



Summary Report –
FINAL
March 2011



Prepared with:
Moonee Ponds Creek Co-ordination Committee

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ACKNOWLEDGEMENTS

In addition to the various stakeholders consulted during this process the authors would particularly like to acknowledge the participation and contributions of the following individuals:

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EXECUTIVE SUMMARY

THE BRIEF

The Moonee Ponds Creek Co-ordination Committee (MPCCC) was established in 1996 and comprises representatives of the four municipalities abutting the Moonee Ponds Creek and the Friends of the Moonee Ponds Creek. The MPCCC has the following statement of purpose:

“To ensure the preservation, restoration, environment protection and ecologically sensitive development and maintenance of the Moonee Ponds Creek and adjoining catchment areas, with a long term aim of securing a major regional park with significant recreation and conservation value”

The brief called for the review of the previously prepared strategic document – the Moonee Ponds Creek Concept Plan 1992 in order to develop a revised plan to act as a framework for planning, development and management of the Creek environs.

THE VISION

The Moonee Ponds Creek is a key natural and recreational asset of suburban and inner city Melbourne. Along its course of approximately 25 kilometres the Creek traverses a varying landscape from the near natural setting of Woodlands Historic Park, through the outer and inner suburbs of Melbourne to the Docklands. The corridor offers an opportunity to experience a microcosm of Melbourne's landscape character.

The Moonee Ponds Creek Corridor also plays an important role in linking various recreational assets such as suburban sports fields and parklands. Opportunities for relaxation, exercise, playing and socialising occur within open spaces of varying scale and character.

The associated corridor trail already provides a near continuous path between Woodlands Park and the city connecting these various broader open spaces. The trail enables both recreational and commuter cycling for fun and fitness along with day to day journeys to work, largely devoid of conflict with vehicles.

The related open spaces along the corridor also say much about the local communities and their history. To some degree they illustrate the history of municipal parkland design throughout the past century. Similarly the adjoining residential areas paint a picture of Melbourne's growth.

Whilst for a long period the corridor was largely perceived only as a drainage reserve, works undertaken by Friends Groups, Councils and Melbourne Water have seen this view disappear. These works have highlighted key existing features such as historic sites along with more recent works, such as the wetlands. The recreation of meaningful habitat, both terrestrial and aquatic, is also occurring in conjunction with these works.

Friends, Local and State Government authorities are working in partnerships in order to continue the reinvigoration of the Creek Corridor via co-ordinated and consistent policies. The Strategic Plan identifies means of addressing key issues, opportunities and the staged implementation of works.

The Moonee Ponds Creek Corridor provides an opportunity to integrate, connect and enhance the opportunities for the diverse communities to experience a range of recreational pursuits and a landscape of great character and quality.

THE STUDY

This study does not deal with the Moonee Ponds Creek in isolation. It investigates issues and opportunities presented by the immediate Creek environs, that is, the corridor that comprises the waterway, the abutting land under public ownership or management and the influence of privately owned land beyond.

The physical environment of the Moonee Ponds Creek Corridor is strongly influenced by the range of generally highly modified landscapes and varied land uses which occur along its course of approximately 25 kilometres, from north of Woodlands Park and Gellibrand Hill to its confluence with the Yarra River in the south. The primary sources of the Creek occur on privately owned land in Oaklands Junction.

This Moonee Ponds Creek Strategic Plan aims to outline an integrated and strategic approach to rehabilitation and ongoing management, through the planning, implementation and maintenance of the Creek's significant environmental, recreational, cultural heritage and social aspects.

Furthermore, the Strategic Plan should assist in maintaining the broad support from the communities, councils and statutory authorities that are charged with management of the Creek environs. The Plan should aid the active pursuit of funding by these various management bodies for Creek Corridor related projects.

The preparation of this Strategic Plan followed the recognition that the 1992 Moonee Ponds Creek Concept Plan required review and updating to establish a simplified and concise strategic direction for the next five year period. The Moonee Ponds Creek Co-ordination Committee (MPCCC) has been working towards a co-ordinated approach to management along the Creek since 1996 and implementing parts of the 1992 plan. The MPCCC established the Objectives and Scope of this study as follows:

- Produce a concise strategy that can provide the MPCCC, local Councils and the broader community with strategic direction for the planning, development and management of the Moonee Ponds Creek and environs now and in the future.
- Provide an overview of important issues along the waterway corridors of Moonee Ponds Creek and its tributaries and to document agreed objectives, targets and actions to achieve their resolution.
- Provide a detailed works program for the first 12 months, a fairly detailed works program for years 2 to 5 and an action that includes a major review of the plan in the fifth year.

The previous plan placed a particular emphasis upon six key categories:

- Revegetation/Conservation
- Provision of Habitat
- Creation of wetlands
- Development of access
- Co-ordinated management
- Community Participation

Similarly, the consultant brief for this project highlighted aspects of the Strategic Plan related to management to be addressed:

- Planning and Legislative Framework
- Land tenure including easements
- Community Groups
- Native Flora and Fauna
- Pest Plants and Animals

- Aboriginal and European Cultural Heritage
- Land and Soils
- Water quality
- Existing infrastructure including public utilities
- Recreation (including trails and access)

These categories remain relevant to this 2011 Plan. However, this plan also has a secondary focus upon identifying achievable aims for the next five years. So where should the focus be over the next five years? Readily achievable aims in the public realm include:

- Ongoing weed species management
- Ongoing revegetation
- Provision of safe access
- Minimisation of rubbish and pollutants
- Improving water quality
- Maintaining community participation

The implementation of appropriate planning controls to ensure rehabilitation of the Creek Corridor on private land north of Woodlands Historic Park should also be pursued.

Whilst creating a corridor exhibiting high levels of biodiversity, habitat restoration and water quality are high ideals. The resources required to achieve further progression with the above aims, initially over the next five years and if appropriate beyond, would suggest these 'higher' ideals are more long-term aspirations. Works in the shorter term should however remain cognizant of these aspirations.

1.0 INTRODUCTION

The Moonee Ponds Creek winds its way through the northern suburbs of Melbourne, Victoria.

Flowing from its source near Oaklands Junction and Greenvale, joining the Yarra River in West Melbourne, the Moonee Ponds Creek winds its way through the suburbs of Westmeadows, Meadow Heights, Tullamarine, Broadmeadows, Gowanbrae, Glenroy, Strathmore Heights, Oak Park, Strathmore, Pascoe Vale South, Essendon, Brunswick West, Moonee Ponds, Ascot Vale, Flemington, Parkville and North Melbourne, before joining the Yarra River at Docklands, West Melbourne (refer Map 1). Contributing as a major tributary to Melbourne's Yarra River, the Creek drains a catchment area of approximately 145 square kilometres.

There are five major tributaries that flow into the Moonee Ponds Creek south of Woodlands Historic Park and these include:

- *Attwood Creek* (the Broad Street Main Drain No. 4352), which drains parts of Greenvale and Westmeadows (rises just to the west of Mickleham Road in Green Vale).
- *Yuroke Creek* (Drain No. 4360), which drains parts of Broadmeadows, Coolaroo and Westmeadows (Yuroke Creek enters Moonee Ponds Creek from the North at Westmeadows).
- *Westbreen Creek* (Drain No. 4340), which drains parts of Pascoe Vale.
- *Five Mile Creek* (Drain No. 4330), which drains parts of Essendon and Strathmore.
- *The Melville Main drain* (Drain No. 4320), which drains parts of Coburg, Coonans Hill, Moreland, Brunswick and Brunswick West.
- *The Royal Park Main Drain*, which drains via the Royal Park wetlands.

The Moonee Ponds Creek is a heavily modified waterway, with the lower two-thirds of the waterway performing an important drainage function through urban environments. A deeply incised, concrete lined channel commences where the Creek re-engages with the Tullamarine Freeway in Essendon. This channel transitions to a broader profile near Travencore and Flemington. The general perception is that the urbanisation is the direct cause of many of the environmental issues now confronted by the Moonee Ponds Creek.

In addition to the Creek's basic role as a drainage asset, the Moonee Ponds Creek Corridor is a space of significant social value to Melbourne. Currently providing a vital role as open space for both passive and active recreational use, the Moonee Ponds Creek and its environs fulfil a vital regional role, linked to many neighbouring open spaces.

Linear and cross connections along the Creek are reinforced via some shared pedestrian and cycling trails. Furthermore, the Moonee Ponds Creek presents an opportunity to create a "green" corridor of some ecological value that, along with other significant waterways and open space throughout Melbourne, creates a significant network of biodiversity assets.



MOONEE PONDS CREEK STUDY EXTENT
MAP 1

2.0 OVERVIEW: THE SETTING OF MOONEE PONDS CREEK

Waterways are a primary constituent of most ecosystems – providing water, habitat, food and shelter, elements essential to life within natural ecosystems and catchments. However, until recent times, modern urbanization has seen the degradation of many waterways, to the point where water quality has been depleted, vegetation and therefore habitat removed and biodiversity minimised.

Since the 1970's the value of waterways (and associated wetlands) to urban communities has become recognized and in fact sought after – particularly in provision of green open space links between communities. While recreating pristine environments is not possible, the co-ordinated management of the Moonee Ponds Creek seeks to continue the elevation of the environmental quality of waterways in Metropolitan Melbourne by increasing amenity and potentially biodiversity.

As is the case with most urban waterways, the Creek Corridor forms part of a broader “green” network and provides linkages to many adjacent public open space areas. The corridor passes through a wide variety of urban, semi-rural and estuarine landscapes and contains a wealth of flora and fauna species. In addition, the waterway contains various significant areas and sites of European and Aboriginal heritage.

Much work has been previously undertaken by Councils, Melbourne Water and other government bodies. However, as the corridor passes through numerous municipalities and also falls under the jurisdiction of various authorities, there have been difficulties encountered in maintaining a unified approach to the future planning and improvement of the Creek environs. The Moonee Ponds Creek Strategic Plan will enable that unified approach.

2.1 OVERVIEW: MANAGEMENT HISTORY

Prior to European settlement, the Moonee Ponds Creek was part of the lands of the Wurundjeri People of Kulin Nation. The Moonee Ponds Creek existed as a sequence of marshy ponds with widespread salt water marshes adjoining its entry to the Yarra River. The Creek derived its name from these winding chains of waterholes, which during heavy rains swelled into a fast flowing temporary stream through what are now Melbourne's north-western suburbs. The Creek flowed into a large salty lagoon in West Melbourne prior to meeting the Yarra River.

The Port Phillip region was first settled by Europeans in 1835, with the first sales of land throughout Strathmore on Moonee Ponds Creek being made in 1843 and 1845. With the rapid expansion of Melbourne due to the Victorian Gold Rush, by the 1850's the marsh rapidly became a receptacle for the waste waters from suburbs of Flemington, North Melbourne and Parkville. In 1879, 'Batman Lagoon' was drained and filled to create the North Melbourne railway yards. In the 1890's the lower Moonee Ponds Creek was altered to form the railway canal.

Between the 1940's and 1980's the Melbourne Metropolitan Board of Works, now called Melbourne Water, attempted to stop periodic flooding of the Creek. Flow protection of the Creek resulted in the removal of bank vegetation and in-stream debris in conjunction with the construction of a concrete lining throughout much of the lower reaches of the Creek, in an attempt to stop periodical flooding and to prevent further erosion. Realignment of the Creek and concreting occurred alongside the construction of the Tullamarine Freeway. The modifications to the Creek were part of extensive urban development of the lower floodplain. For much of its length through the inner northern suburbs, the Moonee Ponds Creek is now characterised as a concrete stormwater drain that runs parallel to the Tullamarine Freeway/City Link corridor.

In 1989, the Moonee Ponds Creek Association was formed with the aim of protecting the Creek from further detrimental impacts of adjacent road construction. In 1992, the association initiated the preparation by Melbourne Water of a Strategic Plan – the Moonee Ponds Creek Concept Plan.

In 1998 the Moonee Ponds Creek Co-ordination Committee (MPCCC) was formed to administer planning, restoration, education and development of guidelines and policies aimed at protecting and enhancing the Creek and its tributaries. The MPCCC comprises members each of the four Councils: Hume, Moreland, Moonee Valley and Melbourne City, as well as Friends of the Moonee Ponds Creek Inc (formerly the Moonee Ponds Creek Association).

Under the guidance of the MPCCC, community participation has grown to thirteen Friends Groups. In the period 2005 - 2008, volunteers participated in revegetation planting days using over 50,000 plants. Community education events involving several thousand participants have also occurred.

2.2 OVERVIEW: SOILS AND GEOLOGY

The 1992 *Moonee Ponds Creek Concept Plan* draws on a background technical report *Soils of the Moonee Ponds Creek* (Board of Works, Sargeant, I., 1991, Moonee Ponds Creek Concept Plan: Soils of the Moonee Ponds Creek) for its soil components.

The *Soils of the Moonee Ponds Creek* report is 19 years old. It is expected that considerable earth works (including substantial residential development and associated infrastructure) and road works (including freeway construction) will have taken place since that time. Much of the development associated with nearby freeways and residential growth is expected to have been preceded by detailed geotechnical soil assessment work. No other general government soil studies of the Moonee Ponds Creek environs are known.

It is quite possible that some features identified in 1991 may now no longer be in existence. Some recommendations may have been acted on, and if this is the case, their efficacy should be assessed in the field.

The 1991 review of the geological conditions of the Moonee Ponds Creek was undertaken through a Desktop investigation. An Application Programming Interface (API) was undertaken of black and white photographs (1:10,000), references were made to geological maps and early works were considered, however these were limited. Field work was also carried out, including a soil profile inspection for each of the units identified.

Soils Units were examined to a depth of 1m (where possible) by hand auger, soil horizons were described in terms of colour, texture, structure, consistence, tendency to slake and disperse and boundary character and samples were taken at two points in the profiles to test for pH levels. In the results nine different soils were discussed.

From the soils perspective, sensitivity that arises along the Moonee Ponds Creek largely relates to erosion and contamination. Unfortunately the *Soils of the Moonee Ponds Creek* report lacks up-to-date information. Some constraints and impacts highlighted in earlier reports include:

- Allowing existing infrastructure to crowd the Creek environs and severely limit rehabilitation options.
- Decreasing vegetation in the catchment as development continues, so runoff could increase.
- The length of the Creek and the number of stakeholders - various Councils, Government agencies and private land owners. For any program to be effective there will need to be a co-ordinated approach along this extensive section of the Creek.
- Increasing intensity of some storms, increasing the erosivity of peak flows.

Updated reports are essential in order to make appropriate future recommendations for the Creek and its environs. These revised reports need to describe the Creek line more comprehensively, as well as examining current information concerning the hydrology of the Creek line and information about stormwater flow from the freeways system. The potential for contaminants to infiltrate the Creek environs from this stormwater also needs ongoing review.

2.3 OVERVIEW: FLORA AND FAUNA

The Moonee Ponds Creek was once an important wildlife corridor with rich and varied vegetation and although its course is severely modified in sections, it still offers an important ecological corridor for the movement of birds and other significant wildlife. Many of the species once found along its banks have now disappeared; nonetheless the potential still remains to encourage some flora and fauna species to return to the Creek and its environs.

The 1992 *Moonee Ponds Creek Concept Plan* draws on a background technical report written in 1991 (Tonkinson & Lloyd, 1991, *The Flora and Fauna of Moonee Ponds Creek*) for its flora and fauna components. Since 1991, there has been a series of significant changes to the physical environment of Moonee Ponds Creek and to the legislative and policy environment relating to its flora, fauna and ecological values. Consequently, there is a strong need for this review to update the context and content of the Tonkinson & Lloyd report.

A three-step approach was undertaken in the flora and fauna review of the Moonee Ponds Creek. This included a review of existing associated reports and a desktop review of readily available existing data on flora and fauna values in the study area (*State database records, Environment Protection and Biodiversity Conservation Act 1999, EPBC Act*). In addition, field visits were undertaken to selectively 'ground truth' features of interest identified in the desktop survey and previous consultant's reports.

A State Database review undertaken of the Moonee Ponds Creek, from the Woodlands Historic Park to Docklands, (*Flora Information System, and Atlas of Victorian Wildlife*) found that a total of fourteen threatened fauna species have been recorded in the area since record keeping commenced. A total of seven threatened plant species have been recorded in the study area since record keeping commenced. Most are associated with native grassland communities in the upstream, non-urbanised reaches of the Creek.

The key findings highlighted that most of the species of flora and fauna which are listed either under the Victorian *Flora and Fauna Guarantee Act 1988* (Department of Sustainability and Environment, 1988, *Flora and Fauna Guarantee Act 1988*) or Commonwealth EPBC Act (Department of the Environment, Water, Heritage and the Arts, 1999, and *The Environment Protection and Biodiversity Conservation Act*) are essentially now confined to the non-urbanised upper reaches of the Moonee Ponds Creek. The exceptions to this are mobile aquatic or estuarine birds, which could occur at a number of sites from the lower reaches upstream.

The main sites of biodiversity significance identified in Tonkinson & Lloyd's review of flora and fauna throughout the Moonee Ponds Creek undertaken in 1999 (Tonkinson & Lloyd, 1991, *The Flora and Fauna of Moonee Ponds Creek*) were:

- 1) Koala Crescent, Westmeadows,
- 2) Johnstone Street – on Yuroke Creek, a tributary of the Moonee Ponds Creek,
- 3) Malfunction Junction,
- 4) Strathmore Bike Path,
- 5) Mitchell Parade, Pascoe Vale South,
- 6) Moonee Parade (also known as Union Street bushland, West Brunswick),
- 7) Docklands.

To these sites should be added the Woodlands Historic Park, Greenvale. The extensive areas of grassy woodland (River Red Gum *Eucalyptus camaldulensis*, Grey Box *E. microcarpa* and Yellow Box *E. melliodora*) in the 'Back Paddock' of the Park are the largest areas of natural vegetation in close proximity to the Creek, and support diverse and significant biodiversity values.

Reference should also be made to more recent Melbourne Water studies undertaken in relation to flora and fauna along stretches of the Creek and its tributaries. For example, under the River Health Program the retarding basin in Westmeadows has been identified as a site of Biodiversity Significance, with vegetation communities including closed and open scrub and a small patch of Themeda Grassland (Melbourne Water Rivers and Creeks – Sites of Biodiversity Significance).

The Moonee Ponds Creek displays a range of conditions throughout its course, suggesting that some of the recommendations made in the MPCCP Action Program in 1992 (Board of Works and Moonee Ponds Creek Association, 1992, *Moonee Ponds Creek Concept Plan: Action Program*) have been completed, others have been completed, however, not sustained, and yet more recommendations have not been implemented. For example, inspection of the Mitchell Parade site revealed a highly degraded condition with high levels of weed infestation compromising the remaining indigenous plants. Similarly the confluence of the Moonee Ponds Creek and Yarra River at Docklands is now a highly modified landscape with little remnant vegetation.

Splitting more or less identical recommendations across a range of similar sites can tend to lead to piecemeal and unco-ordinated efforts. The intended message is duplicated in the 1992 MPCCP; these actions need to be combined and streamlined in order to improve focus in the future plan.

Many of the large scale issues identified for biodiversity management in the Moonee Ponds Creek and environs in 1992 remain unresolved in 2009. Issues such as weed invasion, erosion and other soil disturbance, vegetation trampling and species decline are all currently evident in the study area. Consequently, most of the recommended actions made in the 1992 plan are still valid.

While the 1992 *Moonee Ponds Creek Concept Plan: Action Program* included a number of key actions across widely dispersed sites along the Creek, combining and revising the 1992 actions and recommendations should include a process where compatible, landscape-scale actions are grouped together. This would provide the basis for a co-ordinated program across the study area, to deal with some of the key, common issues of the Creek.

In re-developing program objectives intended for a Moonee Ponds Creek Strategic Plan and developing future plans with landscape plantings, a number of pertinent references should be consulted. The report by Ecology Australia, 2001 (Ecology Australia, 2001, *Melbourne Airport: Minimising Bird Hazards to Aircraft Operations. Urban landscape plantings*), puts forward planting guidelines which aim to minimise bird hazards to aircraft. This report should be referred to for any proposed plantings near Melbourne Airport. The *Moonee Ponds Creek Corridor Revegetation guidelines*, (Chynoweth, D. 2000 *Moonee Ponds Creek Corridor Revegetation Guidelines: Revegetating the Moonee Ponds Creek Corridor*) will provide more general planting guidelines for the broader Moonee Ponds Creek catchment and should also be consulted.

Hume City Council's, 2006 *Hume Natural Heritage Strategy* report (Hume City Council, 2006, *Hume Natural Heritage Strategy: Discussion draft for community consultation*) is a comprehensive and well considered document, which could act as a template for natural heritage planning and management for the entire Moonee Ponds Creek catchment.

In summary, the key issues arising from the flora and fauna desktop review of the Moonee Ponds Creek and its environs are that the most threatened species are associated with non-urban reaches above Westmeadows. Many of the issues identified in the 1992 Moonee Ponds Creek Concept Plan remain valid and should be addressed in the new plan. These include weed invasion, erosion and other soil disturbance, vegetation trampling and species decline.

The ongoing degradation of remnant vegetation sites points to the value of consolidating and connecting these sites within the wider landscape. The overall aim should be to improve the natural values of biodiversity, habitat, native flora and fauna along the whole Creek Corridor and to promote biolinks with significant sites outside the Creek Corridor.

A. WOODLANDS HISTORIC PARK
- RECOMMENDED TO BE DOCUMENTED AS A MAIN SITE OF BIODIVERSITY SIGNIFICANCE

GREENVALE CREEK

VICTORIA POLICE ATTWOOD

MOONEE PONDS CREEK
TRANSPACIFIC CLEANWAY, TULLAMARINE

F. TARNUK (WRIGHT STREET RETARDING BASIN)

1. KOALA CRESCENT, WESTMEADOWS

WILLOWBROOK RESERVE

MELBOURNE AIRPORT

AIRPORT WEST

BOEING RESERVE AND COMMUNITY CENTRE

3. STRATHNAVER RESERVE

ESSENDON AIRPORT

STEELE CREEK

FIVE MILE CREEK

HORTICULTURE CENTRE

MOONEE VALLEY RACECOURSE

AVONDALE HEIGHTS

BRAYBROOK

MAIDSTONE

TRAVENCORE PARK

DEBNEYS PARK

FLEMINGTON RACECOURSE WETLANDS

FOOTSCRAY PARK

EXTENT OF THE TIDAL REACH FOR LOWER MOONEE PONDS CREEK

NEWELLS PADDOCK WETLANDS RESERVE

MOONEE PONDS CREEK

8. DOCKLANDS

YARRAVILLE

YARRA RIVER

WESTGATE PARK

PORT MELBOURNE

MEADOW HEIGHTS

GREENVALE

ATTWOOD

GLADSTONE PARK

JACANA

COOLAROO

ATTWOOD CREEK

BROADMEADOWS VALLEY PARK

YUROKE CREEK

WESTMEADOWS

JOHNSTONE STREET

2. JOHNSTONE CREEK, ON YUROKE CREEK (TRIBUTARY OF MOONEE PONDS CREEK)

B. JACANA WETLANDS

NORTHERN MEMORIAL PARK

C. KINGSFORD SMITH ULM RESERVE

NORTHERN GOLF CLUB

WESTBREEN CREEK

CONCRETE CHANNEL COMMENCES

STRATHMORE NORTH PRIMARY SCHOOL

5. STRATHMORE BIKE PATH

4. MALFUNCTION JUNCTION

STRATHMORE SECONDARY COLLEGE

6. MITCHELL PARADE ESCARPMENT, PASCOE VALE SOUTH

CONCRETE CHANNEL ENDS

MOONEE PONDS CREEK

CONCRETE CHANNEL RECOMMENCES

MELVILLE MAIN DRAIN (NO. 4320)

7. MOONEE PARADE, ALSO KNOWN AS UNION STREET BUSHLAND, WEST BRUNSWICK

QUEENS PARK

D. ROYAL PARK

PRINCES PARK

E. ROYAL PARK WETLANDS

ROYAL PARK WHITE SKINK SITE

MELBOURNE ZOOLOGICAL GARDENS

ROYAL PARK

MELBOURNE GENERAL CEMETERY

ROYAL PARK

MELBOURNE UNIVERSITY

FLAGSTAFF GARDENS

SOUTHERN CROSS STATION

FEDERATION SQUARE

FLINDERS STREET STATION

MELBOURNE EXHIBITION CENTRE

DOCKLANDS

BRUNSWICK

BRUNSWICK WEST

ALBION STREET

VICTORIA STREET

DAWSON STREET

BRUNSWICK

ASCOT VALE

TRAVENCORE

FLEMINGTON

KENSINGTON

SMITHFIELD RD

FOOTSCRAY

SEDDON

YARRA RIVER

PORT MELBOURNE

WESTGATE PARK

MEADOW HEIGHTS

GREENVALE

ATTWOOD

GLADSTONE PARK

JACANA

COOLAROO

ATTWOOD CREEK

BROADMEADOWS VALLEY PARK

YUROKE CREEK

WESTMEADOWS

JOHNSTONE STREET

2. JOHNSTONE CREEK, ON YUROKE CREEK (TRIBUTARY OF MOONEE PONDS CREEK)

B. JACANA WETLANDS

NORTHERN MEMORIAL PARK

C. KINGSFORD SMITH ULM RESERVE

NORTHERN GOLF CLUB

WESTBREEN CREEK

CONCRETE CHANNEL COMMENCES

STRATHMORE NORTH PRIMARY SCHOOL

5. STRATHMORE BIKE PATH

4. MALFUNCTION JUNCTION

STRATHMORE SECONDARY COLLEGE

6. MITCHELL PARADE ESCARPMENT, PASCOE VALE SOUTH

CONCRETE CHANNEL ENDS

MOONEE PONDS CREEK

CONCRETE CHANNEL RECOMMENCES

MELVILLE MAIN DRAIN (NO. 4320)

7. MOONEE PARADE, ALSO KNOWN AS UNION STREET BUSHLAND, WEST BRUNSWICK

QUEENS PARK

D. ROYAL PARK

PRINCES PARK

E. ROYAL PARK WETLANDS

ROYAL PARK WHITE SKINK SITE

MELBOURNE ZOOLOGICAL GARDENS

ROYAL PARK

MELBOURNE GENERAL CEMETERY

ROYAL PARK

MELBOURNE UNIVERSITY

FLAGSTAFF GARDENS

SOUTHERN CROSS STATION

FEDERATION SQUARE

FLINDERS STREET STATION

MELBOURNE EXHIBITION CENTRE

DOCKLANDS

BRUNSWICK

BRUNSWICK WEST

ALBION STREET

VICTORIA STREET

DAWSON STREET

BRUNSWICK

ASCOT VALE

TRAVENCORE

FLEMINGTON

KENSINGTON

SMITHFIELD RD

FOOTSCRAY

SEDDON

YARRA RIVER

PORT MELBOURNE

WESTGATE PARK

MEADOW HEIGHTS

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FLEMINGTON

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SMITHFIELD RD

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PORT MELBOURNE

2.4 OVERVIEW: CULTURAL HERITAGE

The strategic plan review draws on an earlier background archaeological report (F. Weaver, Report for Board of Works, 1991) undertaken for the 1992 Moonee Ponds Creek Concept Plan and makes an assessment of its relevance and currency in light of present heritage status and legislation across Moonee Ponds Creek, in particular the advent of the Aboriginal Heritage Act 2006 (AHA, 2006) (Department of Planning and Community Development, Aboriginal Affairs Victoria, 2006, *Aboriginal Heritage Act 2006*, Victorian State Government).

A Cultural Heritage Management Plan (CHMP) is compulsory for an activity if the activity:

- is a high impact activity
- falls in whole or in part within an area of cultural heritage sensitivity (CHS)

However, if part of an area of CHS has been subject to significant ground disturbance that part is not an area of CHS. The entire reaches of Moonee Ponds Creek and surrounding 200 m buffer is an area of CHS under the AHA (2006). Registered Aboriginal sites – including both the thirty one cited within the 1991 report and any found since are also areas of CHS.

The AHR (2007) provides a list of high impact activities and should be referred to. Activities such as walking tracks or bike trails, park facilities, certain amenities and infrastructure are high impact activities and (unless in areas of significant ground disturbance) would trigger a CHMP.

The aims of the Weaver (1991) archaeological survey were to locate, document and assess the significance of archaeological sites, to assess implications that archaeology may have for development, to consult with relevant local Aboriginal groups and make preliminary recommendations for additional works and impact mitigation.

Many sites identified along the Moonee Ponds Creek are of archaeological sensitivity. These include sites of existing remnant Aboriginal cultural heritage in addition to European heritage interest. A total of thirty one Aboriginal sites and thirteen historic archaeological sites were recorded over a 5-day period in April/May 1991 by foot and by bicycle.

During the same archaeological review undertaken in 1991, a total of twelve European historic sites were located along the course of the Moonee Ponds Creek. From the findings of significant European cultural heritage, it was recommended in the 1992 Concept Plan (Board of Works and Moonee Ponds Creek Association, 1992, *Moonee Ponds Creek Concept Plan*) that the historic Cypress and Peppercorn trees near Moreland Road should be preserved and the old bridges ought to be incorporated into public interpretation nodes along the Moonee Ponds bike path, along with a suggestions that further research be undertaken of Bulla Quarry and the early settlement quarry at Broadmeadows.

In relation to remnant Aboriginal cultural heritage sites along the Moonee Ponds Creek, the 1992 *Moonee Ponds Creek Concept Plan* recommended the following:

- Within Reach 9: Westmeadows from Deviation Road to Victoria Street:
 - protect Aboriginal sites identified near Moonee Ponds Creek. Erosion control at some sites;
 - further recording of an Aboriginal hearth upstream of Mickleham Road;
 - further archaeological research upstream of Mickleham Road.
- Within Reach 10: Gellibrand from upstream of Victoria Street:
 - undertake further archaeological research in the area along the northern tributaries of MPC.

A review of the current Aboriginal Affairs Victoria (AAV) database revealed that the recommendations relevant to heritage within the 1992 *Moonee Ponds Creek Concept Plan* do not appear to have been undertaken. Within the 19 years subsequent to the 1991 study, there have been relatively few archaeological surveys of relevance to the Moonee Ponds Creek. Melbourne Water has also recognised the high archaeological values of the Tarnuk Reserve, in Tullamarine (Melbourne Water Rivers and Creeks – Sites of Biodiversity Significance).

From the recent site review of the Archaeological provisions of the Moonee Ponds Creek and its environs, it is recommended that a new Aboriginal and European Heritage survey of the Moonee Ponds Creek be conducted, in order to review the present heritage status of the Creek. A prominent focus should be the area of highest potential between Mickleham Road and Gellibrand Park.

Some studies also relevant to Cultural Heritage prepared by the City of Moreland in recent years have implications in relation to the Moonee Ponds Creek. The Moreland Pre-Contact Aboriginal Heritage Study (Terra Culture Pty Ltd, March 2010) included a mandate to identify ways to protect Aboriginal Heritage “where it may be threatened by a development proposal”. The study included research, fieldwork, modelling and recommendations including the recognition that much of the Creek environs have been modified since European settlement and confirmed the similar conclusions of the earlier Weaver Study prepared as part of the 1991 Concept Plan.

The complementary Moreland Post Contact Aboriginal Heritage Study (Goulding Heritage Consulting Pty Ltd, April 2006) identified Moonee Ponds Creek “as an important place for Aboriginal people for resource collection and as a travel route”. Similarly, the Westmeadows and Upper Moonee Ponds Creek Interpretation Strategy - ‘Uncovering a Unique Ecological and Historic District within Suburban Melbourne’ (MPCCC, 2005) includes the identification of cultural heritage sites relevant to the Moonee Ponds Creek Strategic Plan.

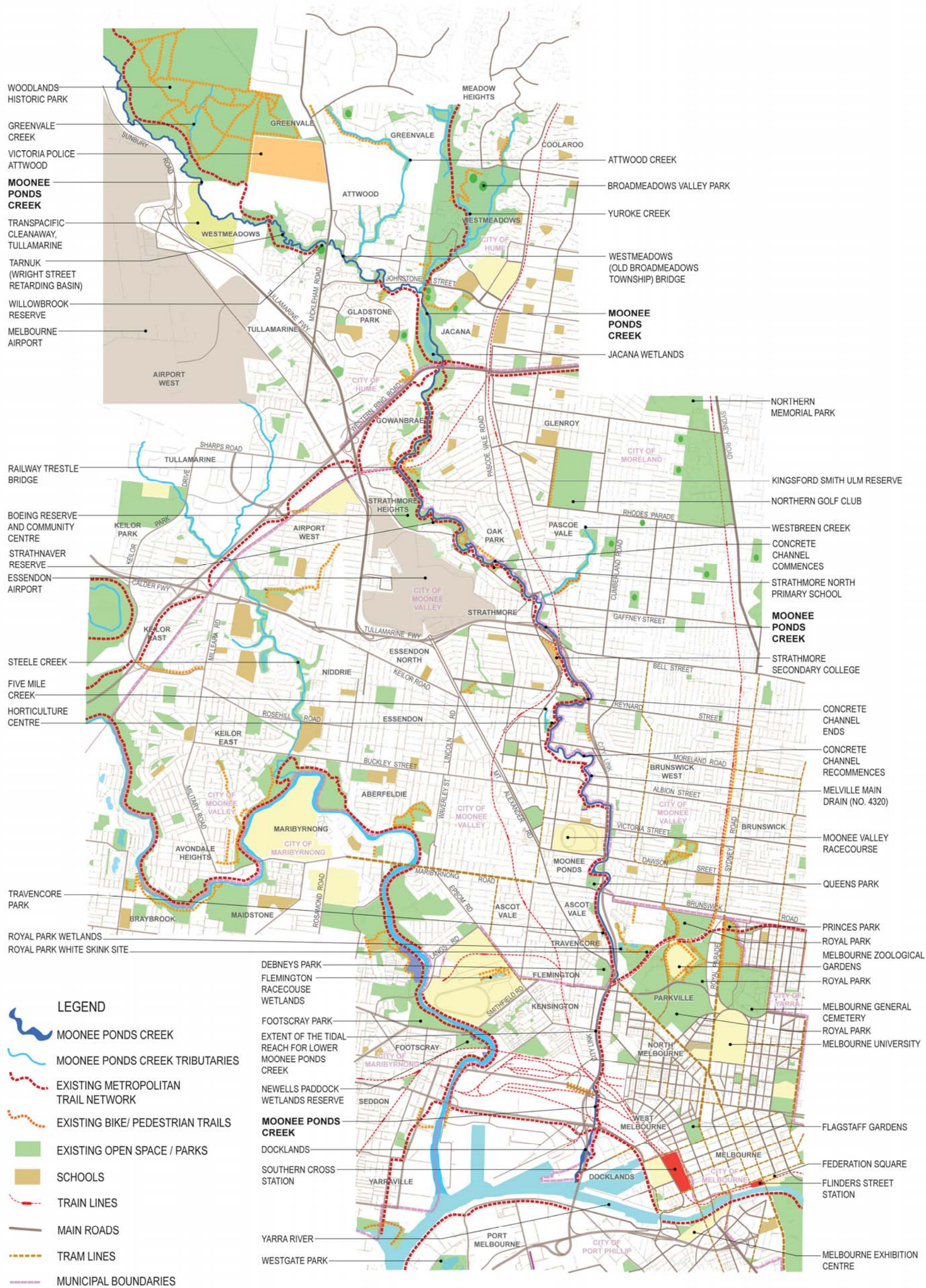
In conjunction with a revised survey, a follow-up investigation of the Aboriginal hearth, discovered in the 1991 survey is warranted. In addition, the implications of the Aboriginal Heritage Act, 2006 upon development proposals, such as public amenities, bike trails, open spaces, etc., particularly the CH permit and CHMP requirements, needs to be considered.

2.5 OVERVIEW: LAND USE CONTEXT

Due to urban growth and continued industrial development in the lower reaches, the Creek was considerably altered in the 1950’s for flood protection including redirection for the freeway and later dock developments.

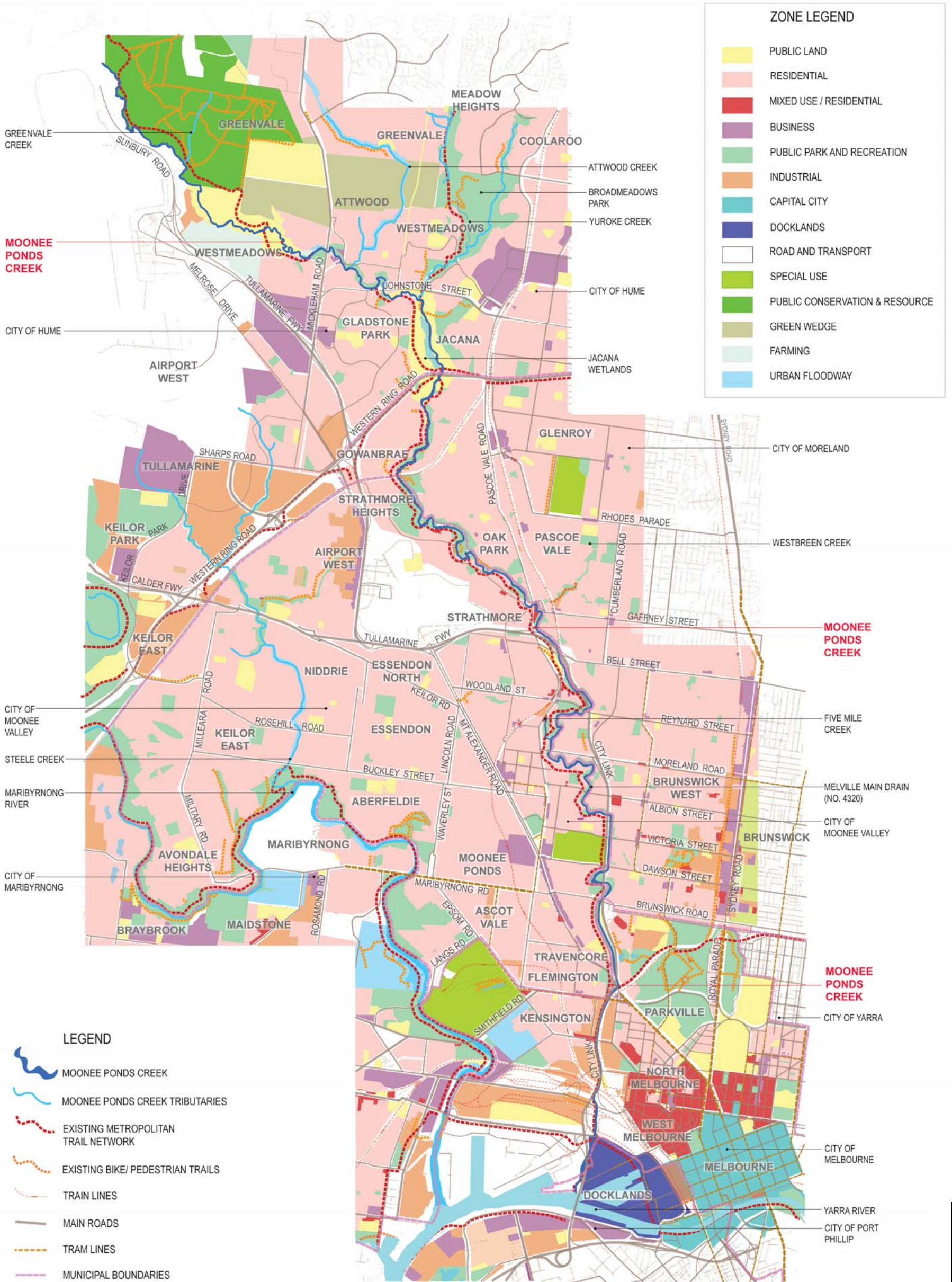
Other work included removal of bank vegetation, concrete lining of much of the lower reaches and connection to Melbourne’s stormwater drain system. As a result, only the upper reaches of the Creek in Woodlands Park would somewhat resemble its original state. More recent projects undertaken by the MPCCC with Friends Groups has seen the reinstatement of vegetated areas along the Creek. The Creek Corridor is relatively narrow in the majority of the southern half but often expands to incorporate other open spaces such as parklands in the north. The tributaries also contribute to a wider context.

Main road bridge crossings in the north are relatively few. Towards the south, bridge crossings are more prevalent, providing users with easier access to both sides of the waterway. A near continuous trail adjacent to the waterway runs along the Creek, generally to a single side. Abutting landuses other than those of a residential and recreational nature also have influence over the Creek. These include the airport, rail, road and port uses. Demand for higher density development also has the potential to influence the character of the Creek Corridor. Land use context for the Moonee Ponds Creek, particularly along its lower reaches, is associated in often complex relationships between land ownership, leasehold and management.



MOONEE PONDS CREEK CONTEXT PLAN
MAP 3





MOONEE PONDS CREEK LAND USE PLAN
MAP 4

2.6 OVERVIEW: ACCESS AND CONNECTIVITY

Roads and paths provide critical connection to other nearby open space networks, facilities such as schools, universities and community centres. A shared trail exists almost along the entire length of the Moonee Ponds Creek, from Woodlands Historic Park to Melbourne Docklands. The *Moonee Ponds Creek Trail*, provides a recreational path for cyclists and walkers, as well as providing physical connections to adjoining reserves, sporting grounds and community facilities situated along and neighbouring the Moonee Ponds Creek.

The Metropolitan Trail Network is illustrated and already has strong connection to the Creek trail. Opportunities are apparent to link to a wider regional network of open space via roads and open space, adding to the recreation and open space available to residents living in nearby suburbs.

Increasingly, shared trails are used by commuting cyclists, leading to increased conflict with recreational uses. Education, signage and regulation in relation to trail and corridor use should form an intrinsic part of the Strategic Plan.

2.7 OVERVIEW: EXISTING PLANNING POLICY

There is a large variation in zoning along the Moonee Ponds Creek for each of the four abutting municipalities. In Hume, Commonwealth Land, Farming and Residential 1 Zones contrast with Melbourne's Industrial, Mixed Use, Business and Special Use Zones. However, the Creek is afforded immediately adjoining areas of open space throughout all municipalities under Public Park and Recreation, Public Land, and Public Conservation and Resource zonings.

A Moonee Ponds Creek Incorporated Plan Overlay applies to the Moonee Valley and Melbourne Planning Schemes. For the 2011 Strategic Plan's effectiveness to be realised, it should be implemented as an incorporated plan overlay along the entire length of the Creek. Key policy directions included in the existing overlays relating to protection and enhancement of environmental, cultural heritage and recreation features of the Creek are reiterated in the Strategic Directions for the 2011 Strategic Plan.

The TransPacific Landfill site is the subject of an application for rezoning the site and the adjoining buffer land, for car parking and business use. The EPA has recently advised that the landfill cap construction will be reviewed by an independent panel. This panel will also consider the future use of the site and the adjoining buffer land.

Planning Directions

Based on the review of current planning policy and the analysis of the existing physical condition of Moonee Ponds Creek, the following broad planning directions should be pursued:

- Incorporate the new Moonee Ponds Strategic Plan 2011 in the local planning policy planning framework of each Moonee Ponds Creek municipality.
- Ensure the long term future of linear parkways along the Moonee Ponds Creek in the City of Melbourne through appropriate zoning (West Melbourne, Docklands and Port of Melbourne).
- Any new residential or industrial development north of the study area (City of Hume) should have consideration to maintaining public open space or conservation areas along the Moonee Ponds Creek.
- Where private land abuts the Creek, acquire additional land when possible for public recreation purposes.

3.0 SUMMARY OF STAKEHOLDER CONSULTATION

Discussions regarding potential development or aspirations were held with a range of key stakeholders during the preparation of the Strategic Plan. These stakeholders included:

- Melbourne Water
- VicTrack
- Parks Victoria
- VicUrban
- Melbourne Airport
- CityLink
- Yarra Valley Water
- Port of Melbourne Authority

A summary of relevant responses follows.

STATE GOVERNMENT AGENCIES

Melbourne Water is both 'a government landowner' and also has the role of caretaker of river health, including the Moonee Ponds Creek and its tributaries. Melbourne Water has indicated that there is a possibility of a second retarding basin adjacent to the Moonee Ponds Creek. This would be located above the Western Ring Road north of the Wright Street parklands in Westmeadows. However, due to high drainage standards enforced in new developments, this retarding basin will most likely not be needed.

Under the auspices of the River Health Program outlined in the Port Phillip and Westernport Regional River Health Strategy (Melbourne Water, February 2007), Melbourne Water has identified future activities along the Moonee Ponds Creek with a focus on the lower reaches, including improving water quality, protecting heritage values, revegetation and weed control and improving the environment for passive recreation. Grants are proposed to foster the protection of streamside vegetation in rural reaches. The program for the Moonee Ponds Management Unit as identified in the RRHS Addendum (Melbourne Water, June 2007) included the following actions with associated Melbourne Water funding requirements:

Moonee Ponds Creek Lower

- Undertake channel form works in accordance with recommendations of Moonee Ponds, Attwood, and Yuroke Creeks Waterway Management Activity Plans.
- In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist.

Moonee Ponds Creek Upper

- In partnership with government agencies, local land managers and community groups undertake riparian management with reference to local waterway plans where they exist.
- Investigate opportunities to protect River Red Gum communities.

Five Year Implementation Target Areas nominated in the Addendum included 63.4 kilometres of riparian land subject to weed management and 34.9 kilometres of revegetated streamside.

VicTrack owns a parcel of land in Glenroy that they were looking to develop. This land was to be developed for residential purposes 'Outlook Glenroy', however, VicTrack has put this development on hold and it will not be revisited again in the near future.

VicTrack also has landholdings abutting the Creek in North and West Melbourne. These areas are being suggested as suitable for urban renewal.

Parks Victoria indicated that there are plans to fill in the quarry located north of the land fill in Hume. This would be converted into parkland. Parks Victoria also has plans to create an interpretive trail along the Creek in the Woodlands area.

VicUrban (Docklands Authority) plan to create a walkway and trail along the woodlands adjacent to the Creek. Revegetation has been undertaken in this vicinity. The walkway would connect to the current path owned by the Port of Melbourne Corporation and providing connection to the Creek's confluence with the Yarra at Victoria Dock.

Melbourne Airport's Development Plan indicates that the airport land located along the Moonee Ponds Creek will be used for Conservation and Recreation Purposes and vegetation restriction may apply.

MOONEE PONDS CREEK FRIENDS AND USER GROUPS

Consultation was also undertaken with representatives of various Friends Groups. In particular,

- Friends of Strathmore Ponds,
- Friends of Strahnaver Reserve,
- Friends of Jacana Wetlands,
- Friends of Upper Moonee Ponds Creek,

shared a number of common aspirations that were disclosed during the consultation process:

- At key stopping/rest points along the Moonee Ponds Creek Trail, construct water fountains, toilets and park benches.
- Develop a cultural heritage trail/interpretive trail, highlighting both Indigenous and European heritage sites with relevant information.
- Identify a strategic location for a daytime café at a key destination point. Seek to utilise existing facilities if available.
- Continue to return areas to the north to native parkland.
- Develop short walking trails/loops from car parks including the Woodlands precinct and Docklands precinct.

MOONEE PONDS CREEK STRATEGIC PLAN WORKSHOP

Following feedback to the draft plan issued for comment, a workshop was organised by the Steering Committee to guide the preparation of the final Strategic Plan. In addition to members of the Steering Committee and Consultant team, participants included representatives from State Government agencies, Local Government and Friends Groups.

The workshop enabled a fleshing out of issues to be undertaken in an open forum where all views could be appreciated by all participants. The workshop led to the incorporation of general and specific implementation strategies under three overriding categories, Planning, Environment and Visitor Experience.

The workshop reiterated those aspirations above and identified a number of further aspirations:

- Identify responsibilities for Friends Groups, Local Government and State Government for implementation of the Moonee Ponds Creek Strategic Plan components. Create an integrated plan for the entire length of the Creek.
- Improve linkages with other open space areas, community hubs, recreational facilities and residential areas.
- Complete the Moonee Ponds Creek Trail for the full length of the Creek.
- Protect areas of natural and cultural significance.
- Develop cultural heritage and interpretive trails, highlighting both Indigenous and European heritage sites with relevant information.
- Continue to return areas to the north to indigenous vegetation parkland.
- Protect and enhance indigenous vegetation, habitat and biodiversity along the Creek Corridor.
- Create biolinks.
- Support 'naturalisation' of the Creek. In particular, seek reduction in the extent of concrete channelisation in the southern section of the Creek.
- Identify responsibilities for Friends Groups, Local Government and State Government for implementation of the Moonee Ponds Creek Strategic Plan components.
- Encourage adjoining landholders and stakeholders interest in the Creek and participation in revegetation and other projects.

4.0 SUMMARY OF PLANNING AND MANAGEMENT ISSUES

The overview of the current setting and physical condition of the Moonee Ponds Creek, along with review of planning policy and discussions with key stakeholders have revealed a range of general planning and management issues to be addressed in the actions which constitute the Strategic Plan. These issues are summarised below:

Environment

- Identifying the natural and cultural values of the Creek Corridor, to enable their protection and enhancement, while allowing appropriate interaction with these values.
- Identifying areas which are experiencing development pressure, to enable the future identification of guiding principles for such development, aimed at protection of the Creek Corridor.
- The variable nature of the Creek Corridor has led to a variety of hydraulic conditions from rapid flow of high volume areas to higher friction, rock-lined sections. The condition of the Creek Corridor, as well as water management by agencies must be identified to enable future planning.
- Consideration of geomorphology, floodplain dynamics and bank stability will be an important aspect in defining access and activity along the Creek. Soil conditions, land uses and high energy flows have seen significant bank erosion in some stretches.
- Future actions must ensure the flood protection function of the Creek Corridor is not compromised. While some of the waterway runs through 'natural' and 'rural' landscapes, the impact of urban run-off on flooding needs to be considered.
- Planned measures to enhance water quality of the waterway system, particularly through urban areas, need to be identified, understood and implemented.
- While the Creek Corridor has significant natural values, it exhibits significant weed infestation in some areas, particularly in the "urban" reaches.
- Sites of particular geological, archaeological and biological significance need to be identified and carefully managed.

Community Use and Involvement

- Many areas of the Creek Corridor are highly accessible to pedestrians and cyclists. This needs to be exploited with a safe and accessible pathway system which is integrated with its suburban and open space context. Identification of such opportunities will be important in this Strategic Plan.
- Urban design issues that need careful attention include the need to identify clear points of entry into the Creek system, enabling the integration of other networks with its urban context.
- There will be a clear need to fully understand the needs and aspirations of the local communities and various interest groups along the Creek Corridor, along with maintaining consultation with Stakeholders for its success.
- The Strategic Plan must continually analyse the demand for recreational uses along the Creek Corridor. This will entail a clear understanding of the local community groups and users of the corridor, their expectations and needs.

Landscape Character

- The impacts of infrastructure (such as roadways and bridges, drainage and services) upon the image and function of the Creek Corridor need to be carefully managed.
- The Strategic Plan must also consider the visual and spatial characteristics of the waterway, allowing definition of the desired character, achieved through a combination of planting, clarity of circulation, amenities, development control etc.

Planning

- In addition to issues relating to the physical stream environment, there is a clear need for the Strategic Plan to identify anomalies across the municipal planning schemes, to ensure an integrated approach to planning, design and management.
- Adoption of an Integrated Plan for the full length of the Creek will assist in achieving the above.

5.0 MOONEE PONDS CREEK STRATEGIC PLAN DIRECTIONS

Key policy directions from the Moonee Ponds Creek Incorporated Plan Overlay and of particular reference to this Strategic Plan include:

- Public Use Zone should be applied to waterways;
- Public Park and Recreation Zone should be applied to adjoining land along waterways;
- A vegetation buffer zone of at least 30 metres wide along waterway to maintain the natural drainage function, stream habitat and wildlife corridors and landscape values to minimise erosion of stream banks and verges;
- Investigate the implications of climate change on creek flows (less frequent, more intense rain events);
- Protect and enhance the natural capital (vegetation and biodiversity), amenity and attractiveness of Melbourne's parklands, the Yarra and Maribyrnong Rivers and Moonee Ponds Creek;
- Ensure open space links along waterways provide for recreational and environmental purposes;
- Support design treatments that lead to enhancement or restoration of natural systems;
- Link each of our waterways through linear parks, bike paths and walking tracks and also by providing a continuous linear path along the waterways and ensure that public access along our waterways is maintained;
- Conserve, enhance and re-establish areas of natural habitat through appropriate planting, earthworks and landscaping;
- Develop a program with the Koori Community to recognise, protect and interpret key Koori sites in the municipality;
- Complete the development of continuous linear pathways.

The outcomes of the stakeholder consultation and workshop reiterated these directions and added:

- Improve the Creek Corridor access through the strategic land acquisition, appropriate planning controls and management.
- Create biolinks.
- Recognise, protect and interpret, as appropriate, sites of cultural heritage significance.
- Encourage and improve stakeholder and community engagement via the promotion of education and participation.
- Minimise the impacts of urban growth and climate change with appropriate planning controls.
- Improve the visitor experience with the provision of stimulating but safe access and additional facilities.
- Adopt an integrated planning approach for the entire length of the Creek, however Public Park and Recreation Zone is more appropriate zoning for the waterway as well as the adjoining land, not Public Use Zone.

5.1 STRATEGIC PLAN

In response to these directions, the Strategic Plan proposes general and specific implementation strategies under three overriding categories:

Planning

Environment

Visitor Experience

In essence, the Moonee Ponds Creek Strategic Plan 2011 comprises a vision and program of planning, management and implementation works aimed at responding to the issues and directions identified through the existing conditions analysis coupled with consultation with key stakeholders.

While this programme of works treats the Creek as a whole, it also responds to specific site conditions which vary from location to location, from precinct to precinct. On this basis, a number of character precincts have been identified as the basis for defining the works which constitute the Strategic Plan. These precincts are outlined in Section 5.3 'Specific Implementation Strategies', with a summary of precinct related issues and actions.

5.2 GENERAL IMPLEMENTATION STRATEGIES

Across the full study extent of the Moonee Ponds Creek some particularly common issues exist with generally common solutions. These initiatives should be tackled within the first five years of the Strategic Plan and thereby have established the framework for ongoing implementation.

PLANNING			
Objective			
Adopt an integrated planning approach to the Creek and its environs			
Action	Responsibility	Timeframe	Outcome
Incorporate 2010 Strategic Plan into Local Planning Policy	Local Government	2011-2012	Co-ordinated control over Creek Corridor
Ensure new developments adhere to best practice WSUD	Local Government/ Melbourne Water	2011- ongoing	Improved water quality
Investigate opportunities for land acquisition to enhance the corridor	Local Government/ Melbourne Water	2011- ongoing	Improved recreational and habitat opportunity
Undertake master planning of the Creek Corridor and adjacent open spaces	Local Government/ Melbourne Water	2011- ongoing	Co-ordinated approach to corridor use and character

ENVIRONMENT			
Objective			
Protect and enhance the natural capital (vegetation and biodiversity), amenity and attractiveness			
Action	Responsibility	Timeframe	Outcome
Establish a system of measuring benchmarks of environmental improvement	Local Government/ Melbourne Water	2011-2012	Annual measurement improvement
Formulate a weed management strategy	Local Government/ Melbourne Water	2011-2012	Reduced weed infestation
Formulate revegetation guidelines	Local Government/ Melbourne Water	2012-2013	Co-ordinated approach for entire corridor
Map and monitor significant environmental and cultural sites	Local Government/ Melbourne Water/ MPCCC	2012-2013	Protection of key assets
Monitor water quality in conjunction with Melbourne Water	Local Government/ Melbourne Water	2011- ongoing	Improved water quality
Continue Investigations into the feasibility of modifying the concrete channel	Local Government/ Melbourne Water	2011- ongoing	Restoration of 'natural' creek form and character

VISITOR EXPERIENCE			
Objective			
Improve the visitor experience with the provision of stimulating but safe access			
Action	Responsibility	Timeframe	Outcome
Undertake and update to the trail safety audit and rectify as required	Local Government/ Melbourne Water	2011- ongoing	Improved user safety and amenity
Implement Interpretation Policy	Local Government/ MPCCC	2013- 2014	Increased community interest and involvement
Implement Master Plan outcomes such as interpretive information, signage, furniture etc.	Local Government/ Melbourne Water/ MPCCC	2014- 2015	Improved user amenity
Implement ongoing weed management	Local Government/ Melbourne Water/ MPCCC	2011- ongoing	Improved habitat and 'natural' environment
Implement staged revegetation	Local Government/ Melbourne Water/ MPCCC	2012- ongoing	Improved habitat and 'natural' environment
Improve key points of linkage to other trails and open space	Local Government/ MPCCC	2012- ongoing	Increased amenity for users and habitat
Create points of interest along the corridor for appreciation and education	MPCCC	2012- ongoing	Increased community interest and involvement

5.3 SPECIFIC IMPLEMENTATION STRATEGIES

Starting to the north of Woodlands Historic Park through to the junction with the Yarra River in Docklands, the Creek Corridor exhibits various landscape characteristics, primarily driven by Creek conditions and the immediate environs to the Creek or the accessible areas abutting the Creek.

Aside from the rural areas in the upper reaches near Greenvale and in Woodlands Historic Park, the character of the Moonee Ponds Creek Corridor is, for the most part, urbanised or strongly influenced by nearby urban development. Nonetheless, variations in landscape character, including topography, vegetation type and cover, recreational activities and facilities provide a myriad of experiences.

Specific implementation strategies are put forward taking into account these characteristics and variations.

OVERVIEW: PRECINCTS

The site analysis phase identified particular character precincts based generally on a broad perception of landscape character. These precincts have also been used to establish related works associated with the rehabilitation of the Creek Corridor, despite the broad nature of this classification:

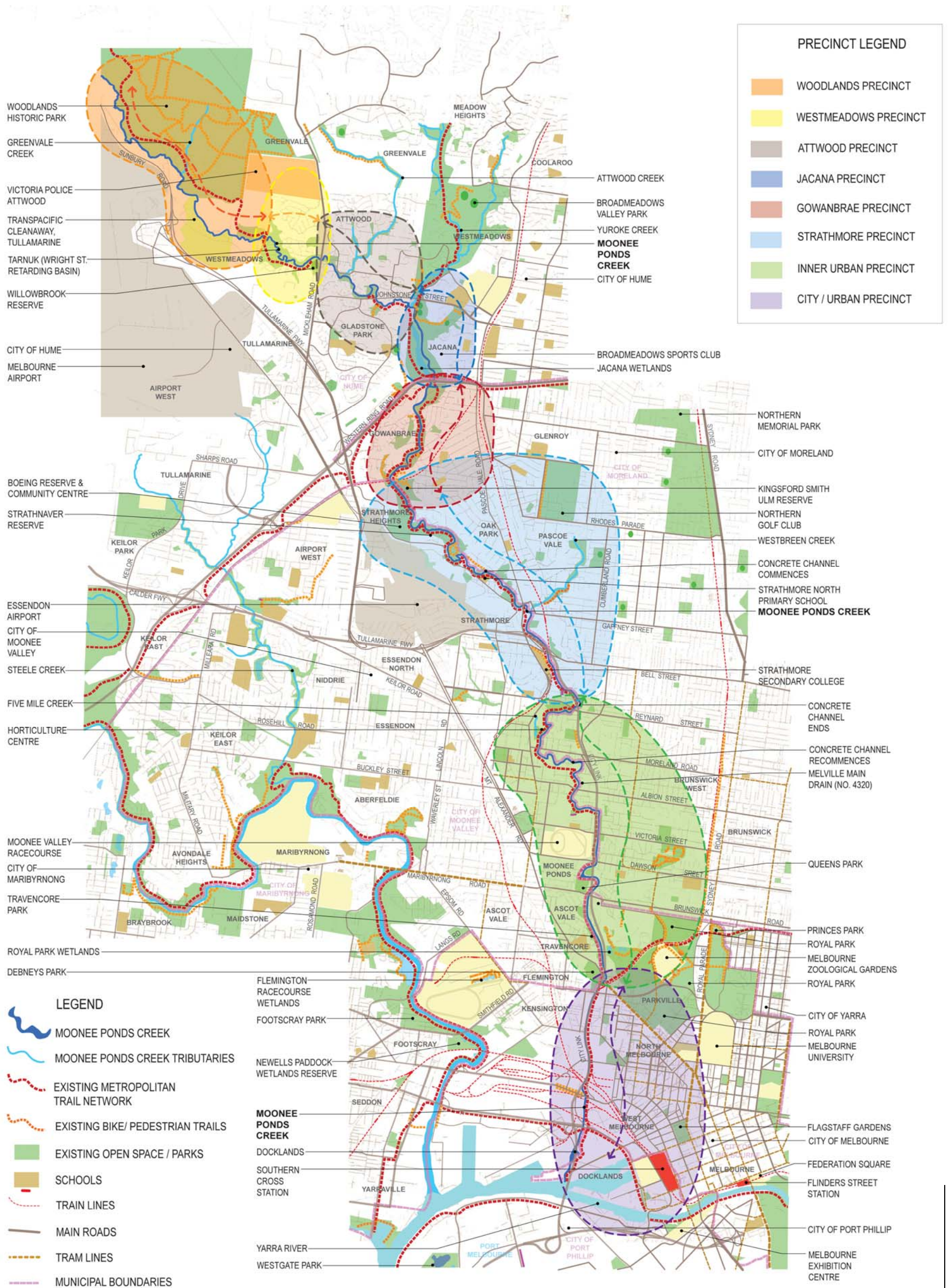
- Woodlands Precinct
- Westmeadows Precinct
- Attwood Precinct
- Jacana Precinct
- Gowanbrae Precinct
- Strathmore Precinct
- Inner Urban Precinct
- City/Urban Precinct

Across these various precincts, a key unifying element and recreational component of the corridor is a shared pathway, the *Moonee Ponds Creek Trail*. This trail provides a recreational path for cyclists and walkers, connecting many adjoining reserves, parks and sporting grounds along the Creek and the opportunity to experience these various characteristics.

The trail also accommodates increasing commuter demands, particularly in the lower reaches. Enhancement of the functional and experiential quality of the trail is a key component of the Strategic Plan, recognising its significant recreational use, as well as its role in unifying the disparate character of the Creek Corridor.

The accompanying character analysis images illustrate both existing conditions and precedent images for intended character to be worked towards over the next five years. As with all Strategic Plans and in this instance, the Strategic Plan will be reviewed in five years to assess what has been achieved, what new issues have arisen and how these can be best addressed in the lifetime of an updated strategy.

The specific implementation strategies have been framed around a five year works programme, establishing a strong basis for ongoing implementation for the life of the Strategy and its objectives. The numeric references relate to tasks within the works strategy.



Key characteristics and management direction for works for each precinct are summarised as follows:

Woodlands Precinct –

The character and definition of the Woodlands Precinct is largely determined by the presence of the remnant open woodland and the topographic forms of the Creek valley and Gellibrand Hill. As noted in the flora and fauna overview, this precinct exhibits:

“extensive areas of grassy woodland (River Red Gum *Eucalyptus camaldulensis*, Grey Box *E. microcarpa* and Yellow Box *E. melliodora*) in the ‘Back Paddock’ of the Park are the largest areas of natural vegetation in close proximity to the Creek, and support diverse and significant biodiversity values.”

Issues include:

- weed management,
- gravel trail upkeep and safety,
- disconnection of trail and Creek alignments,
- land ownership to left bank, freeway side of Creek, abutting Airport/landfill land uses,
- the landfill site on the west of the Creek,
- quarries within/adjacent to Woodlands Historic Park where remediation is currently being pursued for inappropriate fill.

Opportunities include:

- building upon remnant natural landscape to inform Precinct character,
- trail connection to Airport.

Specific Implementation Strategies:

W9 Seal shared trail where appropriate and in accordance with Parks Victoria plans.

General Implementation Strategies:

W1 Undertake and update the trail safety audit and rectify as required.

W2 Formulate a Weed Management Strategy.

W3 Formulate Precinct Revegetation Guidelines and Master Plan.

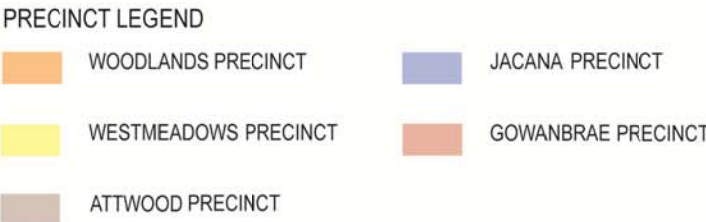
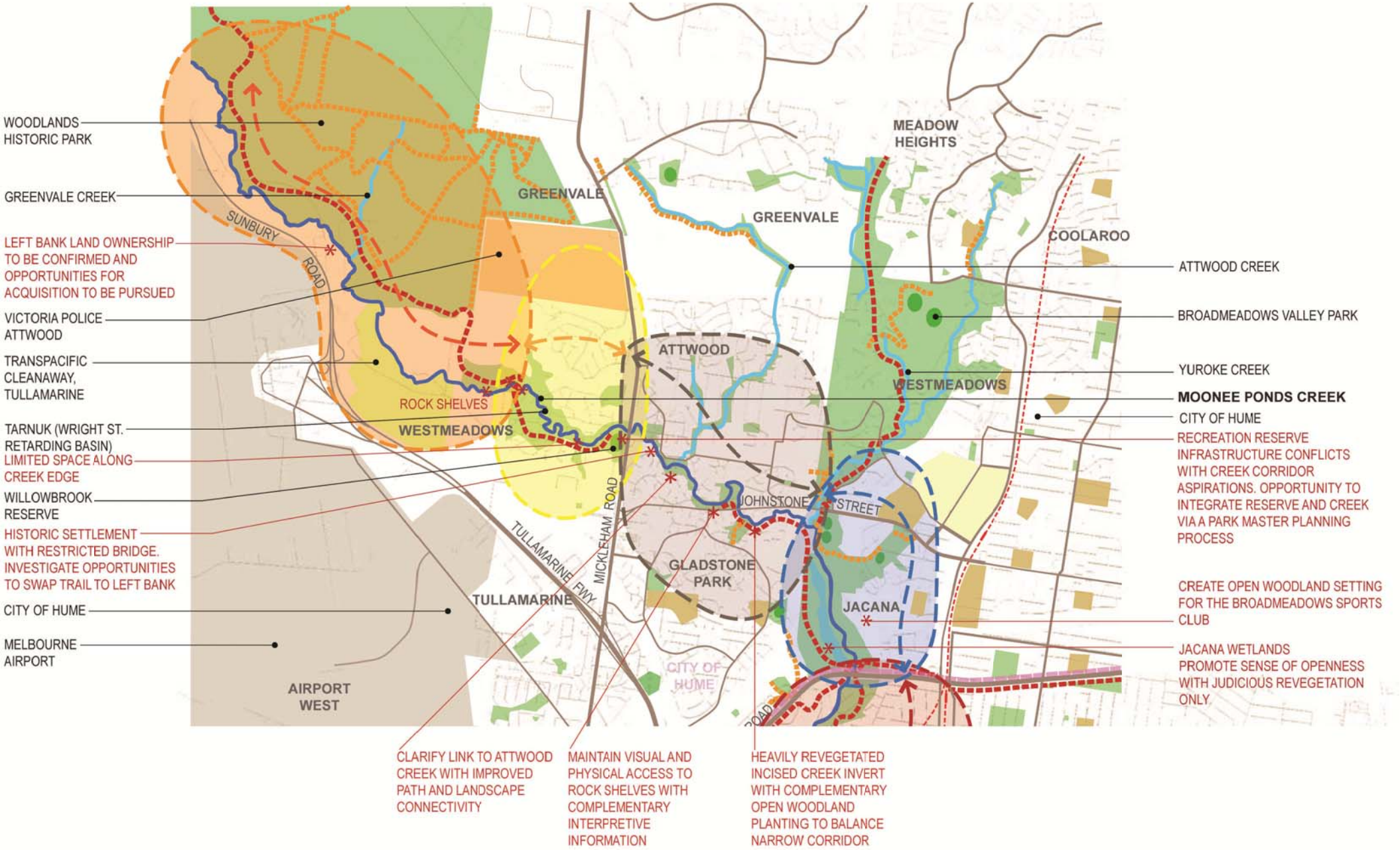
W4 Formulate Interpretation Policy.

W5 Incorporate Plan into Local Planning Policy.

W6 Implement ongoing Weed Management.

W7 Implement staged Revegetation.

W8 Implement other Master Plan outcomes such as interpretive information, signage and furniture etc.



MOONEE PONDS CREEK STRATEGIC PLAN
PRECINCTS: WOODLANDS, WESTMEADOWS,
ATTWOOD AND JACANA
MAP 7



EXISTING CREEK



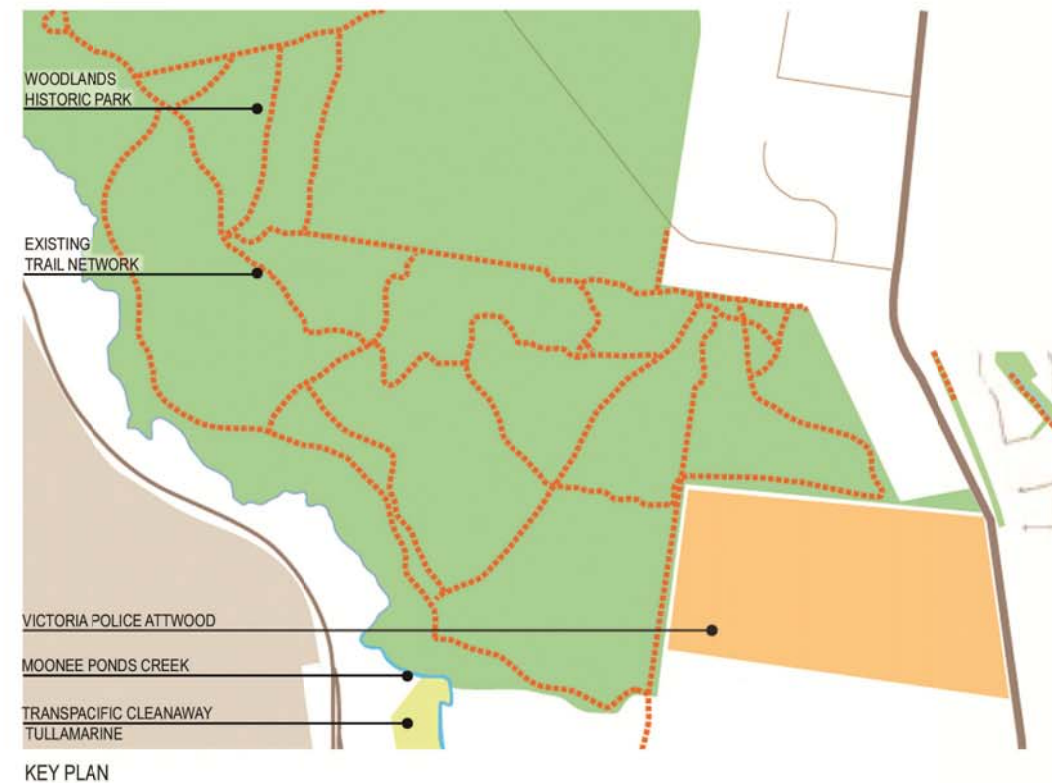
WOODLANDS EXISTING TRAIL



PRECEDENT IMAGE



EXISTING TRAIL ACCESS



PRECINCT IMAGES 1: WOODLANDS

Westmeadows Precinct –

The Westmeadows Precinct includes several broad open spaces adjoining the immediate Creek Corridor. The majority of these areas are informal with open grass and pockets of revegetation beginning to provide some spatial variation or enclosure to the Creek. More formal recreation activities occur in areas such as Willowbrook Reserve with associated parking and buildings supporting recreation. The broad nature of the open spaces along with the establishing revegetation is inclined to minimise the visual influence of residential development upon the Creek environs.

Issues include:

- weed management,
- gravel trail upkeep and safety,
- abutting recreation vehicular access and parking conflicts,
- restricted Corridor width in part.

Opportunities include:

- varied landscape environs informing character,
- habitat reinforcement including flora and fauna,
- passive recreation character complemented by minimal active recreation,
- maintaining a sense of visual surveillance over parklands from adjoining residential areas without dominating the parkland feel,
- reinforcing links and connectivity to other open spaces such as Attwood Creek,
- enhancing key characteristics such as the exposed geology,
- addressing the imposition of active recreation upon the Creek Corridor via the Master Plan process.

Specific Implementation Strategies:

CF9 Seal trail to conform to Authority recommendations.

General Implementation Strategies:

CF1 Undertake and update the trail safety audit and rectify as required.

CF2 Formulate a Weed Management Strategy.

CF3 Formulate Revegetation Guidelines and Master Plans for parkland reserves and Creek Corridor.

CF4 Formulate Interpretation Policy.

CF5 Incorporate Plan into Local Planning Policy.

CF6 Implement ongoing Weed Management.

CF7 Implement staged Revegetation.

CF8 Implement other Master Plan outcomes such as interpretive information, signage, furniture and addressing vehicular and pedestrian/cyclist conflicts.



EXISTING CREEK ROCKPOOLS



EXISTING CREEK



PRECEDENT



PRECEDENT



EXISTING TRAIL AND OPEN SPACE



KEY PLAN



PRECINCT IMAGES 2: WESTMEADOWS

Attwood Precinct –

The Attwood Precinct does, in contrast to the Westmeadows Precinct, feature a relatively narrow and linear space where the adjacent residential development encroaches upon the character of the corridor. Rear fences quite often abut the open space with overhead bridges and road underpass connections on the trail introducing particular characteristics and experiences. The remnants of the historic Broadmeadows township, now Westmeadows, provide an interesting adjunct to the Creek and reinforce the Creek's important role in the use of the landscape.

Issues include:

- weed management,
- access limitations on the trail through Westmeadows and over the historic bridge,
- lineal nature of the Corridor and extent of rear fencing abutting the open space corridor,
- limited Creek crossings,
- potential impact of change in the E14 road reservation.

Opportunities include:

- developing landscape environs including historic node to inform character,
- reinforcement of flora and fauna habitat,
- passive recreation character complemented by minimal active recreation,
- maintaining some sense of visual surveillance over parklands from adjoining residential areas within an overall open parkland setting,
- recognition/interpretation of the old bridge at junction of Ardlee, Raleigh and Fawkner Streets,
- trail linkage to nearby Fawkner Street shops.

Specific Implementation Strategies:

OS9 Address restricted Creek crossing at historic bridge via trail realignment along the south bank.
OS8 Develop clear and complementary connectivity to the north via Atwood Creek and Broadmeadows Valley Park.

General Implementation Strategies:

OS1 Undertake and update the trail safety audit and rectify as required.
OS2 Formulate a Weed Management Strategy.
OS3 Formulate Revegetation Guidelines and Master Plans for Creek Corridor.
OS4 Formulate Interpretation Policy.
OS5 Incorporate Plan into Local Planning Policy.
OS6 Implement ongoing Weed Management.
OS7 Implement staged Revegetation.
OS8 Implement other Master Plan outcomes such as interpretive information, signage, furniture etc.



EXISTING TRAIL AND PARKLAND



EXISTING UNSEALED GRAVEL TRAIL AND ADJOINING RESIDENTIAL



EXISTING UNDERPASS



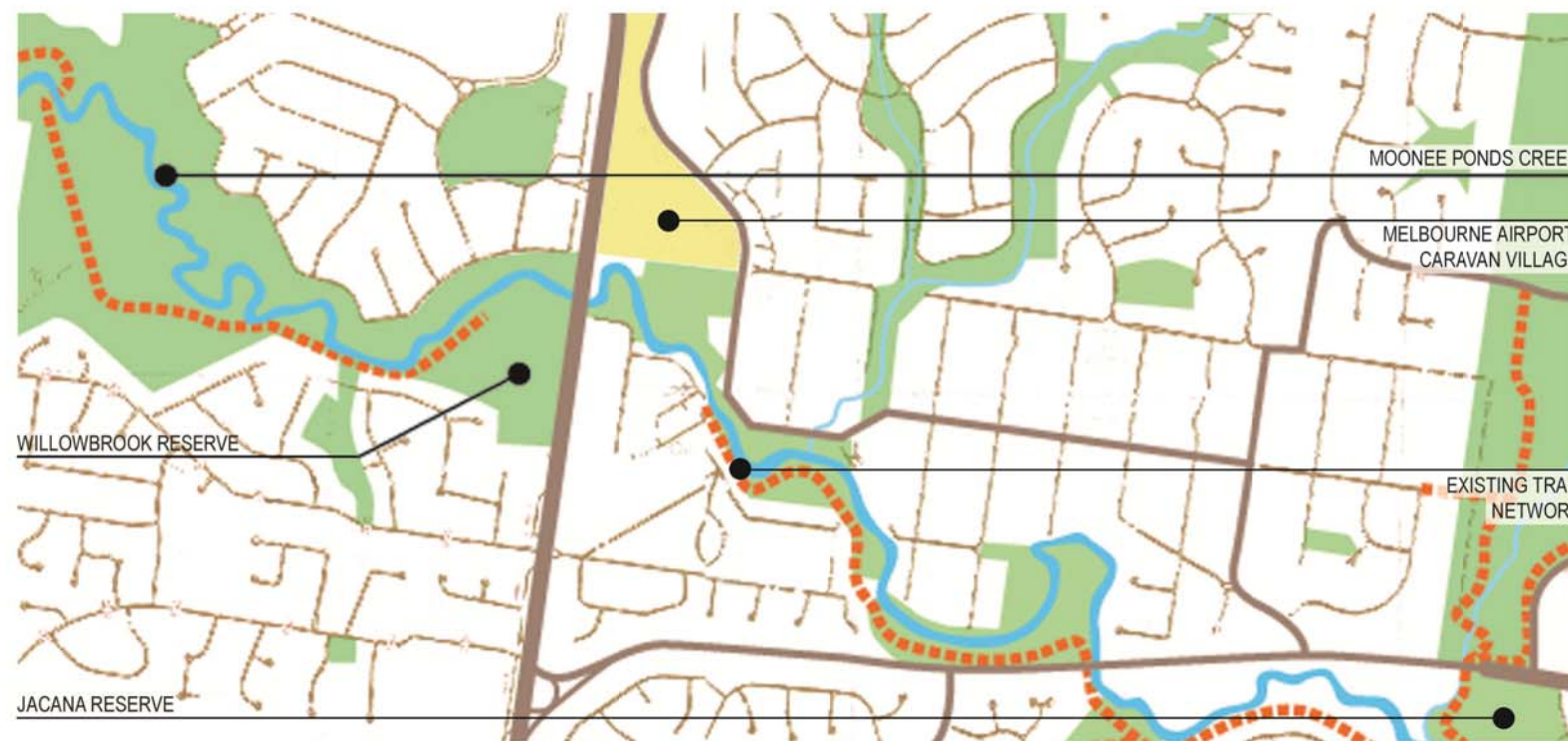
EXISTING TRAIL AND RECREATION RESERVE INTERFACE



EXISTING CREEK



PRECEDENT IMAGE



KEY PLAN



PRECINCT IMAGES 3: ATTWOOD

Jacana Precinct –

The Jacana Precinct does, in contrast to the Attwood Precinct, feature an open character created by both the broad waterbodies and the gentle but enveloping landform defining the Creek valley. Active sports areas such as Jacana Reserve and Broadmeadows Rotary Park by their size add to the sense of openness and minimise the visual impact of residential development, particularly to the east. The transmission towers to the west are ever present due to their scale and elevation above the Creek.

Issues include:

- weed management,
- the large scale of the valley corridor and its inherent maintenance requirements,
- impact upon character by the electricity transmission towers and potential changes associated with retention of the E14 road reservation; Western Ring Road,
- limited Creek or wetland crossings.

Opportunities include:

- developing landscape environs of the Creek Corridor including the wetlands, to inform a particular precinct character,
- habitat reinforcement including flora and fauna,
- passive recreation character complemented by generous active recreation areas,
- maintaining some sense of visual surveillance over parklands from adjoining residential areas within an overall open parkland setting,
- reinforcing links and connectivity to other open spaces such as Broadmeadows Valley Park.

Specific Implementation Strategies:

WL3 Promote unique openness of precinct with specific revegetation guidelines.

WL9 Address restricted Creek crossings.

WL3 Advocate for the undergrounding of the existing electricity transmission towers.

General Implementation Strategies:

WL1 Undertake and update the trail safety audit and rectify as required.

WL2 Formulate a Weed Management Strategy.

WL3 Formulate Revegetation Guidelines and Master Plan for parkland reserves and Creek Corridor.

WL4 Formulate Interpretation Policy.

WL5 Incorporate Plan into Local Planning Policy.

WL6 Implement ongoing Weed Management.

WL7 Implement staged Revegetation.

WL8 Implement other Master Plan outcomes such as interpretive information, signage, furniture etc.



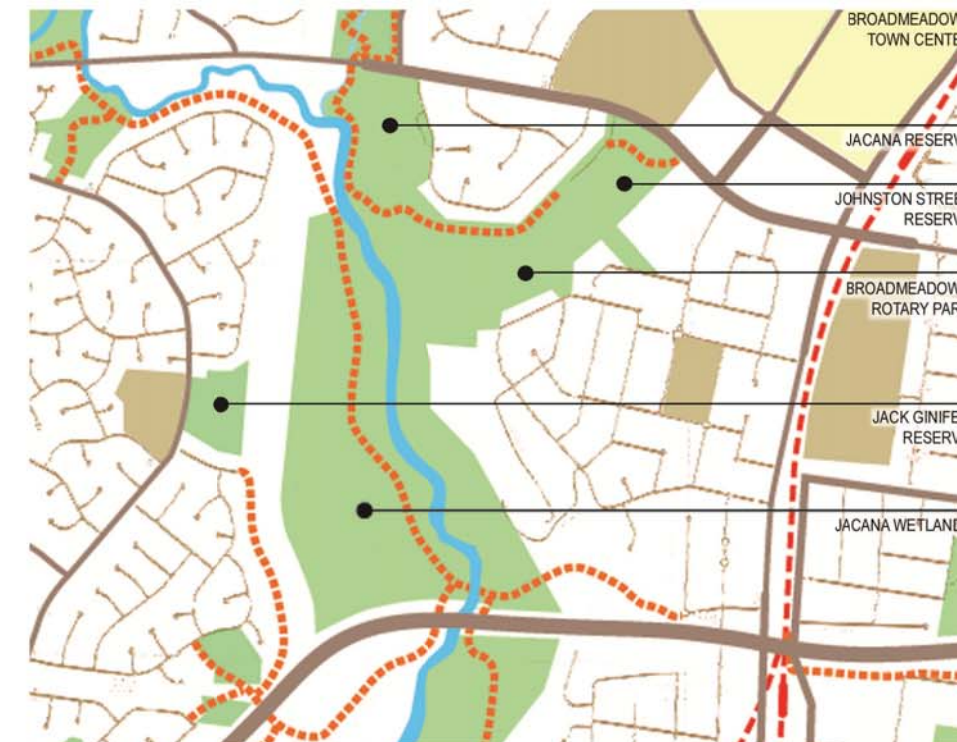
EXISTING WETLAND



EXISTING WETLAND



PRECEDENT IMAGE



KEY PLAN



PRECINCT IMAGES 4: JACANA



**MOONEE PONDS CREEK STRATEGIC PLAN
PRECINCTS: JACANA, GOWANBRAE,
STRATHMORE AND INNER URBAN
IMAGE 8**

Gowanbrae Precinct –

The Gowanbrae Precinct does, similar to the Jacana Precinct feature an open character. However the landform to the west and east closes in past the retarding basin located in the north. This creates far more dramatic and apparent edges with the visual influence of adjoining residential areas, defining the Creek valley. Residential development in Gowanbrae dominates the horizon due to the elevation as does the trestle rail bridge located towards the south, adding to the character of this landscape. Pockets of revegetation, primarily in close proximity to the Creek provide limited respite from the generally open character.

Issues include:

- weed management,
- impact upon character by encroaching development.

Opportunities include:

- developing landscape environs of the Creek Corridor coupled with dramatic landform and features such as the rail bridge, to inform a particular precinct character,
- habitat reinforcement including flora and fauna,
- passive recreation character reinforced via provision of pedestrian and bicycle amenities,
- maintaining some sense of visual surveillance over parklands from adjoining residential areas within an overall open parkland setting,
- reinforcing links and connectivity to other open spaces in Gowanbrae.

Specific Implementation Strategies:

V3 Formulate Revegetation Guidelines and Master Plan for Creek Corridor, including potential incorporation of surplus adjoining VicTrack land.

V8 Create an open woodland setting for encroaching residential development at corridor edges.

General Implementation Strategies:

V1 Undertake and update the trail safety audit and rectify as required.

V2 Formulate a Weed Management Strategy.

V4 Formulate Interpretation Policy.

V5 Incorporate Plan into Local Planning Policy.

V6 Implement ongoing Weed Management.

V7 Implement staged Revegetation.

V8 Implement other Master Plan outcomes such as interpretive information, signage, furniture etc.



EXISTING RAIL BRIDGE



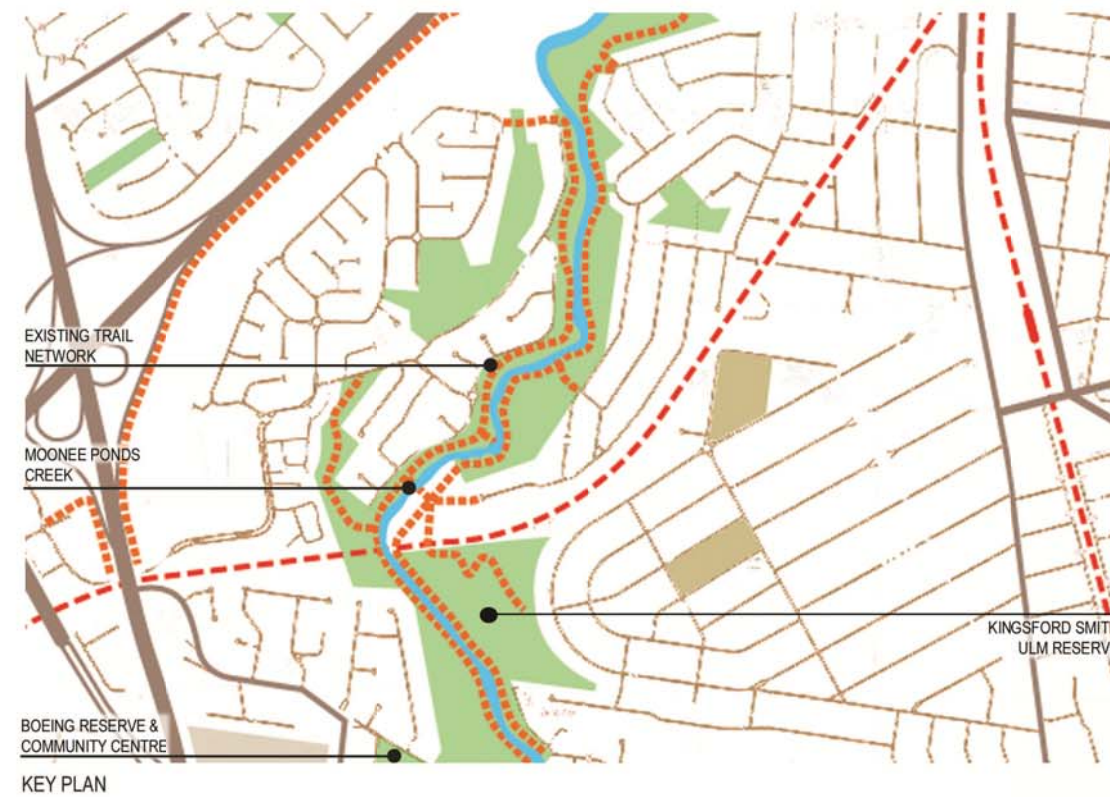
EXISTING TRAIL AND PARKLAND



EXISTING CREEK AND ADJOINING RESIDENTIAL AREA



PRECEDENT IMAGE



PRECINCT IMAGES 5: GOWANBRAE

Strathmore Precinct –

In the northern half of the precinct, the Strathmore Precinct features a generous open space corridor along the Creek punctuated by several parkland reserves accommodating active recreation uses. The southern half of the precinct narrows and the Creek becomes more incised, eventually transitioning to a strongly engineered profile with a concrete base channel.

Medium density residential development and rear fences quite often abut the corridor in the southern half, with overhead bridges and road underpass connections on the trail occurring in conjunction with Pascoe Vale Road, Bell Street and the Freeway. The infrastructure associated with the Freeway, including sound walls, creates a particularly urban landscape character.

Issues include:

- weed management,
- several blind corners on trail,
- no consistency in landscape character established along the Corridor,
- several Creek crossing points of poor landscape amenity,
- conflicts between abutting active recreation areas and the passive recreation along the Creek/

Opportunities include:

- developing landscape environs to reinforce particular characteristics (parkland, infrastructure etc.),
- habitat reinforcement including flora and fauna,
- maintaining a sense of visual surveillance over parklands from adjoining residential areas within an overall parkland setting.

Specific Implementation Strategies:

MS3 Establish parameters for complementary treatments of the Creek Corridor and active open space.
MS3 Investigate options for improved connectivity to Westbreen Creek.
MS3 Counter dominance of freeway infrastructure with specific and strong revegetation themes.
MS9 Address poor landscape amenity at Creek crossings.
MS3 Incorporate resolution of any access conflict between passive and active areas into relevant open space master plans.

General Implementation Strategies:

MS1 Undertake and update the trail safety audit and rectify as required.
MS2 Formulate a Weed Management Strategy.
MS3 Formulate Revegetation Guidelines and Master Plans for parkland reserves and Creek Corridor.
MS4 Formulate Interpretation Policy.
MS5 Incorporate Plan into Local Planning Policy.
MS6 Implement ongoing Weed Management.
MS7 Implement staged Revegetation.
MS8 Implement other Master Plan outcomes such as interpretive information, signage, furniture etc.



EXISTING TRACK AND CREEK



EXISTING TRACK AND CREEK



EXISTING UNDERPASS



EXISTING UNDERPASS



EXISTING TRAIL AND ADJACENT PARKLAND



EXISTING TRAIL AND ADJACENT PARKLAND



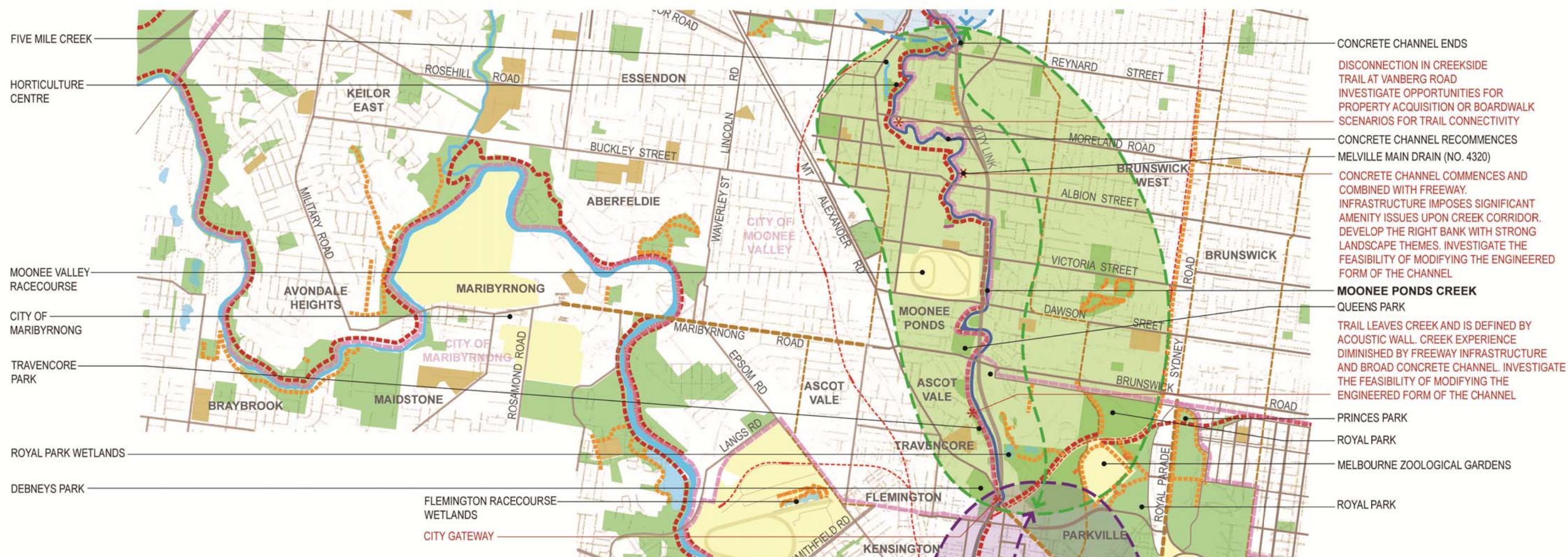
PRECEDENT IMAGE



KEY PLAN



PRECINCT IMAGES 6: STRATHMORE



MOONEE PONDS CREEK STRATEGIC PLAN
PRECINCTS: STRATHMORE, INNER URBAN AND
CITY/ URBAN
MAP 9

Inner Urban Precinct –

The Creek initially winds its way through suburban residential development until it rejoins the Freeway corridor in Brunswick West. The Inner Urban precinct features a relatively narrow corridor between Cross Keys Reserve in the North and Travancore Park in the South. South of Moreland Road the limitations of the Creek Corridor and immediacy of development over steep embankments, require the trail link and other passive recreation pursuits, to relocate briefly to local streets in Essendon. The character of the southern section is dominated by the broad engineered form of the Creek channel and the restrictions to the trail imposed by the freeway infrastructure.

Issues include:

- weed management,
- missing link on the Trail in Essendon,
- narrowness of the Corridor and extent of rear fencing abutting the open space,
- blind corners at freeway underpasses with limited scope for improvement in the southern section.

Opportunities include:

- enhance vegetated, passive recreation character complemented by minimal active recreation,
- maintaining views from adjoining residential areas within a lineal, open parkland setting,
- improving safety and connectivity along the street link,
- reinforcement of landscape features such as the Union Street escarpment and its exposed geology with appropriate treatments.

Specific Implementation Strategies:

IU9 Monitor opportunities for property acquisition or funding sources for boardwalk structures, in order to complete corridor access through Essendon.

IU3 Develop strong landscape themes to eastern bank where freeway infrastructure dominates west bank.

General Implementation Strategies:

IU1 Undertake and update the trail safety audit and rectify as required including improvements to on road linkages.

IU2 Formulate a Weed Management Strategy.

IU3 Formulate Revegetation Guidelines and Master Plans for Creek Corridor sub precincts.

IU4 Formulate Interpretation Policy.

IU5 Incorporate Plan into Local Planning Policy.

IU6 Implement ongoing Weed Management.

IU7 Implement staged Revegetation and trail amenity improvements in the south.

IU8 Implement other Master Plan outcomes such as interpretive information, signage, furniture etc.



EXISTING CHANNEL AND ESCARPMENT



EXISTING EXOTIC VEGETATION



PRECEDENT IMAGE



EXISTING CHANNEL AND ACOUSTIC WALL



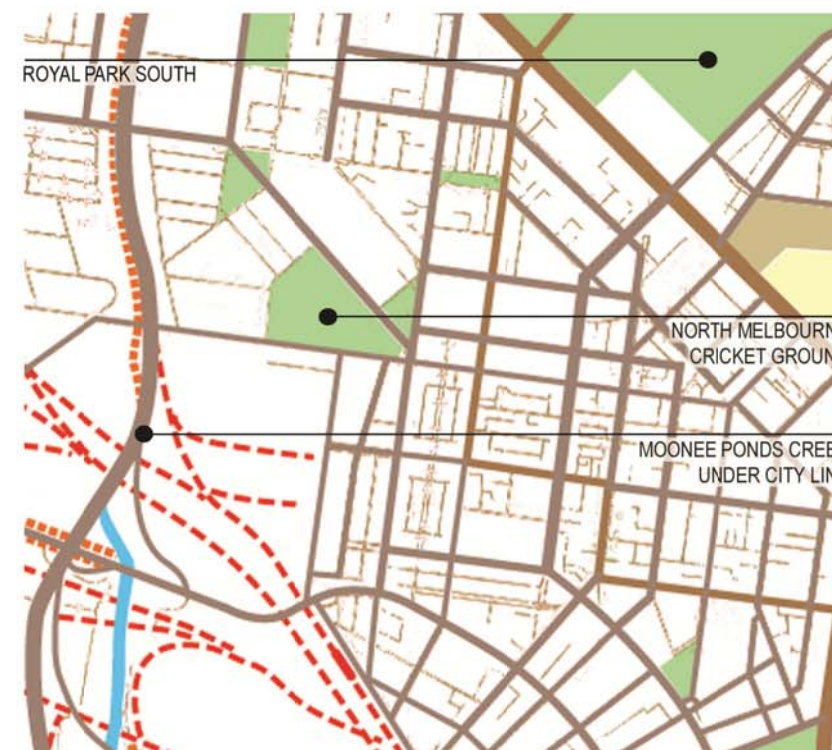
EXISTING UNDERPASS



EXISTING CHANNEL



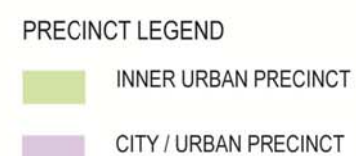
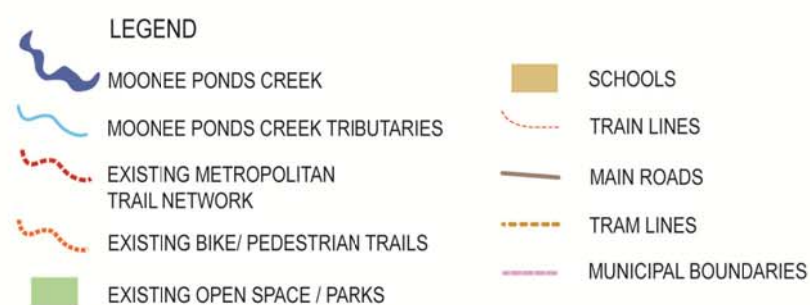
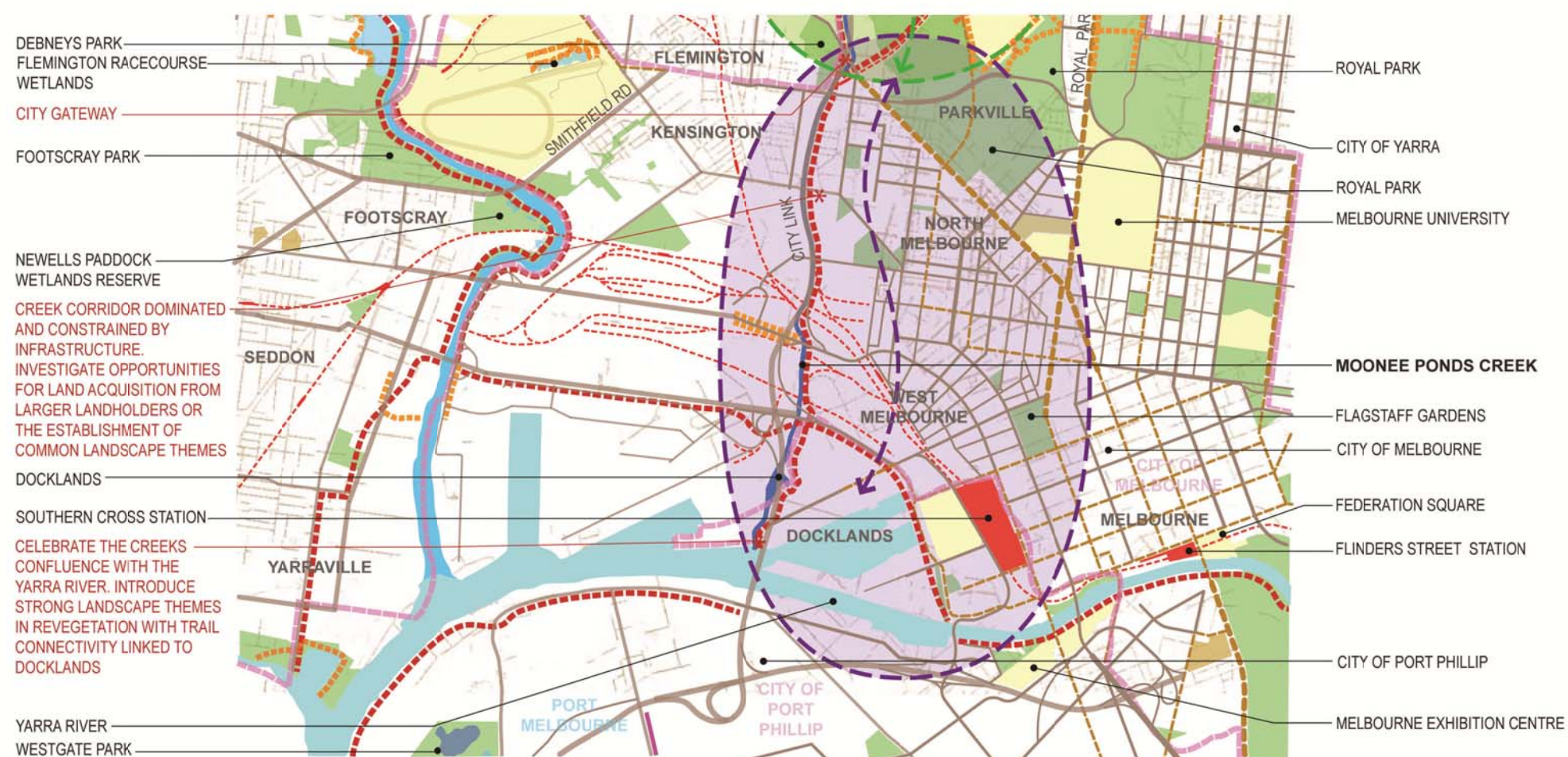
EXISTING CHANNEL



KEY PLAN



PRECINCT IMAGES 7: INNER URBAN



MOONEE PONDS CREEK STRATEGIC PLAN
PRECINCTS: INNER URBAN AND CITY/ URBAN
MAP 10

City/Urban Precinct –

The Creek Corridor shares the engineered character of the Freeway and interchange at the 'ceremonial gateway' to the city at the end of Flemington Road. The modified Creek alignment and form are dominated by the near continuous influence of the overhead freeway structure and its post supports, along with the abutting rail corridor. Adjoining industrial uses also influence the character of the corridor until the corridor meets the Docklands developments. The Creek joins the Yarra at Victoria Harbour where extensive views up stream to the city are possible.

Issues include:

- weed management,
- lineal nature of the corridor and domination of infrastructure,
- adjoining land uses contribute some visual interest but little amenity to trail experience.

Opportunities include:

- developing landscape environs to reinforce engineered character (using vegetation to highlight precinct features rather than obscure),
- habitat reinforcement including flora and fauna,
- passive recreation character complemented by minimal active recreation,
- maintaining a sense of visual surveillance from adjoining roads and industrial uses,
- Improving safety and connectivity along street linkages.

Specific Implementation Strategies:

CU3 Encourage the implementation of similarly themed landscape treatments on adjoining land holdings.
CU3 Highlight the Creek's estuarine sections and its confluence with the Yarra River.
CU3 Improve interface at Debneys Park to encourage community involvement with the Creek.

General Implementation Strategies:

CU1 Undertake and update the trail safety audit and rectify as required including improvements to on road linkages.
CU2 Formulate a Weed Management Strategy.
CU3 Formulate Revegetation Guidelines and Master Plan for Creek Corridor.
CU4 Formulate Interpretation Policy.
CU5 Incorporate Plan into Local Planning Policy.
CU6 Implement ongoing Weed Management.
CU7 Implement staged Revegetation.
CU8 Implement other Master Plan outcomes such as interpretive information, signage, furniture etc.



EXISTING UNDERPASS AND WATERBODY



EXISTING TRAIL AND ACOUSTIC WALL



EXISTING TRAIL AND OVERHEAD FREEWAY



EXISTING TRAIL AND REALIGNED CREEK



PRECEDENT IMAGE



KEY PLAN



PRECINCT IMAGES 8: CITY / URBAN

6.0 IMPLEMENTATION TIME FRAMES

The implementation strategy is based upon identifying key tasks to be undertaken in the future with an emphasis upon the next five years. These tasks have been based on the findings of the overview for each precinct discussed above, with particular tasks identified for each precinct, as outlined above. These are summarised in the table below.

The tasks identified in each precinct include recommended works beyond day to day maintenance requirements. For instance, the 2002 Audit identified significant works south of Mickleham Road required to improve trail safety. Consequently a review and update of this audit is given high priority along with implementation of recommendations. Some works can be undertaken as part of day to day management. Other works will require additional capital expenditure, such as path widening or reconstruction, fence or barrier installation, warning signage etc.

A consistent and co-ordinated planning policy throughout all municipalities is also required and is nominated as a key task to evolve in the financial year beginning 2011.

A key focus of Friends Groups is the re-establishment of an indigenous plant character. Rather than this occurring in an ad-hoc manner, the preparation of revegetation guidelines for each of the precincts is recommended along with (where not already existing) the development of landscape Master Plans for abutting reserves. These guidelines can, along with nominating suitable species, include planting guides in relation to location, layout and planting style. For example, although similar species may occur, the informal or 'natural' patterning of planting in the Woodlands precinct should contrast with the more formal or 'structured' planting of the City/Urban precinct, reinforcing the distinct character of these precincts.

The Austroads Guide for Bicycles and Melbourne Waters Guidelines for Shared Pathways have been created in order to establish standards for shared pathways. The implications for the Moonee Ponds Shared Trail include recommendations for paths to be sealed either with asphalt or concrete. Given the expected increase in commuter traffic and possible connections to facilities such as the airport, these works are included in the latter portion of the works period, for the upper sections of the trail. These works require substantial capital injection and funding applications and availability may imply a staged implementation over the 2011 - 2015 period.

The connectivity of the trail is somewhat compromised in the Outer Suburban Precinct and Inner Urban Precinct. Realignment of the trail along the southern bank of the Creek in the Outer Suburban Precinct to avoid the narrow road bridge crossing may involve either some decking or on road land demarcation near Grundy Street, consequently additional capital expenditure is high. Similarly, the formalisation of bike lanes along Vanberg Road in Essendon will in the short term overcome this disconnection of the trail. In the longer term, property acquisition or boardwalk construction along the actual Creek Corridor may be possible to allow access to continue along the Creek Corridor.

	KEY TASKS	Audit Review/ Trail and General Safety		Weed Management Strategy		Revegetation Guidelines, Master Plans		Interpretation Strategy		Local Planning Policy		Main Trail Sealing/ On Road Upgrades		Revegetation Implementation		Furniture Interpretation Strategy Implementation	
Precinct	Responsible Body	Local/MPCCC		Local/MPCCC/ Friends/MW		Local/MPCCC/ MW		Local//MPCCC/ Friends		Local/MPCCC		Local/MPCCC		Local/MPCCC/ Friends/MW		Local/MPCCC	
Woodlands	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2015-2015		2013-2015		2014-2015	
	Budget	5000	W1	5000	W2	2500	W3	5000	W4	W5		750000	W9	100000	W6/7	10000	W8
Westmeadows	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2015-2015		2013-2015		2014-2015	
	Budget	2500	CF1	2500	CF2	2500	CF3	2500	CF4	CF5		250000	CF9	50000	CF6/7	5000	CF8
Attwood	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2012-2015		2013-2015		2014-2015	
	Budget	2500	OS1	5000	OS2	5000	OS3	2500	OS4	OS5		50000	OS9	50000	OS6/7	5000	OS8
Jacana	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2014-2015		2013-2015		2014-2015	
	Budget	2500	WL1	5000	WL2	10000	WL3	5000	WL4	WL5		15000	WL9	100000	WL6/7	15000	WL8
Gowanbrae	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2014-2015		2013-2015		2014-2015	
	Budget	2500	V1	2500	V2	10000	V3	5000	V4	V5		15000	V8	100000	V6/7	15000	V8
Strathmore	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2014-2015		2013-2015		2014-2015	
	Budget	2500	MS1	2500	MS2	10000	MS3	2500	MS4	MS5		10000	MS9	50000	MS6/7	10000	MS8
Inner Urban	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2012-2015		2013-2015		2014-2015	
	Budget	5000	IU1	2500	IU2	10000	IU3	2500	IU4	IU5		50000	IU1/9	50000	IU6/7	10000	IU9
City/Urban	YEAR	2011-2012		2011-2012		2012-2013		2013-2014		2011-2012		2012-2015		2013-2015		2014-2015	
	Budget	5000	CU1	5000	CU2	10000	CU3	5000	CU4	CU5		50000	CU1/8	50000	CU6/7	10000	CU8

Works Strategy - 2011 - 2015 - IMPLEMENTATION TABLE

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