

MILDURA MURRAY

Riverfront Central Precincts Feasibility



Mildura Rural City Council



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ARUP



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MILDURA MURRAY

Riverfront Central Precincts Feasibility

FEBRUARY 2010

01

BACKGROUND REPORT

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Preface

The Mildura Riverfront Central Precincts Feasibility assesses and develops the Mildura Riverfront 2005 Masterplan. The purpose of this further investigation is to provide a strategic basis to secure the proposed outcomes for both the Central Precincts and the entire Mildura riverfront. New opportunities have arisen since the 2005 Masterplan's adoption with the removal of rail freight infrastructure now underway and government funding available to support the preservation of the Murray River.

The feasibility develops the Central Precincts identified in the 2005 Masterplan. Further investigation into the detailed design, feasibility and costing of the necessary public infrastructure to facilitate the identified private sector investment in the Precincts has been undertaken. This includes a detailed scoping analysis and costing of the key development opportunities proposed.

The feasibility process is outlined in five consecutive reports. The 2005 Masterplan is assessed against detailed site investigations, document research completed before and after the Masterplan's adoption, and an analysis of current trends and issues.

A conceptual framework is then developed utilising the findings of the background assessment. It establishes the design principles to guide and govern the refinement of the Central Precincts Masterplan.

The Masterplan is refined through the design development phase outlining the recommendations for development of the Central Precincts. It presents the ideas behind the overarching vision for the project and a detailed breakdown of its components.

The Central Precincts feasibility recognises the project as unique opportunity within Mildura establishing a high quality mixed-use development of regional benefit. It proposes to maintain the existing qualities of the area, including both the natural elements and built structures, endeavouring to create a vibrant and diverse riverfront that is rich with the social, economic and environmental experiences. It will promote a community that celebrates past, current and future contexts and one that contributes robustly and positively to the development of Mildura and its riverfront.



Image
Mildura and Murray River, 2005 Masterplan.

Executive Summary

In undertaking the Background Report a detailed review of the 2005 Masterplan Report has been conducted. The Masterplan identified the background and subsequent vision for the Central Precincts as the following:

'The redesigned riverfront precinct has the potential for a cohesive and grand landscape element, through which a number of defined activities and opportunities can be found and developed, stimulating the park as a lively and integrated part of the City. As a part of the city, the connections back to the Mildura CBD are a key component of the future success of the Mildura Waterfront.'

The Background Report provides a detailed assessment and review of all relevant existing conditions and opportunities and constraints pertaining to the study area.

Image
Central Precincts, Mildura. Google Earth.



1.0 Site Investigation

To commence the feasibility study a comprehensive site investigation has been undertaken. In association with the analysis of the existing Central Precincts of 2005 Masterplan a thorough analysis of the existing site conditions has been conducted. The following areas are evaluated as part of this site investigation:

- Survey and Geotechnical
- Services Infrastructure
- Title Search and Land Tenure
- Rail Infrastructure
- Roads Infrastructure
- Natural Environment
- Photographic Analysis



Image
Mildura riverfront.

1.1 Survey/Geotechnical

Mildura Rural City Council has numerous survey plans of the subject sites available in a range of formats. In analysing the survey information and utilising it as the basis to develop site concepts we have verified its appropriateness by:

- Conforming with aerial photographic overlays;
- Site inspections to cross reference key features;
- The preparation of a 3D massing model of the site and its surrounds;
- The coordination with VicTracks Land Tenure overlay.

Survey plans that have been prepared by VicTrack are to be utilised as individual and collective projects advance beyond the feasibility stage.

Limited geotechnical information is available for the subject sites, however a high water table exists throughout the site.

Ultimately as sites are appropriately subdivided, sold and/or leased, those earmarked for development whether it be for built form, open space or infrastructure, will require detailed survey plans and geotechnical investigations.

Consultants are available both locally and from further abroad who can undertake the desired detailed investigations at a suitable time.

A copy of the digital survey used for this report is available in the projects supplementary material.



1.2 Services Infrastructure

1.2.1 Overview

Adjacent sites to Central Precincts area are currently serviced by potable and non-potable water, sewer, electricity, stormwater drainage. Upgrade capacity for all of these services is available and will suit a substantial development proposal.

Upgrade of these services will need to be considered in view of potential sustainable strategies. Further detail is outlined in Concept Report 02.

'Dial Before You Dig' searches have been undertaken on the proposed development area. These searches provide an initial overview of the services which exist within the development boundaries, however these searches do not include services such as irrigation reticulation. Prior to the initiation of any design works within the proposed Masterplan area a detailed service search should be undertaken.



1.2.2 Telecommunications

Telstra have indicated that there are a number of existing utility lines including both copper services and fibre optic located within the boundaries of the proposed development area. A substantially sized group of cables pass through the site, under the Murray River to the North bank of New South Wales.

It is likely that there will be a number of diversions required during the development of the Central Precincts. The diversion works required for fibre optics will be far more complicated than that of the copper services as the introduction of a number of new buildings will require this infrastructure to be in place.

Neighbourhood Cable was also contacted during the service search and have indicated that they do not have any infrastructure within the vicinity of the development boundaries.



1.2.3 Electrical and Gas

Electrical services are located within the development area. The existing electrical infrastructure primarily involves street light cabling and service provision for the existing buildings within the development.

It is likely that during the development of the Central Precincts a number of electrical service diversions and extensions will be required.

In addition the increased development to this area will likely result in a requirement for an additional substation.

No gas services have been located during the initial 'Dial Before You Dig' service search.



1.2.4 Water/Irrigation

The Lower Murray Water, water treatment works is located within the Central Precincts area. These works will need to be incorporated into the proposed development. The treatment works draws water from the Murray and treats it for potable water supply.

It is believed that reticulation will be present on the site to service the properties located within the development area and to provide irrigation for the existing parklands.

1.2.5 Stormwater

Several stormwater pipes run through the site discharging the stormwater from Mildura CBD into the Murray River.

Stormwater services shall be investigated further in the development of the Central Precincts Masterplan. Refer to reports 02 and 03 for further details.

1.2.6 Development Requirements

It is likely that during the process of developing the Central Precincts all services located within the development area will require some level of diversion works or upgrading.

Services may be diverted from Seventh Street to provide utilities to the proposed buildings along the boundary of the rail corridor in the vicinity of Seventh Street.

Utilities for future residential areas would likely be extended from the existing residential areas on the boundaries of the development area.



1.3 Title Search and Land Tenure

In the 2005 Masterplan land tenure was broadly identified. Since then and during the feasibility investigations, key landowner and stakeholder, VicTrack, have been undertaking internal investigations to verify the extent of their landholdings. In summary, the outcomes of VicTrack's investigations have reconfirmed that the land tenure diagram is still relevant as the key assessment tool to determine opportunities and constraints as the Masterplan feasibility is developed. As such the following summation applies as the background for land tenure in the Central Precincts:

Most of the study area is Crown Land, administered by the Department of Sustainability and Environment (DSE), leased to various agencies. The Central Precincts area, with the exception of some freehold titles that face roads at the boundaries, the whole of the study area is Crown Land of which most has been delegated for management to other agencies.

VicTrack is owner of all rail land within the study area and has leased the majority of this land through the Director of Public Transport to the Rail Operator, Freight Australia for rail related purposes. The land that has not been included in the Rail Operators Infrastructure Agreement is privately leased to various leaseholders including Mildura Rural City Council.

VicTrack holds all railway land within the Central Precincts area as freehold title. Details are:

- The areas shown coloured pink have been leased to Council for park related purposes. A small area

between Olive and Pine Streets is leased to a private entity;

- The areas shown green are unleased;
- The areas shown yellow are leased through the Director of Public Transport to Freight Australia. The lease remains active. Part of this area contains the freight yard, which has been recommended for relocation. If this area is to be incorporated into the Waterfront Park or used for access to it access rights will need to be arranged with Freight Australia or ownership arranged from VicTrack;
- The grey areas indicate rights of access to V/Line and Freight Australia for access to the station facilities.

There are several items within the Central Precincts area that will require additional investigation and potentially legislative amendments to simplify coordinated management. Land tenure opportunities are explored further in reports 02, 03 and 04.

The Mildura Marina Indigenous Land Use Agreement (ILUA) between the Latji Latji Native Title group, the Wergaia Native Title group and the Mildura Rural City Council provides consent to all future development in the ILUA area, including for Mildura's river frontage.

It is noted that Native title has been extinguished for the Crown land that is vested in VicTrack (refer to DSW GL/PL assessment reference: L5-3412).



1.4 Rail Infrastructure

VicTrack has outlined the Government's policy in relation to at-grade crossings confirming additional at grade crossings will be allowed as part of the proposed development.

The removal of the freight rail facility will have an impact on potential reuse of land as it is likely to be contaminated. The ramifications for development opportunities must be considered with contaminated material either being removed to a registered disposal facility or treated on site.

As part of the Masterplan it is proposed to remove the existing Freight Rail Facility located in the boundary of the Central Precincts.

The existing rail line has low usage at present with approximately two trains a day. The Mildura freight service handles approximately 16,000 tonnes of grain per annum which accounts for 95% of grain exported from the area. However as part of the Central Precincts redevelopment the freight gate will be removed and relocated to an interim facility near Merbein. The removal of all freight facilities from the riverfront area is due for completion in June 2009. This will create the potential to further develop the area which is currently being used as the freight rail facility. The development of this area will reduce the physical barrier between

the Mildura CBD and the Central Precincts making the riverfront more accessible.

The existing topography of the riverfront falls sharply from the north side of the rail corridor towards the Murray River. Current pedestrian access across the rail line into the park is achieved via a footbridge followed by a stairway down the embankment.

The rail line passes over Madden Avenue via a rail overpass that will be retained as part of the proposed development strategy.

As per VicTrack's requirements, a 15 metre wide rail corridor is to be retained centred on the centreline of the existing main line. Station buildings and platform with 5 metre clearance is to be retained, together with current access and egress and bus and commuter parking, until alternative agreed. Additionally, the passenger platform must be a minimum of 160 metres in length.



1.5 Roads Infrastructure

The site is easily accessible and there is currently ample parking for vehicles, however limited bus parking zones exist.

Hugh King Drive currently runs through the centre of the Central Precincts providing direct access from Madden Avenue to the facilities within the park and along the riverfront.

The current road layout bisects the park into two sections. This arrangement creates a physical barrier between the main parkland located on the CBD side of the road and the riverfront area.

Hugh King Drive is a large four lane roadway which has limited connection with other major roadways and purely provides access to the riverfront and adjoining residential areas. In its current state it is substantially under utilised.



1.6 Natural Environment

The existing parkland plays host to a range of sporting facilities and community uses. It contains a series of spaces with various functions and uses that are of importance to Mildura's riverfront and community.

The parkland today is physically and visually divided and has highly modified the existing natural landscape. Extensive areas of irrigated lawn dotted with native and exotic trees characterise the riverfront setting and a range of utilitarian site structures litter the site.

Some sturdy and significant remnant River Red Gum trees still exist but little or no remnant under storey vegetation remains.

The riverbank is significantly degenerated and degraded. Erosion poses a serious and immediate concern. The need for considerable regeneration and revitalisation is urgently needed.

Pedestrian and cycle connections through the parkland are in a number of instances disconnected from their adjoining wider surroundings.



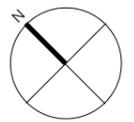
1.7 Photographic Analysis

Outlined on the following pages a thorough photographic analysis has been undertaken in order to record the current status of the Central Precincts sites and their surrounds.

The analysis provides ongoing support to the design process as a valuable tool for verifying site information.



Image
Mildura riverfront photographic analysis.



Images
Mildura riverfront photographic analysis.



Images
Mildura riverfront photographic analysis.



2.0 Document Review

A series of relevant documents have been reviewed at the commencement of the Central Precincts feasibility. These documents include the following:

- Mildura Riverfront Masterplan (Mar 2005)
- Mildura CBD Plan (Nov 2007)
- Final Recreational Strategy 2008-2012 (nd)
- Sunraysia Drainage Strategy (nd)
- MRCC Public Open Space Strategy (Jan 2004)
- Final Greenhouse Action Plan (Jul 2007)
- Murray River Frontage Action Plan (Feb 2003)

In-depth reviews of each report were undertaken to determine the reports' relationship to the Masterplan feasibility. The following is an outline of the initial summaries that provide a brief analysis of the document, followed by an overview of items deemed pertinent to the Masterplan's development.



Image
Mildura riverfront.

2.1 Mildura Riverfront Masterplan (2005)

OVERVIEW

This document was prepared in 2005 by Darryl Jackson Pty Ltd and KLM Gerner Consulting Group for MRCC. The document produces a set of Masterplanning guidelines for the development of the riverfront area of Mildura.

The document discusses the history and context of Mildura and undertakes an assessment of the existing riverfront and its relationship to the city.

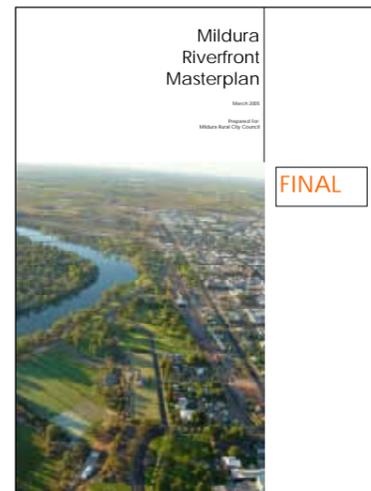
A series of aims, objectives, and visions are put forward for the Mildura riverfront which ultimately sets out the structure of five main precincts for redevelopment. Each precinct has been devised to establish its own unique character and focus urban design recommendations.

Identified key objectives include:

- A state significant precinct that is a destination in its own right;
- Mildura's potential as a city by the river;
- Express the richness of the heritage, environment, culture, leisure, entertainment;
- Mildura Wharf Waterfront – major focus (historic paddle steamers and public craft);
- Murray River key symbolic environmental, economic and social asset to township;
- 'Gateway' to outback;
- First Australians Centre unique to Australia and world;
- Vision for parkland - Adelaide's Torrens Riverparkland and Melbourne's Botanical Gardens;
- Identifies sustainable development guidelines for the development of the riverfront precincts.

RELEVANCE

This document is the focus of the Mildura Murray Central Precincts Feasibility. A full audit of the Masterplan is undertaken to determine the potential opportunities and constraints. Refer to section 4.0 - 2005 Masterplan Audit for the detailed analysis.



2.2 Mildura CBD Plan

OVERVIEW

This document was prepared in 2007 for Mildura Rural City Council (MRCC). The report states that Mildura is experiencing rapid population growth and to manage this the CBD Plan has been established.

The plan aims to guide and change future land use, built form, access and public spaces in the Mildura CBD over a ten to fifteen year timeframe.

It identifies short term and long term actions that can be undertaken by Council, other organisations and stakeholders, so that the Mildura CBD achieve this vision.

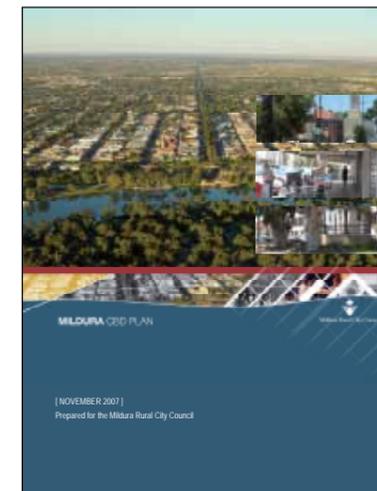
The history and context of the Mildura CBD are discussed, highlighting possible opportunities, constraints and visions for a range of different items within the city.

RELEVANCE

This document is of high importance to the Central Precincts Feasibility. It specifically states the importance of linking the CBD to the river, and it supports the implementation of the original 2005 Masterplan.

There is specific reference to *Precinct C - Seventh Street Riverfront Interface* and *Precinct D - Riverfront Masterplan Area*. The document states the potential for significant redevelopment along Seventh Street, which will compliment the Riverfront Masterplan and create a stronger link between the CBD and the Murray River.

For these precincts, the plan identifies a need for a streetscape Masterplan for Seventh Street and a CBD 'edge park' prior to the implementation of the Riverfront Masterplan (2005).



2.3 Final Recreation Strategy 2008-2018

OVERVIEW

This document was prepared by Sykes Humphreys Consulting for MRCC (nd). The purpose of the report is to develop a strategic direction for recreation provisions within Mildura for the next 10 years. The strategy highlights a number of Mildura specific socio-economic trends that are relevant to recreational activities.

The strategy determines that demand for recreational activities is expected to continue given the expected growth in population. Additionally, Mildura has an ageing population and therefore more programs need to be aimed at retaining mobility, health and independence.

The document highlights the natural environment priorities for recreation over the next 10 years, which include the development and maintenance of trails, natural areas, water areas and riverside reserves.

RELEVANCE

The strategy is of significant to the Central Precincts Feasibility. It is clearly stated that the riverfront area, from the Marina to Rio Vista Park, will remain the focus for the main open recreation space in Mildura. The report highlights that a series of trails and linkages in association with open recreation space will continue to be established throughout Mildura. These recreation initiatives are highly important to the development of the Central Precincts area.



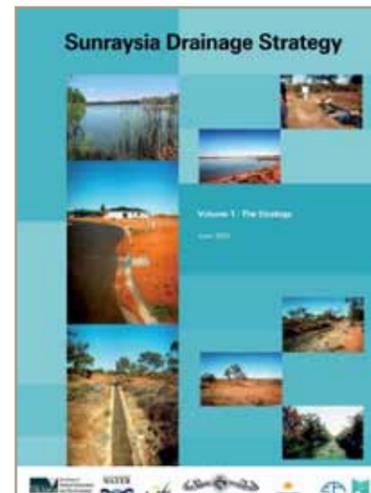
2.4 Sunraysia Drainage Strategy

OVERVIEW

The Sunraysia Drainage Strategy (nd) was prepared by Sinclair Knight Merz. The strategy outlines how existing and future urban and irrigation development within the Mildura Rural City Council area will be serviced with surface and sub-surface drainage to the year 2050. The strategy analyses the existing urban, irrigation and groundwater drainage systems, and recommends standards for future urban development and sub-surface drainage. The report also analyses the economic, social and environmental impacts from stormwater runoff. It highlights the greatest threats to the environment from urban stormwater and irrigation drainage.

RELEVANCE

This strategy is significant to the Central Precincts Feasibility highlighting the threat that urban stormwater runoff has upon the development area. Issues such as damage to riverbanks, riparian vegetation, changed flow paths and erosion need to be considered.



2.5 MRCC Public Open Space Strategy (2004)

OVERVIEW

The MRCC Public Open Space Strategy (2004) was prepared for MRCC by SGL Consulting Group. The report aims to provide a strategic direction for Council to facilitate an integrated approach to public open space provision until 2009. The principle idea is to create a diverse and integrated network of public open space for recreation to meet the needs of Mildura residents and visitors.

RELEVANCE

The riverfront area from the proposed Marina to Rio Vista Park will remain the focus for main open space in Mildura. Other stated strategies that are relevant to the Central Precincts Feasibility include:

- Open space will be managed in an environmentally sustainable manner;
- The Murray River will be managed, maintained and improved due to its tourism, recreational, landscape, cultural and environmental assets;
- Open space networks will link parks and activity areas along waterways to connect places of natural and cultural interest and maintain public access to public land immediately adjoining waterways.



2.6 Final Greenhouse Action Plan 2007-2012

OVERVIEW

The Final Greenhouse Action Plan 2007-2012 (2007) was prepared for MRCC by Maunsell Australia. The plan highlights the need to address issues associated with global warming and sustainability. In recognition of the issues of climate change and the greenhouse effect MRCC has committed to the ICLEI – Local Governments for Sustainability - Cities for Climate Protection (CCP) Program.

RELEVANCE

The plan outlines a various strategies to lower greenhouse emissions by 2012. These strategies are of particular relevance to the Central Precincts Feasibility. They include:

- Encourage the reduction in private vehicle use and promote the use of alternative forms of transport that produce less greenhouse gas, such as bicycles and public transport;
- Conserve and enhance the carbon sink capacity of the municipality through tree planting;
- Energy consumption should be avoided at the outset through giving consideration to energy efficiency in the design stage of a building;
- Increase the uptake of sustainable public lighting technologies.



2.7 Murray River Frontage Action Plan

OVERVIEW

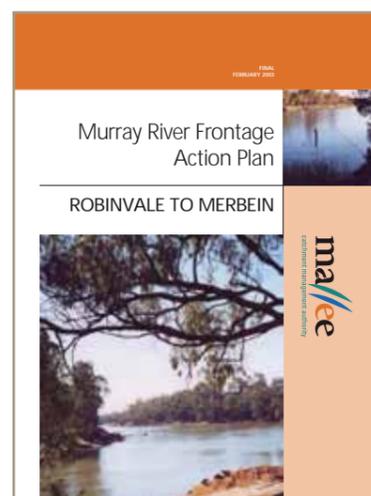
The Murray River Frontage Action Plan (FAP) (2003) was prepared for the Mallee CMA and the Murray River Frontage Action Plan Project Reference Committee by David Clarke, EFFECT Pty Ltd.

The plan outlines a range of actions to enhance the management of frontages to the Murray River between Robinvale and Merbein in the Victorian Mallee, primarily focusing on the management of Crown frontages.

The FAP discusses the impacts of the Murray River's cultural heritage, recreational areas, infrastructure and servicing, and economics outlining actions to service these impacts.

RELEVANCE

The Action Plan makes particular reference to the importance of specific public land frontages to the Murray. These areas provide options for a range of open space, recreational, tourism and economic benefits which are highly relevant to the Central Precincts Feasibility.



2.8 Document Register

Project	Mildura Riverfront – Central Precincts Redevelopment	Project No	10401	Issue
Prepared	Claire Sibert	Date	02.02.09	Page
Development & Planning				
Document	Date	Format	Source	
Mildura Riverfront Central Precincts Redevelopment Project Brief	December 2008	pdf	www.mildura.vic.gov.au	
Mildura Riverfront Masterplan	March 2005	pdf	www.mildura.vic.gov.au	
Mildura CBD Plan	November 2007	pdf	www.mildura.vic.gov.au	
Residential Development Plan Riverside Report	January 2007	pdf	www.mildura.vic.gov.au	
Mildura Riverside Performance Venue		pdf	www.mildura.vic.gov.au	
Mildura Marina Resort Development Plan	January 2006	word		
MRMP SK002 Mildura Plan	March 2005	pdf		
MRMP SK003 Existing Conditions	March 2005	pdf		
MRMP SK101 Existing Conditions	March 2005	pdf		
MRMP SK102 Opportunities and Constraints	March 2005	pdf		
MRMP SK201 Masterplan	March 2005	pdf		
MRMP SK202 Waterfront Wharf Precinct	March 2005	pdf		
MRMP SK203 Games & Entertainment Precinct	March 2005	pdf		
MRMP SK204 The 'Lock' Precinct	March 2005	pdf		
MRMP SK205 Chaffey Water Gardend Precinct	March 2005	pdf		
MRMP SK206 Marina Precinct	March 2005	pdf		
MRMP SK301 Address and Identity	March 2005	pdf		
MRMP SK302 Significant Views & Connections	March 2005	pdf		
MRMP SK303 Proposed Traffic and Carparking	March 2005	pdf		
MRMP SK304 Walking & Cycling – The Chaffey Trail	March 2005	pdf		
MRMP SK305 Landscape Masterplan	March 2005	pdf		
MRMP SK306 Environmental Study	March 2005	pdf		
MRMP SK307 Proposed Land Tenure Arrangements	March 2005	pdf		
MRMP SK308 Priority Strategy for Completion of Major Works	March 2005	pdf		
MRMP SK401 Site Cross Sections	March 2005	pdf		

From Mildura Riverfront Masterplan March 2005
Daryl Jackson
www.mildura.vic.gov.au

Mildura in Context				
Mildura Region Economic Profile	June 2006	pdf	www.mildura.vic.gov.au	
Official Visitors' Guide	December 2008	pdf	www.visitmildura.com.au	
Regional Maps	February 2009	pdf	www.maps.google.com.au	
Authorities				
Mildura Urban Design Framework	1999	cd	MCC	
North West Freight Transport Strategy	May 2002	cd	MCC	
Mildura Retail Strategy	Oct 2000	cd	MCC	
Mildura Strategic Bicycle Plan	2003	cd	MCC	
Mildura CBD Traffic and Parking Study	Jan 1996	cd	MCC	
Mildura Industrial Land Use Strategy	Oct 2003	cd	MCC	
Mildura City Landscape Master Plan Report	Feb 1992	cd	MCC	
MRCC Public Open Space Strategy SLG Consulting Group Final Report	Jan 2004	cd	MCC	
Planning Strategy for A20 Sturt Highway Mildura	Nov 2002	cd	MCC	
Sunraysia Drainage Strategy V. 1&2		cd	MCC	
Mildura Conservation Study	June 1988	cd	MCC	
Murray River Frontage Action Plan	Feb 2003	cd	MCC	
Cultural Heritage Management Plan		cd	MCC	
Flood Modeling for Soundshell		cd	MCC	
V. 1&2 Final Recreation Strategy 2008-2018		cd	MCC	
Mildura transport Plan for Long term Regional Development	May 2005	cd	MCC	
Mildura Planning Scheme	September 2008	pdf	www.dpcd.vic.gov.au	
Milduar Planning Scheme amendment C11 ESS	August 2003	cd	MCC	
Mildura City Council Strategic Financial Plan	2008-13	pdf	www.mildura.vic.gov.au	
Other				
Greenhouse Action Plan	July 2007	pdf	www.mildura.vic.gov.au follow link - Our Services / Environment	
Regional Tourism Action Plan	2009-12	pdf	http://www.tourism.vic.gov.au/	
Tourism Victoria Annual Report	07-08	pdf	http://www.tourism.vic.gov.au/	
Victrack Annual Report	07-08	pdf	http://www.victrack.com.au/	
VLine Annual Report	07-08	pdf	http://www.vline.com.au	

3.0 Cultural Heritage

Large scale developments and many activities in culturally sensitive landscapes – for example coastal dunes or areas near water – can cause significant harm to Aboriginal cultural heritage. The Aboriginal Heritage Act 2006 prescribes, in regulations, the circumstances in which a Cultural Heritage Management Plan will be required.

The Mildura Marina Indigenous Land Use Agreement (ILUA) was made between the Latji Latji and Wergaia native title group and the Mildura Rural City Council to clear the way for the (AUD) \$70 million dollar marina project. The agreement allows the council to proceed with this development and provides employment and training opportunities for the native title group. The agreement also provides consent to all future development in the ILUA area, including for Mildura's Central Precincts river frontage.

The draft Rural City of Mildura Thematic Environmental History, completed by Context in April 2009, is a great resource and reference document for the ongoing cultural investigations within the central precincts. The document outlines a thematic history, most of which is applicable to the Central Precincts Riverfront.

It is important for this feasibility process and developed Masterplan to respond to these sensitive cultural heritage aspects of the site. As developments are proposed further site specific investigations will be required in accordance with local, state and national guidelines.



Image
Murray River

3.1 Future Management Plan

Image
Map of Aboriginal Australia, DECS
South Australia 2009.

The preparation of a Cultural Heritage Management Plan (CHMP) needs to be considered in the context of the following:

- Current rail and freight removal works;
- Remediation of potential contaminates;
- Staged development prospects of varied intensity of uses;
- Full indigenous consultation to be undertaken to provide input to a CHMP brief

The Aboriginal Cultural Heritage Management Plan prepared for the Mildura Riverfront Performance Venue is available as a reference document and outlines the general requirements of a CHMP for the Central Precincts site.

Preparation of a Cultural Heritage Management Plan involves a cultural heritage advisor (an archaeologist or other heritage specialist) working with Aboriginal community representatives to identify and assess cultural heritage values in relation to a proposed development or activity.

A Cultural Heritage Management Plan assesses whether a project will have any impact on Aboriginal cultural heritage values and, as appropriate, outlines management recommendations.

A Cultural Heritage Management Plan is a written report containing the results of the assessment and recommendations for measures to be taken before, during and after an activity to manage and protect Aboriginal cultural heritage in the area.

Preparation of a plan is commissioned and paid for by the project proponent (sponsor).

Where a Registered Aboriginal Party exists they must be notified of a proponent's intention to prepare a Cultural Heritage Management Plan and will then evaluate the plan. Once a Cultural Heritage Management Plan has been approved by a Registered Aboriginal Party, it must then be lodged with the Secretary of the Department for Victorian Communities (DVC) to take affect.

As such the ongoing consultation with the Mildura Indigenous groups will be an important aspect to the undertaking of a Cultural Heritage Management Plan for the Central Precincts area.

Furthermore there will be opportunities to link the investigations and potential outcomes of the cultural management process within the development of an Indigenous cultural centre and public domain spaces.



4.0 2005 Masterplan Audit

In determining the future development opportunities for the Mildura riverfront an audit of the existing Masterplan has been conducted. This section introduces the Masterplan and provides an overview of its background, aims and objectives. It provides a discussion of the key regional and national changes that have occurred since the design of the original Masterplan and the effects on it's further development.

An in-depth tabular assessment has been conducted for all main components within the Central Precincts of the proposed Masterplan. An itemised plan places each component within the Masterplan and is supported with three-dimensional built-form analysis diagrams. These graphical analyses, combined with the tabular assessment, highlights several areas of further investigation forming the basis for the feasibility.



Image
Central Precincts, Mildura
Riverfront 2005 Masterplan

4.1 Background and Aims of the Masterplan

The Mildura Riverfront 2005 Masterplan (MRMP) was commissioned by Mildura Rural City Council along with assistance from Tourism Victoria and the Department of Sustainability to ensure that riverfront development is consistent with the vision of 'a state significant precinct that is a destination in its own right'.

The plan, adopted by Council in 2005, was prepared by Daryl Jackson Pty Ltd in association with KLM Gerner Consulting Group, and provides an integrated detailed design response for the riverfront precinct as whole from the Marina to the Lock.

The MRMP proposes construction of a commercial and cultural precinct comprising of; a physical linkage to the Murray River; the development of commercial facilities (food and beverage, retail and tourism services); community and public spaces; a nationally significant Indigenous cultural centre; traffic management measures and land side water based infrastructure.

The MRMP investigates the following major issues:

- Integration and visual character;
- Economic outcomes;
- Tourism outcomes;
- Environmental outcomes;
- Community Consultation;
- Management rational.

BACKGROUND AND CONTEXT OVERVIEW:

- A critical regional initiative for 2.5km existing long riverbank setting;
- The MRMP bridges the gap between previous strategies and development plans, and the State Government policy to provide a coherent action plan;
- Provides a holistic detailed design focussed response to the site and its surroundings;
- Offers an integrated, harmonious park and river environs of great interest and value to both residents and visitors;
- Mildura is one of the most significant inland river cities. An oasis in Victoria's far north-western region.

KEY OBJECTIVES OF THE MRMP:

- Offers a state significant precinct that is a destination in its own right. Mildura has great potential as a city by the river;
- Expresses the richness of the heritage, environment, culture, leisure, and entertainment;
- Mildura Wharf Waterfront is a major focus (historic paddle steamers and public craft);
- The Murray River is a key symbolic environmental, economic and social asset to township. A 'Gateway' to the outback;
- The First Australians Centre is unique to Australia and World;
- It offers a vision for a parkland citing Adelaide's Torrens Riverparkland and Melbourne's Botanical Gardens as examples.

4.2 Key changes since original 2005 Masterplan

Since the adoption of the Masterplan in 2005 a number of recent developments have occurred that must be considered. They include:

- Opportunities for funding;
- Global Economic situation;
- General opportunities and opinions towards sustainability;
- Changes in public expectations of the Masterplan
- Changes in stakeholders and authorities expectations of the Masterplan;
- VicTrack's regulations for no additional at-grade rail crossings;
- The ecological decline of the Murray and Darling River system;
- CBD Plan (2007).

These items are considered consequential to the development of the Masterplan.

4.3 Costings

The MRMP capital investment cost is approx \$140M (updated for escalation from September 2003). This Masterplan encompasses the area from Lock Island to the Marina with five development precincts that link to both Deakin and Langtree Avenues. The above capital investment costs included low density residential buildings generally of a modest scale. Consequently the car parking along the existing roads was considered sufficient and no covered car parks were implemented at the time. Similarly the public domain and park works were considered to be of a modest scale.

It is understood that the above cost did not include the following:

- Works to proposed marina site;
- Infrastructure Costs such as electrical, stormwater, gas and sewer upgrades;
- High density residential buildings;
- Covered car parking;
- Sustainability costs – such as stormwater filtration biotopes, solar panels and black water treatment plant;
- Large scale public domain/park works.

4.4 Analysis

In order to audit the 2005 Masterplan an assessment of each component within the Central Precincts has been conducted.

The following table analyses each component against the following criteria:

- Opportunities for funding;
- Social;
- Cultural;
- Economic;
- Environmental;
- Planning Controls;
- Heritage.

Urban Design issues are made in relation to the following:

- Context and Location;
- Scale and Form and Density;
- Feasibility.

4.4.1 Central Precincts Assessment - Mildura Wharf Waterfront Precinct

	Masterplan Outcome	Overview	Type	Assessment Criteria					Urban Design Comments			
				Social	Cultural	Economical	Environmental	Planning Controls	Heritage	Context / Location	Scale / Form / Density	Feasibility
01	Deakin Plaza	60m wide terraced pedestrian plaza located on axis of Deakin Avenue linking CBD to river. Flanked by Citrus Gardens and terminates at river forming Deakin Baths. Potential for 'al fresco' dining	I / L	Provides public access and engagement with the river.	Physical and symbolic centrepiece of riverfront masterplan. Heralds the significance of this main axis and the Chaffey irrigation system.	9000m ² approximate area provided presents substantial cost	Potential of large quantity of unfiltered runoff. Thermal mass creating heating effect and radiant heat issues.	PPRZ Zone	N/A	Strong Connection to Deakin Avenue	9000m ² Hard surfaces.	Potential to transform into main visual connection rather than main physical connection however access must still be maintained. Incorporate existing pedestrian footbridge. Substantial fill required for realigning fall
02	Deakin Baths	Located at river's edge at end of Deakin Plaza. Contained by boardwalk promenade.	L	Provides public activity space and engagement with the river.	Signifies importance for public use and accessibility of riverfront.	Public Investment	Contamination of Pool during 100 year flood levels. Additional source of water demand in a constrained supply situation.	PPRZ Zone	N/A	Situated in 100 year flood zone. Proposes demolition and relocation of existing club house.	Approximately 750m ² proposed in masterplan	Existing aquatic centre presents possible competition however intended to perform as a leisure function rather than fitness and training.
03	Citrus Gardens / Chaffey Ways	Comprised of citrus and grape vine varieties they flank Deakin Plaza.	L	Devised to provide amenity to 'al fresco' dining area on Pedestrian Promenade and Deakin Plaza.	Species and application derived from surrounding region as historic reference showcasing the attributes of the area. Physical display of Chaffey irrigation system.	Public Investment Citrus Gardens 4.5m	High consumption of water without monitoring of species. Limited contribution to biodiversity.	PPRZ Zone	N/A	Potential barrier between park & CBD. Existing barrier of rail corridor.	Approximately 1000m ² proposed in masterplan	Maintenance. Substantial area without functional purpose fostering unsafe activities in parkland. Opportunity to propose a national first solution to water shortage in the Murray.
04	Langtree Pedestrian Promenade	Links Langtree Avenue to the riverfront culminating in the Indigenous theme performance and marketplace.	I / L	Provides public activity space and engagement with the river. Opportunity for 'al fresco' dining. Micro-climate impacts	Signifies importance for public use and accessibility of riverfront. Heralds Indigenous history.	Public Investment	Potential of large quantity of unfiltered runoff. Hard surface contributing to urban heat island affect	Rezoning Required	N/A	Connection of main restaurant district into the waterfront precinct	Approximately 1000m ² proposed in masterplan, although being a large area it will be heavily populated by adjacent buildings.	At-grade crossing optimum solution however not possible due to state wide ban on additional crossings. Incorporated into scope of Commercial, Cultural Centre and Transport interchange.
05	Boardwalk Promenade	Extends along riverfront for entire length of precinct providing pedestrian access and mooring opportunities.	L	Provides public activity space and engagement with the river. Micro-climate impacts	Signifies importance for public use and accessibility of riverfront.	Public Investment	Reduction of riverbank erosion due to pedestrian traffic taken on wharf structure	PPRZ Zone	N/A	Cultural precinct engaging the waters and its associated activities	Approximately 500m in length proposed in masterplan	Possible reduction required for financial purposes. Alternatively staging could be implemented. Essential element in masterplan.
06	Hugh King Drive	Decreased from 4 lanes to 2 with pedestrian sidewalks and traffic calming measures. Alternatively designed as a shared pedestrian zone. Will provide sundry vehicle access only.	IL	Provides amenable pedestrian and vehicular access to riverfront and across precinct. Micro-climate impacts	Hugh King??? Refer to notes.	Public Investment	Stormwater runoff into Murray	Existing	N/A	Although dividing the parkland from the north to south Hugh King Drive is a major connection between the 5 precincts of the waterfront.	Existing Large scale road unnecessary for purpose.	Possible reduction to one directional traffic rather than relocation. However series of options to be explored.
06	Rowing Club (relocated)	Proposed demolition of existing single storey brick building and relocation of club facilities to a new building to the east on the riverfront.	B	Community facility providing public activity space and direct relationship with the river.	Signifies importance for public use and accessibility of riverfront.	Public Investment Private Investment	Construction inside of 60m riverfront reserve. Vulnerable to flood impacts	PUZ1	Existing floor levels raise above 1956 flood line.	Proposed and existing building in flood plan. Existing position could aid purpose to Deakin Axis.	Existing building lacking aesthetic merit.	Potential to alter existing building for required functions. Future demolition preferred by council in a staged option.
07	Indigenous Theme Performance and Marketplace.	Located at river's edge at end of Langtree Pedestrian Promenade.	L	Community facility providing themed social gathering space. Micro-climate impacts - heat island	Indigenous theme performance and marketplace provides opportunity for broader understanding of Indigenous history.	Public Investment	Potential of large quantity of unfiltered runoff.	PUZ6 Zone	N/A	Activator of public space. Segregation to residential precinct.	Incorporated into Langtree Ave extension.	Potential activator to other areas of masterplan.
08	Transport Interchange and Commercial	Combines existing railway station with commercial space to support tourist related activity. Its located adjacent to existing shopping precinct.	B/I	Provides easily identifiable public and tourist destination with direct access to key public facilities and supporting commercial space.	Opportunity to incorporate history of existing railway station.	Private Investment \$12.1 m and Public Investment	Encouraging energy efficient transport options.	Rezoning Required	Existing rail buildings & Associated Infrastructure	3 blocks from Sturt HWY. Adjacent Existing Car Park	Incorporated into 'mega structure' without reference to regional scale. Intended to create a node of activities. Existing indicative building section forms rail crossing.	Potential relocation to activate key areas of site derived from site analysis. Amalgamation of function into singular built form is intended to centralise activity. Causing problems in staging of development.
09	Commercial and Cultural Centre	Contains main tourist facilities. Its located between the waterfront and station, offering several different functions over 2-3 levels providing approximately 4,500m ² .	B	Provides variety of spaces for social interaction and exchange including cafes, restaurants and retail that utilise the Pedestrian Promenade that leads down to the river. Linkage to existing Arts Centre	Provides opportunity for appreciation of various regional attributes.	Private Investment \$11m Including The First Australians Centre	Large environmentally inarticulate footprint. Limited opportunities for good passive design	Rezoning Required	Poor Relationship to adjacent heritage buildings	3 blocks from Sturt HWY. High observation of park during a range of operating hours.	Existing masterplan indicatively incorporated into 'mega structure' without reference to regional scale. Intended to create a node of activities.	Potential relocation to activate key areas of site derived from site analysis. Amalgamation of function into singular built form. Causing problems in staging of development. Scope pending on Chaffey House
10	The First Australian Centre	Located in conjunction with the Commercial and Cultural Centre, the First Australians Centre acts as a major showcase for Australia's Indigenous history, culture and evolution.	B	Provides facility for social interaction and exchange centred on cultural experience. Facility unique to Australia and the world.	Provides opportunity for a unique facility that showcases Indigenous history.	Including in Commercial and Cultural Centre	Large environmentally inarticulate footprint. Limited opportunities for good passive design Opportunity to showcase land management practices	Rezoning Required	Poor Relationship to adjacent heritage buildings	Strong connection to Langtree Ave.	Existing masterplan indicatively incorporated into 'mega structure' without reference to regional scale. Intended to create a node of activities.	Potential relocation to activate key areas of site derived from site analysis. Amalgamation of function into singular built form is intended to centralise activity. Causing problems in staging of development.
11	Conservatory and Function Centre	Provides a controlled environment internally that can showcase a broad array of species to become a central focus of the City. Provides a facility for functions and events.	B	Provides facility provides quality function space in the surrounds of the Conservatory and riverfront.	Provides opportunity to showcase variety of significant regional plant species.	Private Investment \$3.2 m	Opportunity to provide a benchmark environmentally sustainable building, subject to design.	Rezoning Required	N/A	Proximity to water treatment plant.	Appropriate to regional scale	Future staged development
12	Parkland off Seventh Street	Large open park area flanking Deakin Plaza parallel to Seventh Avenue with plant screening to railway.	L	Socially known as 'Railway Lawns'. Helps to abate heat island affect.	War Memorial	Public Investment	High consumption of water. Opportunity for water infiltration	Rezoning Required	Heritage Overlay 207. Deakin Avenue Landscaping Masterplan.	Partially positioned in 60m Crown Land reserve.	Large scale parkland.	Opportunity for themed conceptual landscaping fostering tourism objectives. Traditionally the only park easily accessible to the city.
13	Parkland on riverfront	Large open park area flanking Deakin Plaza at river's edge dissected by Hugh King Drive.	L	Large open park area that provides space for social activity and amenity to surrounding development. Helps to abate heat island affect.	Riparian Strip	Public Investment	High consumption of water. Diverse Flora and Fauna corridor Opportunity for water infiltration.	PPRZ Zone	Heritage Overlay 202. Relive Red Gums	Partially positioned in 60m Crown Land reserve.	Large scale parkland.	Opportunity for themed conceptual landscaping fostering tourism objectives.

L Landscaping
B Building
I Infrastructure

4.4.2 Central Precincts Assessment - Games and Entertainment Precinct

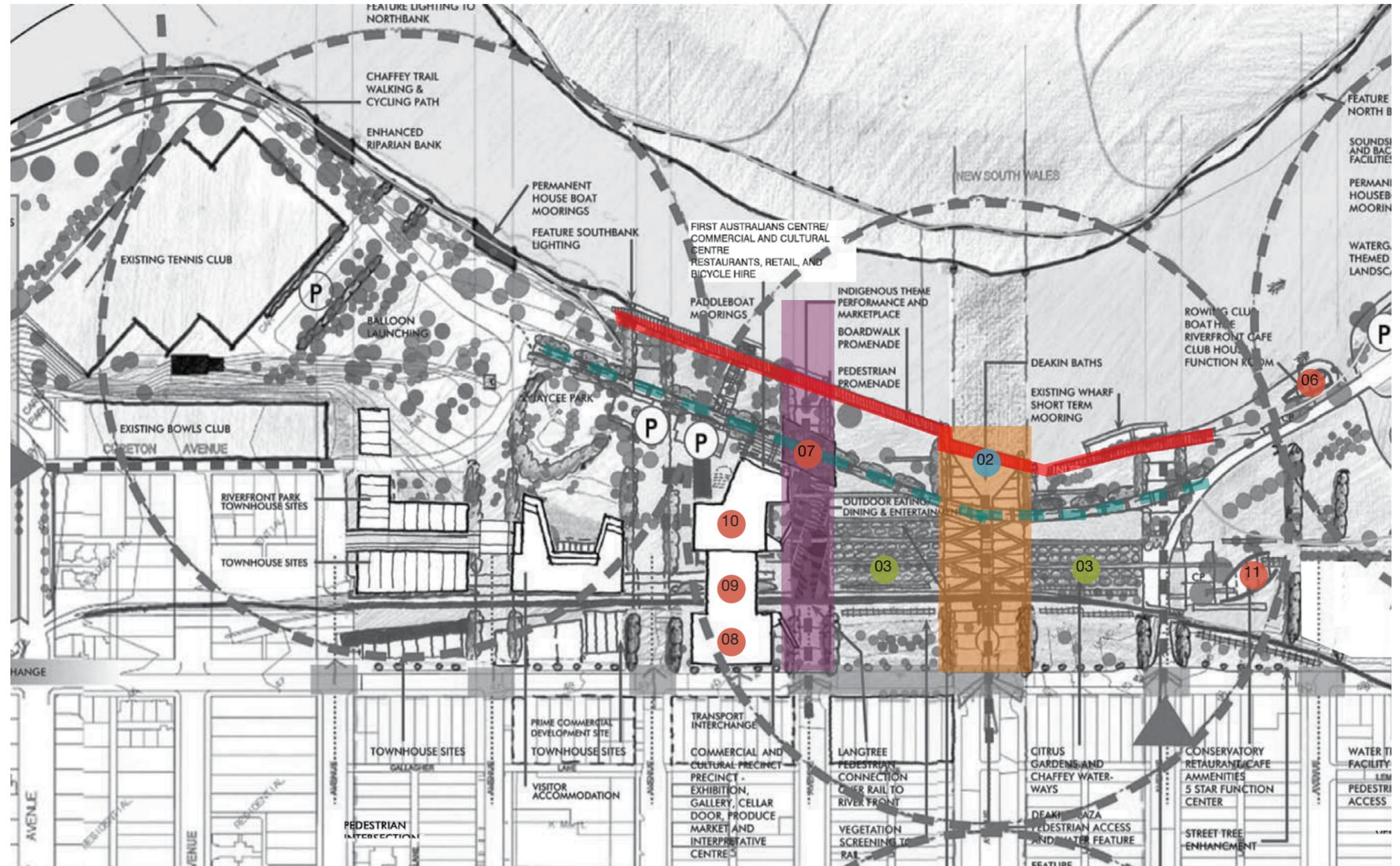
Masterplan Outcome	Overview	Type	Assessment Criteria						Urban Design Comments			
			Social	Cultural	Economical	Environmental	Planning Controls	Heritage	Context / Location	Scale / Form / Density	Feasibility	
Visitor Accommodation	Located above Jaycee Park accommodation could be provided to support the adjacent commercial activity and transport interchange providing passive surveillance of the park.	B	Diverse mix to riverfront.	Increased potential for visitors to explore cultural precinct.	100 serviced apartments. 60 Holiday units / Townhouses Accommodating some 16 750 visitors annually.	Water consumption of facility provides opportunity for grey and black water treatment. Energy consumption can be minimised and opportunity for renewables. Green Building.	Rezoning Required	N / A	Positioned 3 blocks from Sturt HWY. Adjacent proposed transport interchange	Large solid form on edge of park shown for indicative purposes only.	Figures based on 60% occupancy rate. Staged development post completion of the marina precinct.	14
Residential	A new residential precinct would offer new opportunities for inner city living and increase of surrounding parkland and riverfront by providing passive surveillance. Incorporates existing rail sheds.	B	Extension of existing residential node	Increasing residential population within the cbd precinct	32 Garden Townhouses 11 Townhouses Combined annual retail spending of 840 000.	Opportunity to practice current environmental benchmarks in residential housing. Adaptive reuse of existing Rail Carriage Shed.	Rezoning Required	Existing Railway Carriage Shed.	Linking into existing residential node.	Appropriate scale. Possible room for expansion.	Proposed figures represent only 6% of annual demand for new housing. Opportunity to introduce aged housing coinciding with aging population.	15
Power Station	Old power station building provides facility for Amateur Theatre, Musical Society, Field Naturalists and Art Group	B	Activator within Waterfront Park	Integration of the local Art Community into precinct.	Existing presence in building requires no initial set up funding however access to building could be jeopardised pending on relocation of Hugh King Drive.	Opportunity to showcase adaptive reuse of heritage buildings. Green Building.	Rezoning Required for alternate non local government use.	Preservation of historic building.	Close proximity to Lang tree extension. Limited proposed integration due to large built form of cultural centre needs to be addressed.	Inadequate curtilage provided by indicative form of cultural centre.	Existing facility already demonstrating its ability to perform as a strong activator within park environment.	16
Permanent Mooring	Existing scattered moorings are degrading riverbank edge. Proposed 12 existing licenses for permanent moorings managed in one location to rectify this problem.	I	In conjunction with the Boardwalk Promenade engaging the water and introducing a 24 hour presence in the area. Adding to marina focus of precinct.	Continued presence of house boats on the murrumbidgee cultural heritage of the Murray and Mildura.	Combination of Other Public Investment and portion of Chaffey Water Gardens Precinct	Possible erosion to bank do to diverted water flow. Formalisation to rehabilitate and	PPRZ Zone	N / A	Spanning both wharf and central precincts	Spreading over 500m.	Pending on implementation of Boardwalk promenade and existing moorings in Watergardens precinct	17
Jaycee Park	Main park reserved for casual activities. Family, BBQ's, Picnics.	L	Existing public space enjoyed by residents and held high in nostalgia. Adding to objective of creating an oasis. Surrounding BBQ areas function in co-existence Green space to reduce heat island.	Provides a sense of ownership of the project to residents.	Other Public Investment	High consumption of water. Opportunity for water infiltration.	PPRZ Zone	Old Pump House building	Well positioned park between cultural, residential and commercial precincts.	Large unobserved space.	opportunity to further integrate with residential to increase passive observation. Vegetation pending on water access.	18
Balloon Launching	Parkland for balloon launching and other casual activities.	L	Visually exciting and activating element.	N / A	Associated tourism activity from development.	Carbon Pollution Opportunity for water infiltration.	PPRZ Zone	Old Pump House building	Potential activator in Jaycee Park	Large open space required.	Potential activity not requiring public expenditure.	19
Existing Tennis Club	Existing facility to remain.	B	Uniting various members of the community Promotes healthy and active lifestyles.	N / A	Existing facility adding value to precinct. Possible future upgrade necessary.	High consumption of water. Allows for infiltration and reduced heat affect.	UFZ Zone	N / A	Existing location satisfactory.	Extensive facilities	Potential to expand members with increase population and focus within the precinct.	20
Existing Bowls Club	Existing facility to remain.	B	Uniting various members of the community Promotes healthy and active lifestyles.	N / A	Existing facility adding value to precinct. Possible future upgrade necessary.	High consumption of water. Allows for infiltration and reduced heat affect.	PPRZ Zone	N / A	Existing location satisfactory.	Satisfactory facilities	Potential to expand members with increase population and focus within the precinct.	21
Boardwalk Promenade	Continuation of boardwalk from adjacent precinct providing pedestrian access and mooring opportunities.	L	Provides public activity space and engagement with the river. Promotes healthy and active lifestyles.	Signifies importance for public use and accessibility of riverfront.	Public Investment	Reduction of riverbank erosion due to pedestrian access.	PPRZ Zone	Existing 100 year old wharf	Cultural precinct engaging the waters and its associated activities	Approximately 500m in length proposed in master plan	Possible reduction required for financial purposes. Alternatively a progressive staging process could be implemented Essential element in masterplan.	22
Chaffey Trail and Cycling Path	Walking and cycle path at river's edge.	L	Walking and bike riding are referenced in Mildura Recreational strategy as high levels of recreational activity. Promotes healthy and active lifestyles.	Linking surrounding regions referencing historical development	Public Investment	Reduction in erosion due to formalisation of access. Possible use for low emissions transport	PPRZ Zone	N / A	Park of a greater proposed network of trails.	Connects all precincts with NSW and surrounding communities	Effective connective mechanism for residents and tourist alike. However dependent on surround areas to implement trail. Intended to be metaphysical.	22

L Landscaping
B Building
I Infrastructure

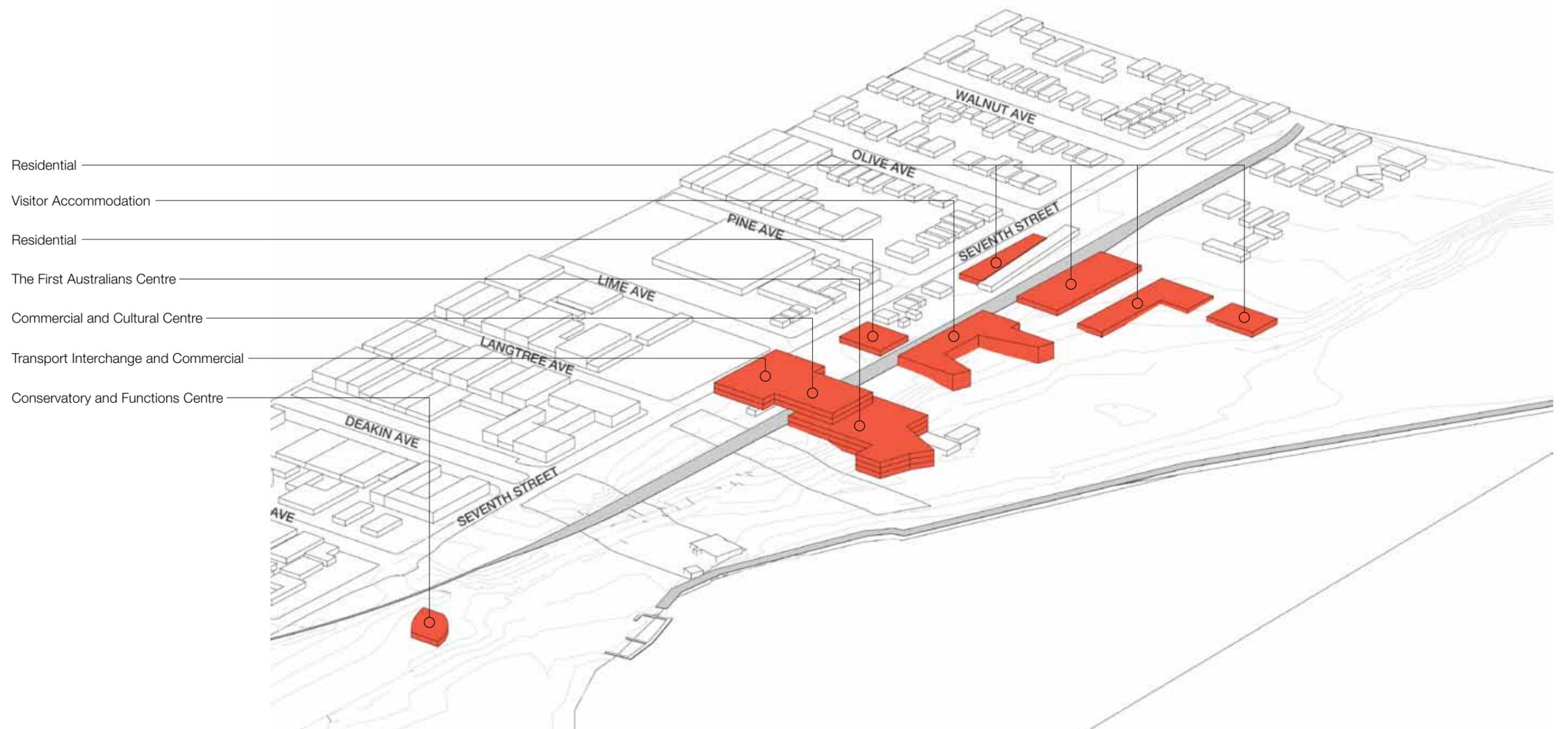


4.4.3 Itemised analysis

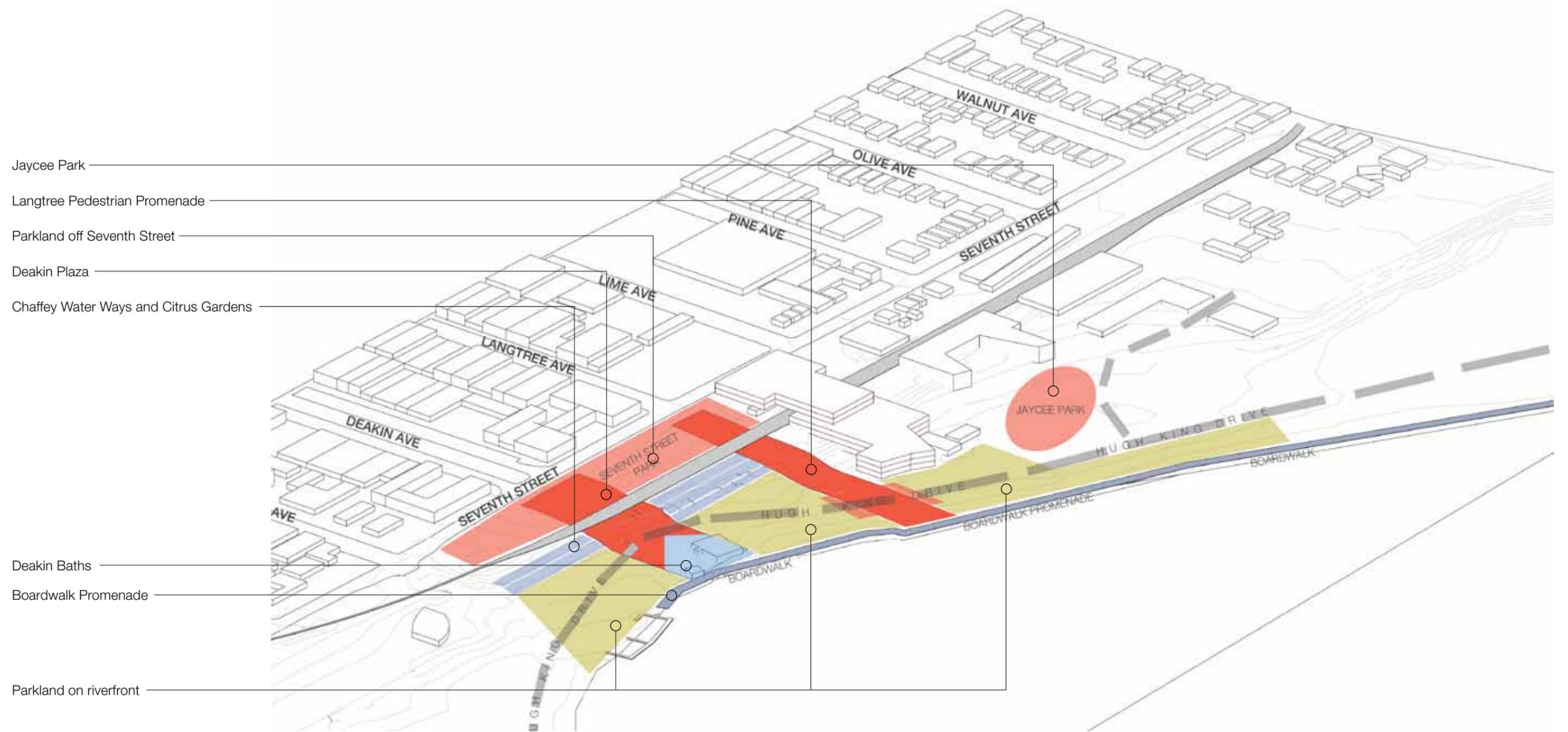
- 01 Deakin Plaza
- 02 Deakin Baths
- 03 Chaffey Water Ways and Citrus Gardens
- 04 Langtree Pedestrian Promenade
- 05 Boardwalk Promenade
- 06 Hugh King Drive
- 06 Rowing Club
- 07 Indigenous Theme Performance and Marketplace
- 08 Transport Interchange and Commercial
- 09 Commercial and Cultural Centre
- 10 The First Australians Centre
- 11 Conservatory and Functions Centre



4.4.4 Built Form Investigation



4.4.5 Landscape and Public Open Space Investigation



4.5 Areas for further investigation

4.5.1 Hugh King Drive

As it exists Hugh King Drive occupies a large portion of the riverfront disturbing the landscape. It is too wide for a riverfront regional road and like the rail, it disconnects pedestrian activity to and from the riverfront. The 2005 Masterplan proposes an appropriate reduction of this roads width and frequency of use.

The need for a vehicular accessible riverfront with associated car and bus parking spaces remains a crucial component of the community's vision. Further investigation is to be undertaken to explore additional options such as alignment, size, accessibility and frequency of use.

4.5.2 Cultural Centre

The proposed Cultural Centre was defined within a large complex of commercial and retail activity. The position close to the river is appropriate however the relationship within the park context and the opportunity to create a 'special and unique' outcome needs to be rigorously investigated.

The Cultural Centre and its ancillary spaces has the ability set the tone for the entire riverfront area acting as a catalyst for further development. For this reason it must appropriately reflect the culturally significant attributes of the site to both herald and respect these qualities.

4.5.3 Railway Gardens (town park)

Referred to as 'Railway Gardens' the park at the end of Deakin Avenue is very much a park for the CBD - a 'Town Park'.

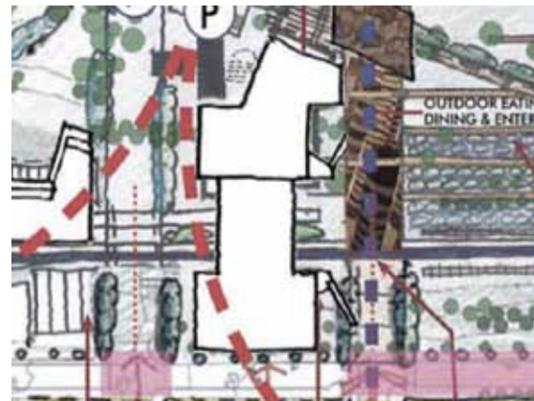
First impressions question the need for this park space when considered in the context of the overall large area of the riverfront parkland that lies adjacent.

However as a culturally significant and functional element, the Railway Gardens has a crucial role to play in the overall Masterplan. Further exploration in relation to identity, connections and functionality of the Gardens are detailed in report 02.

4.5.4 Langtree Promenade (at grade)

As previously outlined in this report the prospect of an at grade connection at Langtree Avenue as suggested in the 2005 Masterplan, is not considered appropriate by State Government Authorities.

This preliminary audit has reinforced the need for pedestrian connection to occur between the CBD and the riverfront. It has been determined through the site analysis that this socially significant spine is the most active pedestrian linkage available to the riverfront. It will be a key element of the concept design phase to explore both options of passing over and/or under the rail.



4.5.5 Baths

The concept of locating publicly accessible baths as a functional feature of the design is deemed plausible fitting in comfortably with the overall 'recreational riverfront' theme.

With the recent implementation of an indoor/outdoor pool complex within the city of Mildura the feasibility of additional facilities will need to be carefully considered.

4.5.6 Citrus Garden/Irrigation Channels

Initial feedback from the community suggests that this element is no longer considered appropriate. The location at a key node at the end of Deakin Avenue is recognised as a significant junction that needs to be distinguished.

The ideas associated with the irrigation age and reference to the Chaffey Brothers should remain a key opportunity. Equally the reference to the citrus and perhaps broader food production that occurs within the region at a reduced scale would provide insight into the history of the surrounding region.

4.5.7 Residential Yield

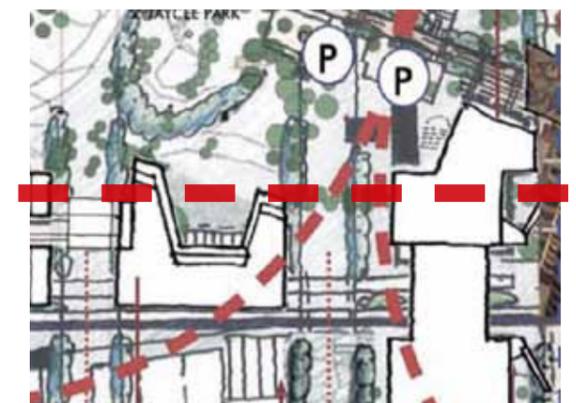
Current research indicates that the amount of residential provided in the 2005 Masterplan equates to less than 10% of Mildura's annual demand. A core opportunity exists to provide the development with increased residential capacity which will encourage the opportunity for increased private investment.

Conceptual development of the residential elements could include: increased densities; increased site footprint; and a mixture of residential uses.

4.5.8 Built Form within Park Envelope

The existing public open space, in its many and varied forms, is vital for the community of Mildura. The 2005 Masterplan shows two large built forms encroaching well into the existing open space of the riverfront parkland. Furthermore, the existing Powerhouse Buildings are dwarfed by the scale of the proposed buildings with minimal curtilage provided.

The conceptual development needs to focus on improvements to the existing park infrastructure and built form should be carefully planned and articulated to avoid unnecessary encroachments.



5.0 Trends and Issues

In analysing 2005 Masterplan, a series of macro and micro trends and issues were deduced. In view of these issues the MRMP is considered to have all the elements to form a successful riverfront area, however the right application is yet to be determined.

Trends and issues that have emerged from the audit of the MRMP and which are specifically relevant to the Mildura region include:

- Regional scale and connection;
- Reinterpretation of built forms;
- Building positioning and zoning;
- Rail crossings and pedestrian connections;
- Enhanced public environment;
- Local tourism initiatives;
- Water sensitive Urban Design.

There is also a series of National and International trends and issues which are of relevance to the Central Precincts area. These include:

- Sustainable development;
- Funding opportunities;
- Global financial situation;
- Design excellence;
- Transportation strategies.



Image
Mildura riverfront.

5.1 Emerging MRMP and Regional Feasibility Issues

5.1.1 Regional Scale and Connection

Mildura is a regional city consisting of low density development with buildings of modest heights and scales. Larger buildings are typically found in the CBD but are otherwise dispersed across the city and found on larger sites or adjoining infrastructure corridors.

Mildura has had a long associated history with the Murray River. Very little development has occurred along the riverfront, and it primarily remains as public open recreational areas.

The Murray River is a focal point of the Mildura community and it is essential that connections between the CBD and the river's edge are accentuated. Linkages from the CBD's access corridors should continue across the Central Precincts to connect the city and the riverfront.

New development within the Central Precincts area should complement and be appropriate to the regional scale of Mildura. It should allow height and scale consistent with the CBD, while introducing a variety of bulk and scale across the site to both the streetscape, parkland and riverfront.



5.1.2 Reinterpretation of Built Form

The audit of the MRMP highlighted the need to re-assess the built form outcomes.

The proposed placement and density of some aspects of the built form outcomes are inappropriate to Mildura's regional scale and must be reinterpreted to respond more appropriately to this context.

The Cultural Centre is to be scaled down and re-positioned to align with regional objectives, economic viability, sustainability and contextual relationships. The size and density of the complex shall respond to user-needs and the relationship to the physical context.

Additionally, some aspects of the built form can be amalgamated to provide more economically viable solutions. Similar functions including the Visitor Accommodation and Function Centre shall be combined to deliver an appropriate regional response and scale.

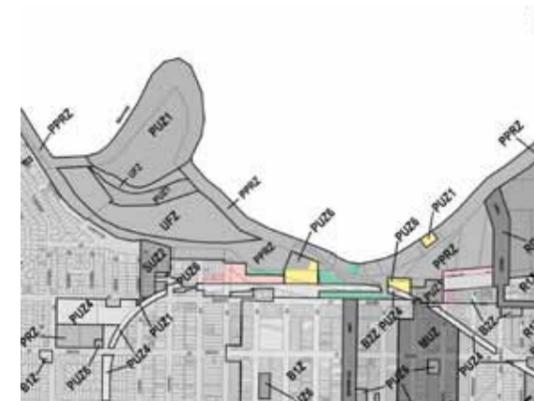


5.1.3 Building Positioning and Zoning

The MRMP suggested built form placement and zoning which is not appropriate for the Central Precincts area, nor is it appropriate for present economic situations.

Zoning and placement of the built form shall respond to connecting vistas from the CBD and Seventh Street. Cultural, social and commercial zones within the existing CBD shall correlate to built form and zoning within the Central Precincts area.

Additionally, residential zones shall be reinterpreted to align with existing residential areas. Appropriate densities shall be determined to suit the contextual relationships and economic parameters.



5.1.4 Rail Crossings and Pedestrian Connections

The use of the rail corridor has been a contentious issue amongst relevant government authorities and the Mildura community for many years. Community consultation has resulted in strong recommendations to cease all rail use on the existing rail line in the Central Precincts area.

The MRMP suggested the removal of freight rail activity, however it also proposes the use of an at-grade crossing at the Langtree and Deakin Ave pedestrian extensions.

The use of rail crossings and pedestrian connections must be addressed against current authority suggestions. Rail use may either decrease or increase, and the design proposal needs to respond to all possible scenarios.

Additionally, public safety shall be a high priority and will be carefully considered for the design of all rail crossing and pedestrian connections.

Physical and visual connections between the CBD and the river are essential connections which must be considered in relation to the rail corridor and crossings.



5.1.5 Enhanced Public Environment

Correctly articulated built form with integrated landscape design for the public environment is essential for the Central Precinct area. Improving the public domain areas within the riverfront area is essential increase use of public space as access ways and for community activities.

The MRMP has primarily limited public spaces to the Langtree and Deakin Avenue. Public spaces are mainly linked to the Commercial and Cultural Precinct areas, and at certain areas are interrupted by the Citrus Gardens and Chaffey Waterways.

Public domain areas and connections shall be carefully considered in the social, cultural and commercial linkages that extend from the CBD. These spaces shall be coordinated across the Central Precincts to provide balance and necessary cross linkages between areas.

The contribution of both built form and landscaped areas will encourage public activity improving the safety amenity of the Central Precincts area



5.1.6 Local tourism initiatives

The Mildura riverfront is recognised as a major regional tourism driver and is a significant contributor to the economic well-being of the local community and businesses.

The MRMP creates a regional tourist attraction having significant potential to contribute to local tourism development. Through the invigoration of the riverfront area a number of tourism benefits could be achieved.

There is further potential for a stronger tourism driver for the Central Precincts area, which was not previously explored in the MRMP. In establishing an 'original' regional riverfront development utilising the unique qualities of the surrounding environment to create a distinctive destination, opportunities for tourism activity would be greatly enhanced.

Through design excellence, innovation and sustainable solutions, the Central Precincts area will encourage tourism initiatives and attract funding opportunities.



5.1.7 Water sensitive Urban Design

Heavy irrigation demands and an extended drought periods have placed the Murray Darling Basin's environment under considerable pressure. Today, the threat to the health of the Murray River and the recognition of water as a valuable resource is widely understood.

When extensive agricultural irrigation demands and urban development occur, natural water cycles are altered. The implementation of best practice integrated WSUD initiatives seeks to replicate pre-development water cycles and restore balance through the use of design initiatives that replicate an equivalent natural hydrological landscape.

With this in mind, the Central Precincts will seek to adopt and incorporate industry best practice WSUD initiatives as part of an overall integrated water strategy for the site. By implementing WSUD initiatives, the area shall minimise irrigation needs and potable water demands; ensure that the Central Precincts area is both flood and drought proof and improve the water quality of the Murray River by reducing contaminated stormwater outflows from the site and catchment area.



5.2 National and International issues and trends

5.2.1 Sustainable development

A range of global and national sustainable trends have emerged and achieved prominence since the adoption of the MRMP. A number of these key trends with implications for the development of the Central Precincts are discussed below.

CHANGING CLIMATE

The CSIRO anticipates the following impacts of climate change on the Mallee, including Mildura:

- Increased average annual temperatures;
- Increased number of hot days (over 30°C);
- Reductions in the total average annual rainfall, with the greatest reductions occurring in spring;
- Increased intensity of summer rainfall events;
- Increases in potential evaporation and reductions in relative humidity contributing to drier conditions;
- Small increases in solar radiation.

KEY IMPLICATIONS

- Design for climate to maintain comfortable indoor and outdoor environments during hotter weather;
- Water efficiency and water recycling;
- Landscape design to minimise risk of erosion due to increasingly arid climate and extreme summer rainfall events;
- Fireproofing to address increased bushfire risk;
- Drought resistant landscaping;
- Improved water treatment to avoid algal blooms associated with lower river flows and impacts of water contamination from eroded sediments and ash from bushfires;
- Understanding of the implications of more extreme weather events for flooding, taking into account generally lower river flows but more intense rainfall in the summer months.

GREENHOUSE GAS EMISSIONS

The Garnaut Climate Change Review found that the weight of scientific evidence tells us that Australians are facing risks of damaging climate change. However, the risk can be substantially reduced by strong, effective and early global action to reduce greenhouse gas emissions.

Australia will need to play its full proportionate part. Introduction of the Carbon Pollution Reduction Scheme, introduction of a National Energy Efficiency Scheme, introduction of a new Renewable Energy Target are all important elements of the government's strategy to avert dangerous climate change. The implications of these schemes will be felt locally in communities and provide incentives to increase energy efficiency and source clean renewable energy.

HEALTH

Emerging trends in heart disease, obesity and diabetes are closely correlated with the way we live in our cities and how we structure our daily lives. There is now a considerable body of research which points to active lifestyles (including walking and cycling to access employment and services and facilities) as impacting on health and wellbeing. Australia's aging population also requires more programmes aimed at retaining mobility, health and independence.

FOOD SECURITY

In Australia most people are not aware that food insecurity is an issue. However, food insecurity has been reported by 5 per cent of people aged 16 years and over. Low fruit and vegetable intake has a greater impact on health than the use of illicit drugs and alcohol and the number of years of life lost due to diet-related disease is 70 percent of that for smoking. As part of Australia's primary agricultural area, Mildura plays an important part in contributing to the nations food security.



SOCIAL INCLUSION AND COMMUNITY COHESION

A challenge for all governments is delivering a share of the benefits derived from economic prosperity to communities that have traditionally not been prime recipients of economic success, particularly in times of economic crisis. Factors influencing social inclusion include poverty, income inequality, low educational qualifications, joblessness, poor health and poor housing. Addressing issues such as access to services and facilities can make a significant difference to levels of social inclusion and community cohesion.



PEAK OIL

Australia's economy and way of life is underpinned by securing access to affordable and sustainable fuel, and as a nation with relatively high vehicle use, we are vulnerable to the economic, environmental and social impacts of rising oil prices and rising temperatures. The future price of oil is uncertain. The Future Fuel Forum predicts that if oil production peaks, prices could climb as high as A\$8 per litre by 2018 in the most extreme case, resulting in significant social impacts that are likely to adversely affect low income Australians. Australia's fuel mix will shift in the near term in response to Peak Oil, to include the expanded use of diesel, gaseous fuels such as LPG and hybrid electric vehicles, with even greater diversity beyond 2020 that might include hydrogen, synthetic fuels from coal or gas and advanced biofuels that will not impact food production. These changes are likely to have a significant impact on the way Australians think about travel and transport.



THE MURRAY RIVER

The introduction of irrigation agriculture, including storage reservoirs, locks and weirs have led to radical changes to the Murray River's natural flows and have seriously disrupted the life cycles of many of its ecosystems. It has also led to dry land salinity which now threatens the very industry it generated. In 2009 the Federal Government allocated \$900 million to save the Murray River and Darling River System through buy-back of irrigated properties, local community water planning, stormwater harvesting projects and bioremediation of the lower Murray. For communities along the Murray like Mildura, this represents a significant opportunity to contribute to improving the health and welfare of the river ecosystems as well as the communities that rely so directly on the welfare of the river for their own survival.



5.2.2 Funding Opportunities

In light of recent government economic stimulus packages and funding opportunities for sustainable developments, it is recommended that the Central Precincts could greatly benefit from existing and potential funding initiatives.

Of particular importance is the Commonwealth Government's 'Water for the Future programme' which includes \$12.9 billion over 10 years, allocated to four priority areas: 1. Action on climate change; 2. Using water wisely; 3. Securing water supplies; and 4. Supporting healthy rivers. Within the area of securing water supplies, the National Urban Water and Desalination Plan includes \$1 billion over 6 years for desalination, water recycling and stormwater harvesting projects. Most of this funding will be allocated to major projects (>\$30 million), but \$200 million has been set aside in the "special call for stormwater harvesting and reuse projects" to fund smaller stormwater harvesting projects (minimum \$4 million in eligible investment).

The Victorian Government has also made funding available for a variety of sustainable and water initiative projects. These funding schemes, in association with other stimulus packages and funding, will greatly enhance the outcome for the Central Precincts area. It is essential that action is undertaken to ensure all effort is made to apply for appropriate funding grants.



5.2.3 Global Financial Situation

The Global Financial crisis is a recent world economic issue which will have a variety of implications upon the Central Precincts development. The crisis sweeping world financial markets is affecting every aspect of business across the globe.

This international issue, is generally beyond the control of the potential public and private investors of the Masterplan. Care must be taken to investigate the effects of this financial crisis upon the realisation of the Masterplan.



5.2.4 Design Excellence

Urban Design Excellence is a principle used to create enduring communities. Good Urban Design approaches incorporate a variety of sustainable and socially appropriate strategies to build healthy and vibrant communities.

Urban Design Excellence is best achieved when design thinking concentrates on creating a sense of place within an urban landscape. The Central Precincts area will incorporate Urban Design Excellence strategies, particularly relating to:

- Interpreting place and context;
- The public realm;
- Visual character and identity;
- Permeability and connectivity;
- Safety and security;
- Varying densities;
- Mixed uses.



5.2.5 Transportation Strategies

In line with creating sustainable solutions for the Mildura Central Precincts, appropriate alternative transportation strategies must be considered as part of the overall Urban Design approach.

The Masterplan must focus on suitable transit oriented development strategies which is a new fast growing trend to create vibrant, liveable communities. The focus must be on creating pedestrian and bicycle friendly environments, to reduce the need for private car use.

Focus must also be given to public transportation strategies, as well as additionally considering the impact of personal car use within the regional context.



6.0 Consultation

The Mildura Riverfront 2005 Masterplan was well received by the Mildura community when it was endorsed by Council in 2005. Since its adoption a number of events have affected the region, including the prolonged drought which has had a great impact on the area and the Murray River, and the opportunity afforded by the potential removal of the rail freight infrastructure.

The involvement of individuals and organisations has formed part of the re-examining process for the Central Precincts and help devise a consultation strategy for the Masterplan's implementation.



Image
Mildura riverfront.

6.1 Background Consultation

Consultation was undertaken in two phases of the development of the MRMP. Led by the Daryl Jackson Architects design team, the views of local people and key stakeholders (authorities and local groups) were sought.

The first consultation session, held in July 2003, focused on awareness raising of the project and included an overview of the following:

- Project Status;
- Structure, Objectives and Outcomes;
- Understanding Mildura;
- Existing Site Appraisal;
- Opportunities and Constraints;
- Comparable Examples;
- Framework Plan;
- Interpretative Ideas.

Design concepts that were developed following this initial session were presented to the community and key stakeholders. These sessions, held in August 2003, identified the following key issues:

- Promote pedestrian activity and perhaps the Chaffey trail;
- Floodlight the Chaffey Bridge;
- Extend the study area to include other noble assets such as Apex Park, the Historic Homestead, Wetlands, and Ski Club etc;
- Retain House Boat moorings where possible;
- Importance of open space for large events such as exhibitors, circus, New Year celebrations, Carols by Candlelight;
- Traffic 'hoon' problems with Hugh King Drive;
- Desire to maximise number of paddle steamer moorings;
- Intrusion of the cactus concrete wall and the railway, both impeding access to the precinct;
- Need for tourist buses, parking and manoeuvring;
- Dark nature of the park, and that it feels unsafe at night.



- Retain of heritage structures such as the wharf and powerhouse;
- Problems with the use of the car park at the Powerhouse;
- Revegetate unsightly embankments;
- Remove through traffic, especially trucks from Deakin Avenue;

Prior to the finalisation of the Masterplan, the document was amended in light of the contributions made during the public exhibition of the Final Draft Mildura Riverfront Masterplan. These are identified in a report to Council for the adoption of the Masterplan with minimal changes required.



6.2 Consultation Strategy

A community and stakeholder involvement plan was prepared at the outset of the Central Precincts Feasibility project. The plan was developed in consideration of the Community Consultation Resource Guide and in recognition of the Mildura Rural City Council's commitment to consultation. This commitment is expressed in the Mildura Planning Scheme:

'Our vision for the development of the Municipality is that all of our communities will have plans, proactively attract and support ongoing future development. Planning will be integrated to support the development of an inclusive community.'

In order to develop an inclusive community, the involvement of the people of Mildura was seen as an imperative starting point for the strategy. Participation is also a key component of sustainable development which seeks to ensure that development is better able to meet local needs and aspirations and promotes social inclusion and cohesion. The consultation strategy was therefore based on the following principles:

- Recognition of previous involvement whilst re-igniting the energy and ideas of the community and stakeholders
- Inclusivity
- Ongoing consultation throughout the process and decisions being made in light of community and stakeholder feedback
- Dissemination of good quality information in a variety of sources
- Opportunities to openly discuss issues.



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