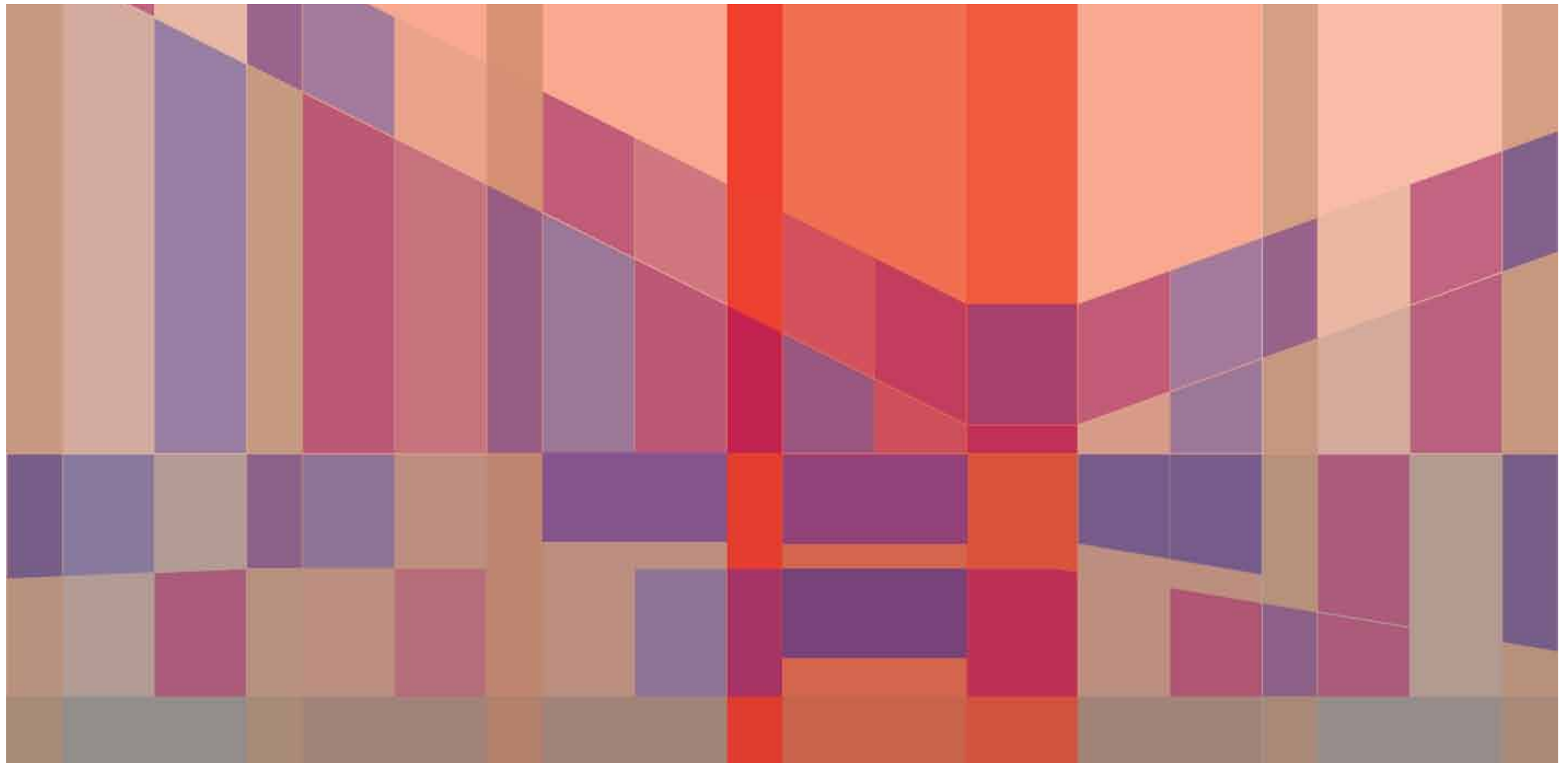


MILDURA MURRAY

Riverfront Central Precincts Feasibility



Mildura Rural City Council



FEBRUARY 2010

03

FEASIBILITY REPORT

Prepared by:

suters



ARUP



On behalf of:



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01 BACKGROUND

02 CONCEPT

03 FEASIBILITY

04 IMPLEMENTATION

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FEASIBILITY 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 Aerial, 2009 Flickr.

Executive Summary

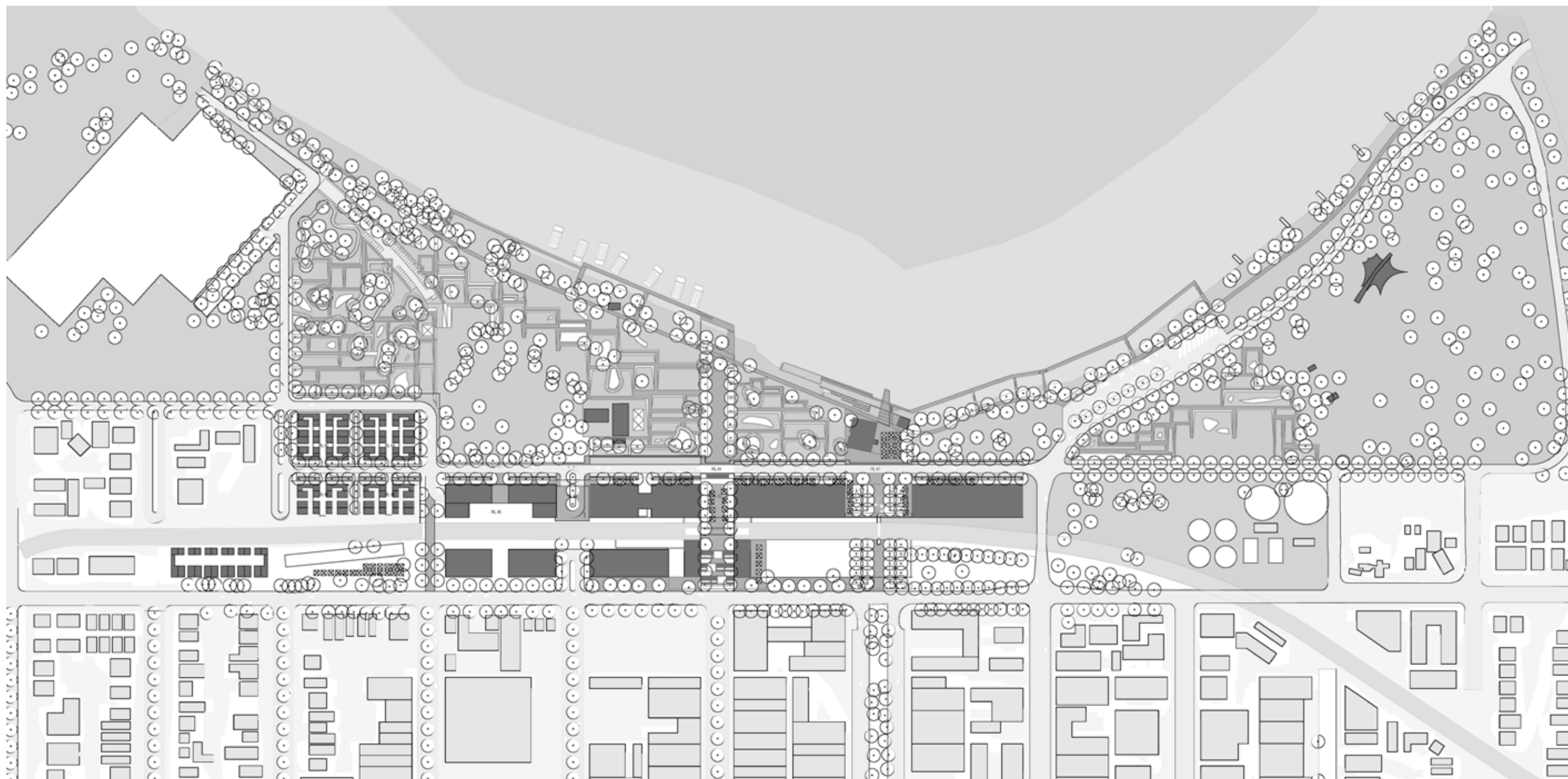
The Feasibility Report provides an overview of the developed design of the Central Precincts outlining the preferred Masterplan scheme. Within private development parcels a preferred recommendation is established, however alternative scenarios are considered. It provides a detailed breakdown of its two major components: built form and public open space. Designed in collaboration they each offer different but complementary aspects to the Central Precincts development to contribute and enhance Mildura and the surrounding region. Individual plans illustrate the location and extent of various elements.

Design parameters are established to instruct the development the Masterplan's components with individual elements being described in detail with supporting images to convey the design intent. Guidelines pertaining to sustainability, water and flood management for the site as a whole and individual items are provided. Infrastructure requirements of the Masterplan are broken down into major items including car parking, traffic and site works.

Feasibility costings highlight the economic benefits of the Central Precincts development including opportunities for tourism, local business, public and private investments and employment.

Outlined is an overview of the consultation process and findings through the refinement of the Central Precincts. It is indicated that ongoing community and stakeholders consultation will be necessary as the Masterplan is implemented.

Image
Central Precincts Masterplan.



1.0 Masterplan

This section provides more detail on the preferred design outlined in the Concept Report 02.

The images within this section of the report are purely representations depicting particular elements of the Masterplan and are not to be considered final design solutions. They illustrate intended building heights; extent of public open space; views; vistas and the various components of the Masterplan.

The Central Precincts Masterplan is depicted on the facing page with reference list of items outlined below.

- 1

Existing Tennis Centre
- 2

Car parking
- 3

Riverpark Rain Gardens
- 4

Residential - Low/Medium Density Townhouses
- 5

Residential Development Site
- 6

Adaptive reuse of Heritage Rail Carriage Shed
- 7

Plaza
- 8

Pine Avenue Rail Bridge
- 9

Existing Jaycee Park to be retained
- 10

Residential-Medium/High Density Apartments
- 11

Mixed Use-Residential and Commercial Med/High Density
- 12

Mooring/Boardwalk
- 13

Existing Heritage Pump House
- 14

Existing Powerhouse Performance Space and Art Gallery
- 15

Visitor Accommodation and Convention Centre
- 16

Transport Interchange and commercial
- 17

Tourist Information and Retail and Vertical Circulation
- 18

Langtree Promenade
- 19

Langtree Ave Rail Bridge
- 20

Cultural Centre Stage 1
- 21

Railway Gardens with car park under
- 22

Row Boat Launching Area
- 23

Murray River
- 24

Deakin Plaza Lookout
- 25

Deakin Pedestrian Plaza
- 26

Existing Rowing Club
- 27

Existing Pump House
- 28

Deakin Ave Pedestrian Bridge
- 29

Moorings/Boardwalk
- 30

Existing Paddle Boat Steamer Wharf
- 31

Riverpark
- 32

Cultural Centre Stage 2
- 33

Existing War Memorial
- 34

Existing Skate Park
- 35

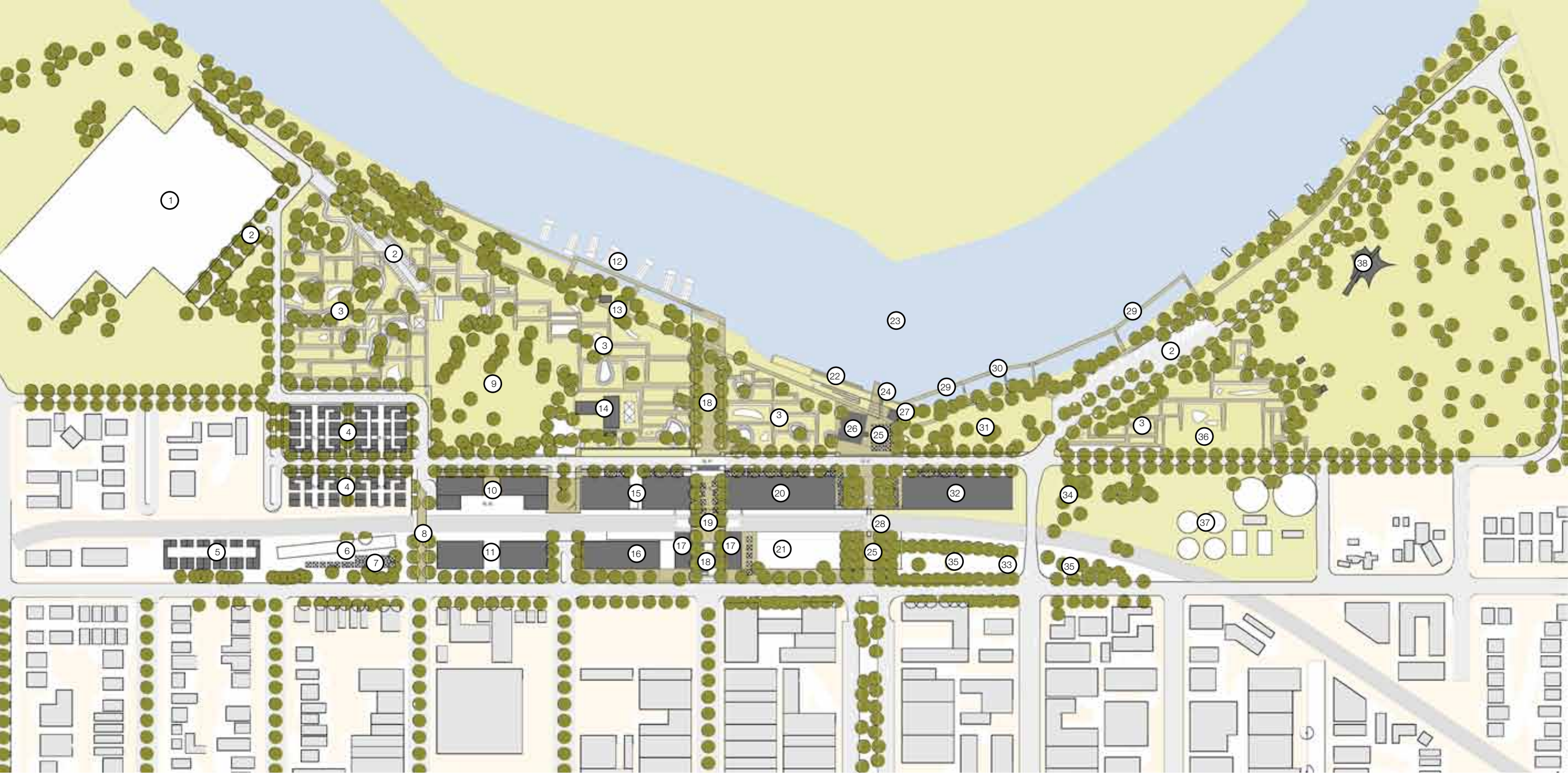
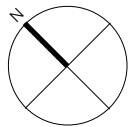
Railway Gardens
- 36

Black Water Treatment Works and Water Storage
- 37

Existing Water Treatment Plant
- 38

Existing Sound Shell

1.1 Central Precincts Masterplan



1.2 Land Use

The following diagram highlights the built form placement and the associated building uses. The Masterplan offers a range of land uses including: residential; mixed use; accommodation; retail; commercial; cultural and adaptive reuse.

■ Residential - Low/Medium Density	■ Accommodation/Conference/Retail	■ Cultural Centre
■ Residential - Medium/High Density	■ Heritage Adaptive Reuse	■ Transport Interchange/Commercial
■ Mixed Use - Residential/Commercial	■ Adaptive Reuse	■ Retail



Residential - Low/Medium Density
 Residential - Medium/High Density
 Mixed Use - Residential/Commercial

Accommodation/Conference/Retail
 Heritage Adaptive Reuse
 Adaptive Reuse

Cultural Centre
 Transport Interchange/Commercial
 Retail



1.3 Built Form Representation

CULTURAL CENTRE

The Cultural Centre is located between the social (Langtree) and cultural (Deakin) zones devised in the project's conceptual framework. Locating the Cultural Centre at the heart of the riverfront development provides a central public attraction for the development that complements the surrounding commercial activity.

The green roof of the Cultural Centre links the green roof space of the Railway Gardens to the landscaped riverfront. The building acts as a transitional zone to provide a physical connection the city and the riverfront.



MEDIUM-HIGH DENSITY RESIDENTIAL

The medium-high density residential areas are positioned within the residential and mixed use transitional zones of the conceptual framework. These developments have been included to promote a mixed use arrangement. Retail and commercial spaces at ground level with residential over generate activity and public interaction.

The built form outcomes are intended to respect the existing densities of Mildura, and respond to the connections between the CBD, parkland and riverfront. Generally three storey buildings are proposed for these mixed used residential areas.



LOW-MEDIUM DENSITY RESIDENTIAL

The low-medium density residential areas are positioned on the periphery of the Central Precincts area within the residential and recreational zones of the conceptual framework.

These residential areas have a relationship with Jaycee Park taking advantage of the existing amenity and provide passive surveillance. Densities of one to two stories have been established to remain in keeping with the existing residential context.



TRANSPORT INTERCHANGE AND COMMERCIAL

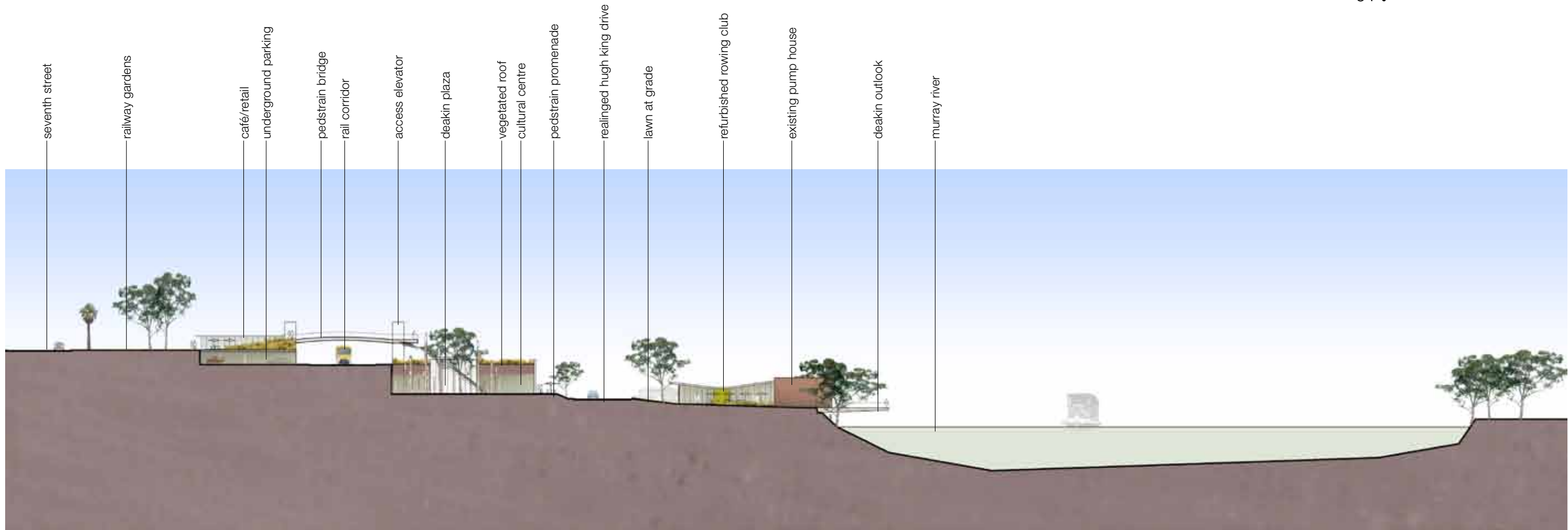
The Transport Interchange and commercial buildings are associated with the commercial and mixed zones of the conceptual framework. The buildings address the activity from the CBD positioned adjacent to the Langtree Promenade connection. A strong relationship between the built form and Seventh Street has been established to ensure for the prosperity of the commercial activity and amenity of the streetscape.

Again densities of three-four stories have been established to fit in with the existing Mildura CBD.



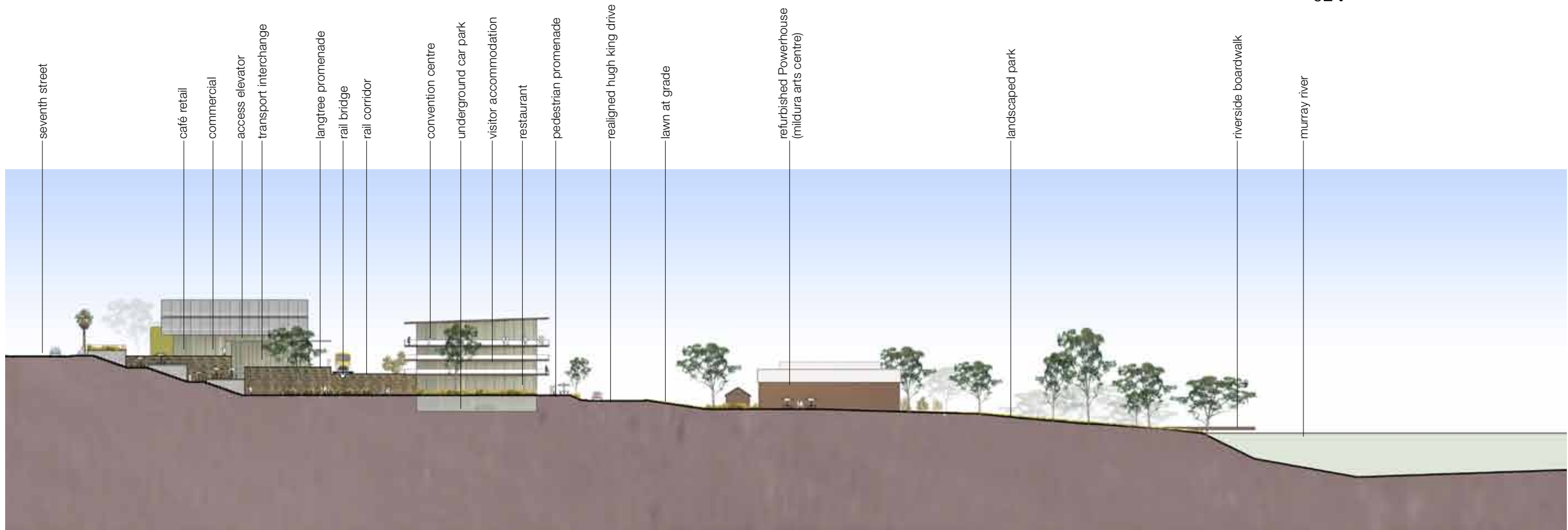
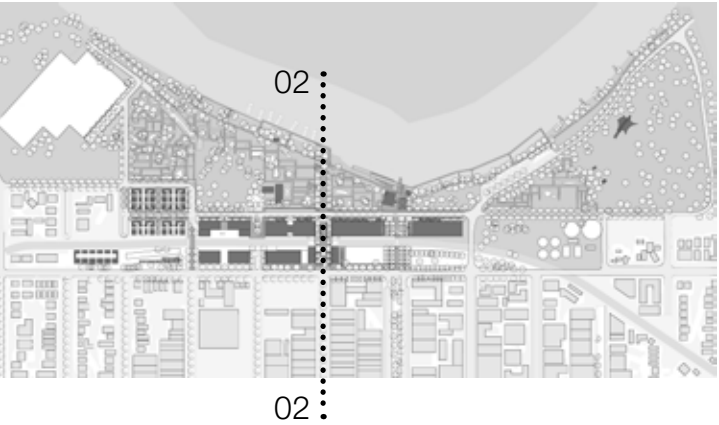
SITE SECTION 01

The section is cut on the axis of Deakin Avenue from the intersection at Seventh Street down to the Murray River. Key elements depicted are the pedestrian foot bridge over the rail corridor, the descent by both stairs and access lift into 'Deakin Plaza'. The Cultural Centre (Flanking Deakin Plaza) built into the escarpment with a green roof allowing for visual continuity from Seventh Street down to the park and Murray River. Also depicted is an artist impression of the refurbishment of the Mildura Rowing Club and Pump House with the provision for café facilities. The final built form shown is 'Deakin Lookout', the finale of the Deakin axis where the pedestrian can walk out over the Murray River.



SITE SECTION 02

This section has been cut on the axis of Langtree Avenue identified in the conceptual framework as a key social node of the CBD and establishes the main connection point between the CBD and the riverfront. A staircase declines from Seventh Street via small retail tenancies and cafés. Depicted in elevation beyond is the Transport Interchange (incorporating access lift) and commercial space. The Promenade then proceeds under a rail bridge opening to the Cultural Centre, Convention Centre and visitor accommodation complex overlooking the parkland, Powerhouse heritage building and the Murray River.



1.4 Landscaping and Open Space

1.4.1 Connection and Access

- The park development will be a generator for local employment opportunities and local business revitalisation and provide a greater interface between the CBD main street retail precinct and the paddle boat wharfs.
- The park will be integrated with the proposed Transport Interchange providing easy accessibility between the CBD and the riverfront. This will include the implementation of a new bus and rail station. The Transport Interchange will connect the park to the greater region.
- The Transport Interchange will 'future proof' the rail service to ensure continued potential for growth in years to come.
- The park development will serve as a key tourism destination that will attract and capture local, regional and national visitation.
- The proposed Langtree Promenade will provide direct access to the Transport Interchange and the entirety of the park. Tourist information will be integrated into the Langtree Promenade.
- Two new pedestrian links will also connect directly to the Transport Interchange and provide greater connection between the CBD and the park. This will further promote and encourage walkable access.
- Way finding interactive elements and signage will form part of the parks education, information and orientation system.
- The integration of a new pedestrian network and cycle network will provide ease of movement and accessibility within the park as well as links to existing external pedestrian and cycling systems.
- Proposed car/bus parking is designed to provide maximum accessibility to all parts of the park. It includes the following: Upgrade and relocation of the wharf car/bus parking to facilitate better capacity and connection to both paddle steamers and the Sound Shell; underground car parking to be located in close proximity to the new Cultural Centre; new car parking to be provided adjacent Jaycee Park and river house boat mooring areas; increased street parking will be provided in close proximity to the Langtree Promenade; and the existing tennis court car park is to be upgraded.

1.4.2 The River

- The river edge natural plant communities will be restored and reinstated to improve the health of the river, improve stabilisation and encourage the return of native fauna.
- The proposed green amphitheatre will provide river access and recreational activities.
- A new boardwalk along the river's edge will form part of the pedestrian linkage for the site and allow short term houseboat mooring.
- The existing boardwalk will be extended and connected to a proposed Deakin Plaza Lookout.
- Boating activities are to be segregated to reduce congestion.

1.4.3 Art and Culture

- A new Cultural Centre will establish important links to schools and universities as well as the park itself. It will also serve as an important tourist destination for the region, providing a range of activity, amenity and facilities.
- Public art works will form an important cultural and educational layer to the park. In addition, a dedicated plaza, between the proposed Cultural Centre buildings, will provide a platform for the display and exhibition of indigenous art and performances.
- The existing Art Gallery is to be retained with the potential for it to curate and promote art installations and events within the park.
- The incorporation of a new Children's Playroom and BBQ Arbour will provide further amenity and space for recreation. The children's playroom will be located adjacent the Rowing Club and the BBQ arbour will sit in close proximity to Jaycee Park.
- Community gardens will be located within the park and will interface with the proposed residential apartments and townhouses, providing amenity and privacy.

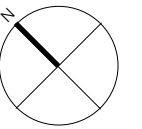
1.4.4 Commercial and Heritage

- The relocation of the Bill Hyder Gardens will allow current recreation space to be retained while also serving as an improved educational resource. The Bill Hyder Gardens could be expanded to provide an interpretive display of the history of irrigation and productive farming practices of the region.
- The existing Rowing Club House has the potential for extension and upgrade with the possible implementation of a restaurant facility.
- The existing Powerhouse building of architectural and heritage significance potentially could be adapted for restaurants; cafés or other similar facilities to further enhance the vibrancy and appeal of the park.
- The existing Skate Park, Jaycee Park and Sound Shell are to be retained and integrated into the new park design, establishing a broader recreational precinct.
- The existing War Memorial is proposed to be relocated and upgraded, allowing this important element to be better viewed, celebrated and appreciated. It's proposed relocation would facilitate larger gatherings by utilising the proposed lawn slope as a green amphitheatre.
- The existing Carriage Sheds are also to be retained for their architectural and heritage value. Future upgrade of these buildings could create a market and events venue.

1.4.5 Natural Environments

- The Rain Gardens proposed for the park will form a key part of the sites natural environment. They will be part of an overall integrated water strategy and will act as the towns stormwater catchment filtration system. The Rain Gardens will be made up of five separate plant community typologies, each representing a plant community found in one of the five major 'Icon Sites' found along the Murray River.
- Existing endangered River Red Gum's are to be retained within the site and along the rivers edge. Additional River Red Gum trees are to be added to help re-establish this community's presence within the parkland. In addition, new lawn areas will be minimised and a range of endemic plant species utilised to assist in promoting the return of native fauna and increasing biodiversity.

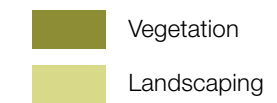
1.4.6 Landscape Masterplan



1.4.7 Landscaping and Vegetation

The following diagram highlights the proposed landscape and vegetation within the Central Precincts area. The landscape component is primarily focused upon sustainable water urban design initiatives providing the basis for the landscape layout.

Existing and new vegetation provides a variety of native flora and endemic plant species.



1.4.8 Plaza and Paving and Boardwalk and Jetty

The following diagram highlights the proposed areas for plazas, paving, boardwalks and jetties within the Central Precincts Masterplan.

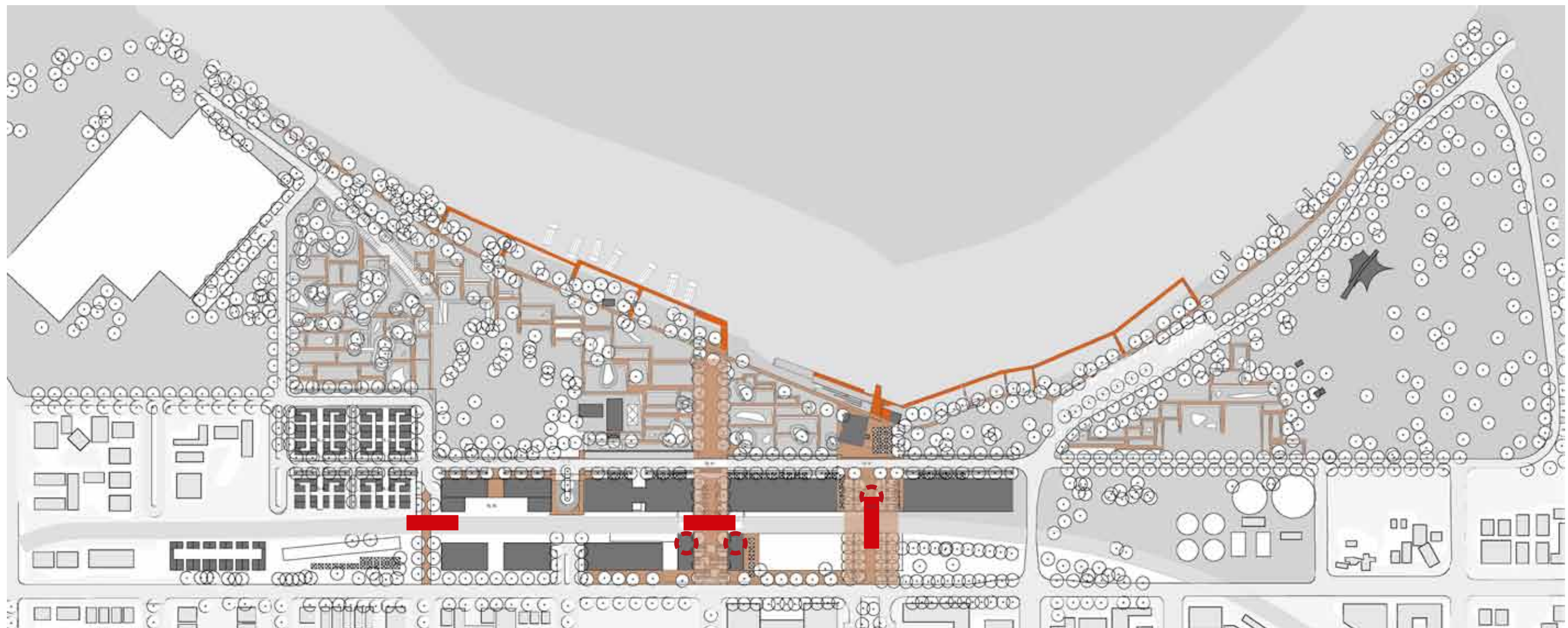
The hardstand elements have been planned to support and enhance pedestrian flows including bike riding and walking in and around the site.

The jetties and boardwalks establish a direct relationship with the riverfront making it accessible to all for river and water activities, including rowing, temporary boat mooring, fishing and paddleboat steamers.

The main pedestrian access points to the site are from Langtree Avenue and the Deakin Ave connections. These plazas provide the a physical and visual connections to the riverfront.

Additionally, all proposed roads have a designated foot path system to allow for effective pedestrian usability.

- Plazas and Paving
- Boardwalks and Jetties
- Bridge
- Public Lifts



DEAKIN PLAZA

Nestled between the two wings of the Cultural Centre this generous plaza space heralds the cultural significance of Deakin Ave and the importance of the riverfront arrival node. A bridge crosses the railway line to meet a new stair/lift that provides access to both the Cultural Centre and Deakin Plaza.

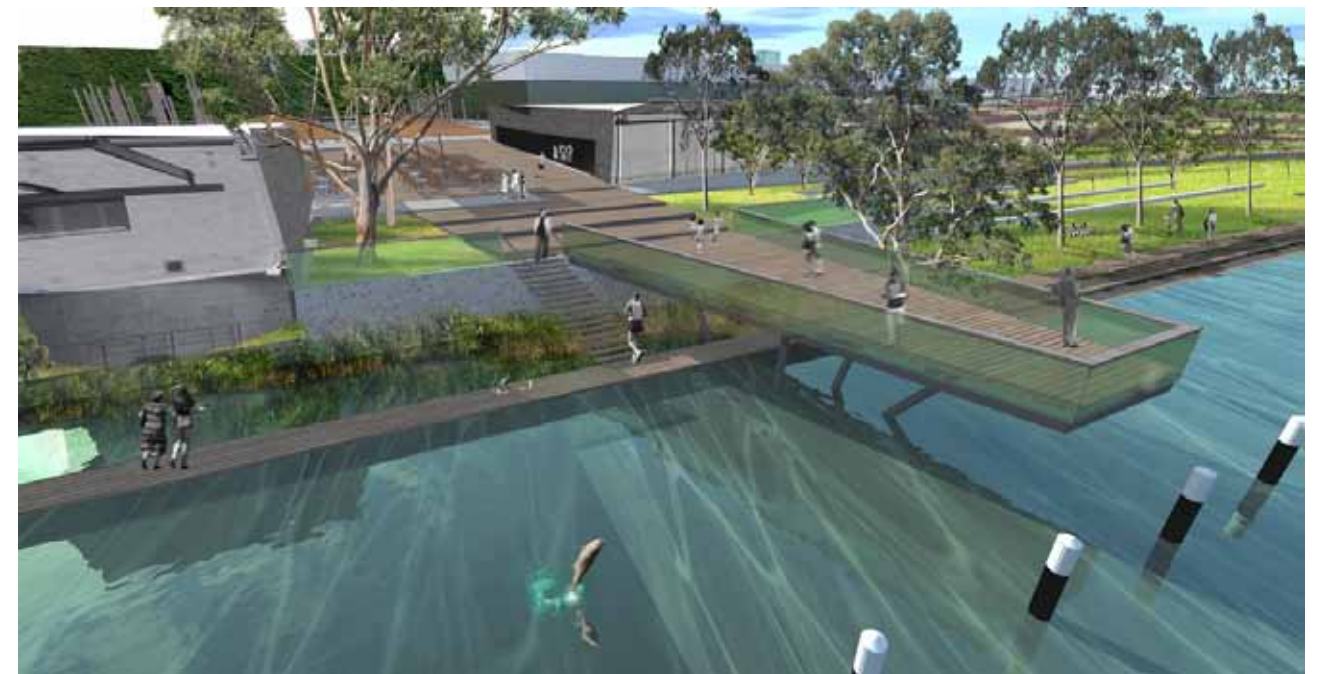
A landscaped wall provides a backdrop to the open plaza space which has interpretive opportunities within a combination of soft and hard landscaping treatments. To the north the plaza opens up to the park spaces with an easy transition to the riverfront.



DEAKIN PLAZA LOOKOUT

This modern feature concludes the Deakin Avenue cultural spine. The lookout will become a feature of the site with its sculptural form. Locals and visitors utilise it to view the river activity and surrounding landscape.

The forecourt to the lookout is the a public seating area linked to a café. The Rowing Club and Pump House buildings flank Deakin Plaza which are proposed to be upgraded and maintained as functional, adaptively reused buildings.



RIVERPARK AND PUBLIC OPEN SPACE

At the junction of Langtree Promenade and the realigned Hugh King Drive public walkways and adjacent park space offer clear views to the riverfront.

These main pedestrian thoroughfares are fully accessible to the public and will be well lit at night to ensure for safety of use. Areas remain accessible to vehicular traffic as needed to service the park.



BOARDWALKS, PATHS AND GRASSED AMPHITHEATRE

Langtree Promenade culminates in a boardwalk with the existing Rowing Club, Deakin Lookout and the proposed grassed amphitheatre located at the riverfront beyond.

Boating traffic including houseboats and paddle steamers have improved mooring facilities and direct access to the park and CBD beyond.



LANGTREE PROMENADE

From the top of Langtree Promenade at the junction of Seventh Street the landscape passes under a new railway bridge to the parkland and riverfront.



LANGTREE PROMENADE TERRACED STEPS

Langtree Promenade terraces up toward the CBD and is flanked by commercial, retail and car park spaces. Soft landscaping is introduced to provide a balance to the hard stand areas and to shade the public spaces.

Public seating has been incorporated to take advantage of the riverfront view and is supported by small retail zones within the terraced Promenade.



LANGTREE PLAZA

Langtree Plaza is situated between the realigned Hugh King Drive and the base of the stairs descending under the rail bridge from the CBD and is flanked by commercial retail space on both sides to activate the area.

Given its size a range of community activities could be supported offering views and a direct connection to the riverfront.



PINE AVENUE RAIL UNDERPASS

The Pine Avenue rail underpass provides a fourth connection point between Seventh Street and the riverfront within the Central Precincts area. This connection would provide the residential areas (existing and proposed) with a direct and safe pedestrian access underneath the railway line.



RIVERPARK AERIAL



CENTRAL PRECINCTS AERIAL



1.5 Car Parking

The following diagram highlights the proposed car parking opportunities within the Central Precincts area. Provided a variety of road side, underground and basement car parking options.

Depending on the density of the proposed residential development it may be appropriate to make allowance for on street parking within the residential areas.

Additional parking has been introduced to support the anticipated increase in visitation to the Central Precincts facilities. Provision to cater for events at the tennis and sound shell have also been considered in establishing car parking capacities.

With the development of the Mildura CBD existing parking areas will be used for the development opportunities. Provision for parking in underground

areas along side Seventh Street will help substitute this lost capacity. These underground parking areas will be integrated with the visitor areas along the boundary of the Central Precincts area.

Car parking will be integrated with new access roads throughout the development increasing accessibility to the parkland and riverfront.

- Road side public: Approx 400 spaces
- Underground public: Approx 250 spaces
- Basement private: Approx 400+ spaces



1.6 Traffic and Infrastructure

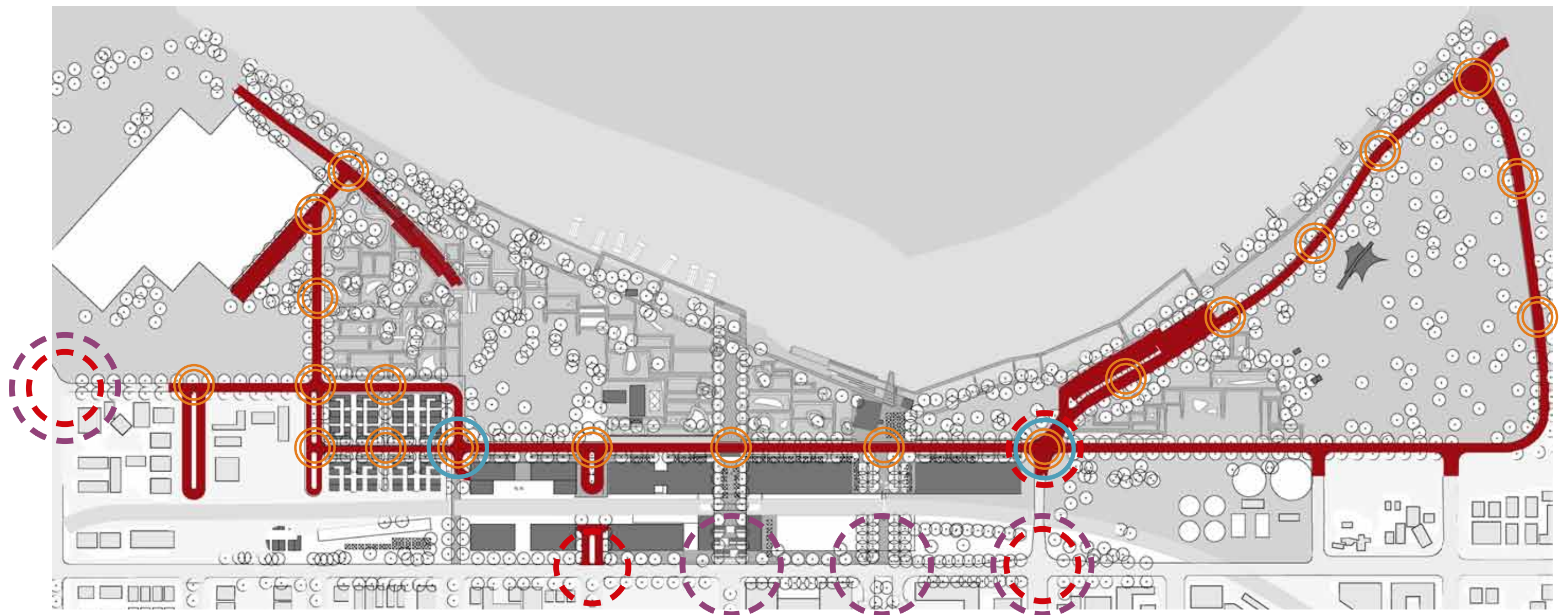
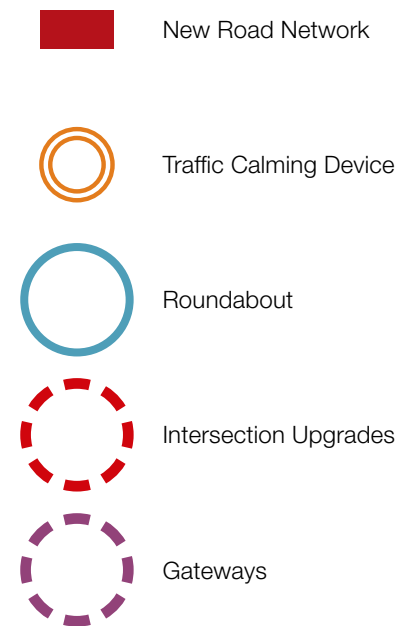
The following diagram highlights the new roads that connect the Central Precincts area to Mildura's existing road network. Two main vehicular gateways are identified at Hugh King Drive and Madden Avenue, and Hugh King Drive and Chaffey Avenue providing the primary access points to the Central Precincts area.

Hugh King Drive has been realigned to better serve the riverfront providing appropriate levels of access to the public facilities, riverfront and residential areas.

New roads have been devised to cater for the anticipated volume of traffic and provide emergency vehicle access to all areas of the development.

Appropriate intersection upgrades are required at the following intersections: realigned Hugh King Dr and Madden Ave; Madden Ave and Seventh Street; Lime Ave and Seventh Street; and realigned Hugh King Dr and Chaffey Ave.

Traffic calming devices including speed humps and signage are to be provided as part of the road infrastructure.



1.7 Water Management

1.7.1 Water Sensitive Urban Design

- The project offers a major opportunity to implement sustainable water management initiatives with benefits that reach beyond the site itself.
- Proposed Rain Gardens for the park will be a key part of an overall integrated water strategy for the site that forms part of the city's stormwater catchment filtration system.
- There will be five Rain Garden community typologies in total, each representing a plant community found in one of the five major 'Icon Sites' found along Murray River. The 'Icon Sites' are so named because of their ecological, cultural and Indigenous significance. The five Rain Garden community typologies are derived from those found in the Baramah-Millewa Forest; Gunbower-Koondrook-Perricoota Forest; Hattah Lakes, Chowilla Floodplain and Lindsay-Wallpolla Island; Lower Lakes and the Coorong and Murray Mouth.
- The proposed Rain Gardens will filtrate stormwater captured from the urban catchment. They will act as filtration and storage facilities as well as educational and environmental places of learning. They will also contribute to the improved water quality of the river by reducing contaminated stormwater outflows.



- The total stormwater catchment collected in the parks filtration system is 114ha, 170 ML/year.
- Two options are proposed for the reuse of stormwater from the urban catchment. The first option would be to reuse captured non-potable water to meet the irrigation needs of Riverpark and other local parks. The second option would be to redirect captured non-potable water to the LMW water plant where it would be further treated for future potable use.
- Solar panels will be installed on a number of the developments roofs to provide power for the park lighting, irrigation pumps, and other associated operations.
- A centralised park composting area is proposed. This could provide an important resource and remove the need for external importation of such organic materials.
- The park is designed to minimise irrigation needs and potable water demands and is to be both flood and drought proof.
- The park will reduce areas of lawn and utilise a range of endemic plant species. This will promote biodiversity, increase the longevity of the parks life, reduce maintenance needs, lower irrigation



- requirements, and encourage native fauna to frequent the site.
- The proposed planting will also implement and celebrate traditional bush foods (aboriginal) of the region.
- Significant site trees are to be retained and added to. This will increase biomass through carbon banking and so reduce the carbon footprint of the development.
- The design will seek to use local materials with low embodied energy and will utilise salvaged, recycled and reclaimed materials where possible. Hard surfaces are to be minimised and shade provided through tree planting and built shade structures.
- Green roofs are also proposed for a number of the developments new buildings. These combined measures will assist in reducing any urban heat island effects.
- The design aims to secure new funding made available as part of the National Urban Water and Desalination Plan. In particular, the project seeks to meet key assessment criteria through its stormwater harvesting and water recycling initiatives.





1.7.2 Black Water Treatment

- A black water treatment plant is proposed to treat all sewage generated by the new riverside development. Initial calculations indicated that a plant 45 kilolitre per day plant would be required. The plant would treat the sewage to Grade A standard so that it can be used within buildings for toilet flushing and other non-potable uses. Excess black water could be reticulated for irrigation or non-potable uses in the CBD. If there was excess stormwater this could be blended with the black water for distribution.
- There is a significant opportunity to integrate an urban recycled water network in Mildura that could start to create considerable potable water savings. A significant volume of this water could be sourced from black water treatment and harvested rainwater. Stormwater collated on the site and not required for irrigation of the parklands could also contribute to this supply of recycled water.



The following diagram highlights the location of the Rain Gardens filtration beds and the black water treatment plant.


-  Rain Garden filtration zones
-  Black water treatment plant and water storage zone

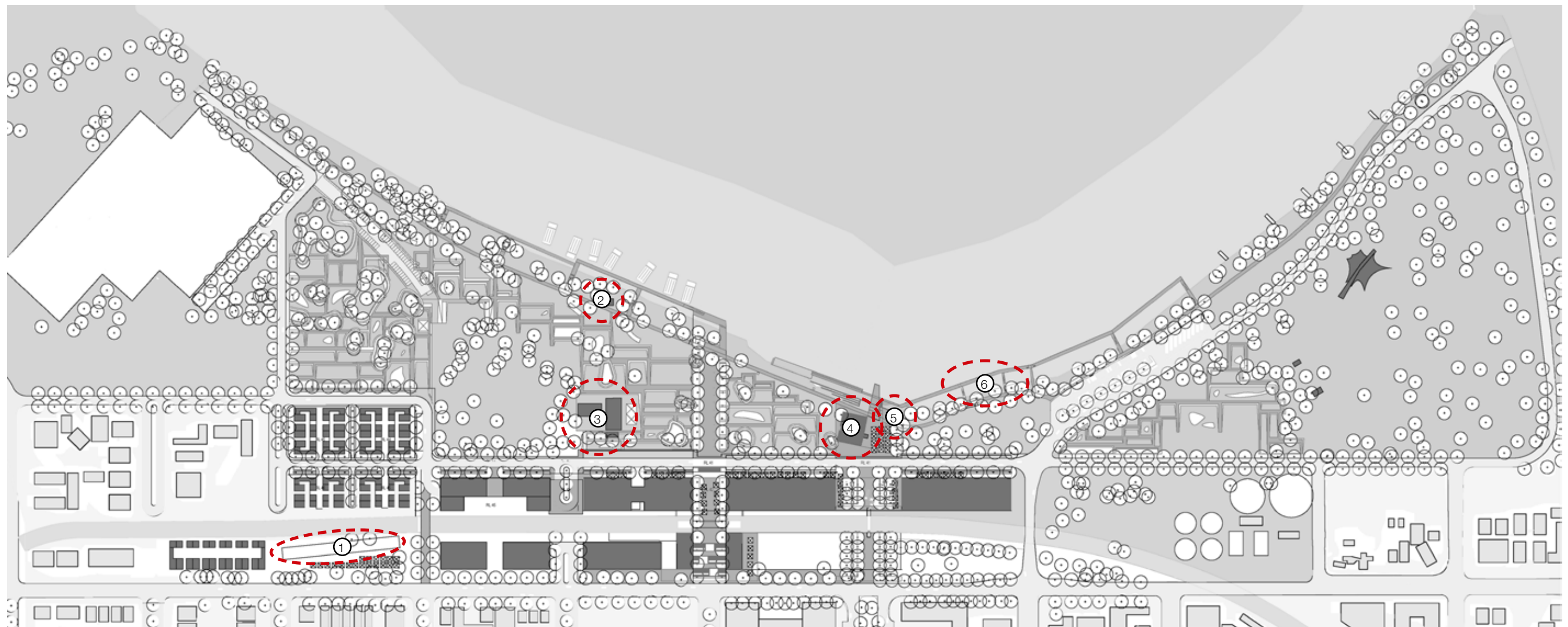


1.8 Retaining Existing Buildings

The following diagram highlights the buildings and structures which are to be retained and adaptively reused within the Central Precincts area. These structure include:

- ① Railway Cooling Shed
- ② Original Pump House
- ③ Powerhouse Performance Space
- ④ Rowing Club
- ⑤ Current Pump House
- ⑥ Wharf Structure

 Existing buildings to be retained



1.9 Flood Management

The following diagram highlights the 1 in 100 year flood level, based upon the historic 1956 flood.

The current parklands are affected in heavy rainfall events by flood waters from the Murray River. It is important that during the development of the riverfront precinct the area which currently supplies flood storage along the bank of the Murray should not be altered in a manner which adversely affects the flood levels down

stream of the precinct. In order to ensure this does not happen the flood storage should be retained with the volume between the 100 year flood level and the ground level not to be decreased.

Should buildings be proposed within the flood plain and their floor levels set above the flood levels, there will also be a requirement for compensatory storage within the flood affected area. This storage may be

acquired by requiring landscaped areas to be further below the flood level.

As the levels proposed for the landscaped areas which are the main flood affected area are relatively close to the existing ground level it is likely that there will not be an issue with adversely affecting the flood levels downstream of the precinct.

Buildings which are to be constructed will need to either be built with floor levels above the 100 year flood levels or be designed to prevent water egress during a flood event, this could mean the incorporation of flood gates at all openings exposed to the flood waters.

1 in 100 Year Flood Level

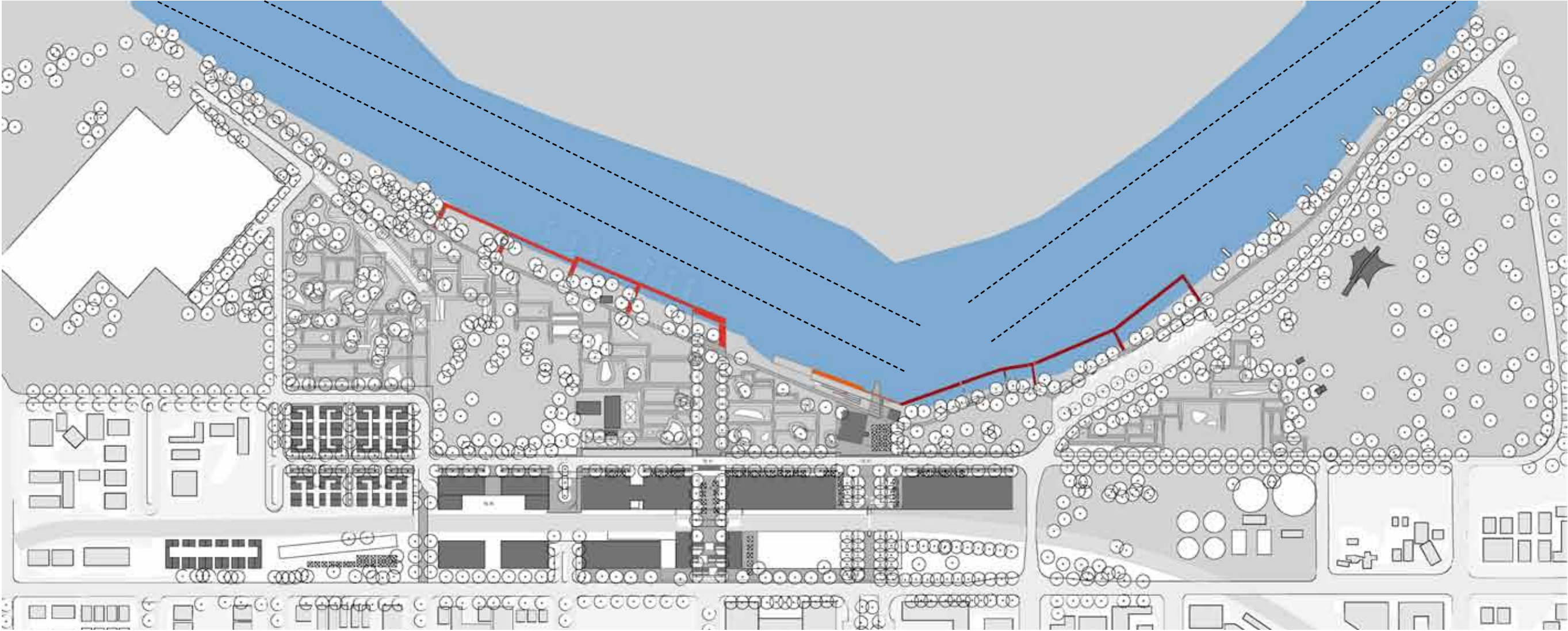


1.10 River Activity

The following diagram highlights the issues that have been considered for river activities, including jetties for temporary mooring, jetties for rowing use, jetties for paddleboat steamers and the approximate location of the existing rowing course.

It is recommended that a water management plan shall be undertaken to respond the river activity uses, to ensure all interested parties are considered.

- Murray River
- Jetty for temporary mooring
- Jetty for rowing use
- Jetty for paddleboat steamers
- Rowing course (approx position)



1.11 Site Works

The following diagrams highlights the major and minor cut and fill site works in the Central Precincts area.

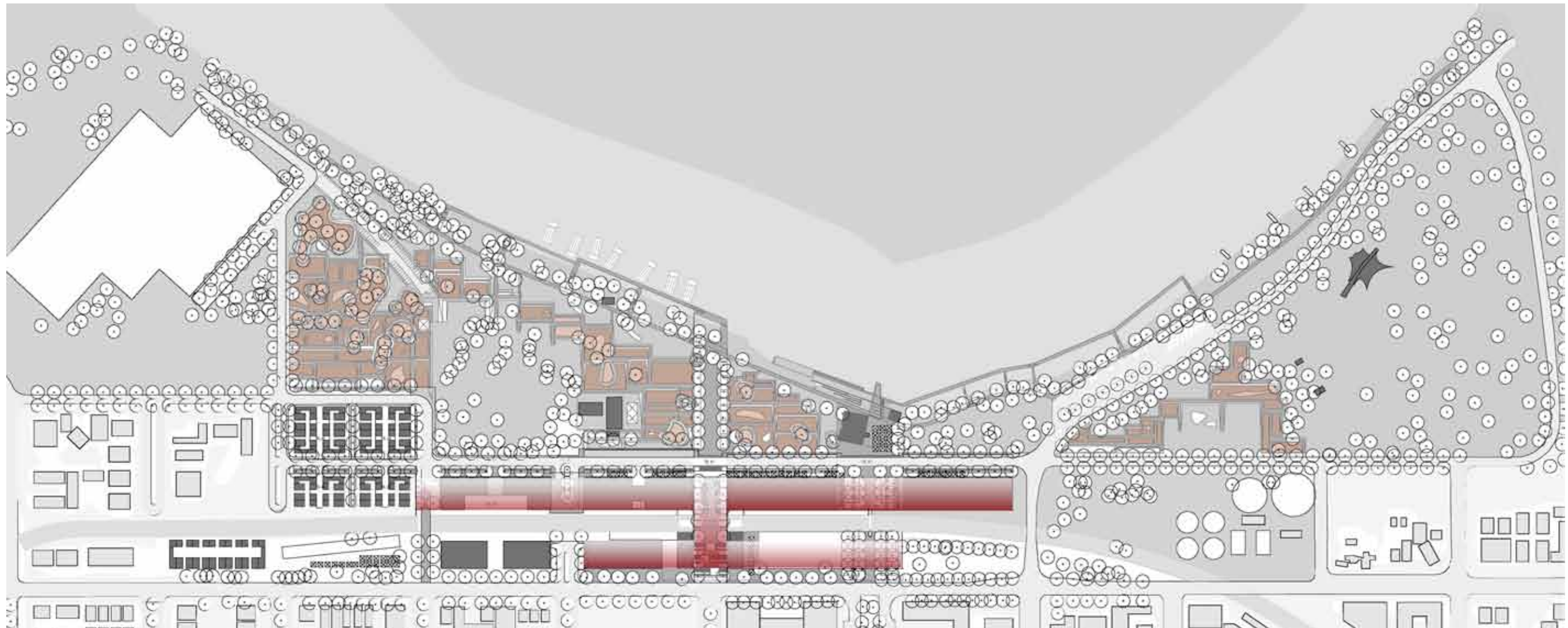
The Masterplan locates a number of buildings along the boundary of the rail corridor. Positioning structures in close proximity to this corridor would result in the level differences between the it and the toe of the embankment to be restrained through earth retaining structural walls. Consideration for the allowable

proximity to the rail corridor will be required during concept design of these buildings.

The landscaped zones have been positioned to balance the cut and fill for these areas, however proposed underground car parks and pedestrian walkways will result in excess cut volumes within the site. This excess material will require disposal from the site and depending on the state can potentially

be reused for fill on other projects. Soil found to be unsuitable or contaminated will need to be disposed of in a suitable dumping area.

- Major Cut and Fill Zones
- Minor Cut and Fill Zones within Riverpark



1.12 Sustainability

The achievement of sustainable development requires substantial change from the conventional approach to both development and occupation. It will require commitment from Mildura Rural City Council and other authorities and stakeholders to be successful.

Underpinning the sustainable development approach is the establishment of an entity responsible for oversight of the development and ultimately management of the Mildura Riverfront Precincts; a multidisciplinary team of sustainability-focussed design and development professionals drawn from the Mildura community, and further abroad if necessary skills are not available locally.

The role of this entity will be to:

- Provide leadership and innovation and seek funding grants to assist in the implementation of sustainability initiatives;
- Work with proponents and end users of specific developments from the earliest possible stage to encourage sustainability objectives and considerations to be incorporated;
- Maintain on-going involvement in the development and management of the site to facilitate long term achievement of sustainability outcomes, including management of the parklands;
- Perform an advisory role to Council; and
- Provide a forum for inter-disciplinary knowledge transfer.

The following sections provide a sustainability action plan for the future development proposed for the Central Precincts, building on proposals developed in the preparation of the original Masterplan and responding to emerging issues such as climate change and the urgent need to protect and enhance the Murray River.

The sustainability Action Plan identifies a range of sustainability measures for the future development of the site across four key performance measures:

- Environment;
- Natural Resources;
- Societal;
- Economic.

1.12.1 Environment

ECOLOGY

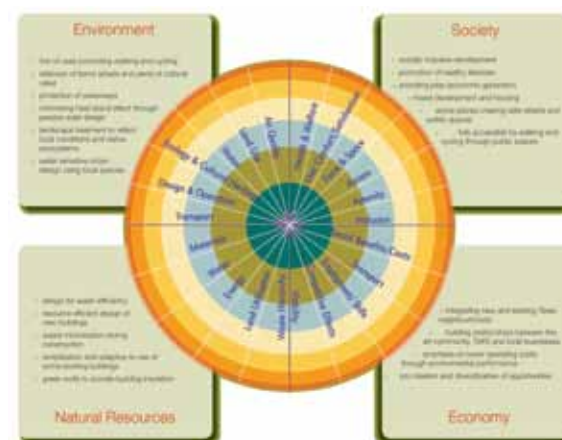
- Remediation of the riverbank and parkland with 100% native and endemic species;
- Construction of wharfs/boardwalks to protect riverbank from erosion;
- Increase in parkland area and vegetation cover against existing condition and reduction in irrigated lawn areas;
- Retention of River Redgums;
- Stormwater detention and treatment system to improve water quality and thereby enhance the aquatic environment of the river.

WATER QUALITY

- Stormwater detention and treatment system to improve water quality;
- Reduced hard surfaced areas.

MANAGEMENT

- Regulatory compliance to be exceeded. Best practice sustainability outcomes to be the goal.



1.11.2 Natural Resources

LAND USE

- Fill is only to leave the site where beneficial reuse is guaranteed;
- Minimal additional development within the floodplain.

WATER USE AND TREATMENT

- Water efficient fixtures and fittings to be used and drought resilient native landscaping species;
- Black water treatment and reuse for non-potable purposes in buildings;
- Rainwater harvesting and reuse for non-potable purposes in buildings;
- Stormwater harvesting of the urban catchment with on-site treatment via gross pollutant traps, constructed wetlands, bioswales and filtration areas along with detention and reuse;
- Water sensitive urban design including reduced hard surfaces;
- Flood and drought tolerant landscape species;
- Investigation into potential expansion of recycled water network in Mildura proposed;

- Overall water strategy to be developed, incorporating best practice water management education initiatives.

ENERGY AND GREENHOUSE GAS EMISSIONS

- Building envelopes orientated to promote energy efficiency;
- Opportunities for use of ground source heat pumps and thermal mass of ground to stabilise temperatures in buildings and reduce energy demand;
- Solar photovoltaic cells, solar hot water and solar powered street lighting to contribute renewable energy;
- Other opportunities to be investigated such as small scale hydroelectric power off the weir, small scale wind power and cogeneration;
- Energy efficiency standards to be applied (e.g. greenstar™, LEED etc);
- Reduced law areas to cut down on requirement for mowing;
- Increased landscaping contributing to carbon sequestration;



- Museum to be earth covered, providing thermal mass;
- Energy and Carbon Strategy to be developed for the site.

RESOURCE RECOVERY

- Reuse of existing buildings and materials;
- Green and organic waste to be collected as feedstock for composting for use in landscaping and community garden;
- Recycling bins to be provided in public areas;
- On-site separation of recyclables to be maximised within buildings;
- Construction waste recycling target of 60% by mass;
- Waste Strategy to be developed for the site.

MATERIALS

- Increased adaptability and robustness of buildings due to smaller blocks and building sizes. Design for longevity;
- Use of local and natural materials;
- Building designs to be materials efficient including use of recycled materials, reduced use of materials

through modular design and prefabrication, reduced services requirements and minimal interior finishes;

- Buildings to be designed for disassembly and recyclability at end of life;
- Performance standards for materials to be established;
- Transport materials by rail where possible.

1.12.3 Societal

COMMUNITY

- Cultural Centre to be established incorporating Aboriginal Cultural Centre, non-indigenous cultural exhibitions and a Murray River research centre to host displays, community art and community activities as well as linking with education programs, schools and universities.
- Maintenance of important existing community facilities including Jaycee Park and the Rowing Club as well as provision for enhanced open spaces reflecting local history and meeting community needs for passive recreation, entertainment and meeting places.
- Opportunities for public art to be incorporated.
- Foster ongoing community involvement in development, management and use of the site.

ACCESS AND TRANSPORT

- Connections with the surrounding community enhanced with pedestrian and cycling links, particularly links with the CBD and surrounding residential areas.

- Encourage walkable access to park with shaded streets
- Integration of links with the Chaffey trail as a historically significant route along the riverfront.
- Enhanced transport Interchange incorporating uses which will activate the space and improve safety. Provision for tourist bus parking.
- Construction of additional wharfs to enhance houseboat moorings and access.
- Improved wharfs for paddleboats incorporating tourist bus parking.
- Bicycle hire within the precinct.
- Retention of railway line for future tourism, freight and interstate travel.

HEALTH AND WELFARE

- Parkland to promote active lifestyles through walking and cycling links as well as swimming and passive recreation. Also linking with existing recreation and leisure opportunities for tennis, rowing, bowling, riverboat cruises and other sporting activities.
- Increased security and safety through environmental design including passive surveillance of parkland areas by mixed use zones.



- Reduce road areas and strong pedestrian treatments to reduce the impact of traffic.
- Provision of adequate accessible parking to provide easy access for the mobility impaired.
- Landscaping to provide shading and enhance the microclimate in response to climate change.
- Buildings to be designed for internal environmental quality, optimising natural daylighting and ventilation and responding to future increases in temperature associated with climate change.
- Reduced hard surfaces to minimise urban heat island effect.

FOOD

- Landscape to incorporate native bush foods
- Community gardens provided in close proximity to residential uses
- Education in permaculture principles.
- Farmers market and cellar door to supply fresh local produce.

HERITAGE

- Cultural Centre to celebrate Aboriginal culture and non-indigenous culture, including heritage features of the site and the surrounding region and its peoples.
- Aboriginal memorial wall to acknowledge the relationship between the Aboriginal people and ancestors and the River Murray.
- Landscape pattern reflects the agricultural character of the region as well as incorporating native foods and bush tucker.
- Naming of the site and site features to reflect outcomes of consultation with Aboriginal and non-indigenous community and drawing on community heritage.

AMENITY

- Optimise views up and down stream and the overall amenity of green spaces and public places throughout the site.

Housing:

- Housing to accommodate a mixed, diverse community.
- Housing Strategy to be developed.

1.12.4 Economic

TENURE

- Mixed tenure site, including Native Title, giving recognition to historical, community and future aspirations for land.

EMPLOYMENT

- Increased employment and economic development, particularly through enhanced tourism opportunities associated with the river (e.g. paddleboats and houseboats), the cultural and research centre, accommodation and convention centre and mixed commercial and retail development.

VIABILITY

- Funding security and staging being determined, including attracting Federal Government funding for Murray River projects.

INNOVATION

- Numerous opportunities for innovation including through the cultural and research centre, green building design, best practice water management and renewable energy. Further opportunities to be explored.



1.12.5 Key Recommendations



1.13 Zoning and Statutory Controls

The Mildura Riverfront redevelopment will require a review current planning controls to allow implementation of the new vision. The existing zoning pattern in part is outdated is inconsistent with the outcomes flowing from the Masterplanning process. There is an opportunity to consider the types of land uses that are desirable now and into the future.

There are a number of ways that planning controls for the site can be introduced. The traditional approach can be adopted by establishing the land use zone for each within the Central Precincts and apply the appropriate colour to the plan. This will require a good understanding of the land uses sought for each precinct. See Option 1.

Alternatively the study site can be given a 'Comprehensive Development Zone' CDZ1. This would mean that one comprehensive zone would apply to the whole of the area. The Mildura Riverfront Masterplan would appear to be well suited to this approach, and would ensure all development consider the overall objectives of the zone.

As part of this approach to the zoning the final adopted Masterplan would become and 'incorporated plan' requiring all future development to be carried out in accordance with its recommendations. To ensure each precinct within the Masterplan appropriately responds to its locality each could be the subject of a Development Plan that sets out building heights, setbacks uses of buildings and overall Urban Design objectives. Where Development Plans are established Permits would not then be required. See Option 2.

A combination of the above options could also be considered, for example the open space components of the site where no development is considered appropriate could be zoned in the usual way with the balance of the site being covered by a CDZ1 zone. See Option 3.

A 4th option is to utilise the Masterplan as the means to implement within the existing planning scheme. This is perhaps linked to Option 2.

In general terms it is considered that the CDZ1 zone is a desirable approach, providing overall flexibility but within the objectives of the Masterplan while also providing an opportunity to include design controls relative to the Precincts. If this approach is to be adopted it is recommended that a Development Plan be prepared for each Precinct within the Masterplan. This approach was adopted for the "Victoria Gardens" site on the Yarra River and a CDZ1 zone included into the Yarra Planning Scheme.

1.13.1 Existing Aerial Plan



1.13.2 Existing Zoning Plan



- Zone CDZ1
- Zone MUZ
- Zone PUZ
- Zone R1Z
- Zone PPRZ

1.13.3 Zoning Option 1



1.13.5 Zoning Option 3



1.13.4 Zoning Option 2



1.13.5 Zoning Option 4



2.0 Developed Feasibility Design

The developed feasibility explores some of the technical data associated with the preferred Masterplan and outlines some of the variations available to particular development sites.

A reference system has been implemented across the Masterplan so that each 'development site' or component of the public domain can be itemised and explained in detail. Referencing follows a sequential approach from west to east and south to north.



Image
Central Precincts Masterplan
Figure Ground Plan.

2.1 Options for Site Development

2.1.1 Residential Zones



2.1.2 Commercial Zones



2.1.3 Cultural Zones

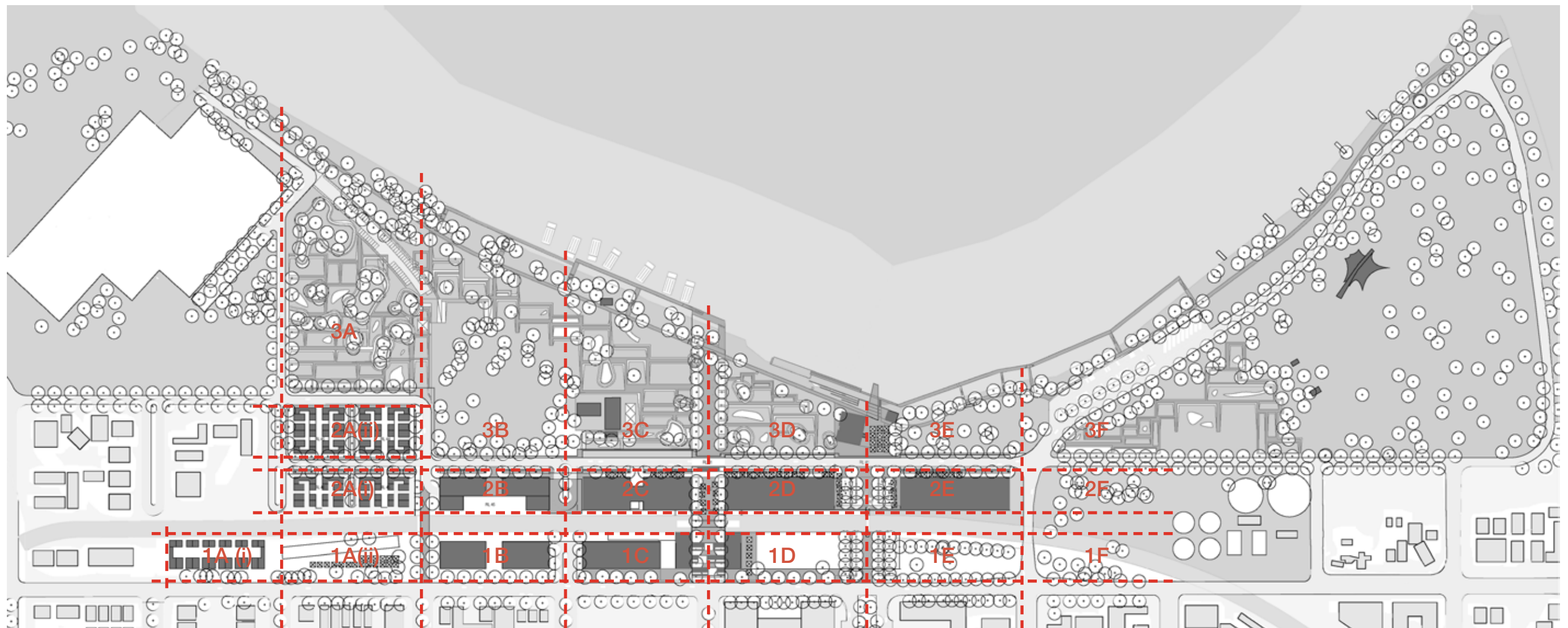
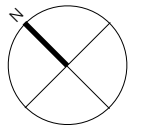


2.1.4 Open Space and Public Domain Zones



2.2 Site Break-up

The following diagram highlights the site referencing and should be read in conjunction with the table on the facing page.



2.3 Tabular Analysis of all Zones

	Residential - Low/Medium Density
	Residential - Medium/High Density
	Mixed Use - Residential/Commercial
	Accommodation/Conference/Retail
	Heritage Adaptive Reuse
	Adaptive Reuse
	Cultural Centre
	Transport Interchange/Commercial
	Retail
	Public Domain

Site	Description		Site Area (m²)	General Inclusions	Building Areas (m²)	Building Envelope	FSR	Zoning Option 1	Zoning Option 2	Zoning Option 3
1A (i)	Residential		4000	Option Medium Density (12, 2 Story Townhouses)	1400	2 Story Townhouses	0.35:1	R1Z	CDZ1	CDZ1
1A (ii)	Carriage Shed / Market Square		6700	Shelter Refurbishment Landscaping Amenities	1200 5400 100	Existing Single Story	0.2:1	PPRZ	CDZ1	CDZ1
1B	Staged Commercial / Residential		5100	Basement Car park Commercial / Residential Residential Option Low (24, 2-3 Bed Units) Residential Option High (32, 2-3 Bed Units)	2000 2000 4000 6000	Basement Car parking Ground Commercial / Residential Levels 2-3 Residential Levels 2-4 Residential	Low = 1.2:1 High = 1.6:1	MUZ	CDZ1	CDZ1
1C	Transport Interchange / Commercial		4800	Basement Parking Transport Interchange (station) Commercial Option Low Commercial Option High	3600 1000 3600 5400	Basement Car parking Ground Station Levels 2-3 Commercial Levels 2-4 Commercial	Low = 1.0:1 High = 1.3:1	MUZ	CDZ1	CDZ1
1D	Public Park / Langtree Underpass		6800	Underground Car park Café Langtree Underpass Landscaping	3200 500 1800 5000	Basement Car parking Single story	0.1:1	PPRZ	CDZ1	CDZ1
1E	Public Park / Deakin Bridge		7100	Landscaping Access Lane / Retaining Wall Ex. Memorial	6100 1000	n/a	n/a	PPRZ	CDZ1	CDZ1
1F	Public Park / future development Site			Landscaping	3000	n/a	n/a	MUZ	CDZ1	CDZ1
2A (i)	Residential		4500	Option Medium Density (16, 2 Story Townhouses) Option High Density (30, 2-3 Bed Units) Option High Density underground Car park	2500 5400 1600	2 Story Townhouses Level G-3 apartments Basement Parking	Med = 0.55:1 High = 1.2:1	R1Z	CDZ1	CDZ1
2A (ii)	Residential		5300	Option Medium Density (24, 2 Story Townhouses) Option High Density (48, 2-3 Bed Units) High Density underground car park	4000 6300 1500	2 Story Townhouses Level G-3 apartments Basement Parking	Med = 0.75:1 High = 1.2:1	R1Z	CDZ1	CDZ1
2B	Residential		3500	Option Medium Density (14, 2 Story Townhouses) Option High Density (32, 2-3 Bed Units) Option High Density underground car park	2200 6000 1700	2 Story Townhouses Level G-3 apartments Basement Parking	Med = 0.6:1 High = 1.7:1	MUZ	CDZ1	CDZ1
2C	Visitor Accommodation		3900	Basement Car park Retail Accommodation / Associated Functions Convention Centre	3400 400 8000 2800	Basement Parking Ground Levels G- 3 Level 3	2.8:1	MUZ	CDZ1	CDZ1
2D	Cultural Centre		5000	Display Spaces / Research / back of house Langtree Plaza Pedestrian Promenade	3000 1600 400	1 Level (grassed Roof)	0.6:1	PUZ	CDZ1	CDZ1
2E	Cultural Centre / Deakin Plaza		6900	Display Spaces / Research / back of house Deakin Plaza Basement Car parking Pedestrian Promenade	3000 3000 3000 400	1 Level (Grassed Roof) Basement Parking	0.4:1	PUZ	CDZ1	CDZ1
2F	Public Park / Skate Park			Landscaping	n/a	n/a	n/a	PPRZ	CDZ1	CDZ1
3A	Public Park			Landscaping	n/a	n/a	n/a	PPRZ	CDZ1	PPRZ
3B	Jaycee Park / Public Park			Landscaping Jaycee Park Boardwalk	n/a	n/a	n/a	PPRZ	CDZ1	PPRZ
3C	Public Park			Landscaping Boardwalk Existing Powerhouse	780	Existing single story	n/a	PPRZ	CDZ1	PPRZ
3D	Public Park			Landscaping	n/a	n/a	n/a	PPRZ	CDZ1	PPRZ
3E	Public Park			Landscaping Existing Rowing Club Existing Pumphouse	600	Ex. Single story	n/a	PPRZ	CDZ1	PPRZ
3F	Public Park			Landscaping	n/a	n/a	n/a	PPRZ	CDZ1	PPRZ

2.4 Residential Zones

The residential areas as highlighted on the adjoining drawings cover five 'development sites'. As outlined in the table on page 39 there are a number of development options for each residential site.

Site 1A (i): Adjoining Seventh Street and flanking existing residential development, medium density townhouse development consisting of 12 townhouses, associated yard and garaging is proposed.

Site 1A (ii): The adaptive reuse of the Carriage Shed into a publically accessible 'pocket park' with structure to become a shelter to paved BBQ and seating areas.

Alternative: Ability for space to be leased for public uses such as Sunday markets.

Alternative: Ability for space to be adaptively reused as a functional building for dedicated uses only such as 'special' office space, educational facility etc. Cultural facilities and residential are not considered suitable.

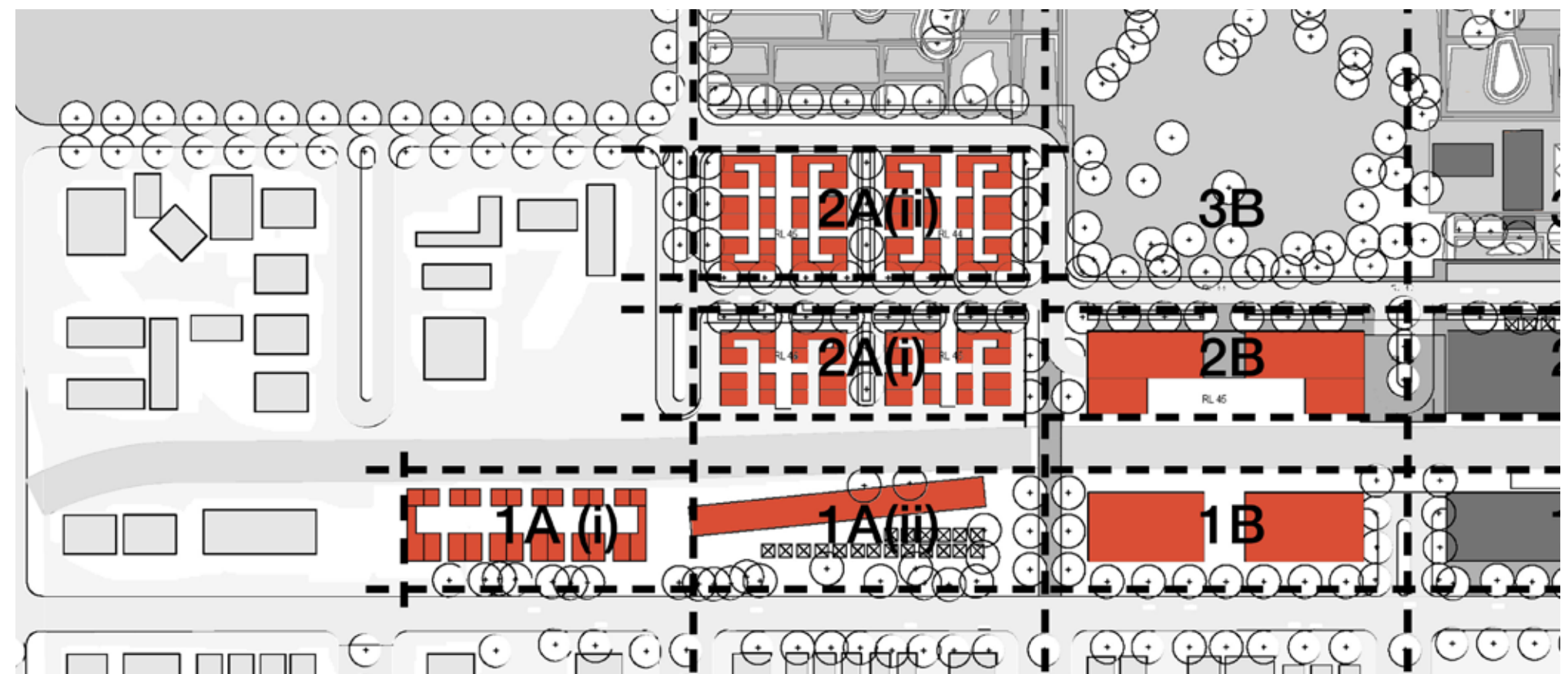
Site 1B: Currently occupied with a number of privately owned single lot housing, the outcome depicted on this site is a medium to long term outcome. A staged approach could be considered to provide a mixed use residential/commercial outcome with market demand likely to determine the mix. 24-32+ units/apartments can be considered for this site with balconies and basement car parking.

Site 2A (i + ii): Currently shown as 16 and 24 townhouses respectively, these residential development sites will sit comfortably adjacent existing residential development with park amenity. These sites can be developed independently of the rest of the Central Precincts given their proximity to existing road and services infrastructure.

Alternative: Larger scale unit development or mixture.

Site 2B: Medium-high density residential development with potential for up to 32 units/apartments at its highest density.

Alternative: Lower scale townhouses or mixture.



2.5 Commercial Zones

The commercial areas as highlighted on the adjoining drawings cover three 'development sites'. As outlined in the table on page 39 there are a number of development options for each commercial site.

Site 1C: Transport Interchange provides ground floor functional spaces for transport and visitor information spaces. Allocations for on site bus drop-off areas and basement car parking. Commercial space above is shown at 2 levels of approx 1,800m² per level which is available for either dedicated or speculative end users. There is public lift accessibility between levels.

Alternative: Additional commercial floor.

Note: VicTrack have indicated the rail platform must be a minimum length of 160 metres. Additionally a 5 metre clearance must be maintained between the rail corridor, station buildings and platform.

Site 1D: Small commercial/retail facility linked to public car park, Langtree Promenade and park. Public lift for accessibility between levels.

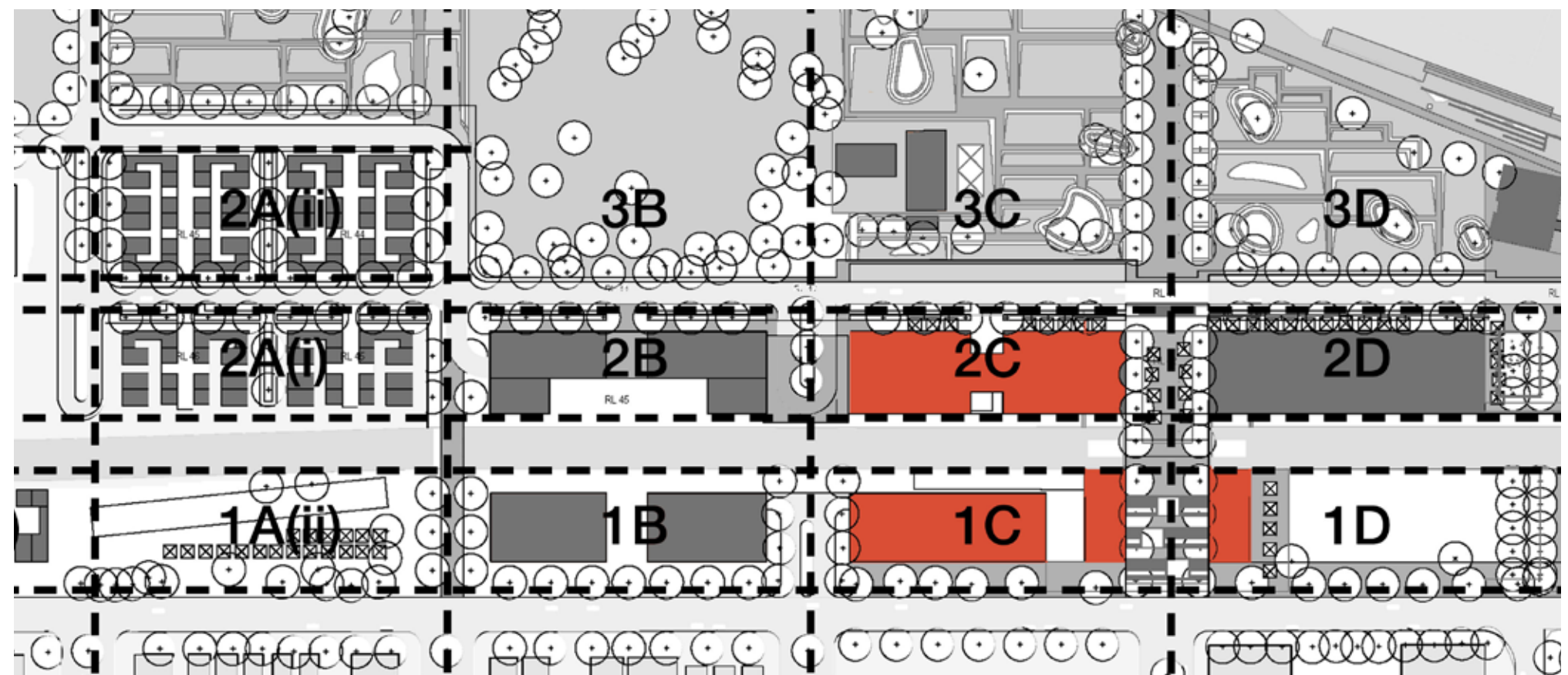
Site 2C: Hotel and Convention Centre is shown as a four storey structure with ground level (lower ground floor) dedicated to retail and hotel support services. Some car parking can exist on ground floor as well as basement parking underneath.

Given a cross fall in the site the hotel lobby can exist on the first floor (upper ground floor) with covered entry, restaurant(s) and some hotel suites available at the same level.

The next floor is dedicated to hotel suites with an opportunity for a dual key arrangement and/or serviced option for longer stay.

The upper level provides additional hotel suites which can be pitched as executive style. Also on the top floor is the convention centre with almost 3,000m² available to be developed all at once or in stages. The convention space can be custom design with no real limit on height/volume of the space and will have prime views of the park and river.

140-160 hotel suites are considered viable.

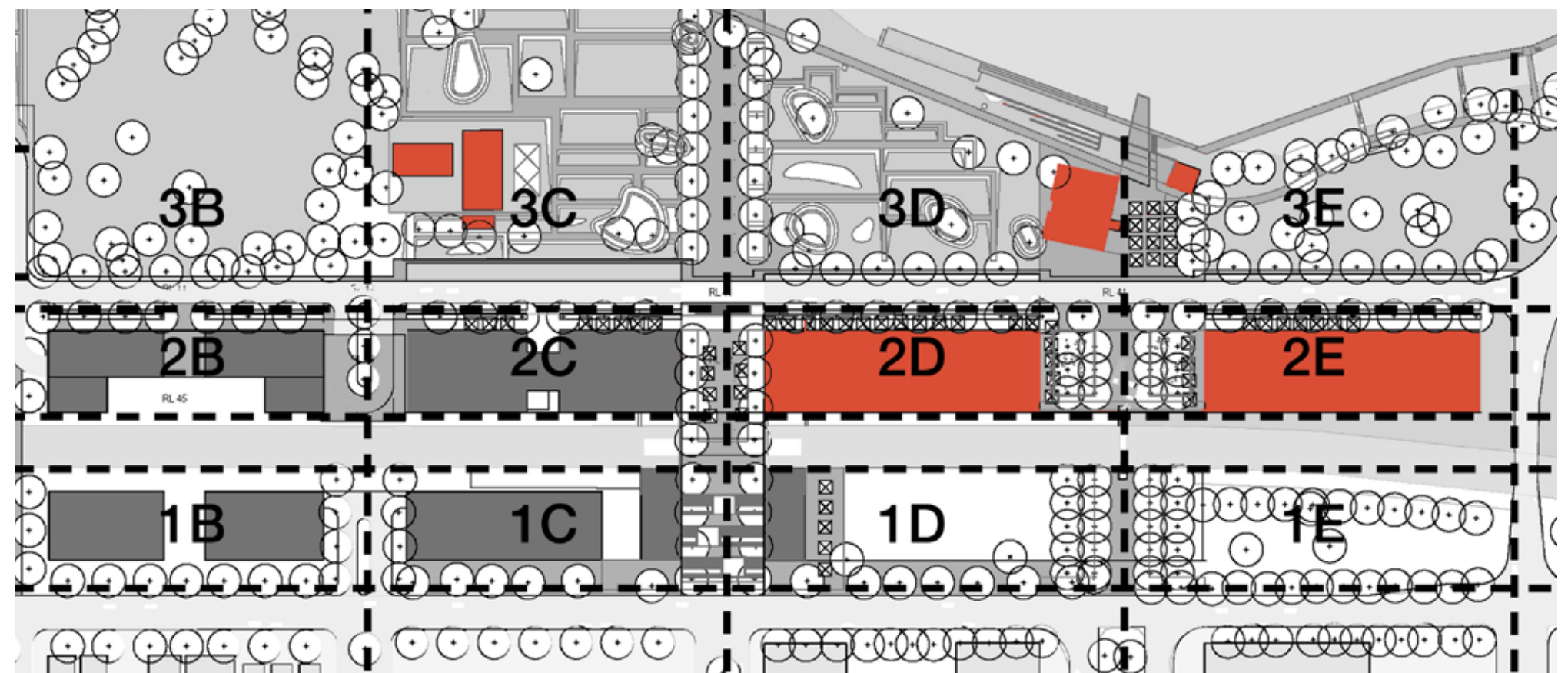


2.6 Cultural Zones

The cultural areas as highlighted on the adjoining drawings cover two 'development sites'. As outlined in the table on page 39 there is an opportunity to develop up to 6,000m² for cultural facilities in multiple stages.

The Cultural Centre built form is depicted at a single large storey/volume to provide ultimate flexibility within the space. The proposal for a green roof and the southern retaining wall against the rail line, the ultimate building design opportunity and ESD initiatives provide the framework for an exciting outcome.

Also highlighted are existing buildings within the park that have an existing cultural function. It is proposed to retain and enhance these existing facilities with the buildings rejuvenated as part of the overall Central Precincts development.



2.7 Open Space and Public Domain Zones

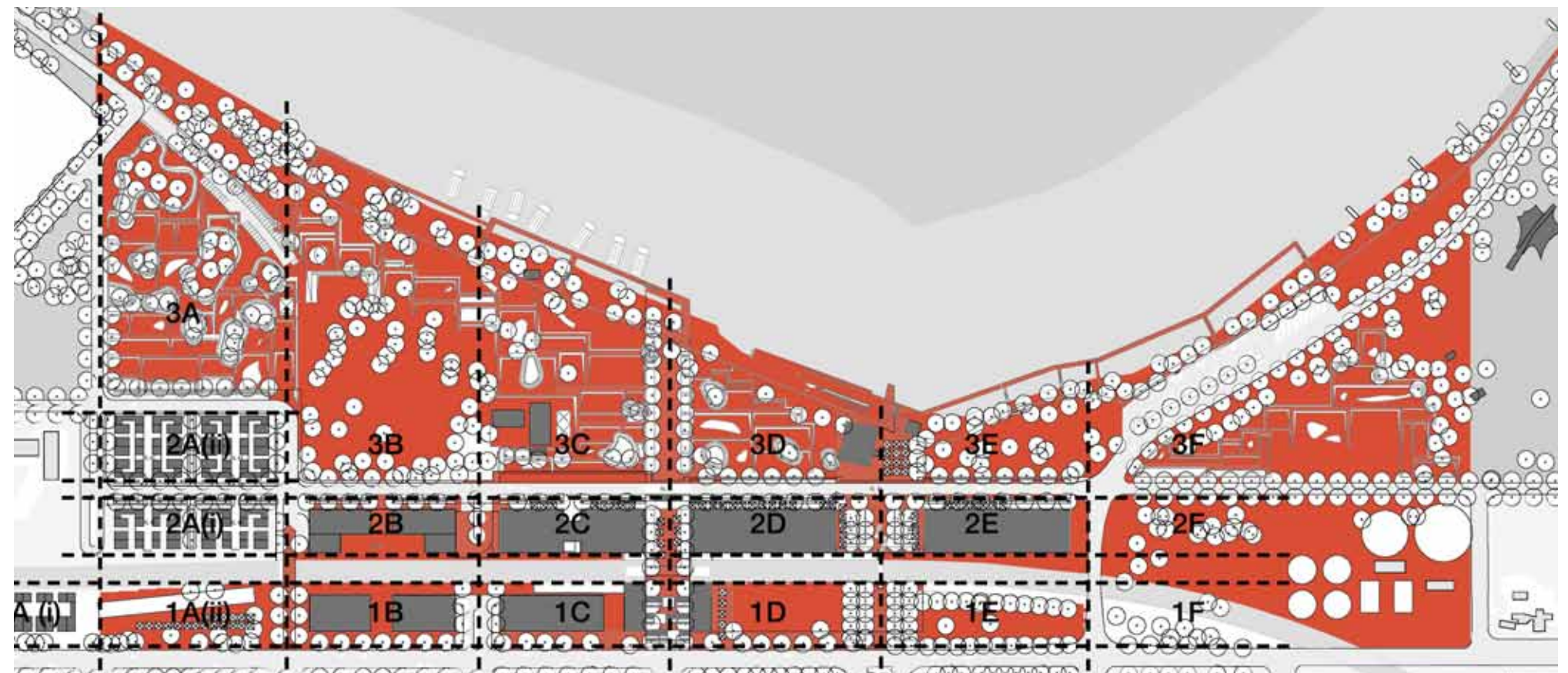
The open space and public domain areas as highlighted on the adjoining drawings sit adjacent and within all 'development sites'. As outlined in the table on page 39 there is an opportunity to develop various park spaces.

The park spaces are have many developed to provide a range of uses and attributes including:

- Cleaning 50% of CBD stormwater catchment with potential for future growth;
- Part of a wider sustainable initiative/message;
- Is a modern interpretation and extrusion of 2005 MRMP irrigation gardens/waterways;
- Is linked to the Indigenous and European cultural interpretive aspects of the Cultural Centre;
- Unique nationally significant tourist destination in its own right;
- Low maintenance (as opposed to traditional waterfront parks);
- Educational Benefits (Snowy Mountain Scheme / Australian Gardens etc);
- Strengthens visual character of red gums on foreshore.

To ensure the park is fully serviced for the community the following is a concise list of items for inclusion:

- Shelters, BBQ's, street furniture;
- Interactive play equipment;
- Lighting, signage;
- Public art and interpretive display;
- Boardwalks and jetties;
- Bridges and viewing platforms;
- Grassed amphitheatre;
- Various themed gardens;
- Pedestrian plazas;
- Amenities/toilets.



3.0 Feasibility Costing

This section outlines the steps involved in estimating the capital investment for the proposed Masterplan. The section also highlights the local economic benefits of the Masterplan and additionally elaborates upon the opportunities for public and private investments and discusses the possibilities for funding opportunities.

The final estimated costing and tables will be presented in the final version of this document. Draft tabular costing will be presented in due course for review, to the appropriate parties.



Image
Murray River, Flickr 2009.

3.1 Costing

The estimated capital investment cost at May 2009 is \$222,000,000. This estimated cost has been based on the architectural, infrastructure, landscape and sustainable concept designs. Indicative rates per square metre have been used for the proposed buildings and hard and soft landscaping. The Masterplan provides flexibility in staging the proposed development works. It will not only provide improved town amenities, but also promote sustainable development along the foreshore enhancing the long term economic and environmental benefits of Mildura. The above estimated capital investment cost has been indicatively apportioned between the public and private sectors as outlined below.

The indicative costs included for the sustainable design includes the following:

- Black water treatment plant for new developments only;
- Solar panels for new developments only;
- Stormwater filtration for potable or non-potable water reuse – the costs included for stormwater filtration allow for forming stormwater filtration biotopes, associated collection/storage tanks and stormwater reticulation, either up to the existing water treatment plant or up to the existing stormwater pipe in Deakin Avenue.

The following costs have been excluded from the stormwater filtration:

- Potable reuse option via the existing Mildura water treatment plant;
 - Costs related to connection to the existing water treatment plant;
 - Upgrade of the existing water treatment plant that may be required;
- Non-potable reuse option for park and sports field irrigation;
 - Replacement of the existing stormwater pipe in Deakin Avenue and further distribution to parks and sport fields.

These additional cost will be assessed in the following Masterplan stage.

The cost for residential options will be assessed in the following Masterplan stage.

3.2 Local economic benefits

The city of Mildura is the commercial hub of the Mildura region. The urban centre of Mildura is increasingly becoming a major regional service centre for South Western NSW, the Riverland and North West Victoria. Such prospects are supported by a sound strategic planning regime with the Mildura Rural City Council driving a number of initiatives to provide a strategic framework to facilitate growth up to the year 2030.

3.2.1 Tourism

The economic structure of the region is dominated by irrigation based industries. Other significant sectors of the Mildura region include tourism, retail and farming. The Mildura region is well placed, with air connections to Melbourne, Sydney and Adelaide, to target tourism. The region's hot and dry climate and proximity to the Murray River makes Mildura an attractive holiday destination providing opportunities for the growing tourism industry.

The implementation of the Central Precincts Masterplan will provide approximately 140 to 180 visitor accommodation units. Based on the approximate cost for overnight stay at \$130 per night, the annual spending between \$6.4 and \$8.3 million would be attributable to visitors staying in the proposed accommodation.

In addition to the visitor accommodation, the Masterplan will provide a Cultural Centre of approximately 6,000m² and extensive garden/public domain areas. These new facilities will make Mildura city an ideal location for festivals, events and conferences, resulting in an increase in overnight visitors of approximately 20%.

3.2.2 Housing Market

The housing market in the Mildura region has shown strong growth in terms of housing prices and new dwellings in recent years. In comparing Mildura with other regional Victorian cities, property prices are more affordable than Bendigo, Ballarat, Wangaratta, Wodonga and Shepparton, making it an attractive location to live, work or invest in.

Mildura's population will continue to grow between 1.7-1.9% per annum and it is predicted that 500 new houses will need to be built each year to meet this demand.

The implementation of the Masterplan will provide 170 residential units, which will reduce annual demand

for housing by at least 6% and would support local economy through increased annual consumer spending estimated at approximately \$3.3 million.

3.2.3 Local Business

Provision of a Transport Interchange of approximately 1,000m² including 5,600m² to 7,400m² of commercial space and provision of market place at approximately 1,300m² will create growth in hospitality, retail and local businesses.

3.2.4 Employment

Implementation of the Masterplan will generate employment through construction phases of the development staged over a fifteen year period (approximately 1,600 direct jobs). In addition an ongoing retail/service employment will be generated through retail spending by residents and visitors (approximately 220 ongoing jobs). There would also be a considerable number of indirect jobs created as the flow-on effects throughout the economy of which some of them will be also located in the Mildura region.

In summary, development of the Masterplan area is expected to generate significant economic benefits to Mildura community by contribution to the overall development of the residential market, creation of new local spending for Mildura retailers and providing additional employment opportunities.

3.3 Public and Private Investments

The implementation phase of the Masterplan will develop new capital investment opportunity within the region. The total estimated investment of approximately \$222 million (excluding sustainability and optional roadworks costs) will be generated from both private and public sectors. The public investment is estimated to be in the region of \$75 million and private investment in the region of \$147 million.

3.4 Funding Opportunities

The Masterplan presents investment opportunities in construction, tourism, hospitality and retail trade. The capital investment opportunities may be generated through capital funding agencies negotiated with not only private stake holders providing investment from private sector, but also through the state and federal funding schemes including potentially number of current and any forthcoming federal government stimulus packages.

The Masterplan is also promoting sustainable opportunities which provides an additional potential to successfully attract funding from Australian's Government's Water for the Future fund or from other government grant schemes.

3.5 Feasibility Costing Table

The following table outlines the inclusions, area, envelope for each component of the Masterplan with their respective public and private and investment costs.

	Site	Description		Site Area (m²)	General Inclusions	Building Areas (m²)	Building Envelope	Costing Comments	Public Investment Cost	Public and Private Investment	Private Investment Cost
Built Works	1A (i)	Residential		4000	Option Medium Density (12, 2 Story Townhouses)	1400	2 Story Townhouses				\$13,360,900
	1A (ii)	Carriage Shed / Market Square		6700	Shelter Refurbishment Landscaping Amenities	1200 5400 100	Existing Single Story	Existing shelter refurbishment (1200 m2); provision for amenities (100m2); pedestrian tunnel access; soft and hard landscaping.		\$1,710,720	
	1B	Staged Commercial / Residential		5100	Basement Car park Commercial / Residential Residential Option Low (24, 2-3 Bed Units) Residential Option High (32, 2-3 Bed Units)	2000 2000 4000 6000	Basement Car parking Ground Commercial / Residential Levels 2-3 Residential Levels 2-4 Residential				\$19,016,225
	1C	Transport Interchange / Commercial		4800	Basement Parking Transport Interchange (station) Commercial Option Low Commercial Option High	3600 1000 3600 5400	Basement Car parking Ground Station Levels 2-3 Commercial Levels 2-4 Commercial			\$2,000,000	\$15,429,500
	1D	Public Park / Langtree Underpass		6800	Underground Car park Café Langtree Underpass Landscaping	3200 500 1800 5000	Basement Car parking Single story	One level covered car park and café at street level (3,700m2); Langtree underpass and associated soft and hard landscaping	\$3,682,500	\$3,500,000	
	1E	Public Park / Deakin Bridge		7100	Landscaping Access Lane / Retaining Wall Ex. Memorial	6100 1000	n/a	Allowance for soft and hard landscaping including access lane to covered car park on site 1D.		\$966,300	
	2A (i)	Residential		4500	Option Medium Density (16, 2 Story Townhouses) Option High Density (30, 2-3 Bed Units) Option High Density underground Car park	2500 5400 1600	2 Story Townhouses Level G-3 apartments Basement Parking				\$13,360,900
	2A (ii)	Residential		5300	Option Medium Density (24, 2 Story Townhouses) Option High Density (48, 2-3 Bed Units) High Density underground car park	4000 6300 1500	2 Story Townhouses Level G-3 apartments Basement Parking				\$15,072,600
	2B	Residential		3500	Option Medium Density (14, 2 Story Townhouses) Option High Density (32, 2-3 Bed Units) Option High Density underground car park	2200 6000 1700	2 Story Townhouses Level G-3 apartments Basement Parking				\$14,424,100
	2C	Visitor Accommodation		3900	Basement Car park Retail Accommodation / Associated Functions Convention Centre	3400 400 8000 2800	Basement Parking Ground Levels G- 3 Level 3	Visitor accommodation providing 140 to 180 units on site 2C; including convention centre on the top level and one level covered car park.			\$35,462,100
	2D	Cultural Centre		5000	Display Spaces / Research / back of house Langtree Plaza Pedestrian Promenade	3000 1600 400	1 Level (grassed Roof)	One level Cultural Centre including plaza external works.	\$11,852,000		
	2E	Cultural Centre / Deakin Plaza		6900	Display Spaces / Research / back of house Deakin Plaza Basement Car parking Pedestrian Promenade	3000 3000 3000 400	1 Level (Grassed Roof) Basement Parking	One level cultural centre including one level covered car park and plaza external works.	\$15,290,000		

	Site	Description		Site Area (m²)	General Inclusions	Building Areas (m²)	Building Envelope	Costing Comments	Public Investment Cost	Public and Private Investment	Private Investment Cost
Infrastructure Items	n/a	Infrastructure		n/a		n/a		Works to development Sites Allowance for new electrical, gas, telecoms and potable water, sewer for new developments			\$1,200,000
	n/a	Roadworks		9915		n/a		Realignment and extension of Hugh King Drive including new access roads to sites 1E, 2A and 3A.	\$1,661,825	\$1,661,825	
	n/a	Substation		n/a		n/a		Provisional Allowance for new precinct substation	\$1,500,000	\$1,500,000	
	3A & 3F	Carpark		5486		n/a		Car Park off Hugh King Drive and adjacent to the existing Tennis Courts	\$1,097,200		
	n/a	Other Works		n/a		n/a		Relocation of freight activity; existing tree re-planting to Seventh Street; pedestrian pavement in public domain areas. NOTE - Some of these activities may have been undertaken, hence costs may be redundant		\$6,960,000	
Park	3A - 3F + 1F	Riverpark		113000		n/a		Parkland between new development sites and river Murray.	\$5,000,000	\$16,947,245	
SUB TOTAL									\$40,083,525	\$35,246,090	\$127,326,325

TOTAL COST	\$202,655,940
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Extras	n/a	Sustainability Works		14000		n/a		Stormwater Filtration, Blackwater Treatment Plant, dual reticulation for new developments, Solar cells to new developments		\$17,450,000	
	n/a	Optional Extras				n/a		Extension to Hugh King Drive (East)		\$1,391,250	
SUB TOTAL									\$0	\$18,841,250	\$0

	Residential - Low / Medium Density		Cultural Centre
	Residential - Medium / High Density		Commercial / Transport Interchange
	Mixed Use - Residential / Commercial		Public Domain
	Accommodation / Conference / Retail		Infrastructure
	Adaptive Reuse		

TOTAL COST + EXTRAS	\$221,497,190
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4.0 Response to Periphery Sites

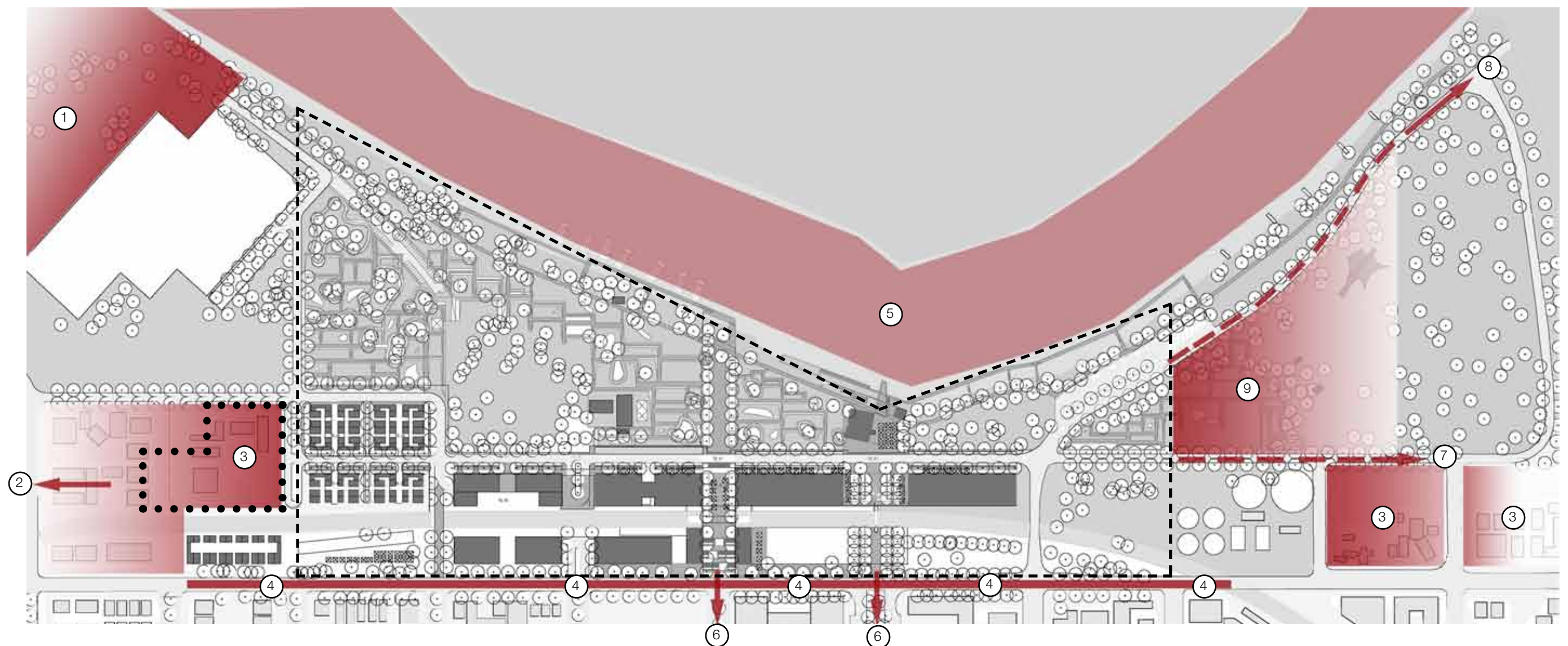
This section highlights the need to respond to linkages and areas beyond the prescribed Central Precincts area. It is important to consider a solution which takes account the periphery areas beyond this immediate area.

The following diagram highlights the areas beyond the site which require further investigation in accordance with the design intent of the Masterplan. These areas include the following:

- ① Upgrade of Rio Vista Park and large event support zone, in accordance with the intent of the Masterplan;
- ② Creation of linkages to the existing Art Precinct area;
- ③ Potential for residential development opportunities along Seventh Street and on sites facing the Riverpark;
- ④ Upgrade and potential Masterplanning of Seventh Street public domain facilities;
- ⑤ Water Management of the Murray River with appropriate NSW authorities, including the evaluation of house boat mooring in the NSW jurisdiction;
- ⑥ Upgrade and potential Masterplanning developments for Langtree Avenue and Deakin Avenue to emphasise the pedestrian connection to the Central Precincts area;
- ⑦ Road connection continued to loop around Hugh King Drive and connect with existing residential areas;
- ⑧ Connectivity to the Marina Proposal (currently under construction;)
- ⑨ Continuation of the Riverpark concept to the fringes of the area.



- Areas requiring further investigation
- ● ● Private Land area to be potentially incorporated into the development of the Central Precincts



5.0 Consultation

This section identifies the design response to the feedback received during the concept development phase. It also documents the consultation strategy for the feasibility phase of the project which outlines the exact areas for development to allow for detailed design and development applications to be lodged for individual sites.



Image
Murray River.

5.1 Response to Concept Findings

The consultation techniques used during the concept development phase are detailed in the Concept Development Report. The outcomes of that phase and the design response/consideration are outlined in the following table.

Issue	Design Response/Consideration
Rail	
Design for flexibility in access to the site should rail be removed	The feasibility Masterplan has been designed to improve accessibility to the site should the rail line be removed, whilst reinforcing gateway points to the main surrounding street. However, the refined design also accommodates retention of the rail line for the immediate future.
Consider passenger rail opportunities for the site and a central railway station (including maintaining the existing railway station facilities)	As rail freight is to remain for the immediate future, an important element of the design is the site's ability to adapt to the retention or subsequent removal of this linear element.
Relocate station to Eighth Street	Eighth Street is beyond the boundaries of the Masterplan.
Indigenous issues	
Support for the proposed Cultural Centre	Cultural Centre is a key element of the refined Masterplan.
Incorporate the story of Aboriginal people and the river in the design	The Cultural Centre will provide an opportunity for these stories and site interpretation. A memorial wall is also proposed to be located adjacent to the centre to acknowledge and celebrate the relationship between the Aboriginal people, the river and the land.
Protect Jaycee Park given its significance to the Aboriginal people as a gathering place	The park is to remain including preservation of the majority of River Red Gums. A road is proposed to traverse the park in an east-west direction, however, it is to be treated as a pedestrian priority zone and softened through material selection.
Support integration of interpretative signage	An interpretative strategy may form part of the implementation phase of the project.
Incorporate a memorial wall to acknowledge Aboriginal people who have passed away and the connection of Aboriginal people and the river	A memorial wall is proposed adjacent to the Cultural Centre.
Aboriginal community elders to provide advice on naming of the site	Discussions to be held with relevant representatives.
Interpretation should recognize the complexity of the underground watercourses	Discussions to be held with appropriate representatives.
Include native species in landscaping	The landscape plan includes native species.

Issue	Design Response/Consideration
The Cultural Centre needs strong Aboriginal involvement	Indigenous involvement in the concept development phase relates to the overall site and uses. Specific involvement with the proposed centre is beyond the scope of this study.
Site use	
Relocate skate park to Jaycee Park	The skate park is a popular facility for the youth and is proposed to remain in situ.
Support the creation of a beach	Proposed beach is included within the feasibility plan.
Preference for the inclusion of affordable housing	Housing tenure has not as yet been allocated, though inclusion of affordable housing is recommended.
Café in the Rowing Club building is supported	Proposed café is included within the feasibility plan as an extension to the Rowing Club.
Swimming pool on site is not required, particularly with a beach proposed	The swimming pool no longer forms part of the feasibility plan.
Site for hot air balloon launching is inappropriate due to trees	The launch site no longer forms part of the feasibility plan.
Accommodate wharfs for both house and commercial boats	Wharfs for both users are included within the feasibility plan.
4 hour mooring is unsupported as it limits tourism opportunities	This is an operational detail which is beyond the scope of the Masterplan. The plan however does provide mooring.
Potential safety concerns with swimming in the river (re. currents and boats)	The river is currently used for swimming and a proposed beach is included within the refined Masterplan.
Opportunities to hold different events in rich tapestry of spaces.	It is the intention for these spaces to be used as such as outlined in this feasibility report.
Incorporate a visitor's centre, including Indigenous and non-Indigenous history as part of the transport interchange	An additional visitor's centre forms part of the refined Masterplan. It is accessible to the transport Interchange.
Provide moorings for 80 – 100 houseboats and create a sense of arrival from the riverside to the town	The refined Masterplan proposes moorings for some temporary houseboats and paddle steamers.
Keep Rowing Club mooring clear of houseboat moorings	The refined Masterplan now includes a ramp for boats.
Reuse existing buildings as a transport Interchange / interchange in the immediate future	The carriage shed is retained within the Masterplan. Its use will be determined as part of the detailed design for individual development applications.

Issue	Design Response/Consideration
Include a maze for children’s play made out of grape vines	Vineyards will be reflected as part of the regional produce theme in the landscape. Detailed design will consider the incorporation of a maze.
Include an older people’s play area	This will be considered in the detailed design phase of the park.
Access and Movement	
Reduce roads within the site	The refined Masterplan contains fewer roads with the downgrade of Hugh King Drive (from a four lane road to an access road).
Waterfront access (including vehicular) to the paddle boats is needed with associated parking for coaches etc	Parking is proposed within the refined Masterplan.
Car parking is required near the Jaycee Park and close to the swimming area	Parking is proposed within the refined Masterplan at this location.
Access to the site along Langtree Avenue is important	Access to this key part of the site is proposed with pedestrian priority.
Transport Interchange on site is required with good bus access	This is provided within the refined Masterplan.
Provide for parking of mobile homes	Mobile home parking has not been proposed.
Identify access for rowers in light of proposed beach	A boat ramp is proposed to the east of the swimming area.
Consider alternative access to the site given the current problems caused by overhead rail	An additional access road has been recommended to allow access to the site by tall vehicles such as trucks and buses (outside of the study area).
Provide cycle access across the site	The revised Masterplan proposes a link with the Chaffey Trail through the site and dual pedestrian and cycle paths.
Consider access to Magnolia Avenue	Magnolia Avenue is beyond the site boundary, however, links with the wider movement network as it relates to the site are considered.
Include Lemon Avenue into the plan	Lemon Avenue is beyond the site boundary, however, links with the wider movement network as it relates to the site are considered.
Environment	
Prepare a water use strategy	This is beyond the scope of the feasibility Masterplan, but is likely to form a recommendation for ongoing work.
Understand why the Monash Wetlands project failed	The design team understands that drought was a major factor and has considered these lessons in the design of the WSUD. Calculations have since been undertaken to assess local rainfall levels and overland flows.

Issue	Design Response/Consideration
Safety concerns regarding stormwater management system (bodies of water on the site)	A study has since been undertaken to determine that the maximum depth of water on the site at any point in time will be below 300mm which is considered the maximum safety depth.
Concerns over the appearance and use of the site during droughts	Drought tolerant species are proposed and there are no water features within the landscape design.
Consider orientation, shading etc	Building envelopes are proposed to face north east. Designs for efficiency will form a recommendation for the detailed design phase.
Support sustainable building design	Designs for efficiency will form a recommendation for the detailed design phase.
Management of water consumption on site	Water saving fixtures and the like will form a recommendation for the detailed design phase.
Consider flood levels (including the 1956 flood)	Buildings are proposed to be located above the 1:100 year flood with the exception of the Rowing Club, however the extension proposed is located above the flood level.
Heritage	
Retain and reuse carriage shed	The carriage shed is retained in its current position in the refined Masterplan. There are a number of uses which are suitable for this structure such as: an open BBQ / shelter for public use, farmer’s market; and for adaptive reuse for a defined outcome such as residential. The use for this structure will be determined as part of the detailed design and development application phase.
Amenity	
Consider impacts on existing residential buildings in the vicinity	Residential land uses proposed in the refined Masterplan are sited in proximity to existing residential buildings to ensure uses are compatible.

5.2 Consultation Strategy

The aim of consultation throughout the duration of the project is to inform the public of the Central Precincts Masterplan and seek their views during a formal public exhibition period. The feasibility phase of consultation provides an opportunity to engage stakeholders and the wider community, provide a platform for them to express their opinions regarding the revised design and to see how the design team has responded to the key findings from the discussion forums and surveys.

The engagement strategy for this stage includes:

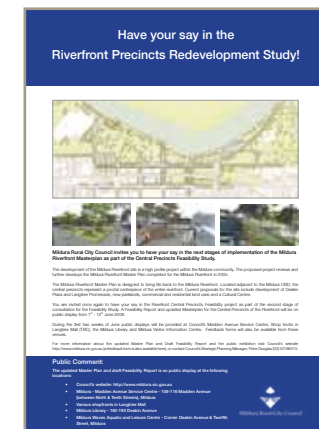
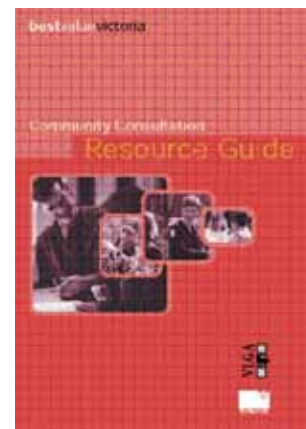
- A formal public display at various locations including the mall and Council offices;
- Advertising and media release in the local newspaper;
- Flyers;
- Community survey;
- Council website 'news' and survey.



5.3 Next Steps

Feedback from the feasibility consultation has been received, reviewed and responded to outside of this report.

A preferred strategy for ongoing community and stakeholder involvement will be provided in an Implementation Report 04. The main premise of the actions relating to consultation will be to continue to facilitate and ensure participation of the community and stakeholders.





HOUSE BOATING



ROWING



BOARDWALK



MOORINGS / JETTY



CULTURAL CENTRE



LEISURE ACTIVITIES



PUBLIC



WALKING PATHS



INTERACT

CENTRAL PRECINCTS FEASIBILITY STUDY

The Mildura Riverfront Master Plan is designed to bring the focus to the Mildura Riverfront. Located adjacent to the Mildura CBD, the central precincts represent a pivotal centrepiece of the entire riverfront. Current proposals for the site include development of Deakin Plaza and Langtree Promenade, new parklands, commercial and residential land uses and a Cultural Centre.

The master plan vision for the site is to create "a state significant precinct in Victoria that is a destination in its own right".

The need for the Mildura Riverfront Central Precinct Redevelopment Study arose from the findings of the Mildura Riverfront Master Plan (2006), and is to provide a strategic basis to secure the proposed outcomes for both the Central precincts and the entire Mildura Riverfront.

LANDSCAPING

The Mildura Murray Park will provide a dynamic and interactive recreational and environmental precinct. It will be home to living environmental systems and will have the capacity to filterate storm water harvested from the urban catchment. It will also form a place within which visitors can gain an insight into the rich history of the Murray River and the human habitation that has evolved along its length. The Mildura Murray Park has the potential to influence attitudes towards the Murray River and raise public awareness in relation to its enormous value and significance, both locally, regionally and nationally.

The Mildura Murray Park will establish a significant tourist destination that will gain Mildura and the Murray greater regional and national connection. Increased tourist numbers to Mildura have the potential to generate new economic stimulus and for local businesses.

SUSTAINABILITY

Providing a sustainable environment is a key objective of the masterplan. Sustainability measures for the future development of the site have been developed across four key performance measures:

- Environment
- Natural Resources
- Society
- Economic

ENVIRONMENT

Ecology:

- Remediation of the river bank and park land with 100% native and endemic species.
- Construction of wharfs / boardwalks to protect riverbank from erosion.
- Reduction in irrigated lawn areas.
- Reduced hard surfaced areas.
- Retention of River Redgums.

NATURAL RESOURCES

Water Use and Treatment:

- Water efficient fixtures and fittings to be used.
- Blackwater treatment and rainwater harvesting reuse for non-potable purposes in buildings.
- Stormwater harvesting of the urban catchment with on site treatment.
- Flood and drought tolerant landscape species.
- Energy and greenhouse gas emissions.
- Building envelopes orientated to promote energy efficiency.
- Solar photovoltaic cells, solar hot water and solar powered street lighting to contribute renewable energy.
- Museum to be earth covered, providing thermal mass.

Resource Recovery:

- Reuse of existing buildings and materials.
- Green and organic waste to be collected as feedstock for composting for use in landscaping.

Materials:

- Increased adaptability and robustness of buildings using local and natural recycled materials.
- Buildings to be designed for disassembly and recyclability at end of life.

SOCIAL

Community:

- Cultural centre to be established to host displays, community art and community activities as well as linking with education programs, schools and universities.
- Maintaining important existing community facilities including Japotea Park, the Rowing Club and Mildura Art Centre.
- Foster ongoing community involvement in development, management and use of the site.

Access and Transport:

- Enhanced pedestrian and cycling links, particularly links with the CBD and residential areas.

- Enhanced transport hub and provision for tourist bus parking.
- Construction of additional wharfs to enhance houseboat moorings and access.
- Improved wharfs for paddleboats incorporating tourist bus parking.
- Retention of railway line for future tourism, freight and interstate travel.

Health and Welfare:

- Parkland to promote active lifestyles through walking, cycling, tennis, rowing, bowling, riverboat cruises and other sporting activities.
- Increased security and safety through environmental design including passive surveillance of parkland areas by mixed use zones.

Heritage:

- Cultural centre to celebrate Aboriginal culture and non-Indigenous culture, including heritage features of the site and the surrounding region and its peoples.
- Landscape pattern reflects the agricultural character of the region.

ECONOMIC

Tenure:

- Mixed tenure site, including Native Title, giving recognition to historical, community and future aspirations for land.

Employment:

- Increased employment and economic development, particularly through enhanced tourism opportunities associated with the river (e.g. paddleboats and houseboats), the cultural and research centre, accommodation and convention centre and mixed commercial and retail development.

Viability:

- Funding security and staging being determined, including attracting Federal Government funding.
- Opportunities for innovation include the cultural and research centre, green building design, water management and renewable energy.



AERIAL PERSPECTIVE



SITE PLAN: PUBLIC DOMAIN



PERSPECTIVE: DEAKIN PLAZA



PERSPECTIVE: LANGTREE PROMENADE
(LOOKING SOUTH TOWARDS SEVENTH STREET)



PERSPECTIVE: LANGTREE PROMENADE
(LOOKING SOUTH TOWARDS SEVENTH STREET)



PERSPECTIVE: LANGTREE PROMENADE
(LOOKING NORTH TOWARDS THE PARK)



PERSPECTIVE: PINE STREET UNDERPASS



PERSPECTIVE: GENERAL PARK LANDSCAPE



PERSPECTIVE: DEAKIN OUTLOOK



PERSPECTIVE: RIVERFRONT

MILDURA MURRAY
Riverfront Central Precincts Feasibility



ADAPTIVE REUSE



RESTAURANTS / CAFES



CBD LINK



OPEN PARK SPACE



WAY FINDING



SUSTAINABLE



MARKETS



RIVER WALK



PUBLIC AMENITY



PRIVATE PARK SPACES



CYCLE PATHS



- Residential - Low/Medium Density
- Residential - Medium/High Density
- School Use - Residential / Commercial
- Accommodation / Commercial / Hotel
- The Edge Adaptive Reuse
- Adaptive Reuse
- Cultural Centre
- Commercial / Transport Interchange
- Park



LOW/MEDIUM DENSITY RESIDENTIAL

The low/medium density residential areas are located on the edge of the central precincts and are positioned within the residential and commercial zones of the future city. These areas are designed to be a mix of residential and commercial uses, providing a high level of amenity and a high level of connectivity to the central precincts. The areas are designed to be a mix of residential and commercial uses, providing a high level of amenity and a high level of connectivity to the central precincts.



MEDIUM/HIGH DENSITY RESIDENTIAL

The medium/high density residential areas are located in the central precincts and are designed to be a mix of residential and commercial uses, providing a high level of amenity and a high level of connectivity to the central precincts. The areas are designed to be a mix of residential and commercial uses, providing a high level of amenity and a high level of connectivity to the central precincts.

The commercial and transport interchange areas are located in the central precincts and are designed to be a mix of commercial and transport uses, providing a high level of amenity and a high level of connectivity to the central precincts. The areas are designed to be a mix of commercial and transport uses, providing a high level of amenity and a high level of connectivity to the central precincts.



CULTURAL CENTRE



COMMERCIAL & TRANSPORT INTERCHANGE



SITE PLAN: BUILT FORM



SECTION: DEAKIN PLAZA

SECTION: LANGTREE PEDESTRIAN PROMENADE

MILDURA MURRAY
Riverfront Central Precincts Feasibility



References

- Agreements, Treaties and Negotiated Settlements (ATNS) (2005), "Mildura Marina Indigenous Land Use Agreement (ILUA)", accessed <http://www.atns.net.au/agreement.asp?EntityID=3118>
- Aboriginal Tourism Victoria (nd), accessed <http://www.aboriginaltourismvictoria.com.au/>.
- Commonwealth of Australia (2009), "Special call for stormwater harvesting and reuse projects".
- Context CM (2006), "Deakin Avenue, Mildura: Landscape Masterplan Final". Prepared for MRCC.
- Daryl Jackson & KLM Gerner Consulting Group (2005), "Mildura Riverfront Masterplan". Prepared for MRCC.
- David Lock Associates (1999), "Mildura Urban Design Framework".
- Department of Sustainability and Environment (2009), accessed <http://www.dse.vic.gov.au/dse/index.htm>.
- Department of Infrastructure et al (2002), "North West Freight Transport Strategy".
- GHD (2005), "Mildura Transport Plan for Long Term Regional Development". Commissioned by Mildura Airport Management Advisory Committee with the support of The Sunraysia Mallee Economic Development Board.
- Google Earth (2009), accessed <http://earth.google.com/>
- Landskape (2008), "Mildura Riverfront Performance Venue, 80-100 Cureton Avenue, Mildura: Cultural Heritage Management Plan".
- Mallee Catchment Management Authority (2003), "Murray River Frontage Action Plan".
- Maunsell Australia et al (2003), "Mildura Industrial Land Use Strategy". Prepared for MRCC.
- Maunsell Australia (2007), "Final Greenhouse Action Plan 2007-2012". Prepared for MRCC.
- Mildura Chamber of Commerce (2009), accessed <http://www.mildurachamber.com.au/>.
- Mildura Rural City Council (nd), "Strategic Financial Plan 2008-2013".
- Mildura Rural City Council (2009), accessed <http://www.mildura.vic.gov.au/>.
- Planisphere (2007), "Mildura CBD Plan". Prepared for MRCC.
- SGL Consulting Group (2004), "Mildura Rural City Council Public Open Space Strategy". Prepared for MRCC.
- Sinclair Knight Merz (2002), "Sunraysia Drainage Strategy". Prepared for MRCC
- Sykes Humphreys Consulting (nd), "Recreation Strategy 2008-2018". Prepared for MRCC.
- Tourism Victoria (2008), "Regional Tourism Action Plan 2009-2012".
- Tourism Victoria (nd), "Visions of Victoria", accessed <http://visionsofvictoria.com/>.
- VicTrack (nd), accessed <http://www.victrack.com.au/>.
- VicUrban (2009), accessed <http://www.vicurban.com>.
- Victorian State Government (2009), accessed <http://www.land.vic.gov.au>.

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Suters Design Team:

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Michael McPherson	Suters Architects
Rob Polglase	Suters Architects
Dean Cotter	Suters Architects
Maarten Hollebrandse	Suters Architects
Katherine Daunt	Suters Architects

Adrian McGregor	mcgregor + partners
Georg Petzold	mcgregor + partners

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Georgia Vitale	Arup

Stephen Ngai	Page Kirkland
Zorica Sandwith	Page Kirkland

Ian Harris	Robert Bird Group
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Craig Marler	ADW Johnson
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Steffen Lehmann	s_Lab
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Rachael Attwood	MRCC
Allan Morffew	MRCC
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Ray Lyons	MRCC
Julian Bowron	MRCC

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Councillor Nick Cavallo	MRCC
Gary Healy	MRCC
Peter Douglas	MRCC
Sarah Nickas	Department of Planning and Community Development
Les Trollope	DSE Public Lands
Nick Byrne	Tourism Victoria
Brendan Geary	V/Line
Craig Barras	Regional Development Victoria
Mike Blackburn	VicTrack

Project Reference Group:

Tim Aldridge	Collie and Tierney
Alan Cameron	Individual Member
Rob Ellis	Mildura Rowing Club
Brian Grogan	Sunraysia Development Industry Group
Adam Hobbs	Individual Member
Lyn McKenzie	Paddleboat Operator
Reg Arney	Mildura Lawn Tennis Club
Max Robinson	Irymple Rotary
Robert Mansell	Rivers and Riverboat Historical Society
Don Carazza	Sunraysia Area Consultative Committee
Susan Watts	Mildura Lawn Tennis Club
Anne Mansell	Mildura Development Corporation
Richard Morfaw	Mildura City Traders
Jeremy Seward	Mildura Chambers of Commerce
Rod Trowbridge	Mildura Tourism

Lord Mayor and Councillors:

Cr Glenn Milne Mayor	MRCC
Cr Eckel	MRCC
Cr Nicholls	MRCC
Cr Arnold	MRCC
Martin Hawson	GMCC
Garry Healy	GMAD
Phil Pearce (CEO)	MRCC
Mieka Symes (Comms Officer)	MRCC
Cheryl Wood	GMCS
Cr Cavallo	MRCC
Cr Harris	MRCC
Cr Hilton-Wood	MRCC
Cr Thorburn	MRCC
Cr Knight	MRCC