



LANDSCAPE MASTER PLAN

Prepared for
Northeast Business Park Pty Ltd

By
PLACE Planning and Design

NORTHEAST BUSINESS PARK LANDSCAPE MASTER PLAN

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EXECUTIVE SUMMARY

This report provides an overview of the proposed Landscape Master Plan for the Northeast Business Park with particular reference to the open space component of the development. The report was written to address the Terms of Reference for an Environmental Impact Statement for the Northeast Business Park Project, issued by the Queensland Co-ordinator General in December 2006.

Northeast Business Park has been conceived as a benchmark environmentally sustainable development. The Landscape Master Plan is considered to achieve outcomes based on these aims:

- restoration and management of the natural environment
- respect for the cultural and historical values of the site
- urban development & open space management in a sustainable manner
- enhancement of the ecological values of open space
- provide open spaces accessible to all members of the public
- provision of varied recreational opportunities for Caboolture residents
- having a participatory and consultative approach with the community
- design based on Water Sensitive Urban Design (WSUD) , Environmentally Sensitive Design (ESD), Crime Prevention Through Environmental Design (CPTED), and Accessibility principles
- protection of ecological values in the Caboolture River and Moreton Bay.

The report briefly describes the existing landscape character of the site. This character is identified as essentially an extensively degraded site resulting from past farming and forestry activities. However the extensive frontage to the Caboolture River and isolated remains of earlier vegetation and physical cultural remnants of human activities provide opportunities to develop an extensive and varied open space network and numerous recreational opportunities.

The Landscape Master Plan developed proposes Open Space & Recreation areas comprising a total of 438.30 ha. These areas include extensive rehabilitation, weed management, and revegetation of much of the proposed open space. It includes large open space areas within the floodplain of the Caboolture River, an 18 hole championship standard golf course adjoining residential precincts, as well as open space areas and buffers within the residential and business park precincts.

Public access to the Caboolture River and throughout the open space areas is encouraged by a number of proposed recreational facilities and elements, including;

- a Heritage Park and district playground based around the remains of the Morayfields homestead;
- a Riverbank Park separating the marina basin from the river;
- a sports and recreation precinct including a community use clubhouse;
- access to much of the Caboolture R. via river side walking trails and canoe trails with landing points at strategic locations;
- an extensive network of recreation and commuter cycleways;
- promenades, plazas, shopping streets and gardens around the Marina residential and commercial precincts;
- localised parks and walkways within residential and business park areas, and;
- the golf club facilities and the golf course.

Significant enhancement of ecological values, habitat values, Caboolture River water quality, and other environmental values is to be assisted by the following components of the landscape development;

- revegetated riparian buffer to the Caboolture River;
- conservation of remnant vegetation and rehabilitation of disturbances to that vegetation;
- buffering zones between conservation areas and built up areas;]

- artificial wetland establishment as stormwater treatment components under WSUD strategies;
- rehabilitation of disturbances from bulk earthworks and flood mitigation works;
- rehabilitation and expansion of creek line riparian vegetation buffers;
- fauna habitat development planting strategies;
- extensive street landscapes;
- encourage of community and environment group participation in rehabilitation of the site environment;
- sustainable design and materials strategies;
- an Environment Centre demonstrating sustainability principles and encouraging such strategies in the private development domain

The Landscape Master Plan report includes concepts of the various components mentioned and graphic illustrations of the desirable outcomes to be achieved in the future. For each of the various precincts and strategies outlined the report lists the following;

- an Intent statement;
- a list of Desirable Aims and Outcomes;
- a list of Design Parameters to be considered during detail design phases;
- a list of Proposed and Permissible Constructed Site Elements;
- and the intended Landscape Modifications involved.

The report concludes that the implementation of the Landscape Master Plan will result in considerable benefits to the community, the environment, and the social and economic growth of Caboolture Shire.

1 INTRODUCTION

This report outlines the proposed Landscape Master Plan and its components for the development proposed with the Caboolture Shire and referred to as Northeast Business Park. The report has been prepared by Place Planning and Design for inclusion in an Environmental Impact Statement on the development and addresses wholly or in part and in association with other reports the following sections 3, 3.1, 3.4, 4.2.1.7, 4.2.1.8, 4.2.2.4, 4.2.2.5, 4.8.2, and 4.9.1

1.1 PROPONENT

The proponent for the development is Northeast Business Park Pty Ltd, a Queensland registered company with shares held by the shareholders of Port Binnli Pty Ltd, Laing O'Rourke Caboolture Developments Pty Ltd and a number of smaller shareholders.

1.2 PROJECT DESCRIPTION

Northeast Business Park (NEBP) is a multi-use marina and business park concept that will integrate marina facilities, appropriate business, industry, commercial, residential, heritage and recreational greenspace precincts providing a place to live, to work and to play in a master planned Riverbank precinct on the Caboolture River.

Situated on the southern bank of the Caboolture River approximately 8km inland from the coastline, adjacent to the Bruce Highway and 43km north of Brisbane CBD, the NEBP site encompasses 793 hectares of property which includes the following six land parcels ("the project area");

Lot 2 on RP902075
Lot 10 on RP902079
Lot 24 on SP158298
Lot 7 on RP845326
Lot 15 on RP902073
Lot 12 on RP145197

The following components are incorporated into the NEBP development.

- Marina basin.
- Marine industry.
- Industrial.
- Commercial/mixed use.
- Residential.
- Apartments.
- Townhouses.
- Hotels.
- Golf residential.
- Environmental open space.
- Golf course.
- Recreational areas and sporting fields.
- Heritage Park.

The landscape report deals in specifics with the treatment of Open Space primarily, the last five components of the above listed, along with public open spaces and streetscape treatments of the other components.

The current Structure Plan prepared by PMM outlines Open Space & Recreation Precincts comprising an area of 438.30 ha.

1.3 PROJECT LOCATION DESCRIPTION

The NEBP project area is vacant privately owned land that is bound:

- to the north by 9km of Caboolture River frontage, with land on the opposite side of the river being primarily rural and used for forestry activity;

- to the west by the Bruce Highway, with land on the opposite side of Bruce Highway developed with residential and open space areas; and
- to the south and east by privately owned rural residential properties with lot sizes ranging from 1-20 ha, bushland, open grassland areas and limited agricultural and recreational land uses.

The project area is surrounded by areas of conservation significance as follows.

- The Deception Bay Declared Fish Habitat area, which extends along the entire length of the northern boundary, within the bounds of the Caboolture River. This area is protected by the Fisheries Act 1995 due to the estuarine habitats that support commercial and recreational fisheries in close proximity to developing communities.
- The Habitat Protection Zone of the Moreton Bay Marine Park which is located within the Caboolture River and begins at the mid-northern boundary of the site then extends eastward along the Caboolture River. This area is protected by the Marine Parks Act 2004 in order to:
 - a) conserve significant habitats, cultural heritage and amenity values of the marine park;
 - b) maintain the productivity and diversity of the ecological communities that occur within the marine park; and
 - c) provide for reasonable public use and enjoyment of the zone consistent with the conservation of the marine park.
 - d)
- The Moreton Bay RAMSAR wetlands which traverse the same area within the Caboolture River as the Moreton Bay Marine Park. The Moreton Bay RAMSAR wetlands are protected pursuant to international conventions as they are one of only three extensive intertidal areas of seagrass, mangroves and saltmarsh on the eastern coast of Australia that provide habitat for water birds.
- South East Queensland Wader Bird Sites are mapped approximately 500m to the east of the site. This area is protected via the JAMBA and CAMBA convention to protect habitats of Migratory Birds.

1.4 KEY PROJECT AIMS

The development will provide the Caboolture community with access to natural watercourses, bushland and parklands whilst developing much needed marina berths and vessel maintenance facilities north of the Brisbane River in an ecologically sustainable manner by:

- commissioning technical studies to inform the design, construction and operation of the development to minimise adverse impacts on surrounding environmentally sensitive areas;
- providing managed mooring and boat maintenance facilities;
- restoring degraded river banks and wetlands;
- rediscovering historic cultural elements and providing access to the public;
- attracting tourism and multinational operators; and
- satisfying government agendas for environmental rehabilitation, marine industry reform, increased local employment, and balanced environmental, social and economic objectives.

2 EXISTING LANDSCAPES

This section illustrates the form and character of the existing landscape of the site.

Refer Figures: 01 Existing Landscape Character, 02 Visual Analysis, and 03 Existing Vegetation

The landscape of the Northeast Business Park site has been highly modified in appearance from that found pre-European settlement. The existing character has been shaped by the past intensive agricultural and forestry use, resulting in an environmentally degraded site dominated by cleared paddocks.

2.1 BUILT FORM LANDSCAPE ELEMENTS

Little built form exists on the site. The primary elements are;

- A cluster of farm buildings circa 1950's located on a ridge in the north-western portion;
- Fencing and dirt tracks;
- Assorted remains of previous buildings and farm activities eg. wells, log bridges, cattle yards, building footings.

2.2 NATURAL LANDSCAPE ELEMENTS

The following are the major existing natural landscape elements.

2.2.1 Ridgelines

Two primary ridgelines run diagonally to the Northeast partially through the site from the south west and southern boundaries. These ridges have gently sloping sides down to the flat floodplain that constitutes the majority of the site. The ridges reach no more than RL. 14 to 17 in height and they are broad and flat in form, rather than being visually pronounced landforms.

A low sand ridge in the centre of the site represents an ancient shoreline to Moreton Bay.

2.2.2 Waterways

The tree lined meanders of the Caboolture River form a distinct 'green' boundary to the northern side of the site. At the approximate mid point of the river frontage a visually prominent grove of trees dominated by Bunya and Hoop pines mark the location of the original European homestead complex of 'Morayfields'.

Two tributaries of Raff Creek flow into the site from the south, flanking and separating the ridges and then joining together and flowing through an array of tidal channels to the Caboolture River. The eastern tributary in part flows through a significant stand of Melaleuca forest suitable for retention within open space of the proposed development for its environmental, habitat and water quality control values.

The western tributary discharges from a bushland patch outside the site boundary, fringed initial by a narrow band of Melaleucas, then flowing as generally open channels with thin scattered Melaleuca regrowth patches, until it becomes bordered by mangroves and remnant Swamp Oak communities within the tidal reaches from the confluence of the tributaries to the confluence with the river.

A number of minor channelised waterways also exist on site, their natural alignments obviously amended in the past to facilitate agricultural activities. In the lower sections of these, closest to the river, some small areas of colonisation by riparian vegetation, either mangroves or marine couch communities, has occurred in recent times.

2.2.3 Soils

A separate report prepared by PLACE Environmental entitled Good Quality Agricultural Land Assessment, NEP01 07.03.2007, provides details of soils and concludes insufficient quality land suitable for agriculture exist on site to be viable and believes this creates no impediment to the type of development proposed.

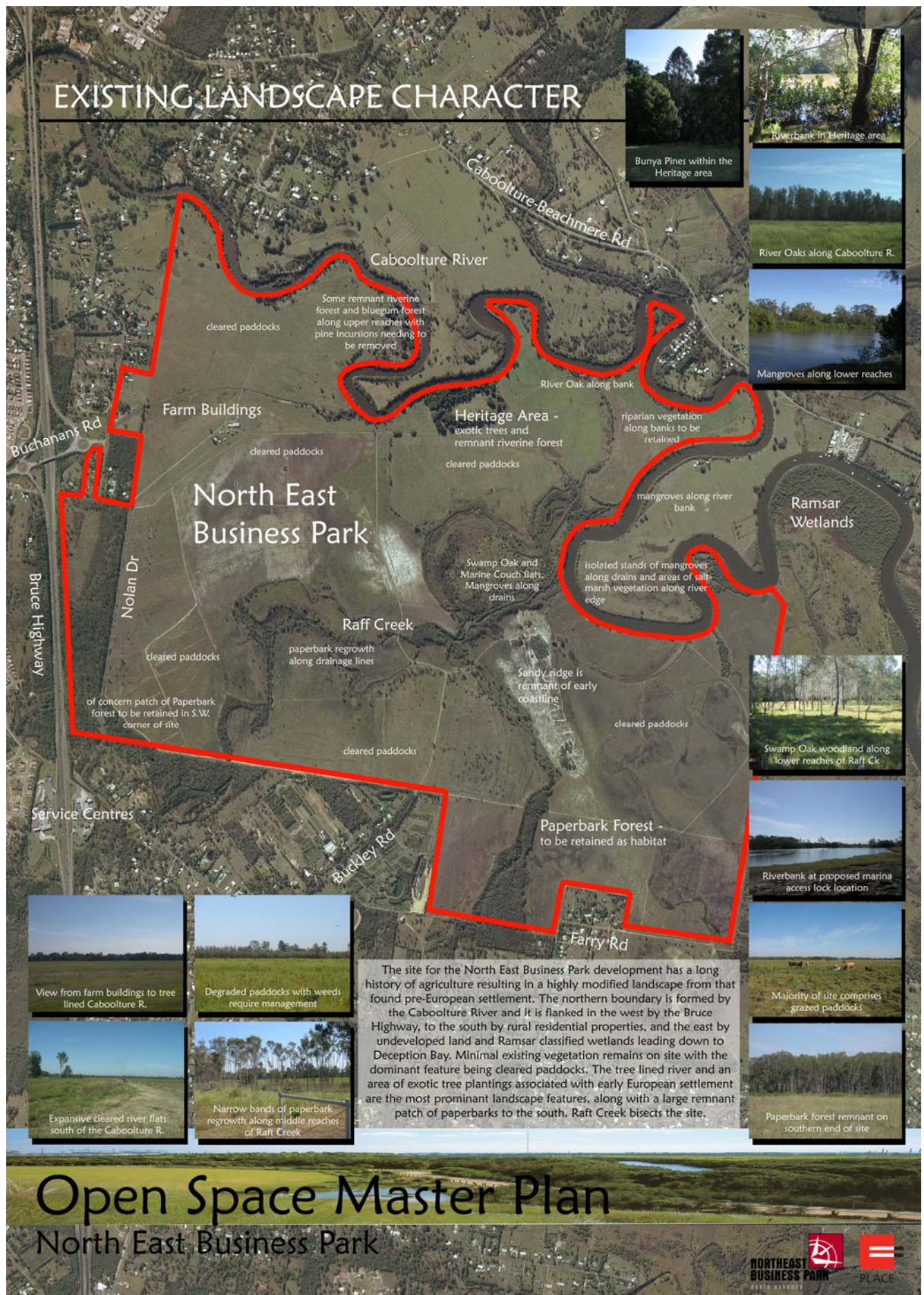


Figure 01 – Existing Landscape Character

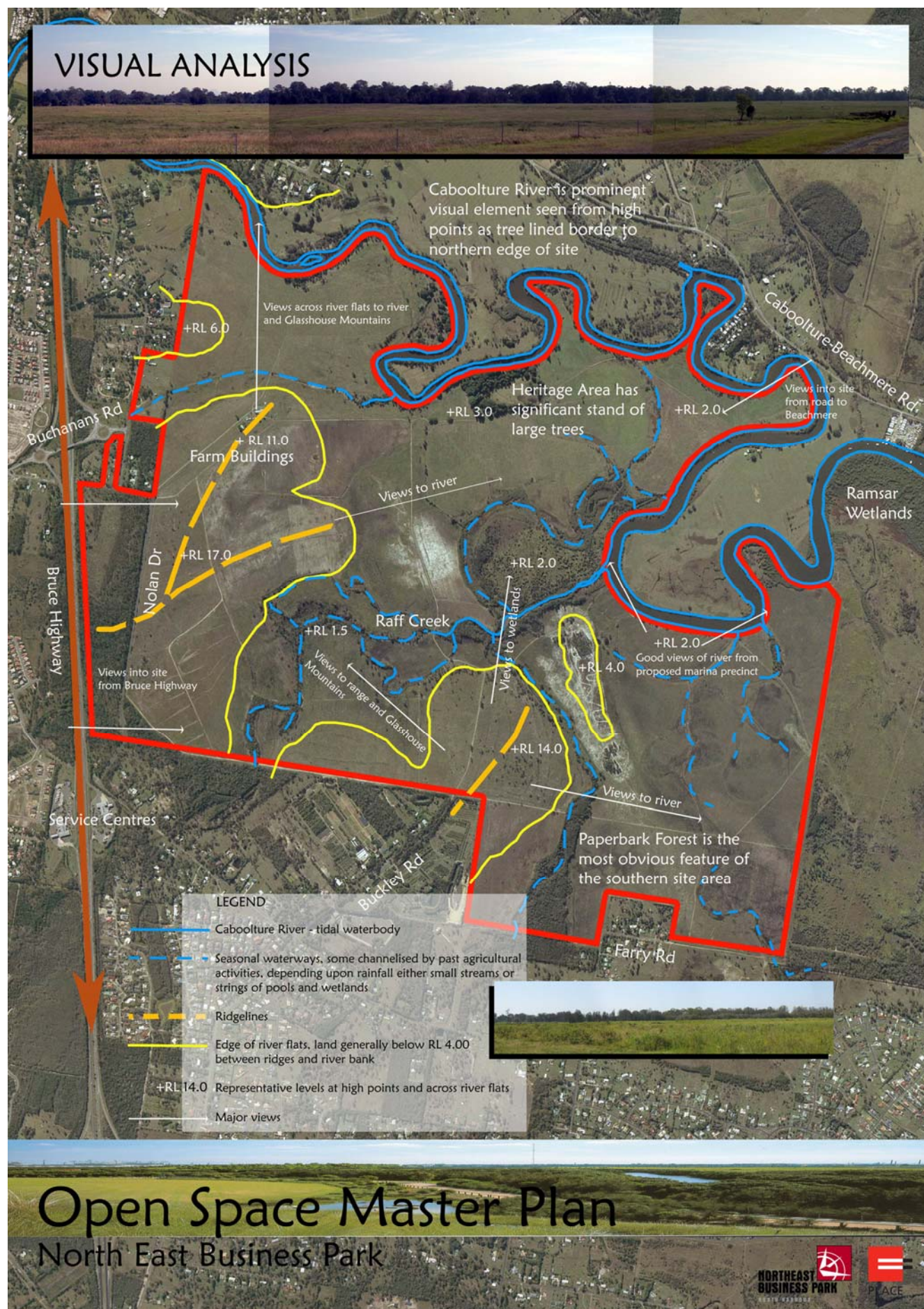


Figure 02 – Visual Analysis

2.2.4 Views

Views into the site

Limited views into the site are available from surrounding roads. The Bruce highway frontage at present is covered by woodland and behind the western ridgeline blocking views. Views are available at several points across the Caboolture River from the Caboolture-Beechmere Road but are restricted by trees on both banks. Nolan Road currently runs through the western portion of the site, but it also is beyond the ridgeline and offers only limited distance views into the site.

The river frontage on the Caboolture River offers views across the site from a boat, but only on the downstream sections as by the time the river reaches the old homestead site the banks have increased to sufficient height to block views.

Adjoining residences, primarily rural residential in nature have varying views into the site depending on their location and vegetation within their lots and within the subject site. Some properties have long distance views across the paddocks to the Caboolture River tree line.

Views out of the site

From ground level at the highest points of the ridgelines, distant views of the Glasshouse Mountains can be seen to the north and northwest. In areas clear of vegetation views to the D'aguiar Range are possible to the west and northwest.

Moreton Bay is not visible from ground level anywhere on the site, as the elevation is insufficient to view over tree lines to the east. Multi-storey buildings proposed for the site would have distant views to Moreton Bay from upper storeys if of sufficient height.

Views to surrounding rural residential properties are primarily at a mid range as residences are generally not in close proximity to the site boundary. Most views are partially or fully screened by vegetation in the adjoining property.



Distant views of the Glasshouse Mtns (Mt Tibrogargan centre of image) can be seen from higher points over the tree lined course of the Caboolture River.

Views within the site

Expansive and panoramic internal views occur within the site due to its predominately level topography and lack of vegetation. Higher points have views across the waterways to the meandering line of the Caboolture River.



Typical Internal panoramic views





River bank and view of Caboolture River at proposed Marina locks



Scattered regrowth along the upper sections of Raff Creek within the site



View to Caboolture River from Farm Buildings across open paddocks

2.3 EXISTING VEGETATION

Refer environmental reports for more detailed descriptions of existing vegetation within the site.

The site is dominated by grasslands created through clearing for farming and forestry, and the more recent use of the property for grazing.

In summary, the limited areas of remnant or significant vegetation remaining on site are;

- A small area of 'of concern' Paperbark forest in the southwest corner which will be retained within the proposed development and undergo an intensive weed management programme to remove heavy infestations of Wedelia and other garden pest species;
- A patch of woodland along the Bruce Highway frontage for which a compensatory habitat contribution elsewhere is proposed to allow clearing;
- A significant area of Paperbark forest along the eastern Raff Creek tributary extending well into the site from the southern boundary near Farry Road;
- A large area of Swamp Oak and Marine Couch communities flanking Mangrove lined waterways at the bottom end of Raff Creek and extending in limited patches along the eastern reaches of the Caboolture River;
- Narrow bands of riparian vegetation including mangroves, swamp oak, and river oak along the banks of the Caboolture River;
- Scattered, small and isolated patches of trees woodland and forest trees.
- The extensive grove of native pines and exotic plantings at the old homestead site.



Melaleuca forest to be conserved



Exotic and native pines in Heritage Park area



Swamp oak, Marine couch and Mangrove communities



Narrow riverine band of Mangroves, Swamp oak, and River oak

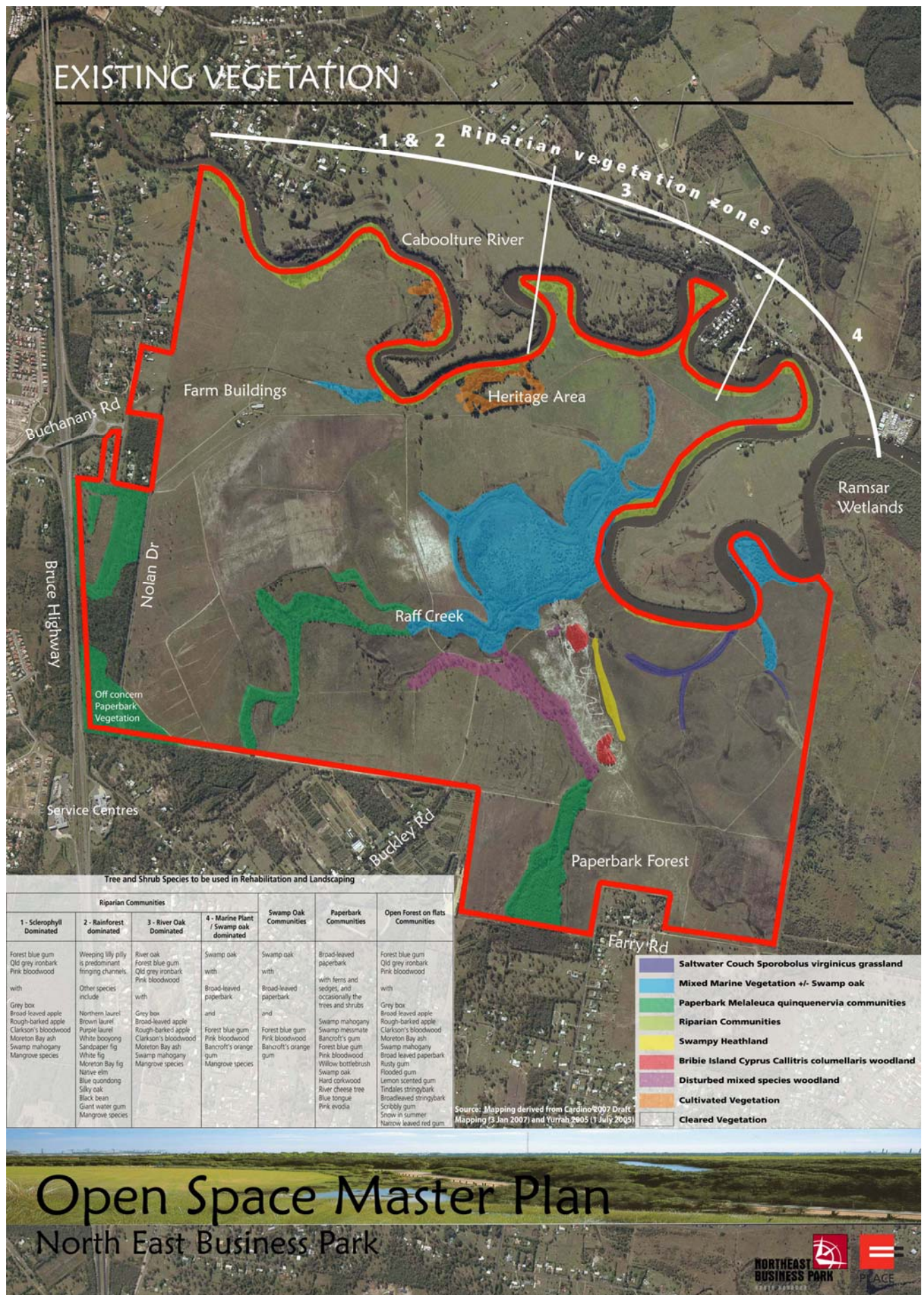


Figure 03 – Existing Vegetation

2.4 CULTURAL HERITAGE

Refer attached Figure 04 Cultural Heritage for an overview of the history and cultural remains on the site. An abbreviated timeline of the site's history is shown and the general location of major historical remnants is mapped.

2.4.1 Indigenous Cultural Heritage

Detailed descriptions within the reports by Davies Heritage Consultants Pty Ltd, namely ; *Cultural Heritage Assessment of Lot 10 RP902079 And Lot RP902075 Caboolture Shire, Southeast Queensland, October 2003*, and *Cultural Heritage Survey Report for Northeast Business Park Pty Ltd., August 2006* outline the indigenous cultural heritage issues on the site.

A Cultural Heritage Management Plan on indigenous heritage has been prepared and registered. The CHMP will be activated upon commencement of works. Similarly a CHMP relevant to non-indigenous heritage has been prepared and will be activated upon commencement of the works.

2.4.2 European Cultural Heritage

European influence on the site has been extensive via the various agricultural activities undertaken. The report *Cultural Heritage Assessment of Lot 10 RP902079 And Lot RP902075 Caboolture Shire, Southeast Queensland, October 2003* by Davies Heritage Consultants Pty Ltd outlines in detail the history of European settlement and the interactions of Europeans with the indigenous population. It also outlines the influence of the importation of South Sea Islander labourers in the mid nineteenth century, thus creating another cultural aspect to this site.

The physical remains of early European settlement are concentrated within the area adjacent the Caboolture River that is proposed as the primary public access recreational site for the proposed development. This is identified in the Open Space concept plans as the Heritage Park.

Further archeological investigations will be undertaken with regard to the exposure, identification, display and interpretation of such items within the open space, including the recovery of items found within the developed areas.



The "Thirteen Steps" remains of the original 'Morayfields' homestead

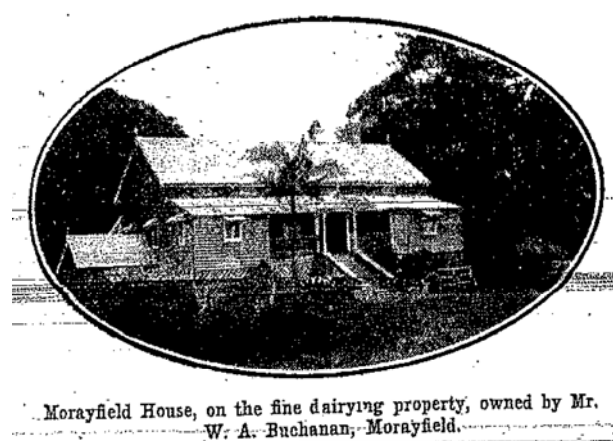


Image of original house showing steps circa 1930, sourced from John Oxley Library, article copied from Brisbane Courier, 18 Oct 1930, p.9

2.4.3 South Sea Islander Cultural Heritage

During detailed planning phases, consultation with the Caboolture South Sea Islander community will be undertaken to provide recognition and respect for the culture and involvement of this community and their forebears in the history of the site and to ensure representative inclusion in the interpretive display of information within the Heritage Park precinct.



Figure 04 – Cultural Heritage

3 LANDSCAPE MASTER PLANNING

This report provides an overview of the proposed Landscape Master Plan for the Northeast Business Park with particular reference to the open space component of the development.

3.1 LANDSCAPE VISION

" Nature does nothing uselessly " Aristotle

Northeast Business Park has been conceived as a benchmark environmentally sustainable development. The site covers an area of some 795 hectares of which approximately 440 hectares is open space. The development of the open space areas will be designed to achieve outcomes based on these aims:

- restoration and management of the natural environment
- respect for the cultural and historical values of the site
- urban development & open space management in a sustainable manner
- enhancement of the ecological values of open space
- provide open spaces accessible to all members of the public
- provision of varied recreational opportunities for Caboolture residents
- having a participatory and consultative approach with the community
- design based on Water Sensitive Urban Design, Environmentally Sensitive Design, Crime Prevention Through Environmental Design, and Accessibility principles
- protection of ecological values in the Caboolture River and Moreton Bay.



Figure 05 – Site Context

3.2 OPEN SPACE PLANNING

The open space planning should be directed towards;

- Habitat conservation
- Habitat restoration
- Environmental interaction and education opportunities
- Creating regionally significant sites and facilities
- Providing public river access
- Providing active recreation options
- Providing passive recreation options
- Development of trail networks
- Creation of play environments
- Creation of local, district and regional parklands
- Provision for community events
- Urban open spaces including plazas, promenades, and display gardens

3.2.1 Relevant Planning Codes and guidelines

Detailed and ongoing future landscape planning would be guided the following relevant codes and guidelines;

Northeast Business Park Area Plan:

- specifically by the Open Space Precincts Code, and;
- more generally by the Traffic, Access and Parking Code and the Stormwater Code

Caboorture Shire Council:

- Stormwater Code;
- Landscaping Code, and;
- the Landscape Design Standards

3.2.2 Recreational Opportunities



Review of the characteristics of the site and relevant Caboorture Shire Council recreational, sport and open space planning documents and policies suggest a number of recreational opportunities suitable for this site, including;

- | | |
|---------------------|--------------------------------------|
| • Rowing | • Informal play |
| • Canoeing | • Sports fields |
| • Sailing | • Dog exercising |
| • Boating | • Photography / painting |
| • Picnicing | • Birdwatching |
| • Walking / jogging | • Environmental studies / education |
| • Exercise trails | • Golf |
| • Cycling | • Horticultural appreciation |
| • Bushwalking | • Historical / cultural appreciation |
| • Sitting | • Swimming |
| • Sightseeing | • Fishing |
| • Driving | |

These various opportunities have a variety of physical requirements, have potential adverse impacts that require management, require a variety of support facilities and are to varying degrees compatible with each other. The following matrices outline these factors and will have been used in determining proposed open space precincts and will be used in more detailed design processes for various parts of the open space during development phases.



Figure 06 – Planning Matrices

Activity	Physical Requirement	Slopes 0-10%	Slopes 10-25%	Large Water Area	Access to Roads	In frequent Flooding	Access to Water	Tracks / pathways	Fauna / flora Diversity	Intensive Use Area	Shade Trees	High Maintenance	Special Features eg lookouts etc	Absence of Wildlife Habitats
Leisure Rowing														
Canoeing														
Sailing														
Boating														
Picnicing / BBQ's														
Walking / Jogging														
Bush Walking														
Sitting														
Sightseeing														
Pleasure Driving														
Informal Play														
Sports Fields														
Dog Exercising														
Photography / Painting														
Birdwatching														
Environmental Studies / Education														
Golf Course														
Display Gardens														
Historical Features														
Swimming														
Fishing														
Recreational Cycling														

 Direct Requirement
 Indirect Requirement

Matrix 1 : MAJOR PHYSICAL REQUIREMENTS FOR RECREATION ACTIVITIES*Figure 6.1 – Major Physical Requirements for Recreation Activities*

Activity	Potential Impact	Increased Traffic	Trampling of Riparian Vegetation	Noise	Increased Water Turbidity	Increased Fuel Water Pollution	Physical / Visual Impact on Riverbank	Disturbance of Native Fauna & Flora	Increased Erosion Potential	More Litter, Possible Effluent Waste	Increased Nutrient Discharge
Leisure Rowing											
Canoeing											
Sailing											
Boating											
Picnicing / BBQ's											
Walking / Jogging											
Bush Walking											
Sitting											
Sightseeing											
Pleasure Driving											
Informal Play											
Sports Fields											
Dog Exercising											
Photography / Painting											
Birdwatching											
Environmental Studies / Education											
Golf Course											
Display Gardens											
Historical Features											
Swimming											
Fishing											
Recreational Cycling											



 Direct Impact
  Indirect Impact if Uncontrolled

Matrix 2 : POTENTIAL IMPACTS OF ACTIVITIES

Potential impacts from recreational activities can range from minor to occasionally severe particularly in a localised sense eg. erosion of a waterway bank in at an unmanaged access point. Detail design of recreational facilities should involve the assessment of likely impacts and ensure design and / or management strategies are applied to minimise such impacts. Such strategies will include the preparation of Environmental Management Plans to control the maintenance and operation of high use sites such as the golf course, heritage park, sports grounds, and parklands.

Figure 6.2 – Potential Impacts of Activities

Activity	Support Facility													
	Carparking	Access Roads	Access Tracks	High Standard Tracks	Low Standard Tracks	Launching Points	Water Access Points	Toilets / Drinking Water	Rubbish Bins	BBQ's / Tables / Shelters	Benches	Playground Equipment	Transport Network Nearby	Perimeter Fencing
Leisure Rowing														
Canoeing														
Sailing														
Boating														
Picnicing / BBQ's														
Walking / Jogging														
Bush Walking														
Sitting														
Sightseeing														
Pleasure Driving														
Informal Play														
Sports Fields														
Dog Exercising														
Photography / Painting														
Birdwatching														
Environmental Studies / Education														
Golf Course														
Display Gardens														
Historical Features														
Swimming														
Fishing														
Recreational Cycling														

 Direct Related to Site of Activity
 Indirectly Related

Matrix 3 : SUPPORT FACILITIES FOR ACTIVITIES

Figure 6.3 – Support Facilities for Activities

Activity	Compatible Activity	Leisure Rowing	Canoeing	Sailing	Boating	Picnicing / BBQ's	Walking / Jogging	Bush Walking	Sitting	Sightseeing	Pleasure Driving	Informal Play	Sports Fields	Dog Exercising	Photography / Painting	Birdwatching	Environmental Studies / Education	Golf Course	Display Gardens	Historical Features	Swimming	Fishing	Recreational Cycling
Leisure Rowing																							
Canoeing																							
Sailing					2																		
Boating				2																	5		
Picnicing / BBQ's																							
Walking / Jogging											5			5									
Bush Walking											5			5				5					
Sitting																		5					
Sightseeing																							
Pleasure Driving																							
Informal Play																		5					
Sports Fields																							
Dog Exercising											5		5					5	1				5
Photography / Painting																							
Birdwatching																							
Environmental Studies / Education					4	1						3	1								3		
Golf Course														5									
Display Gardens														1									
Historical Features																							
Swimming				2	5																	5	
Fishing					5																4		
Recreational Cycling														5				5					



Compatible



Unrelated



Incompatible and Primary Reason For Incompatibility



Opposing Physical Requirements



Poor Manoevrability to avoid Collision



Noise Pollution and Distraction



Water Quality Decrease



Physical Danger

Matrix 4 : COMPATIBLE ACTIVITIES

Incompatible activities may be able to be accommodated in the same location provided measures are undertaken to mitigate the reasons for the incompatibility eg. the provision of fenced compounds for off leash dog exercise. Careful consideration in the location of specific recreational facilities is required to ensure minimal incompatibility issues arise between activities.

Figure 6.4 – Compatible Activities

3.3 PLANNING FOR SUSTAINABLE DEVELOPMENT

A primary aim of the vision for the proposed development is;

‘urban development & open space management in a sustainable manner’

To foster this aim of creating a sustainable community the planning codes and guidelines will encourage the following;

- Catching rainwater;
 - roof water tanks
- Water harvesting;
 - contour drainage to planted beds
 - pondage collection of overland flows
 - retention basins
 - wetlands
- Water Sensitive Urban Design
- Climate responsive building designs
- Low energy use
 - low voltage appliances and lighting
 - building insulation
 - microclimatic building designs
 - convective cooling
 - heat sump technologies
- Solar technologies
 - solar landscape lighting
 - solar power pumps on water tanks
 - solar power panels
 - solar hot water systems
- Recycled materials
 - crushed concrete/brick mulches
 - recycled timber
 - recycled rubber soft falls
 - chipped forest mulch from cleared vegetation
 - reconstituted building products
- Recycled water
 - recycled mains from waste water treatment plant
 - dual reticulation
 - grey water re-use
- Bio-filtration
 - turf bio-swales
 - gravel bio-swales
 - gravel bio-filtration basins
 - artificial wetlands
- Conservation strategies
- Community social facilities
- T.O.D. Planning integration
- Public transport services
- Childcare facilities
- Retail facilities
- Recreational facilities

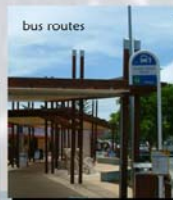


SUSTAINABLE LIVING

CATCHING RAINWATER
 WATER HARVESTING
 WATER SENSITIVE URBAN DESIGN
 CLIMATE RESPONSIVE BUILDING DESIGNS
 LOW ENERGY USE
 SOLAR TECHNOLOGIES
 RECYCLED MATERIALS
 RECYCLED WATER
 BIOFILTRATION
 CONSERVATION STRATEGIES
 SUSTAINABLE COMMUNITIES
 COMMUNITY SOCIAL FACILITIES
 T.O.D. PLANNING INTEGRATION
 PUBLIC TRANSPORT SERVICES
 CHILDCARE FACILITIES
 RETAIL FACILITIES
 RECREATIONAL FACILITIES



sustainable technology & lifestyles



Open Space Master Plan

North East Business Park

Figure 07 – Sustainable Living

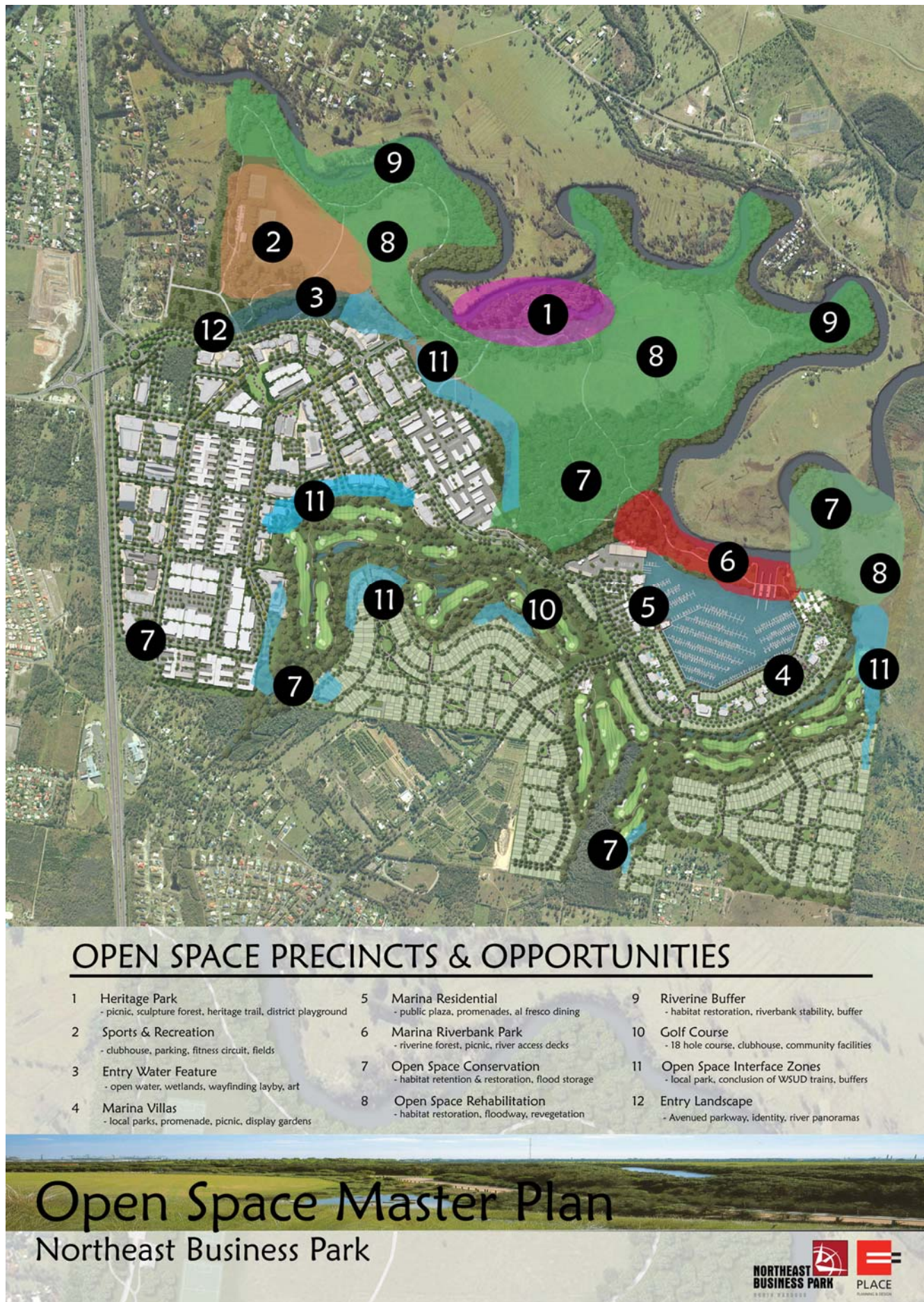


Figure 08 – Open Space Precincts & Opportunities

3.4 OPEN SPACE PRECINCTS AND OPPORTUNITIES

The major open space areas outlined on the Structure Plan of the site has been divided into precincts as outlined in Figure 08 Open Space Precincts & Opportunities based on the natural character, physical characteristics, environmental value, and relationships to proposed built form precincts. These precincts provide the mix of recreational opportunities. The recreational opportunities vary across the spectrum from quiet natural area experiences to intense built form experiences.

3.4.1 Precinct 1 – The Heritage Park Precinct

This precinct adjoining the Caboolture River incorporates the major historical remains of European settlement and is located on ground that is higher than most of the river side land downstream. This original decision to construct a homestead in this location is obviously reflective of this topography. This precinct is therefore suited to the development of a more intense recreational facility that encourages the aim of fostering public access to the river, realising the public recreational use of open space, and rediscovering the historical cultural elements of the site.

3.4.2 Precinct 2 – Sport and Recreation Precinct

This precinct to the adjoining the north-western boundary of the is proposed for multi – purpose community use, in particular sport and recreation uses. An area of higher ground would allow for flood protected facilities accessed from Trafalger Drive road system. Large existing open expanses would be suitable for the development of sporting fields with minimal environmental impact and significant physical separation from nearby residential dwellings.

3.4.3 Precinct 3 – Entry Water Feature

The previous drainage way through this zone leading from a localised catchment around Trafalger Drive has been graded and 'controlled' by farming operations. The potential of this precinct is to develop a sequence of wetlands and water body to provide water themed landscape entrance to the proposed development. This sequence of water elements not only provides a attractive landscape, but provides the opportunity for stormwater treatment processes from catchments within the adjoining residential, business park, and sports areas.

3.4.4 Precinct 4 – Marina Residential Precinct

The highly developed zone of residential villas and apartments surrounding the marina incorporate areas of public and private open spaces such as parks, forecourts, courtyards and promenades. This intensive built form prompts more concentrated landscape treatments and elements to cater for more frequent and intense public usage.

3.4.5 Precinct 5 – Marina Village Precinct

The highly developed commercial zone of shops, eateries, tavern, and marina activities also prompts more concentrated landscape treatments and elements to cater for more frequent and intense public usage and activities associated with commercial enterprises such as outdoor dining. Promenades, plazas and pedestrianised streetscapes are suited to this type of precinct.

3.4.6 Precinct 6 – Marina Riverbank Park Precinct

A 100m wide strip of riverbank to remain between the marina basin and the river constitutes another open space precinct. Its close proximity to both the marina and the river suggests this area provides an opportunity to provide a public access recreational site accessed both from the marina area and the river.

3.4.7 Precinct 7 – Open Space Conservation

Conservation areas of retained vegetation are proposed across the site encompassing the few remaining areas of endemic communities identified on the site. These areas have been encompassed within the open space areas and are generally buffered from built form precincts by buffers and parkland areas.

3.4.8 Precinct 8 – Open Space Rehabilitation

Rehabilitation of the open spaces throughout the site will be extensive and will comprise everything from restoration of existing incursions and fringes areas of retained vegetation, replanting areas and buffers with endemic communities, revegetation of drainage lines, vegetation stabilisation of riparian edges and banks, and revegetation of areas disturbed by bulk earthworks including grassing of floodways with native grass species. Rehabilitation works will be undertaken in a variety of open space precincts, including conservation zones, the riverine buffer, the Heritage Park, the sports and recreation zone, the marina riverbank parkland, the golf course, interface zones and open space parkland within residential and business park precincts.

3.4.9 Precinct 9 – Riverine Buffer

The frontage to the Caboolture River requires the revegetation of a riverine buffer of a minimum 100m depth as catchment and waterway protection.

3.4.10 Precinct 10 – Golf Course

A championship standard 18 hole golf course flanking the tributaries of Raff Creek and incorporating revegetated riparian buffers to the creeklines.

3.4.11 Precinct 11– Open Space Interface Zones

Parkland and vegetation buffers found between the urbanised zones of the site and environmentally sensitive areas of the open space. These interface zones provide opportunities for the control of stormwater discharge and water quality improvement by inclusion of treatment train end points such as wetlands. As per the Stormwater Management Plan, the majority of treatment is to be undertaken with private lot boundaries treatment trains within streetscapes and open space within the built up areas prior to discharge into the interface zones.

3.4.12 Precinct 12 – Entry Landscape

The development of a landscape character at the primary entrance to the site emphasising the environmental aims of the development and the open character of the expansive open spaces along the river.

These precincts have a variety of design and planning intents and inherent design and planning outcomes as outlined in more detail in the following sections.

The resultant characteristics of these precincts result in the evolution of a sequence of “destinations” to attract visitors and residents to the area.

3.5 OPEN SPACE DESTINATIONS

Refer Figure 09 Destinations.

In brief, the “destinations” include;

3.5.1 The Sports Fields and Clubhouse (destination no. 1)

A district level sports and recreation node that includes a clubhouse proposed to service active and organised sporting activities. The exact nature of the sports facilities will be determined in consultation with the Local Authority on a future needs basis. Potentially the clubhouse could be a multi-functional community facility allowing for meeting and function capabilities supplementary to its sporting role.

3.5.2 Heritage Park & Playground (destination no. 2)

An area adjacent to the Caboolture River retains remnants of the early European settlement on the property called Morayfields. This location has been selected to develop a significant passive recreational site themed around the historical

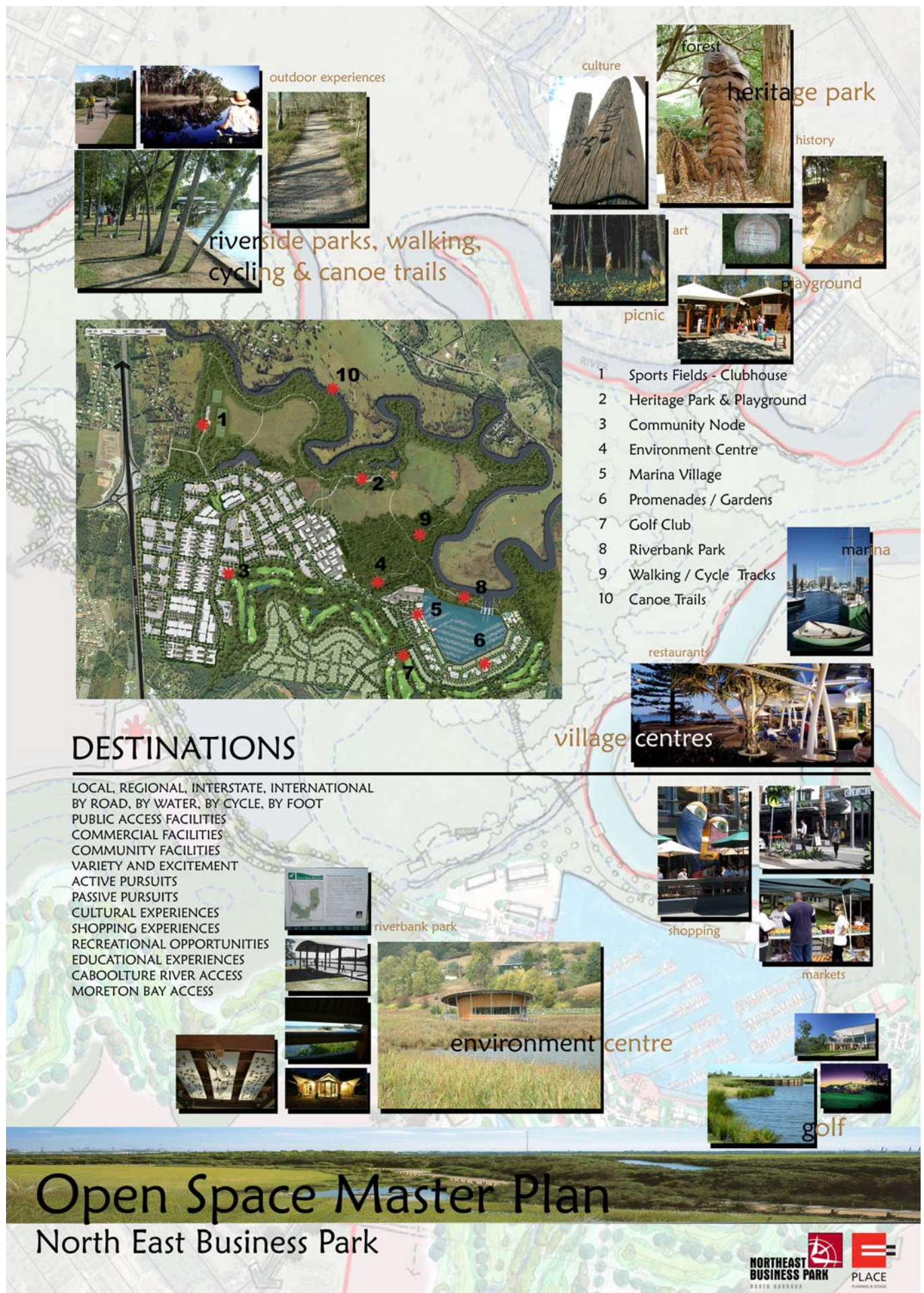


Figure 09 – Destinations

context and supplemented by a proposed sculpture park. This public facility is accessed by road, by cycle, by foot, or from the river. Complementary to the historical remains as an attraction would be a district playground themed to integrate with the art and heritage aspects of the location.

3.5.3 Community Node (destination no. 3)

Within the Business Park precinct of the development will be a community node providing an urbanised open space experience for workers and visitors, based around service providers such as financial providers, postal services, child care, cafes, and health services.

3.5.4 Environment Centre (destination no. 4)

A proposed Environment Centre located adjacent to primary roadway but on the edge of the environmentally sensitive areas along Raff Creek, would provide an educational experience to visitors with links into the conservation areas and the environmental trail network. The facility proposed is intended to be designed, constructed and operated to demonstrate Sustainable and Environmentally Sensitive Design. Its intent is to be a benchmark for construction of building within the development.

3.5.5 Marina Village (destination no. 5)

The commercial centre of the Marina Village provides a vibrant shopping and entertainment precinct of pedestrianised streetscapes, plazas, al fresco dining and socialising.

3.5.6 Promenades and Gardens (destination no. 6)

The Marina basin and its adjoining villas and apartment complexes are interwoven with public and private open space in the form of waterside promenades, pocket parks, playgrounds, gathering spaces, picnic spaces, and gardens. The open space experiences here are urban in nature and contrast with the more natural experiences found elsewhere. Potentially complex and highly landscaped demonstration and display gardens could be incorporated in locations within this area as a public attraction similar to 'pay for view' garden attractions within tourist areas throughout the world

3.5.7 Golf Club and Course (destination no. 7)

A championship standard golf course and clubhouse provides another important destination experience, forming the significant open space fronting the residential precincts and bordering much of the Business Park providing not only sporting facilities but significant visual amenity. An network of cart suitable routes is proposed to be integrated into the road, pedestrian, and cycleway networks to allow residents of the development who own their own golf carts to commute to and from the golf club.

3.5.8 Riverbank Park (destination no. 8)

The buffer zone between the marina basin and the river is proposed to be developed as a Riverbank parkland providing a more naturally themed contrast and open space alternative to the adjacent urbanised open space components on the other side of the Marina. It will provide significant access to the river for both residents and visitors.

3.5.9 Walking and Cycle Tracks (destination no. 9)

An extensive network of cycle and walking tracks is proposed throughout the public open space providing recreational opportunities and links between the various destinations and attractions. This network links to paths integrated into the internal road network providing linkages to the residential and business park precincts and to surrounding urban areas such as Morayfield and Caboolture under current networks and future potential linkages.

3.5.10 Canoe Trails (destination no. 10)

A series of canoe trails proposed by the Caboolture Shire Council integrates with proposed river access to the public open space destinations including landing points at the Heritage Park and near the Marina, providing another recreational option and encouraging access to the parklands by water.



Graphic by v2i and Place Design Group



Open Space Master Plan

Northeast Business Park

Figure 10 – Open Space Landscape Master Plan

4 THE LANDSCAPE MASTER PLAN

The following pages illustrates in graphic form the Landscape Master Plan.

The publicly accessible open spaces, environmental areas, buffers, and the golf course form a significant physical, visual and spatial component of the landscape of the proposed development. The expansive areas of open space along the Caboolture River incorporating recreational choices, cultural heritage values, environmental values, and overall landscape values provides a rare opportunity for the creation of a public open space asset of a significant scale.

Significant components of the master illustrated in more detail include;

- The Heritage Park - the primary developed public recreation node on the Caboolture River preserving cultural heritage aspects of the site;
- The Sport and Recreation precinct – an area set aside to cater to the future sporting needs of the developing community;
- The Riverbank Park Precinct – providing river and marina access in an informal parkland setting;
- The revegetated riverine buffer to the Caboolture River;
- Conservation zones ensuring long term management of conserved vegetation communities;
- Rehabilitation zones undertaken under a strategy of extensive revegetation with endemic plant species;
- The Golf Course, a extensive open space recreational opportunity managed to enhance the environmental values of the site;
- An open space circulation network facilitating public access to the extensive open space areas;
- The Marina Precinct – a urbanised residential, commercial, and tourist oriented maritime precinct or shopping streets, promenades, parks and plazas centred around the marina basin;
- Local parks providing open space experiences to residents, visitors, and workers on the site;
- Streetscapes providing attractive tree lined connections throughout the site;
- The Entry Experience on entering the site from the primary approach route from Caboolture and the Bruce Highway.

4.1 HERITAGE PARK PRECINCT

Refer Figure 11 Heritage Park

Intent:

Provision of a significant public access recreation site on the Caboolture River.

Desirable Aims and Outcomes:

- Provide public access to the river and the cultural heritage of the Morayfields homestead site;
- Protect and preserve the cultural heritage features located at this site;
- Interpret and display cultural heritage elements and histories;
- Provide public recreational facilities;
- Provide pedestrian and cycle linkages to surrounding areas;
- Promote the establishment of a sculpture park component;
- Provide opportunities for community cultural events eg. biennial ephemeral sculpture competition
- Provide a open space gathering point for community or family functions;
- Retain and display some of the horticultural heritage through retention of appropriate exotic tree plantings.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- Localised WSUD treatment train;
- Establishment of 100m buffer to Caboolture R, with majority of built elements beyond this buffer;
- Protection, display and interpretation of heritage items;
- Local Authority Cultural Trail guidelines and CHMP.

Proposed and Permissible Constructed Site Elements:

- Access roadway – AC, flush kerbs, bollard barriers
- Car parking – permeable pavements, bollard barriers
- Overflow car parking for events – open grassed area, potentially on adjacent floodway
- Shared bikeway – concrete or AC, linked to Marina and Sports precincts
- Tracks – AC, deco, timber, chainwalks, roadbase – links to environmental trail network along river
- Boardwalks
- Canoe landing point – compliant with prescribed tidal works codes and relevant authority approvals
- Shelters
- Picnic settings
- Bbq's
- Interpretive displays and signage
- Cultural interpretive shelter / pavilion
- Playground
- Bins
- Amenities – solar lighting, water collection for reuse, on-site waste treatment system

Landscape Modification:

- Rehabilitation and revegetation with endemic plant species of the minimum 100m wide buffer by revegetation plantings, weed management of invasive exotic tree species, in particular camphor laurel;
- Understorey removal as necessary to expose cultural heritage elements;
- Installation of protective measures as necessary to protect heritage elements and ensure public safety;
- De-silting of the water body referred to in historical records as "the Dam " that was overlooked by the old Morayfields homestead as a landscape setting and historical context element for the Heritage Park;
- Use of bio-swale stormwater collection from the intensive use areas of the proposed park , directed to wetlands and the restored "Dam" as part of a localised WSUD train to minimise impacts on the nearby river of the recreation site.



Figure 11 – Heritage Park Concept



Figure 12 – Heritage Park Master Plan – refer concept sketch on previous page



Historic remains on site



Riverbank near proposed canoe landing



Native pines to remain



4.2 SPORT AND RECREATION PRECINCT

Refer Figure 13 Sport & Recreation Precinct Master Plan

Intent:

Provision of a sport and recreation precinct for active public recreational use.

Desirable Aims and Outcomes:

- Provide a precinct within the open space zone suitable for future development of district level sports facilities as determined by the Local Authority;
- Provide support facilities;
- Provide pedestrian and cycle linkages to surrounding areas;
- Provide buffering to adjoining residential areas.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- Localised WSUD treatment train;
- CPTED Design;
- Local Authority sport & recreational Codes, Plans, and needs assessment;
- No encroachment into 100m buffer to Caboolture R;
- Amenities and clubhouse wastes to be disposed of to mains;
- Clubhouse facilities to be located above Q100 flood level.

Proposed and Permissible Constructed Site Elements:

- Access roadway – AC, flush kerbs, bollard barriers
- Car parking – permeable pavements, bollard barriers
- Overflow car parking for events – open grassed area;
- Shared bikeway – concrete or AC, linked to Residential, Business Park, Morayfield and Caboolture, and Marina precincts
- Courts
- Sports fields
- Shelter
- Clubhouse
- Amenities

Landscape Modification:

- Revegetation with endemic plant species of a minimum 100m wide buffer between the clubhouse and sporting fields and the adjoining existing residential lots, car parking permissible within eastern frontage of buffer ;
- Koala food trees dominant with buffer plantings;
- Integration of residential buffer into Riverine Buffer;
- Stormwater harvesting from fields via bio-swales and wetlands directed to proposed water body with Entry Precinct for re-use as irrigation for sports fields, supplemented by dual reticulation recycled water supply as necessary;
- Spectator shade trees;
- Wind protection forest plantings to southern side of fields, open grassland to eastern side to allow cooling winds from seaward;
- Environmental Management Plan to be developed to manage fertiliser and pest control of sporting fields and storm water runoff, including monitoring of irrigation water body and irrigation water quality.



Figure 13 – Sport and Recreation Precinct Master Plan



View from ridge to south to existing rural residential lots to be buffered from proposed clubhouse on knoll to right

View across proposed Sport & Recreation Precinct from ridgeline to south



4.3 RIVERBANK PARK PRECINCT

Refer Figure 14 Riverbank Park Master Plan

Intent:

Provision of a public access recreation site on the Caboolture River.

Desirable Aims and Outcomes:

- Provide public access to the river in the immediate vicinity of the Marina;
- Provide public recreational facilities;
- Provide pedestrian and cycle linkages to surrounding areas;
- Provide river access to the recreation reserve;
- Provide an open space alternative to residents of the Marina Precinct to more urbanised open space within the Precinct;
- Allow public access to the locks system and pedestrian and cycle connection from the Marina to the remainder of the site open space network along the river.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- CPTED design;
- Establishment of 100m buffer between the Marina basin and the Caboolture R;
- Minimum landscape standards to comply with Local Authority Landscape Design Standards

Proposed and Permissible Constructed Site Elements:

- Service access connection from the shipyard to the shared cycle path for maintenance and emergency vehicles;
- Shared bikeway – concrete or AC, linked to Heritage Park and Sports precincts;
- Tracks – concrete, AC, deco, timber, chainwalks, roadbase;
- Boardwalks;
- Canoe landing point – compliant with prescribed tidal works codes and relevant authority approvals;
- Shelters;
- Picnic settings;
- Bbq's;
- Interpretive displays and signage;
- Fishing deck with seating, filleting tables, water – compliant with prescribed tidal works codes and relevant authority approvals;
- Boat pontoon / river landing – compliant with prescribed tidal works codes and relevant authority approvals;
- Bins;
- Amenities accessible from boat pontoon – solar lighting, water collection for reuse, connection to mains waste treatment system.

Landscape Modification:

- Rehabilitation and revegetation with endemic plant species of the minimum 100m wide buffer by revegetation plantings, weed management;
- Extensive planting of shade tree species;
- Selected understorey removal to create open grassed spaces under trees as recreational areas and to maintain sight lines from river into Marina precinct;
- Installation of protective measures as necessary to ensure public safety;
- Riverbank stabilisation;
- Use of bio-swale stormwater collection from the intensive use areas of the proposed park, directed to Marina basin.



Figure 14 – Riverbank Park Master Plan



Tinchy Tamba Parklands on Pine River is the model for the proposed Riverbank Park

4.4 RIVERINE BUFFER

Refer Figure 10 Open Space Master Plan

Intent:

Development of a natural character vegetated buffer to the Caboolture River.

Desirable Aims and Outcomes:

- Retain and protect riverine vegetation and the Ramsar wetlands communities;
- Provide vegetated buffer to the river to assist in water quality control;
- Maintain and reinforce bank vegetation to assist in bank erosion control;
- Provide an enlarged wildlife habitat corridor along the river.
- Provide public access to the river and environmental zones;
- Interpretation of, promote appreciation of, and display of environmental values and issues;
- Provide passive public recreational facilities;
- Provide trail linkages to surrounding areas;
- Provide opportunities for community participation in environmental rehabilitation programmes;

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- Revegetation with endemic plant species;
- Minimisation of built elements within this buffer, other than at defined recreation sites, ie. The Heritage Park and the Riverbank Park;
- Protection, display and interpretation of heritage items

Proposed and Permissible Constructed Site Elements:

- Shared bikeway – concrete or AC, linked to Marina, Heritage Park and Sports precincts, emergency and service vehicle access;
- Tracks – AC, deco, timber, chainwalks, roadbase – environmental trail network along river;
- Boardwalks;
- Canoe landing points;
- Bird hides / outlooks;
- Interpretive displays and signage.

Landscape Modification:

- Rehabilitation and revegetation with endemic plant species of the minimum 100m wide buffer by revegetation plantings;
- Planting of species to improve the habitat value for wildlife eg. Koala food eucalypt species, *allocasuarina* and *casuarina* sp. suitable for Cockatoo habitat; mangrove species, and the installation of nesting boxes and nesting logs to suited various bird, bat, reptile and mammal species to compensate for the immature state of revegetated zones;
- Understorey removal as necessary to expose cultural heritage elements and allow public access trails;
- Installation of protective measures as necessary to protect heritage elements and ensure public safety;
- Weed management – ongoing programme directed by a Weed Management Plan;
- Use of bio-swale stormwater collection from the intensive use areas of the proposed park, directed to wetlands and the restored "Dam" as part of a localised WSUD train to minimise impacts on the nearby river of the recreation site;

4.5 CONSERVATION ZONES

Refer Figure 15 Conservation

Intent:

Protection and preservation of remnant endemic vegetation.

Desirable Aims and Outcomes:

- Retain and protect riverine vegetation communities and the Ramsar wetlands communities;
- Retain and protect swamp oak vegetation communities surrounding the confluence of Raff Creek and the Caboolture River ;
- Retain and protect remnant vegetation communities along the tributaries of Raff Creek;
- Retain and protect the 'of concern' vegetation community in the SW corner;
- Retain wildlife habitat values of remnant vegetation;
- Provide limited public access;
- Interpretation of, promote appreciation of, and display of environmental values and issues;
- Provide passive public recreational facilities;
- Provide trail linkages to surrounding areas;
- Provide opportunities for community participation in environmental monitoring and weed management programmes;

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- Revegetation with endemic plant species;
- Minimisation of built elements;
- Protection, display and interpretation of heritage items.

Proposed and Permissible Constructed Site Elements:

- Shared bikeway – concrete or AC, linked to Marina, Heritage Park and Sports precincts, emergency and service vehicle access;
- Tracks – AC, deco, timber, chainwalks, roadbase – environmental trail network;
- Boardwalks;
- Bird hides / outlooks;
- Environmental education centre demonstrating sustainable design and construction;
- Interpretive displays and signage.

Landscape Modification:

- Rehabilitation and revegetation with endemic plant species in infill areas eg. pine planting enclaves near Raff Creek;
- Rehabilitation and revegetation with endemic plant species to fringes to integrate with adjoining open space;
- Planting of species to improve the habitat value for wildlife;
- Understorey removal only as necessary to allow public access trails;
- Weed management – ongoing programme directed by a Weed Management Plan;



Figure 15 – Conservation



Figure 16 – Master Plan of Environmental Conservation Precinct at Confluence of Raff Creek and Caboolture River



Site photo within conservation area shown, featuring mangrove lined drainage channels and Swamp oak woodlands

4.6 REHABILITATION WORKS

Note: Rehabilitation works will apply through the majority of described within this report as requirements for revegetation , expansion of existing vegetation, infill planting, buffering planting, and/or restoration of disturbance from construction activities will be found throughout the site.

Intent:

Rehabilitate historically or otherwise disturbed areas of open space by re-establishment of vegetation.

Desirable Aims and Outcomes:

- Retain and protect remnant vegetation communities and the Ramsar wetlands communities by rehabilitation with endemic vegetation open space areas disturbed by site works or historical landscape modification;
- Interface with the Caboolture community by fostering co-operative partnerships with community and environment groups keen to contribute to the rehabilitation of the site. For example, at the time of writing, NEBP in partnership with Friends of Caboolture Regional Environmental Education Centre (FO :CREEC) have applied for funding through a Federal Government Envirofund Round 10 'Coastal and Marine' Grants to trial a pilot project on site. The pilot project will involve a small portion of the river bank with the aim of establishing a process for the ongoing stabilisation and rehabilitation of the entire bank and foster long term relationships with local community members and environmental groups;
- Revegetate disturbed areas ;
- Re-establish fringing vegetation communities along the tributaries of Raff Creek;
- Revegetate buffers between developed areas within the site, and between site development and adjoining residential areas;
- Provide controlled public access;
- Provide public recreational facilities;
- Provide trail linkages to surrounding areas.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- WSUD treatment train wetlands to interface zones between developed areas and rehabilitated areas;
- Revegetation with endemic plant species;
- Minimisation of built elements;
- Protection, display and interpretation of heritage items.

Proposed and Permissible Constructed Site Elements:

- Access roadways to recreational sites;
- Shared bikeway – concrete or AC, linked to Marina, Heritage Park and Sports precincts, emergency and service vehicle access;
- Tracks –AC, deco, timber, chainwalks, roadbase – environmental trail network;
- Boardwalks;
- Bird hides / outlooks;
- Interpretive displays and signage.

Landscape Modification:

- Excavation as per flood modelling parameters to allow flood detention and floodway roles;
- Active and passive recreation open space grassland areas within floodway zone;
- Rehabilitation and revegetation with endemic plant species to fringes to integrate with adjoining open space;
- Planting of species to improve the habitat value for wildlife;
- Weed management – ongoing programme directed by a Weed Management Plan;

4.6.1 Indicative Landscape Rehabilitation Species:

- Revegetation and environmental rehabilitation will be undertaken by a combination of direct planting, seeding, and regeneration of endemic species identified in the various ecological reports on the site;
- Relevant plant species to the inherent plant communities within the site will be utilised relevant to topographic and environmental parameters suiting such communities;
- Provenance is to be endemic to the site as much as practicable eg. by agreement with the Friends of CREEC (Caboolture Regional Environmental Education Centre) for the collection of seed from the site and propagation of plant stock at their community nursery for use within the rehabilitation process;
- Landscape species are to be primarily native species and in particular endemic species;
- Buffers and open space and environmental zone interfaces are to be planted with endemic and non-invasive native species
- Minimal numbers of exotic feature species may be utilised with streetscape and developed urban areas if and as permissible under the Local Authority Landscape Code and Landscape Design Standards as applicable at the time of Operational works application.



Cleared patch within conserved Swamp oak community, originally planted with exotic pines requiring weed management and rehabilitation.

4.6.2 Indicative Rehabilitation Planting Species Lists

The following tables contain indicative plant species for rehabilitation and landscape plantings within the overall site of Northeast Business Park.

Estuarine Edge / Creek		Keystone Fauna Habitat	
Botanical name	Common name		Feature
Canopy			
<i>Allocasuarina glauca</i>	Swamp Oak	X	Dominant canopy species. Medium green-grey tree, often monospecific
<i>Corymbia intermedia</i>	Pink Bloodwood		Occasional, source of nectar for bees when in flower
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark		Masses of fragrant Yellow/White flowers during Autumn, distinctive white bark
Midstorey			
<i>Allocasuarina littoralis</i>	Black sheoak	X	Small tree
<i>Alphitonia excelsa</i>	Soaptree / Red Ash		Occasional
<i>Cupaniopsis anacardioides</i>	Tuckeroo		Common & versatile landscape species with attractive green foliage and orange fruits.
<i>Jagera pseudorhus</i>	Foambark		Spreading fine leaved medium tree
<i>Acacia concurrens</i>	Black wattle		Common, short lived pioneer
<i>Acacia sp.</i>	Wattle		Short lived pioneers
Groundcovers			
<i>Eustrephus latifolius</i>	Wombat berry		Vine with stems to 6 m long, sometimes much branched
<i>Lomandra confertifolia</i>	Matrush		Low clumping groundcover
<i>Lomandra hystrix</i>	Matrush		Low clumping groundcover
Estuarine Edge / Creek			
<i>Aegiceras corniculatum</i>	River mangrove		Occasional. Closed scrub. Upper tidal reaches of rivers
<i>Avicennia marina</i>	Grey mangrove		Common. Dominant species in eastern section.
<i>Bruguiera gymnorhiza</i>	Large-fruited orange mangrove		
<i>Enchylaena tomentosa</i>	Ruby saltbush		Small shrub to 1m, greyish foliage and hairy stems
<i>Excoecaria agallocha</i>	Milky mangrove		Occasional
<i>Rhizophora stylosa</i>	Red Mangrove		
<i>Sporobolus virginicus</i>	Marine Couch		Low grass cover covers large areas, monospecific areas on saltmarsh
<i>Sesuvium portulacastrum</i>	Sea purslane		Salt meadow
<i>Suaeda sp.</i>	Sea blight		Low growing clumping plant

Table 1 – Estuarine Edge / Creek Plant Species List

Freshwater Wetland / Wet edge / Drainage Lines		Keystone Fauna Habitat	
Botanical name	Common name		Feature
Small trees / Shrubs			
<i>Acacia leiocalyx</i>	Black wattle		Short lived
<i>Acacia ulicifolia</i>	Prickly moses		Small open spiky shrub
Sedge			
<i>Baumea articulata</i>	Jointed Twig-rush	X	Smaller dark green sedge
<i>Isolepis nodosa</i>	Knobby Club-rush	X	Erect sedge with interesting globular seed heads
<i>Juncus kraussii subsp. australiensis</i>	Sea Rush	X	Dense clumping dark-green rush.
<i>Lepironia articulata</i>		X	Taller sedge grows in dense grey-green clumps
<i>Baloskion pallens</i>		X	Attractive green-gold leaves. Grows via creeping rhizome
<i>Baloskion tetraphyllum</i>		X	Attractive green sedge with "fern-like" foliage
<i>Philydrum lanuginosum</i>	Frogsmouth	X	Tufted Succulent plant. Attractive Yellow flowers
<i>Phragmites australis</i>	Native Reed	X	Tall cane like reed. Tall willowy floral plumes in summer
<i>Gahnia clarkei</i>	Tall Saw-sedge	X	Tall tussock-forming perennial with tall flat leaves of 80-200 cm high, 3-10 mm diam
<i>Gahnia sieberiana</i>	Red-fruit saw-edge	X	A large, robust sedge with long, arching leaves
Floating plants			
<i>Nymphaea capensis</i>	Waterlily	X	Emergent aquatic with floating leaves. Spectacular pink/mauve flowers
<i>Nymphaea gigantea</i>	Giant waterlily	X	Emergent aquatic with very large floating leaves. Spectacular pink/mauve flowers
<i>Ottelia ovalifolia</i>	Swamp lily	X	Tufted aquatic with floating leaves and flowers. Showy White flowers with a red/purple throat.
<i>Nymphoides indica</i>	Marshwort	X	Robust perennial aquatic with large floating leaves and numerous "feathered" white flowers
Groundcovers			
<i>Lomandra confertifolia</i>	Matrush		Low clumping groundcover
<i>Lomandra hystrix</i>	Matrush		Low clumping groundcover
<i>Sporobolus virginicus</i>	Marine Couch		Low grass cover covers large areas, monospecific areas on saltmarsh
<i>Sesuvium portulacastrum</i>	Sea purslane		Salt meadow
<i>Crinum pedunculatum</i>	River lily		Clumping plant. Occasional
<i>Fimbristylis polytrichoides</i>	Fuzzy rush		Clumping plant. Occasional
<i>Gahnia aspera</i>	Swordsedge		Clumping plant. Occasional
<i>Lepidosperma laterale</i>	Variable swordsedge		Clumping plant. Occasional
<i>Acrostichum speciosum</i>	Bungwall fern		Fern. Common
<i>Blechnum indicum</i>	Swampwater fern		Fern. Common
<i>Pteridium esculentum</i>	Bracken fern		Fern. Common

Table 2 – Freshwater Wetland / Wed Edge / Drainage Lines Plant Species List

Littoral Forest on the lower terraces and upper reaches		Keystone Fauna Habitat	
Botanical Name	Common name		Feature
Canopy			
<i>Acmena hemilampra</i>	Broad-leaved lilly pilly		Medium sized - tall tree with thick, leathery glossy green leaves. White globose fruit
<i>Callistris columellaris</i>	Bribie island pine		Characteristic species for Bribie island
<i>Corymbia intermedia</i>	Pink bloodwood	X	Large Eucalypt with dense foliage and distinctive blocky bark
<i>Corymbia tessellaris</i>	Moreton bay ash		Medium sized Eucalypt with very attractive tessellated bark stocking
<i>Cupaniopsis anacardioides</i>	Tuckeroo		Common & versatile landscape species with attractive green foliage and orange fruits.
<i>Elaeocarpus obovatus</i>	Hard quandong		Medium sized tree with scattered red leaves and distinctive bright blue fruit
<i>Endiandra sieberi</i>	Hard corkwood		Medium sized tree with dark green foliage and distinctive corky white bark
<i>Eucalyptus siderophloia</i>	Grey Ironbark	X	Attractive large Eucalypt
<i>Flindersia schottiana</i>	Cudgerie		Quick growing emergent with distinctive leaves and form.
<i>Lophostemon confertus</i>	Brush Box		Large attractive tree with dense dark crown and salmon coloured bark
<i>Podocarpus elatus</i>	Plum pine		Rainforest tree with attractive green foliage and black-purple plum-like fruit
<i>Syzygium leuhmannii</i>	Riberry		Rainforest tree used commonly in landscaping attractive new red foliage and red fruits
<i>Archontophoenix cunninghamiana</i>	Bangalow palm		Occasional species, in groves or solitary
<i>Cryptocarya triplinervis</i>	3-veined laurel		Occasional
<i>Ficus macrophylla</i>	Moreton Bay Fig		Occasional specimens, very large tree
<i>Lophostemon suaveolens</i>	Swampbox		Occasional
<i>Neolitsea dealbata</i>	White bolly gum		Occasional
<i>Rapanea variabilis</i>	Muttonwood		Occasional
Midstorey			
<i>Acacia concurrens</i>	Black wattle		Common, short lived pioneer
<i>Acacia leiocalyx</i>	Black wattle		Abundant, short lived pioneer
<i>Acacia melanoxylon</i>	Blackwood		Occasional, short lived pioneer
<i>Acronychia imperforata</i>	Common acronychia		Small tree with thick leathery green leaves. Small yellow fruit
<i>Alphitonia excelsa</i>	Soaptree / Red Ash		Occasional
<i>Backhousia citriodora</i>	Lemon ironwood		Small tree. Leaves emit a strong lemon scent when crushed.
<i>Commersonia bartramia</i>	Brown kurrajong		Good pioneer species
<i>Euroschinus falcata</i>	Ribbonwood		Attractive small tree
<i>Ficus coronata</i>	Creek sandpaper fig		Occasional
<i>Glochidion ferinandi</i>	Cheese tree		Occasional
<i>Flindersia bennettiana</i>	Bennett's ash		Tall tree with attractive dark green foliage
<i>Jagera pseudorhus</i>	Foambark		Small tree occurs in association with Eucalypts
<i>Macaranga tanarius</i>	Macaranga		Good pioneer species
<i>Mallotus philippensis</i>	Red Kamala		Common tree in regenerating rainforest areas, Very hardy tree to 10m.

Littoral Forest con't

<i>Melia azedarach</i>	White cedar		Lacy yellow foliage in autumn before falling, perfumed flowers and fleshy fruits
<i>Polyscias elegans</i>	Celerywood		Good pioneer species
<i>Psychotria loniceroides</i>	Hairy psychotria		Attractive small tree
<i>Polyalthia nitidissima</i>	Polyalthia		Small tree with glossy green leaves
<i>Syzygium oleosum</i>	Blue lilly pilli		Small-medium tree with dense green foliage and attractive edible blue fruits.
Understorey / Groundcovers			
<i>Alpinia caerulea</i>	Native ginger		Herb with large leaves and attractive blue fruit
<i>Austromyrtus dulcis</i>	Midyimberry		Small shrub with dense foliage and attractive blue and white speckled fruits
<i>Blechnum cartilagineum</i>	Gristle fern		Fern with attractive new red growth
<i>Chrysocephalum apiculatum</i>	Yellow buttons		Local everlasting daisy with clusters of bright yellow flowers
<i>Dianella spp.</i>	Flax lilies		Tufted her to 1m producing small purple flowers and blue / purple berries
<i>Lomandra confertifolia</i>	Matrush		Low clumping groundcover
<i>Lomandra hystrix</i>	Matrush		Low clumping groundcover
<i>Pararistolochia praevensosa</i>	Richmond Birdwing Vine	X	A vine which provides habitat for the threatened Richmond birdwing butterfly
<i>Themeda triandra</i>	Kangaroo Grass		Deep rooted clumping grass with soft foliage.
Climbers			
<i>Calamus australis</i>	Lawyer vine		Occasional
<i>Cissus hypoglauca</i>	Native grape		Occasional
<i>Eustrephus latifolius</i>	Womabt berry		Occasional
<i>Parsonsia straminea</i>	Monkey rope vine		Common
Estuarine Edge / Creek			
<i>Aegiceras corniculatum</i>	River mangrove		Occasional. Closed scrub. Upper tidal reaches of rivers
<i>Avicennia marina</i>	Grey mangrove		Common. Dominant species in eastern section.

Table 3 – Littoral Forest Plant Species List

Swamp Oak Woodland		Keystone Fauna Habitat	
Botanical name	Common name		Feature
Canopy			
<i>Allocasuarina glauca</i>	Swamp Oak		Dominant canopy species. Medium green-grey tree, may be monospecific
<i>Corymbia intermedia</i>	Pink bloodwood	X	Large Eucalypt with dense foliage and distinctive blocky bark
<i>Corymbia tessellaris</i>	Moreton bay ash		Medium sized Eucalypt with very attractive tessellated bark stocking
<i>Eucalyptus resinifera</i>	Red Mahogany		Koala food tree
<i>Eucalyptus robusta</i>	Swamp Mahogany	X	Attractive large tree with dark green foliage and cream / white winter flowers
<i>Eucalyptus propinqua</i>	Small-fruited Grey Gum		Koala food tree
<i>Eucalyptus siderophloia</i>	Grey Ironbark	X	Attractive large Eucalypt
<i>Eucalyptus tereticornis</i>	Queensland blue gum	X	Attractive large Eucalypt with blue - green smooth bark and white / cream winter flowers
<i>Lophostemon suaveolens</i>	Swamp turpentine		Gnarly medium sized tree with grey - green foliage and distinctive flaky bark
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark	X	Masses of fragrant Yellow/White flowers during Autumn, distinctive white bark
Midstorey			
<i>Allocasuarina littoralis</i>	Black sheoak	X	Small tree
<i>Banksia integrifolia</i>	Coast banksia	X	Attractive small tree with cream / yellow blossoms
<i>Callistemon salignus</i>	Willow bottlebrush		Medium sized tree with attractive pink new foliage
<i>Cupaniopsis anacardioides</i>	Tuckeroo		Common & versatile landscape species with attractive green foliage and orange fruits.
<i>Elaeocarpus reticulatus</i>	Blueberry ash		Small tree with scattering of attractive red leaves and bright blue fruit
<i>Glochidion sumatranum</i>	Umbrella cheese tree		Leafy small tree with large green leaves and attractive "button-like" or pumpkin shaped fruit
<i>Leptospermum polygalifolium</i>	Tea tree		Small tree
<i>Leptospermum trinervium</i>	Tea tree		Small tree
<i>Melaleuca linariifolia</i>	Flax-leaf paperbark		Small tree with fine foliage and large clumps of white flowers (Snow in summer)
Groundcovers			
<i>Lomandra confertifolia</i>	Matrush		Low clumping groundcover
<i>Lomandra hystrix</i>	Matrush		Low clumping groundcover
<i>Sporobolus virginicus</i>	Marine Couch		Low grass cover covers large areas, monospecific areas on saltmarsh
<i>Sesuvium portulacastrum</i>	Sea purslane		Salt meadow
Estuarine Edge			
<i>Aegiceras corniculata</i>	River mangroove		Occasional. Closed scrub. Upper tidal reaches of rivers
<i>Avicennia marina</i>	Grey mangrove		Common
<i>Excoecaria agallocha</i>	Milky mangrove		Occasional
<i>Phragmites australis</i>	Common reed		Tall perennial reed that can grow to 6m
<i>Sporobolus virginicus</i>	Marine Couch		Low grass cover covers large areas, monospecific areas on saltmarsh

Table 4 – Swamp Oak Woodlands Plant Species List

Paperbark Woodland (Streamlines / Low lying areas away from Raff Creek and Caboolture River)		Keystone Fauna Habitat	
Botanical Name	Common name		Feature
Canopy			
<i>Casuarina glauca</i>	Swamp Oak		Medium green-grey tree
<i>Eucalyptus robusta</i>	Swamp Mahogany	X	Attractive large tree with dark green foliage and cream / white winter flowers
<i>Eucalyptus siderophloia</i>	Grey Ironbark	X	Attractive large Eucalypt
<i>Eucalyptus tereticornis</i>	Queensland blue gum	X	Attractive large Eucalypt with blue - green smooth bark and white / cream winter flowers
<i>Lophostemon suaveolens</i>	Swamp turpentine / Swamp box		Gnarly medium sized tree with grey - green foliage and distinctive flaky bark
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark	X	Dominant Canopy species. Masses of fragrant Yellow/White flowers during Autumn
Midstorey			
<i>Acacia concurrens</i>	Black Wattle		Short lived pioneer species
<i>Acacia leocalyx</i>	Black Wattle		Short lived pioneer species
<i>Acmena hemilampra</i>	Broad-leaved lilly pilli		Medium sized - tall tree with thick, leathery glossy green leaves. White globose fruit
<i>Acmena smithii</i>	Common lilly pilli		Common hardy small tree with purple to white fruit
<i>Alphitonia excelsa</i>	Soaptree / Red Ash		Small tree used as surfactant by indigenous people
<i>Banksia integrifolia</i>	Coast banksia	X	Attractive small tree with cream / yellow blossoms
<i>Banksia robur</i>	Swamp Banksia		Small gnarly shrub with distinctive broad green leaves and cream banksia-like flowers
<i>Callistemon salignus</i>	Willow bottlebrush		Medium sized tree with attractive pink new foliage
<i>Elaeocarpus reticulatus</i>	Blueberry ash		Small tree with scattering of attractive red leaves and bright blue fruit
<i>Endiandra discolor</i>	Rose walnut		Medium sized tree of coastal lowlands lush green leaves
<i>Ficus coronata</i>	Creek sandpaper fig		Small tree with grey green leaves which are rough to the touch (Sandpaper-like)
<i>Glochidion ferdinandii</i>	Cheese tree		Leafy small tree with large green leaves and attractive "button-like" or pumpkin shaped fruit
<i>Glochidion sumatranum</i>	Umbrella cheese tree		Leafy small tree with large green leaves and attractive "button-like" or pumpkin shaped fruit
<i>Hibiscus tileaceus</i>	Cottonwood		Spreading tree with attractive foliage and large bright yellow Hibiscus flowers
<i>Melaleuca linariifolia</i>	Flax-leaf paperbark		Small tree with fine foliage and large clumps of white flowers (Snow in summer)
<i>Melastoma affine</i>	Native lasiandra		Small shrub with purple flowers
<i>Melicope elleryana</i>	Pink euodia		Small tree with attractive green foliage, flowers bright pink hanging panicles
<i>Phebalium squamossa</i>	Satinwood		Small tree with attractive silver colouration on bottom of leaf
<i>Pittosporum revolutum</i>	Yellow or Hairy Pittosporum		Small tree to 3m with yellow flowers and fruit
<i>Syzygium oleosum</i>	Blue lilly pilli		Small-medium tree with dense green foliage and attractive edible blue fruits.
Understorey / Groundcover			
<i>Pararistolochia praevenosa</i>	Richmond Birdwing Vine	X	A vine which provides habitat for the threatened Richmond birdwing butterfly
<i>Austromyrtus dulcis</i>	Midyimberry		Small shrub with dense foliage and attractive blue and white speckled fruits
<i>Blechnum indicum</i>	Swamp water fern	X	Forms a dense green sward to 1m deep, striking contrast to white paperbark stems.
<i>Christella dentata</i>	Binung		Medium sized understorey fern of wet areas.
<i>Cordyline petiolaris</i>	Cordyline		Tall shrub with long distinct leaf blades and panicles of red fruit
<i>Hypolepis muelleri</i>	Harsh ground fern		Common groundcover forming dense clumps in Paperbark forest
<i>Lomandra longifolia</i>	Matrush		Low clumping groundcover
<i>Smilax glyciphylla</i>	Sweet sarsaparilla		Tough climber with contrasting upper & lower leaf surfaces.
<i>Viola betonicifolia</i>	Arrow-leaved violet	X	Habitat for the Australian fritillary butterfly
Climbers			
<i>Kennedia rubicunda</i>	Dusky coral pea		Climber or scrambler with a spread of up to 5 metres. Dark red pea flowers
<i>Parsonia straminea</i>	Monkey rope vine		Common
<i>Stephania japonica</i>	Snake vine		Climber or twiner, slender stems without prickles;
Wetland / Estuarine Edge			
<i>Philydrum lanuginosum</i>	Woolly Waterlily, Frogmouth.		Emergent aquatic perennial to 2 m or more
<i>Phragmites australis</i>	Common reed		Tall perennial reed that can grow to 6m
<i>Sporobolus virginicus</i>	Marine Couch		Low grass cover covers large areas, monospecific areas on saltmarsh

Table 5 – Paperbark Woodlands Plant Species List

Dry Sclerophyll Woodland / Forest		Keystone Fauna Habitat	
Botanical Name	Common name		Feature
Canopy			
<i>Callistris columellaris</i>	Bribie island pine		Characteristic species for Bribie island and dominant canopy species in some locations
<i>Corymbia intermedia</i>	Pink bloodwood	X	Large Eucalypt with dense foliage and distinctive blocky bark
<i>Corymbia racemosa</i>	Scribbly Gum		Medium sized Eucalypt with characteristic white "scribbly bark"
<i>Corymbia tessellaris</i>	Moreton bay ash		Medium sized Eucalypt with very attractive tessellated bark stocking
<i>Eucalyptus resinifera</i>	Red Mahogany		Koala food tree
<i>Eucalyptus robusta</i>	Swamp Mahogany	X	Attractive large tree with dark green foliage and cream / white winter flowers
<i>Eucalyptus propinqua</i>	Small-fruited Grey Gum		Koala food tree
<i>Eucalyptus microcorys</i>	Tallowwood		Koala food tree
<i>Eucalyptus siderophloia</i>	Grey Ironbark	X	Attractive large Eucalypt
<i>Eucalyptus tereticornis</i>	Queensland blue gum	X	Attractive large Eucalypt with blue - green smooth bark and white / cream winter flowers
<i>Lophostemon confertus</i>	Brush Box		Large attractive tree with dense dark crown and salmon coloured bark
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark	X	Masses of fragrant Yellow/White flowers during Autumn, distinctive white bark
Midstorey / Shrub Layer			
<i>Acacia spp.</i>	Acacias		Several species available for use. Short lived and not suitable in feature locations
<i>Allocasuarina littoralis</i>	Black sheoak	X	Small tree
<i>Alphitonia excelsa</i>	Red ash		Common and hardy landscape species
<i>Banksia integrifolia</i>	Coast banksia	X	Attractive small tree with cream / yellow blossoms
<i>Banksia spinulosa</i>	Golden hairpins		Small banksia with very distinctive foliage and characteristic banksia flowers
<i>Cupaniopsis anacardioides</i>	Tuckeroo		Common & versatile landscape species with attractive green foliage and orange fruits.
<i>Duboisia myoporoides</i>	Corkwood		Medium sized tree with bright green foliage
<i>Elaeocarpus reticulatus</i>	Blueberry ash		Small tree with scattering of attractive red leaves and bright blue fruit
<i>Glochidion sumatranum</i>	Umbrella cheese tree		Leafy small tree with large green leaves and attractive "button-like" or pumpkin shaped fruit
<i>Leptospermum polygallifolium</i>	Tea tree		Small tree
<i>Leptospermum trinervium</i>	Tea tree		Small tree
Groundcovers			
<i>Dianella spp.</i>	Flax lilies		Tufted herb to 1m producing small purple flowers and blue / purple berries
<i>Hibbertia obtusifolia</i>	Guinea flower		Erect or diffuse shrub but weak structure and limbs often trailing, attractive yellow flowers
<i>Lomandra confertifolia</i>	Matrush		Low clumping groundcover
<i>Lomandra multiflora</i>	Matrush		Low clumping groundcover
<i>Pteridium esculentum</i>	Bracken Fern		Common fern
<i>Smilax australis</i>	Austral sarsaparilla		Tough prickly vine that can be used to enforce "out of bounds"
<i>Xanthorrhoea sp.</i>	Grasstree		Grasstree

Table 6 – Dry Sclerophyll Woodland / Forest Plant Species List

Wet heath		KeyStone FauNa Habitat	
			- limited suitable habitat conditions on site
Botanical Name	Common name		Feature
Tree / Shrub < 1.5m @ Maturity			
<i>Banksia robur</i>	Swamp Banksia		Small gnarly shrub with distinctive broad green leaves and cream banksia-like flowers
<i>Boronia salicifolia</i>	Safrole boronia		Small shrub with pink flowers; distinct safrole aroma from crushed leaves
<i>Callistemon pachyphyllus</i>	Wallum bottlebrush		Small shrub with attractive red (or green in subsp. <i>viridis</i>) "bottlebrush" flowers.
<i>Epacris microphylla</i>	Coral heath		Tall shrub with white tubular flowers
<i>Leptospermum liversidgei</i>	Swamp may		Lemon scented foliage; attractive white flowers
<i>Leptospermum polygalifolium</i>	Wild may		Attractive tall shrub
<i>Leptospermum whitei</i>	White's tea tree		Attractive tall shrub with profuse white flowers
<i>Persoonia virgata</i>	Small-leaved geebung		Small shrub with attractive yellow flowers
Tree / Shrub > 1.5m @ Maturity			
<i>Acacia baueri</i> subsp. <i>baueri</i>			Threatened species worthy of inclusion
<i>Baeckea imbricata</i>	Spindly baeckea		Small shrub with small white flowers
<i>Baeckea stenophylla</i>	Weeping baeckea		Small shrub with small white flowers, attractive weeping form
<i>Banksia oblongifolia</i>	Dwarf banksia	X	Small shrub to 1m with attractive Banksia-like flowers.
<i>Blechnum indicum</i>	Swamp water fern	X	Forms a dense green sward to 1m deep
<i>Blandfordia grandiflora</i>	Christmas bells		Striking plant when in flower, although requires firing to achieve this.
<i>Boronia falcifolia</i>	Wallum boronia		Small shrub with very attractive pink flowers
<i>Bossiaea heterophylla</i>	Pea		Small shrub with yellow and brown pea flowers:
<i>Burchardia umbellata</i>	Milkmaids		Small herb producing attractive white six-lobed flowers
<i>Caustis recurvata</i>	Curlywigs		Erect green herb with interesting coiled branches
<i>Dianella longifolia</i>	Lily		Tufted her to 1m producing small purple flowers and blue / purple berries
<i>Dianella revoluta</i>	Flax lily		Tufted her to 1m producing small purple flowers and blue / purple berries
<i>Gahnia sieberana</i>	Sword sedge		Forms large tufted clumps. Sharp leaf edges make it unsuitable for human contact areas.
<i>Gonocarpus micranthus</i>	Smoke bush		Low herb with red flowers giving plant bright red appearance
<i>Goodenia bellidifolia</i>	Goodenia		Small shrub with five-lobed yellow flowers, attracts butterflys
<i>Goodenia paniculata</i>	Goodenia		Small shrub with five-lobed yellow flowers, attracts butterflys
<i>Goodenia stelligera</i>	Spiked goodenia		Small shrub with five-lobed yellow flowers, attracts butterflys
<i>Hibbertia salicifolia</i>	Hibbertia sp.		Similar in general appearance to commercial varieties, although not as vigorous
<i>Leptospermum juniperinum</i>	Tea tree		Small shrub with solitary white flowers
<i>Melaleuca thymifolia</i>	Thyme honeymyrtle		Small attractive shrub producing mauve flowers
<i>Melastoma affine</i>	Native lasiandra		Small shrub with purple flowers
<i>Philydrum lanuginosum</i>	Frogsmouth		Commonly used species: prefers wetter areas: Yellow flower: long flowering period
<i>Baloskion pallens</i>			Bright green tufted herb of wetter areas (common species)
<i>Baloskion tetraphyllum</i>	Foxtails		Bright green unbranched herb of wetter areas (common species)
<i>Sprengelia sprengelioides</i>	Sprengelia		Small shrub with white flowers

Table 7 – Dry Health Plant Species List

Dry Heath		Keystone Fauna Habitat	- limited suitable habitat conditions on site
Botanical name	Common name	Feature	
Tree / Shrub < 1.5m @ Maturity			
<i>Acacia suaveolens</i>	Sweet wattle		Small wattle to 2m (low and spreading). Small cream sweet smelling flowers
<i>Acacia ulicifolia</i>	Prickly moses		Small shrub; white globose flowers; prickly foliage
<i>Allocasuarina littoralis</i>	Black sheoak	X	Small tree
<i>Banksia aemula</i>	Wallum banksia		Small tree to 6m, large creamy-yellow flowers. Characteristic species of coastal areas.
<i>Banksia integrifolia</i>	Coast banksia	X	Attractive small tree with cream / yellow blossoms
<i>Banksia serrata</i>	Red honeysuckle		Tree to 15m with characteristic yellow banksia flowers
<i>Boronia rosmarinifolia</i>	Forest boronia		Attractive shrub to 2.5m with white to bright pink flowers.
<i>Elaeocarpus reticulatus</i>	Blueberry ash		Small tree with scattering of attractive red leaves and bright blue fruit
<i>Jacksonia scoparia</i>	Dogwood		Leafless shrub with unusual branch arrangement. Yellow pea flowers attractive to butterflies
<i>Jacksonia stackhousii</i>	Wallum dogwood		Uncommon species of Wallum heathland, attracts butterflies
<i>Leptospermum polygalifolium</i>	Tea tree		Small tree
<i>Leptospermum trinervium</i>	Tea tree		Small tree
<i>Persoonia stradbrokeensis</i>	Broad-leaved geebung		Shrub to 5m with attractive bright green foliage and yellow flowers
<i>Phebalium woombye</i>	Woombye		Small shrub to 2m, white flowers. Common species
<i>Ricinocarpus pinifolius</i>	Wedding bush		Very attractive shrub to 4m with profuse white flowers
<i>Xanthorrhoea johnsonii</i>	Grasstree		Grasstree
Tree / Shrub > 1.5m @ Maturity			
<i>Aotus ericoides</i>	Common aotus		Woody shrub with yellow pea flowers
<i>Aotus lanigera</i>	Aotus		Woody shrub to 1.5m producing yellow flowers
<i>Austromyrtus dulcis</i>	Midyimberry		Small shrub with dense foliage and attractive blue and white speckled fruits
<i>Dianella revoluta</i>	Spreading flax lily		Tufted herb to 1m producing small purple flowers and blue / purple berries
<i>Epacris obtusifolia</i>	Common heath		Small shrub to 1m producing white tubular flowers
<i>Epacris pulchella</i>	Wallum heath		Shrub to 75cm with white or pinkish flowers
<i>Gompholobium virgatum</i>	Wallum wedge pea		Small shrub to 1m with yellow pea flowers
<i>Hibbertia obtusifolia</i>	Grey guinea flower		Small shrub to 60cm with typical "Hibbertia" flowers
<i>Hibbertia scandens</i>	Twining guinea flower		Commonly used landscape species, tough with large yellow flowers
<i>Hibbertia stricta</i>	Erect guinea flower		Erect shrub to 1m with typical "Hibbertia" flowers
<i>Hibbertia linearis</i>	Guinea flower		Erect shrub to 1.5m with typical "Hibbertia" flowers
<i>Homoranthus virgatus</i>	Homoranthus		Small shrub with small white flowers
<i>Laxmannia gracilis</i>	Lily		Small lily with lilac coloured flowers
<i>Lepidosperma laterale</i>	Lepidosperma		Small clumping plant (similar to Matrush, although not as green) with red fruits
<i>Lomandra filiformis</i>	Mat rush		Small Matrush species to 50cm (thin leaves) with yellow flowers. Attracts butterflies
<i>Lomandra multiflora</i>	Mat rush		Small matrush to 90cm with narrow leaves and cream coloured flowers.
<i>Ochrosperma lineare</i>	Straggly baeckea		Shrub to 2m with small white flowers
<i>Pimelea linifolia</i>	Slender rice flower		Shrub to 1m with attractive "cluster of rice" flower heads
<i>Sowerbaea juncea</i>	Vanilla lily		Small herb with lilac flowers emitting a vanilla-like aroma
<i>Zieria laxifolia</i>	Zieria		Small shrub with white flowers
Heath			
<i>Boronia parviflora</i>	Swamp Boronia		Slender shrub to 1m. Showy pink flowers.
<i>Zieria smithii</i>	Sandfly Zieria		Aromatic shrub to 1.5m. Small white flowers
<i>Sowerbaea juncea</i>	Vanilla Lily		Small erect herb with clusters of mauve flowers
<i>Lomandra longifolia</i>	Mat Rush		Dense matting plant to 1m. Grows in a wide variety of situations
<i>Stylidium graminifolium</i>	Grass Triggerplant		Grass like herb with spikes of showy pink flowers.
<i>Tetradlea thymifolia</i>	Black-eyed Susan		Erect shrub to 1m with rose-purple flowers in winter/spring
<i>Xyris juncea</i>	Dwarf Yellow-eye		Small erect sedge-like plant with yellow "Diets-like" flowers
<i>Xyris complanata</i>	Feathered Yellow-eye		Erect sedge-like plant to 60cms with yellow "Diets-like" flowers

Table 8 – Dry Heath Plant Species List

	Street	Landscape	Fauna food trees
General Street and Landscape Trees			
Large Trees			
<i>Aphananthe philippinensis</i>		x	
<i>Eucalyptus robusta</i>		x	x
<i>Eucalyptus tereticornis</i>		x	x
<i>Ficus hillii</i>		x	x
<i>Ficus rubignosa</i>	x	x	x
<i>Flindersia australe</i>	x	x	
<i>Flindersia xanthoxyla</i>	x	x	
<i>Lophostemon confertus</i>	x	x	x
<i>Mallotus philippensis</i>		x	
<i>Melaleuca quinquenervia</i>	x	x	x
Small to Medium Trees			
<i>Acmena hemilampra</i>	x	x	
<i>Acmena smithii</i>	x	x	
<i>Allocasuarina glauca</i>		x	x
<i>Allocasuarina littoralis</i>		x	x
<i>Araucaria cunninghamii</i>		x	
<i>Archontophoenix cunninghamiana</i>		x	
<i>Backhousia citriodora</i>	x	x	
<i>Banksia integrifolia</i>	x	x	
<i>Brachychiton acerifolius</i>	x	x	
<i>Brachychiton discolor</i>	x	x	
<i>Buckinghamia celsissima</i>	x	x	
<i>Callistemon viminalis</i>	x	x	
<i>Callitris columellaris</i>		x	
<i>Casuarina cunninghamiana</i>		x	x
<i>Corymbia intermedia</i>		x	
<i>Corymbia ptychocarpa</i>		x	
<i>Corymbia tessellaris</i>	x	x	
<i>Cupaniopsis anacardioides</i>	x	x	
<i>Elaeocarpus obovatus</i>	x	x	
<i>Elaeocarpus reticulatus</i>		x	
<i>Eucalyptus propinqua</i>		x	x
<i>Euroschinus falcata</i>		x	
<i>Flindersia bennettiana</i>		x	
<i>Gmelina leichhardtii</i>	x	x	
<i>Grevillea robusta</i>		x	
<i>Guioa semiglaucula</i>		x	
<i>Harpullia pendula</i>	x	x	
<i>Jagera pseudorhus</i>		x	
<i>Livistona australis</i>		x	
<i>Livistona decipiens</i>		x	
<i>Lophostemon suaveolens</i>		x	
<i>Melaleuca linariifolia</i>	x	x	
<i>Melicope elleryana</i>		x	
<i>Syzygium australe</i>	x	x	
<i>Syzygium luehmianii</i>	x	x	

Table 9 – General Street and Landscape Trees Plant List

4.7 GOLF COURSE

Refer Figure xxx Open Space Master Plan and Figure xxx Golf Course

Intent:

Establish an public access golf course..

Desirable Aims and Outcomes:

- Established a championship quality 18 hole golf course along flood plains of the upper tributaries of Raff Creek;
- Revegetate disturbed areas and the 40m buffer either side of the creek line inclusive of fairway 'roughs';
- Revegetate buffers between developed areas within the site and the course to facilitate public safety;
- Provide limited public access;
- Provide public recreational facilities;
- Provide trail linkages and connections through the golf course from residential zones to the Marina and Business Park precincts.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- WSUD treatment train wetlands to be integrated into the golf course landscape;
- Water harvesting and reuse of stormwater for irrigation on the golf course;
- Revegetation with endemic plant species;
- Minimisation of built elements;
- An Environmental Management Plan to be developed to control operations, maintenance, and monitoring management of the golf course to ensure water quality within Raff Creek is not adversely impacted, including use of organic and slow release fertilising and ESD chemical pest control;

Proposed and Permissible Constructed Site Elements:

- Clubhouse with associated facilities and carparking;
- Maintenance facility, to be shared with overall estate maintenance operations;
- Cart path network surfaced with AC, concrete and/or deco
- Access roadways;
- Shared bikeway / cart path connections across course;
- Boardwalks as cycle and cart crossings of creek line and retained wetland and Melaleuca forest;
- Golf Course furniture and signage.

Landscape Modification:

- Excavation of wetlands for stormwater collection, bio-treatment, storage and re-use prior to overflow release to Raff Creek;
- Bio-retention interception swales within fairway 'roughs' draining to wetlands;
- Rehabilitation and revegetation with endemic plant species to fringes to integrate with adjoining open space, residential, and Business Park and to provide protection from ball overflight;
- Planting of species to improve the habitat value for wildlife;
- Weed management of creek and fringing buffers with ongoing programme directed by a Weed Management Plan;
- Localised land forming within fairways to be flood capacity neutral;
- Bunkers to utilise sand recovered from site.



Figure 17 – Golf Course

4.8 OPEN SPACE CIRCULATION NETWORK

Refer Figure 18 Trails Network

Intent:

Establish an extensive network of public access recreational trails within the Public Open Space

Desirable Aims and Outcomes:

- Provide a number of canoe landing points at relevant points of interest to integrate with Caboolture Shire Councils proposed Caboolture River Canoe Trails;
- Provide a shared cycle path linking the Sports precinct with the Marina precinct;
- Provide a series of environmental experience pedestrian trails allowing public access to the majority of the Caboolture River frontage and conservation areas;
- Provide an interpretive Heritage Trail linking historic remains within the Heritage Park;
- Provide public recreational support facilities along the trail network as appropriate;
- Provide connections to roadway based cycle and pedestrian path networks and regional networks connecting to Morayfield, Narangba, and Caboolture;
- Provide for potential future upper stream linkage along river a site western boundary
- Provide trail linkages and connections through the golf course from residential zones to the Marina and Business Park precincts.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- CPTED design;
- Utilisation of durable and slip resistant surfaces;
- Design elements for clear and concise way finding;
- Shared recreational cycle way minimum width 2.5m, pedestrian trails minimum 1.2m;
- Use of raised boardwalks and culverts to maintain natural surface water flows across path routes;
- Manual construction methods through environmentally sensitive zones to minimise disturbance;
- Cycleway design parameters as per Part 14 Ausroads: Guide to Traffic Engineering Practice, Bicycles.

Proposed and Permissible Constructed Site Elements:

- Reinforced concrete pathways – broom finished, exposed, washed, coloured, impressed;
- AC pathways - edged, impressed, coloured;
- Deco or road base pathways – edged;
- Chain walks, or timber sleeper paths
- Raised boardwalks and boardwalk bridges, outlooks and observation decks;
- Directional signage, Interpretive signage;
- Cycleway control barriers, chicanes and safety barriers, bicycle racks;
- Shared bikeway / cart path connections across golf course;
- Timber canoe landing decks;
- Seating nodes;
- Bird Hides.

Landscape Modification:

- Shade tree plantings along trails and cycleway;
- On-site alignment of paths and boardwalks to meander through existing vegetation;
- Adoption of CPTED planting design principles in maintaining sight lines and passive observation;
- Planting of species to improve the habitat value for wildlife;
- Weed monitoring and management along trail corridors with ongoing programme directed by a Weed Management Plan;
- Localised land forming to allow equitable access along trails and pathways;



Figure 18 – Trails Network

4.9 MARINA VILLAGE AND RESIDENTIAL

Refer Figure 19 Marina Residential and Riverbank Park and Figure 20 Marina Village

Intent:

Provision of multi functional public open space within the residential and commercial precincts surrounding the Marina..

Desirable Aims and Outcomes:

- Provide public access of the Marina water edge;
- Provide public recreational facilities;
- Provide pedestrian and cycle linkages to surrounding areas;
- Provide connection to the Riverbank Park recreation reserve;
- Provide circulation, gathering, and play spaces surrounding the high density buildings within Marina Precinct additional and supplementary to the private open space within the Precinct;
- Provide high standard landscape treatments of streetscapes, plazas and parkland within the Marina Precinct;
- Allow public access to the locks system and pedestrian and cycle connection from the Marina to the remainder of the site open space network along the river.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- CPTED design;
- Utilisation of durable and slip resistant surfaces;
- Design elements for clear and concise way finding;
- Provide pedestrian only options separated of shared cycle pavement areas;
- Pedestrianised design outcomes within commercial zone streetscapes;
- Provision of shade and shelter to public access areas;
- Landscape Code;
- Minimum landscape standards to comply with Local Authority Landscape Design Standards

Proposed and Permissible Constructed Site Elements:

- Waterside promenades and boardwalks;
- Shared bikeway – linking promenade to open space circulation network;
- Al fresco dining zones;
- Public art, waterfeatures;
- Stage with public gathering space;
- Boardwalks / jetties;
- Shelters, harbours, picnic settings, Bbq's, bins, bench seating;
- Market stalls;
- Public areas night lighting;
- Bollards and barriers;
- Ramps and stairs;
- Public amenities;
- Play spaces.

Landscape Modification:

- Intensive maintenance display gardens and parklands;
- Extensive planting of shade tree species;
- Selected non-endemic feature tree plantings;
- Installation of protective measures as necessary to ensure public safety;
- Riverbank stabilisation;
- Use of bio-swale stormwater collection from the intensive use areas of the proposed park, directed to Marina basin.

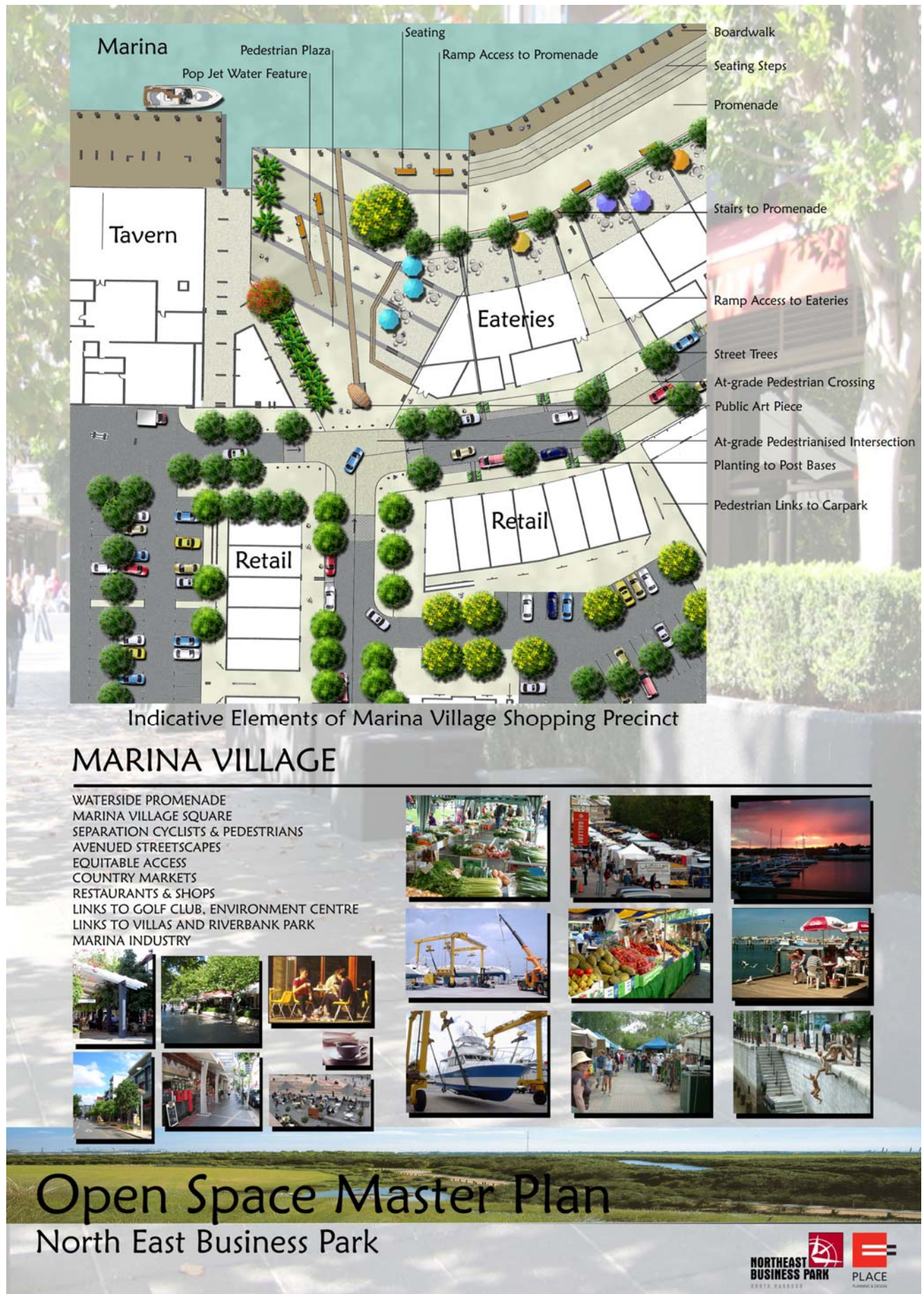
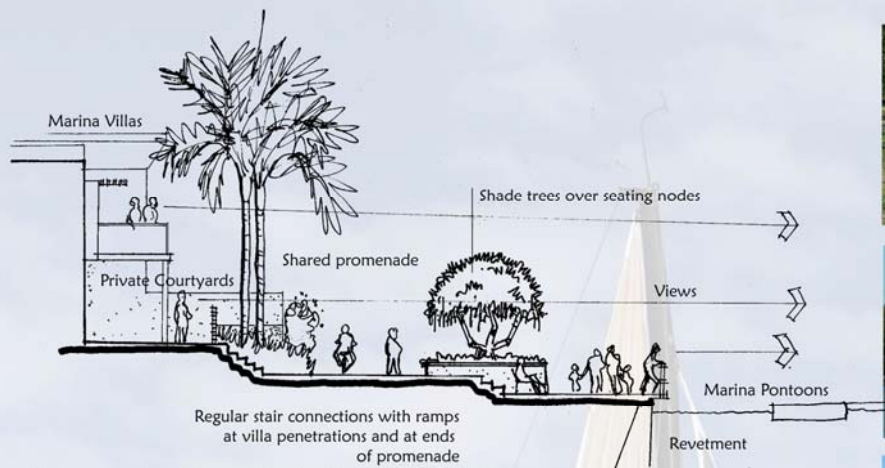


Figure 19 – Marina Village



Concept Section - Typical at Marina Villas



Concept Visualisation (created by v2i)

MARINA RESIDENTIAL & RIVERBANK PARK

WATERSIDE PROMENADE
 SEPERATION CYCLISTS & PEDESTRIANS
 DISPLAY GARDENS
 LOCALISED PARKS / PLAYSPACES FOR RESIDENCES
 EQUITABLE ACCESS
 RIVERBANK PARK - PICNIC FACILITIES, RIVER ACCESS
 FISHING JETTIES
 MARINA LOCKS
 LINKS TO OPEN SPACE, ENVIRONMENT CENTER
 PUBLIC AMENITIES
 RIVER MOORING PONTOON
 CANOE LANDING



Open Space Master Plan

North East Business Park

Figure 20 – Marina Residential & Riverbank Park

4.10 LOCAL PARKLAND – RESIDENTIAL PRECINCTS

Refer Figure 21 Local Parks – Residential Park

Intent:

Provision of a public access recreation sites within the residential precincts

Desirable Aims and Outcomes:

- Provide public access to parkland areas in close proximity to where they reside, work, or visit ;
- Provide public recreational facilities;
- Provide pedestrian and cycle linkages to surrounding areas;
- Provide an open space within highly urbanised areas as alternative experiences to the major open space areas along the river

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- CPTED design;
- Minimum landscape standards to comply with Local Authority Landscape Design Standards.

Proposed and Permissible Constructed Site Elements:

- Service access connection for maintenance and emergency vehicles;
- Car parking;
- Links to circulation network;
- Paths – concrete, AC, deco, road base;
- Boardwalks;
- Retaining walls;
- Shelters and arbours;
- Picnic settings;
- Bbq's;
- Seating;
- Bins;
- Playgrounds;
- Public art.

Landscape Modification:

- Mounding and localised land forming;
- Extensive planting of shade tree species;
- Display gardens;
- Turfed play spaces;
- Bio-swales and bio-retention basins;
- Landscape buffering;
- Retained vegetation;
- Vegetation regeneration;
- Artificial wetlands;
- Installation of protective measures as necessary to ensure public safety.



Figure 21 – Local Parks – Residential Park

4.11 LOCAL PARKLAND & COMMUNITY NODE – BUSINESS PARK PRECINCTS

Refer Figure 22 Local Parks – Business Park and Figure 23 Community Node – Business Park

Intent:

Provision of a public access recreation and community sites within the business park precincts

Desirable Aims and Outcomes:

- Provide public access to parkland areas from workers within the business park precincts in close proximity to where they work;
- Provide passive recreational facilities;
- Provide a commercial services oriented and gathering node for Business Park workforce;
- Provide pedestrian and cycle linkages and connections to surrounding areas;
- Utilise overland flow path corridors as open space and bio-treatment corridors;
- Provide buffering and green space corridors to dissipate the visual massing of buildings.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design of facilities;
- CPTED design;
- Minimum landscape standards to comply with Local Authority Landscape Design Standards.

Proposed and Permissible Constructed Site Elements:

- Service access connection for maintenance and emergency vehicles;
- Bollards or barriers to restrict vehicle access;
- Links to circulation network and roads;
- As appropriate, private access points to parklands from adjacent businesses to encourage greater use and to foster culture of 'my park' amongst workers and therefore improved surveillance and protection of park infrastructure;
- Pedestrian oriented paved spaces at a commercial hub overlooking the golf course;
- Service facilities eg, phones, ATM, public amenities;
- Paths – concrete, AC, deco, road base;
- Boardwalks;
- Retaining walls;
- Shelters;
- Seating;
- Bins;
- Public art.

Landscape Modification:

- Mounding and localised land forming;
- Extensive planting of shade tree species;
- Display gardens;
- Turfed open spaces;
- Bio-swales and bio-retention basins;
- Landscape buffering;
- Artificial wetlands;



Figure 22 – Local Park – Business Park

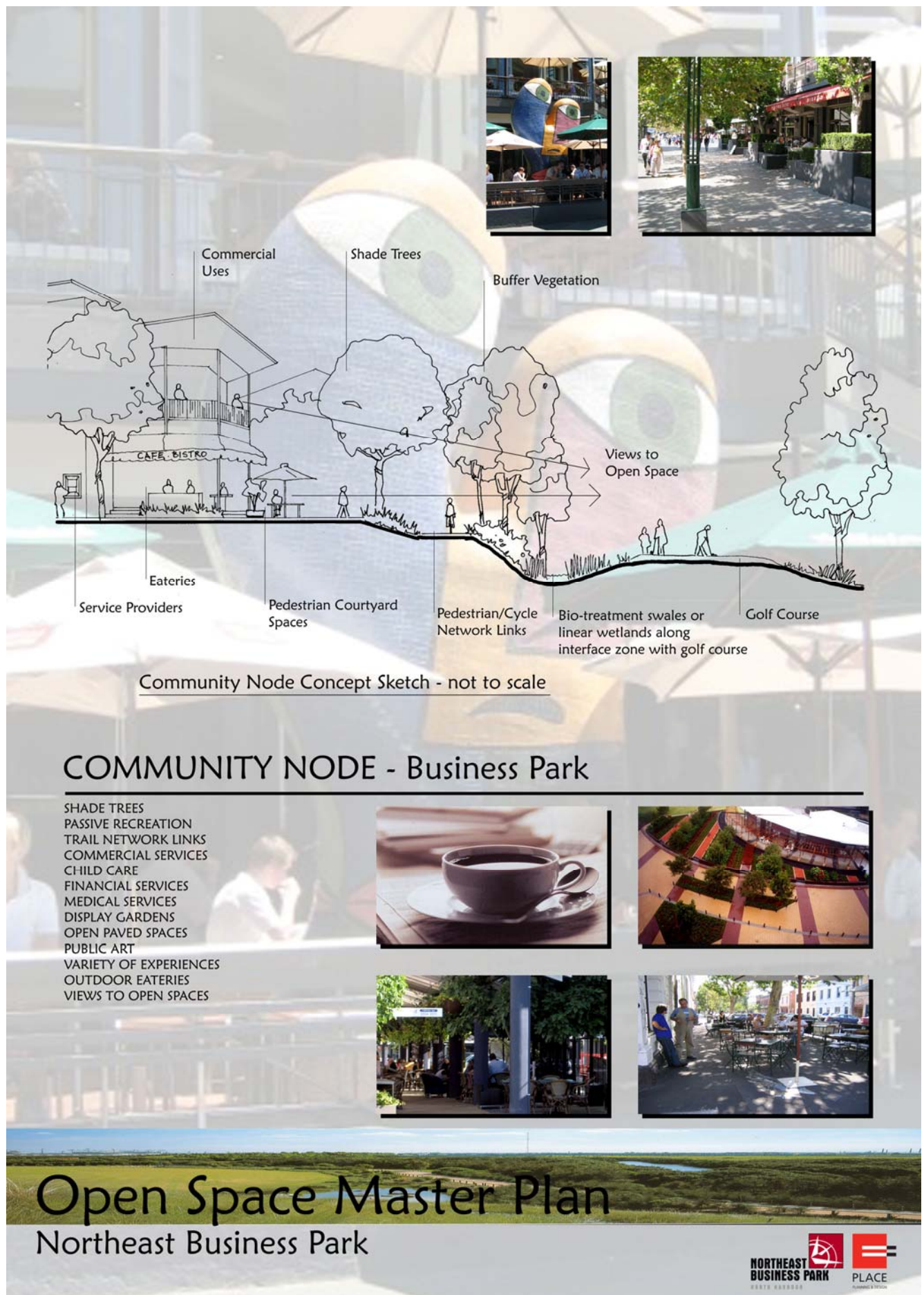


Figure 23 – Community Node – Business Park

4.12 STREETSCAPES

Refer Streetscapes Figures 24 to 27 showing indicative streetscape landscape sections

Intent:

Provision of attractively landscaped streets and boulevards incorporating pedestrian, cycle, and vehicular circulation networks

Desirable Aims and Outcomes:

- Provide streetscapes that integrate with adjoining public open spaces and private open space landscapes;
- Provide safe streetscapes for motorists, cyclist, and pedestrians;
- Provide pedestrian and cycle linkages to surrounding areas as either on-road cycle lanes and/or off road shared cycleways;
- Provide visually attractive tree lined and landscaped streetscapes.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design;
- CPTED design;
- Minimum landscape standards to comply with Local Authority Landscape Design Standards.

Proposed and Permissible Constructed Site Elements:

- Service access connection for maintenance and emergency vehicles to open space, plaza and other public domain areas;
- Limited on street parking in Business Park precinct;
- Links to open space circulation network;
- Footpaths and shared cycleways – concrete;
- Bridges;
- Retaining walls;
- Pedestrian barriers and guardrails;
- Bollards;
- "Pedestrianised" streetscapes;
- Tree grates and tree grills;
- Acoustic fencing;
- Directional signage;
- Shelters and arbours;
- Covered bus stops;
- Seating;
- Bins;
- Public art.

Landscape Modification:

- Avenue / street trees – endemic or non-invasive native;
- Groundcover and shrub beds;
- Landscaped medians with maintenance work safety zones;
- Turfed footpaths;
- Bio-swales and bio-retention basins
- In-ground watering systems of recycled water;
- Landscape buffering;
- Retained vegetation;
- Vegetation regeneration;
- Installation of protective measures as necessary to ensure public safety.

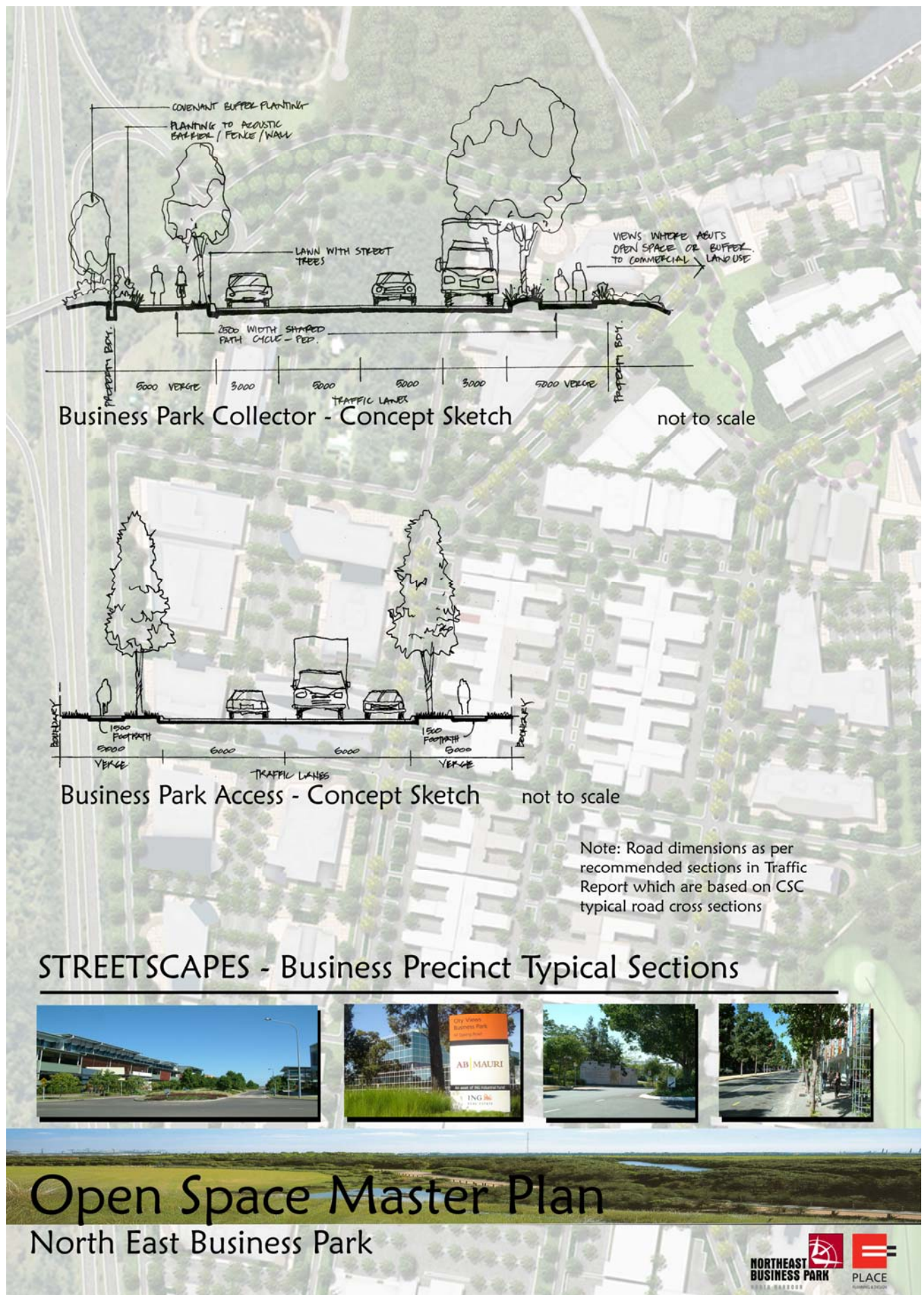


Figure 24 – Streetscapes – Business Precinct Typical Sections

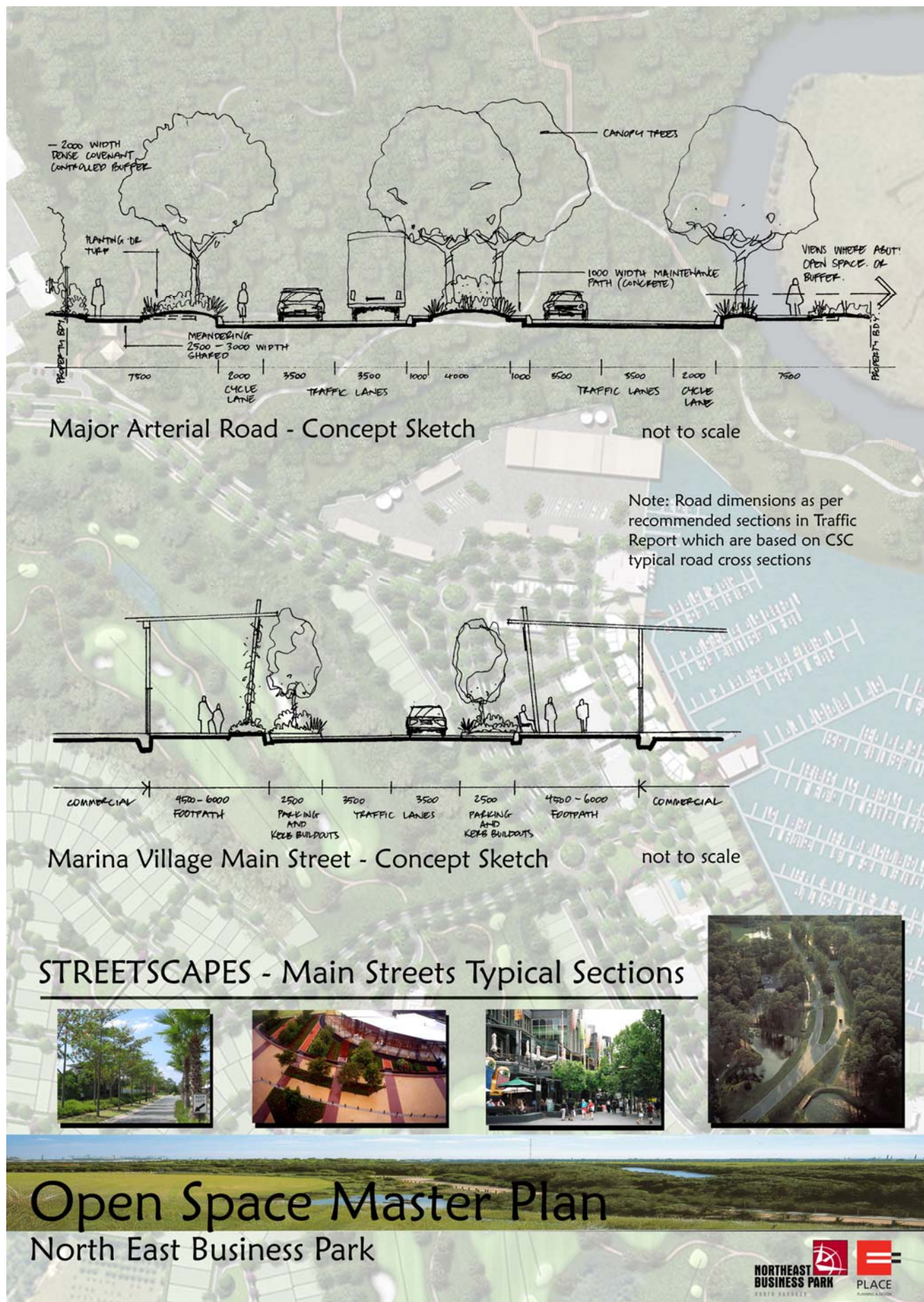


Figure 25 – Streetscapes – Main Streets Typical Sections

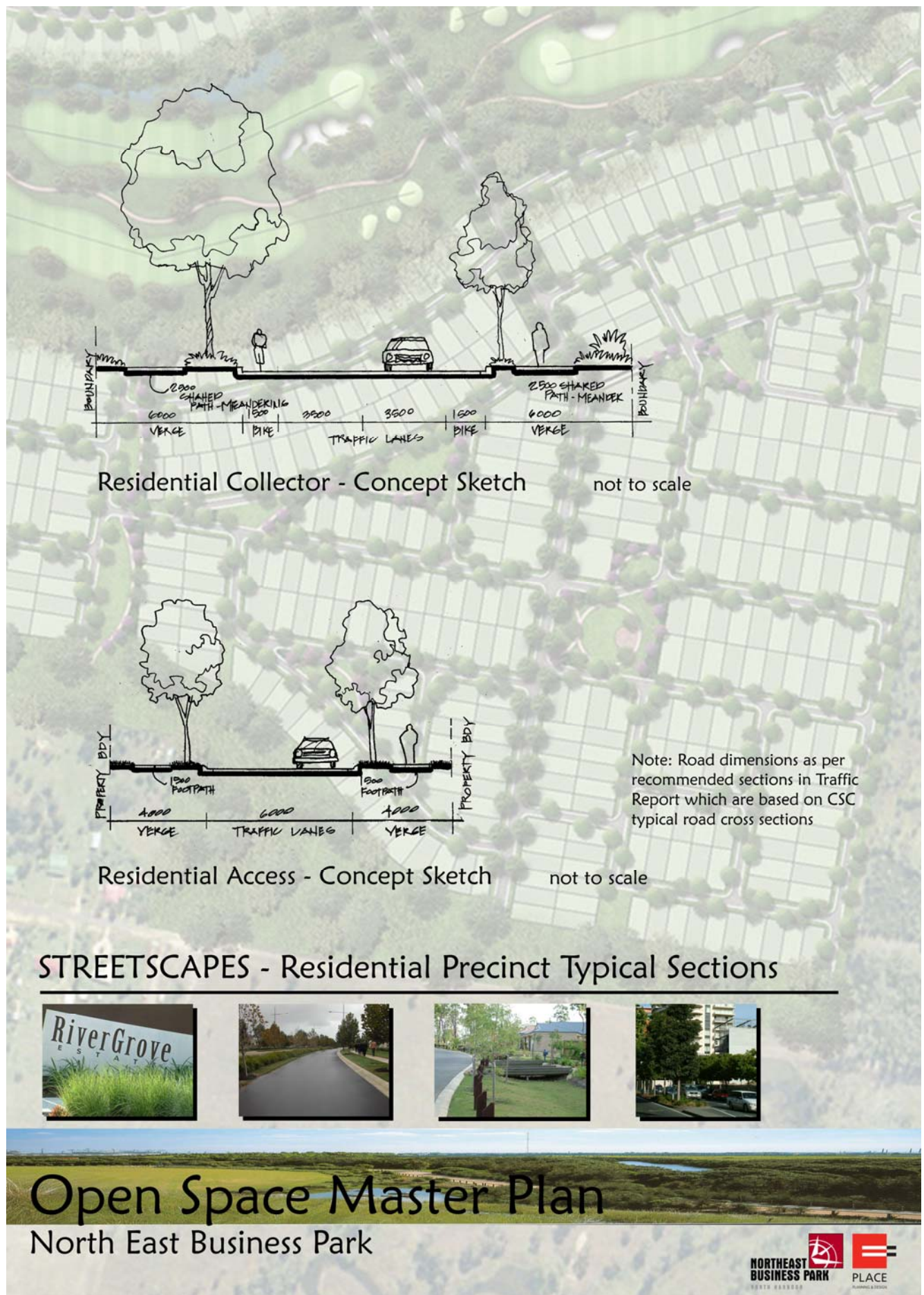


Figure 26 – Streetscapes – Residential Precinct Typical Sections

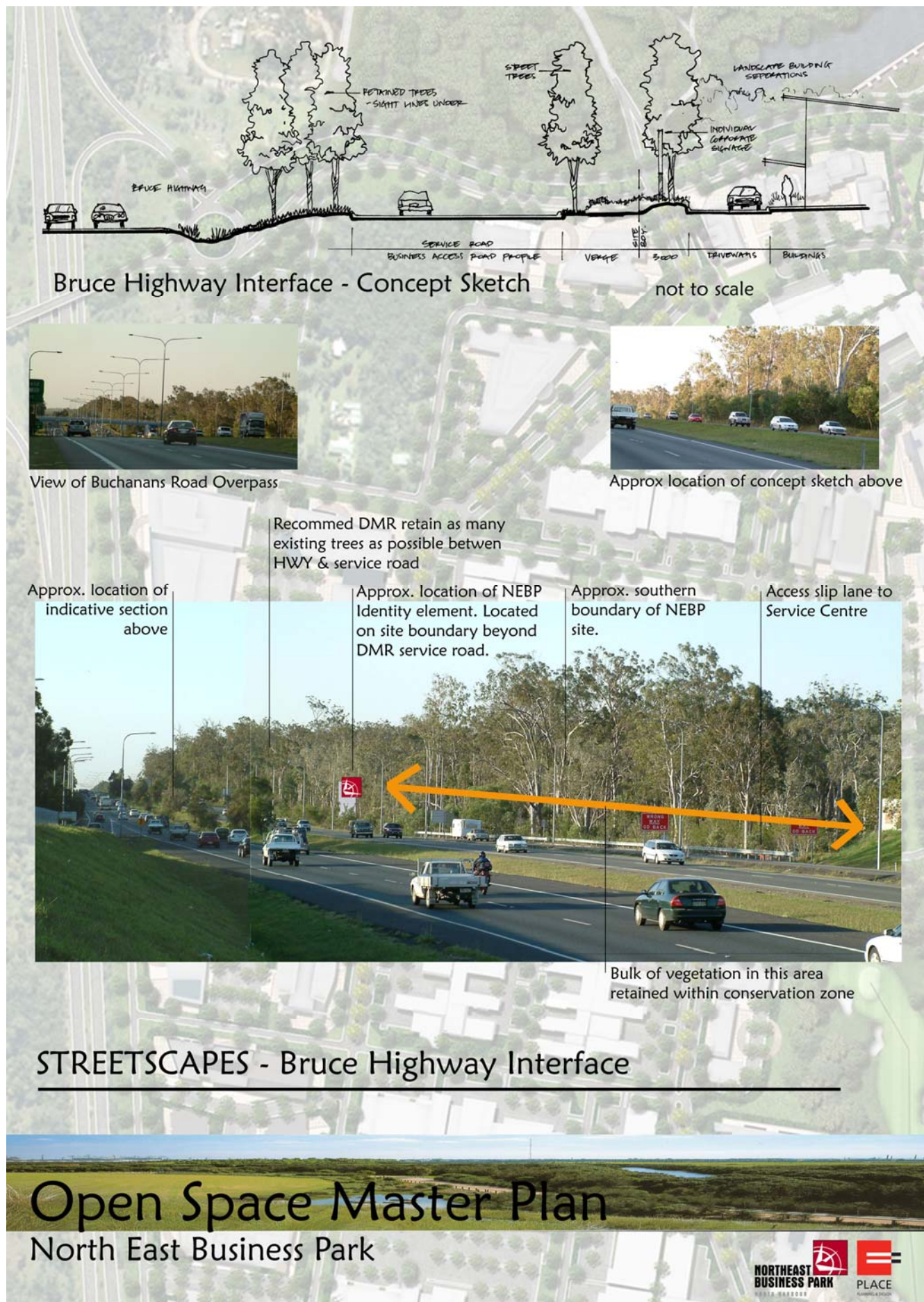


Figure 27 – Streetscapes – Bruce Highway Interface

STREETSCAPES – ENTRY PRECINCT

Refer Figure 28 Streetscapes

Intent:

Provision an extensively landscaped parkway entry experience to Northeast Business Park from the Bruce Highway.

Desirable Aims and Outcomes:

- Provide a wide divided parkway entrance road from the Buchanan Road interchange with wide tree lined medians;
- Panoramic vistas from the approach road across open space to the forest fringing the Caboolture River reminiscent of the typical views in the past from road approaches to Caboolture ;
- Provide views over a water body with an iconic element as a distant focal point;
- Provide understated identity and way finding signage elements;
- Provide pedestrian and cycle linkages to surrounding areas of Morayfield as either on-road cycle lanes and/or off road shared cycleways;
- Provide visually attractive tree lined and landscaped streetscapes.

Design Parameters:

- Equitable Access;
- ESD design and Sustainable design;
- CPTED design;
- Minimum landscape standards to comply with Local Authority Landscape Design Standards.

Proposed and Permissible Constructed Site Elements:

- Limited on street parking at wayfinding and lookout pull over;
- Links to open space circulation network;
- Footpaths and shared cycleways – concrete;
- Retaining walls;
- Pedestrian barriers and guardrails;
- Bollards;
- Tree grates and tree grills;
- Directional signage;
- Identity / lookout shelter;
- Identity signage elements;
- Way finding and directory signage elements
- Covered bus stops;
- Seating;
- Bins;
- Public art.

Landscape Modification:

- Avenue / street trees – endemic or non-invasive native;
- Large median feature trees
- Groundcover and shrub beds;
- Landscaped medians with maintenance work safety zones;
- Turfed footpaths;
- Bio-swales and bio-retention basins
- In-ground watering systems of recycled water;
- Landscape buffering;
- Vegetation regeneration;
- Installation of protective measures as necessary to ensure public safety.

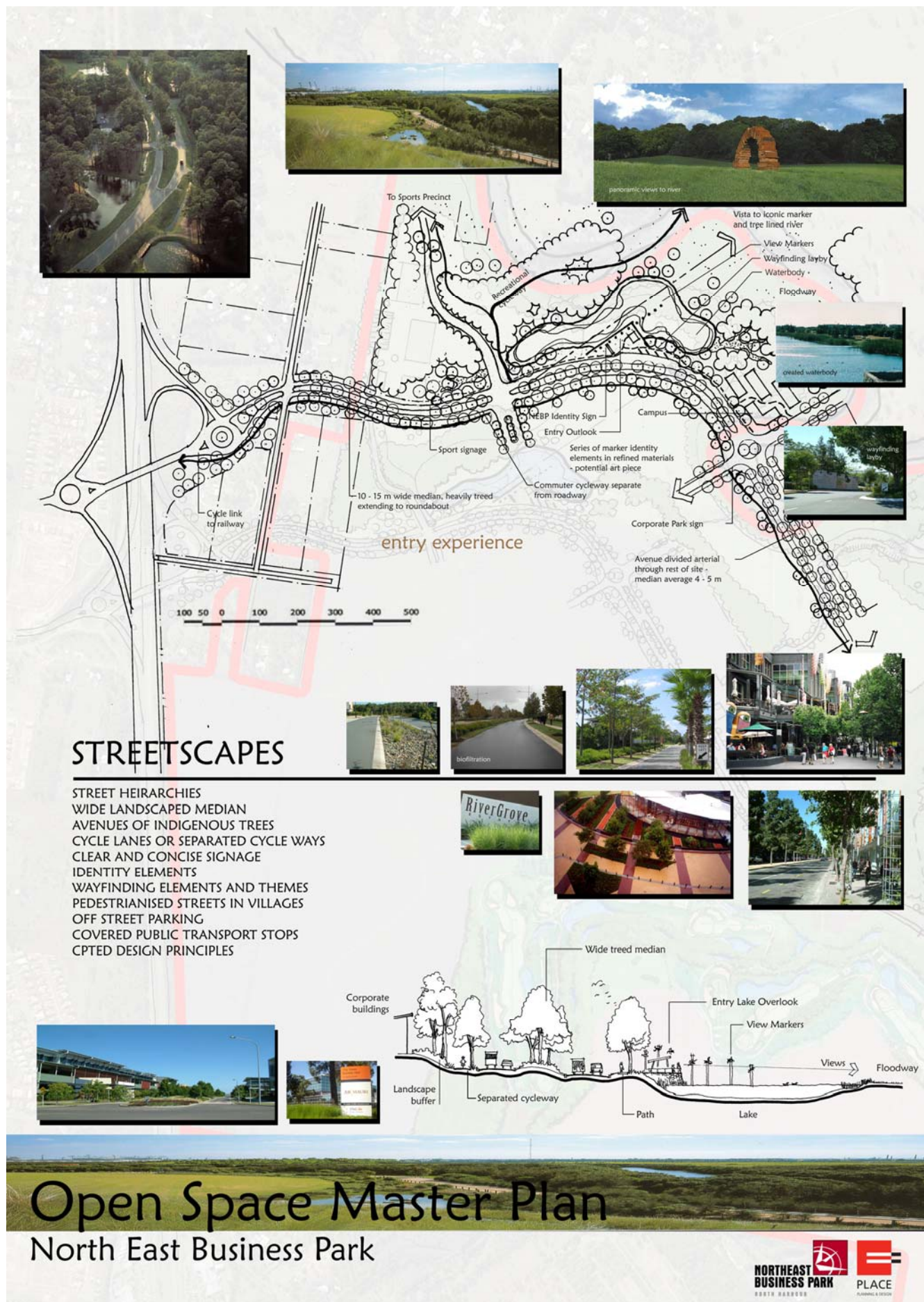


Figure 28 – Streetscapes

5 CONCLUSION

Northeast Business Park has been conceived as a benchmark environmentally sustainable development. The very significant area of open space, both public and private will involve a large landscape development input as outlined.

This report has outlined the proposed Landscape Master Plan for the Northeast Business Park with particular reference to the open space component of the development. It has shown that it is possible to develop the open space areas of the site into a series of dynamic locations functioning as both community recreational and environmental based precincts.

The implementation of the Master Plan will result in considerable benefits to the community, the environment, and the social and economic growth of Caboolture Shire.

5.1 BENEFITS OF THE LANDSCAPE MASTER PLAN

The landscape development as proposed will result in considerable benefits to both the site, the surrounding area, and the surrounding community, including;

- extensive environmental rehabilitation of degraded habitats including the Caboolture R. riparian ecology;
- expansion of habitat into open space areas within the site;
- protection of ecological values in the Caboolture River and Moreton Bay.
- weed control and management over the wetland floodplains;
- enhancement of the ecological values and health of open spaces and the Caboolture River;
- providing open spaces accessible to all members of the public;
- provision of two major river side recreational sites in the Heritage Park and the Riverbank Park for Caboolture residents;
- provision of an extensive network of cycle and walking trails for public recreation;
- provision of publicly accessible sporting facilities including the golf course;
- recreational opportunities to experience the environmental heritage of the coastal plain of SE Qld.
- extensive plaza, promenade and public gathering spaces associated the world class marina, commercial, specialty shopping and café society dining precinct;
- rediscovery of the cultural heritage elements of the site;
- encouraging and opening up public access to the river bank and the marina , areas previously denied to the public;
- providing local job opportunities in the fields of landscape construction, landscape maintenance, revegetation and environmental rehabilitation;
- providing co-operative partnership arrangements and other opportunities for community based groups such as CREEC to contribute in a mutually beneficial way to the development;
- provide an opportunity for the local art community to participate in the sculpture trail proposal within the Heritage Park;
- provide an ongoing demonstration of a sustainable development strategy and the beneficial outcomes to all from such a strategy.

Date: