate	Short Term	QTY	Mid Term	QTY	Long Term
Totals				\$381,950		\$57,070		\$36,400
Combined Totals (5 Reserves)				\$2,200,020		\$1,045,370		\$1,268,030

Hills Crossing Recreation Reserve								
1. Mid and Long term stages provide for additional facilities should the need be determined.								
4. Only nominal amounts provided for landscape planting as final treatment areas not yet determined.								
5. Additional mid and long term stages assume a future proven demand for additional facilities.								
Park Recreation Facilities								
BBQ shelter - Large 6x4m	item	1	\$17,000	\$17,000	0	\$0	0	\$0
Seating and Picnic Tables	item	2	\$1,800	\$3,600	0	\$0	0	\$0
Electric BBQ and fittings including power connection and service pole	item	1	\$16,000	\$16,000	0	\$0	0	\$0
Picnic Shelter - Large 6x4m		1	\$17,000	\$17,000	1	\$17,000	0	\$0
Seating and Picnic Tables	item	4	\$1,800	\$7,200	2	\$3,600	0	\$0
Toilets- Basic unit	item		\$70,000	\$70,000		\$0		\$0
Toilets- Septic system	item	1	\$15,000	\$15,000		\$0		\$0
Water Tank 20000 litre plus pump	item	1	\$5,000	\$5,000		\$0		\$0
Rubbish Bins	item	2	\$300	\$600	2	\$600	0	\$0
Signage - interpretive	item	1	\$1,200	\$1,200		\$0		\$0
Signage - park roadside	item	2	\$1,200	\$2,400		\$0		\$0
Signage - river edge	item	1	\$1,200	\$1,200		\$0		\$0
Subtotal				\$156,200		\$21,200		\$0
Access Facilities								
Path connections from parking to river park area	m	550	\$37	\$20,350	230	\$8,510		\$0
Path connections along river bank	m	1000	\$37	\$37,000	200	\$7,400	200	\$7,400
Water access - launch ramp	item	1	\$15,000	\$15,000		\$0		\$0
Subtotal				\$72,350		\$15,910		\$7,400
Vehicle Access Facilities								
Car parking area road	sqm	450	\$89	\$40,050	200	\$17,800	250	\$22,250
Park access - western section	m	320	\$45	\$14,400	0	\$0	0	\$0
Park access - eastern section	m	280	\$45	\$12,600				
Car parking area park	sqm	450	\$89	\$40,050	0	\$0	0	\$0
Park road control access gateway	item	1	\$15,000	\$15,000				
Canoe portage	m	40	\$45	\$1,800				
Subtotal				\$123,900		\$17,800		\$22,250
Park Landscape Improvements								
Soft Landscape planting - Shrubs	sqm	100	\$45	\$4,500	0	\$0	0	\$0
Shade Landscape planting - Trees	item	60	\$190	\$11,400	90	\$60	30	\$5,700
Landscape re-forestation	sqm	1000	\$2	\$2,100	1000	\$2,100	500	\$1,050
Landscape erosion repairs	sqm	500	\$23	\$11,500				
Subtotal				\$29,500		\$2,160		\$6,750