



Ruffey Creek Linear Park Management Plan



September 2017
Manningham City Council



Ruffey Creek Linear Park Management Plan



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EXECUTIVE SUMMARY

Ruffey Creek Linear Park is an open space corridor linking Ruffey Lake Park in Doncaster to the Yarra River in Templestowe. For most of its three kilometre length, it offers a bushland experience for pedestrians and cyclists on an off-road shared path known as the Ruffey Trail. The land is variously owned by Council, Melbourne Water and the Crown.

Manningham's *Open Space Strategy (2014)* classifies Ruffey Creek Linear Park as a reserve with a regional catchment and multiple functions. In addition to the Ruffey Trail, the Linear Park offers provides drainage functions and opportunities for informal recreation, flora/fauna protection, dog walking and unstructured bush play and forms part of Manningham's regional trail network. The Ruffey corridor supports small areas of the Ruffey Biosite as identified in the *Manningham Biosites Sites of (Biological) Significance Review (2004)*, as well as expansive areas of buffer vegetation.

Manningham City Council prepares Management Plans for complex open spaces such as Ruffey Creek Linear Park that accommodate a range of uses, facilities and services and/or open space areas, including sporting facilities, bushland, linear parks and other reserves with regional or district catchments. Such areas are important community assets and due to competing priorities and limited funding for development, it is crucial to plan and prioritise the use, development and management of these areas.

The Ruffey Creek Linear Park Management Plan has been prepared to provide for:

- future use, development, management and maintenance of the Linear Park;
- improved facilities for informal recreation;
- resolution of on-road sections of the linear trail; and
- indicative capital works expenditure to implement the Plan over the next ten years.

The Management Plan will be used as a resource document for Council officers in the planning development and management of the Linear Park and will also be available to the community to assist in understanding the vision for the Reserve.

Key recommendations of the Management Plan include:

- Establishing a Shared Path Agreement with Melbourne Water
- An off-road shared path link between Foote and Parker Streets, including bridge and boardwalk
- A shared path on Eumeralla Avenue between St Georges Avenue and Nambour Road
- Eumeralla Avenue to be a shared road south of St Georges Avenue
- Improved safety and amenity at road crossings
- Where feasible, a mown secondary path system
- Trail head facilities at McLachlan Street, including a shelter, seating, signage, drinking water, landscaping and parking
- Improved park amenity and rest areas at Kersey Place, Montpellier Crescent, Dellfield Drive and James Street
- Introduction of a requirement for dogs to be on-lead within five metres of the trail, when the trail is completed
- A new playspace at Montpellier Crescent as per the *Open Space Strategy (2014)*
- Provision of litter bins.

VISION & OBJECTIVES

The vision and objectives for the Ruffey Creek Linear Park Management Plan are set out in Figure 1.

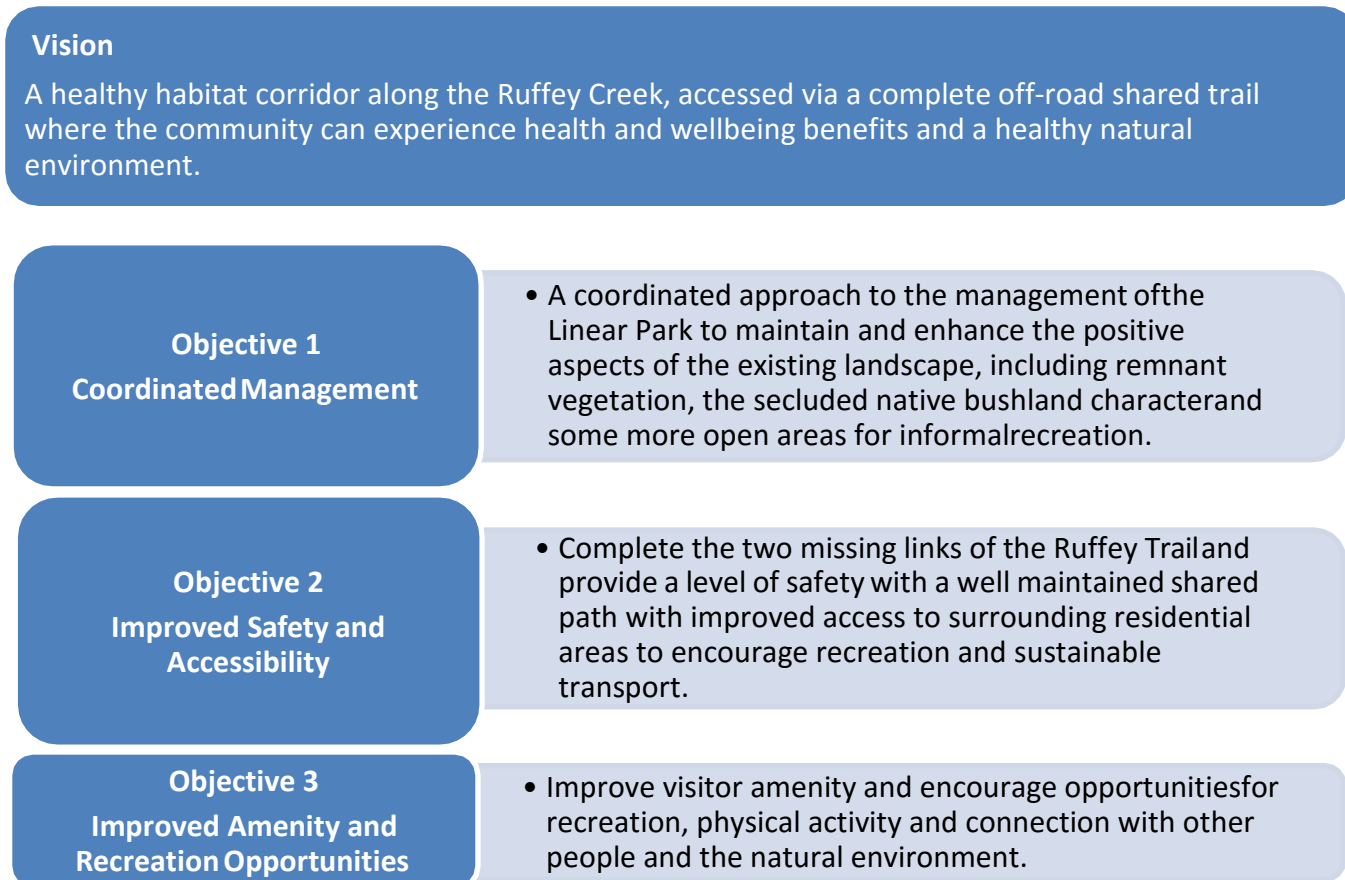


Figure 1: Vision and Objectives

1. INTRODUCTION

1.1 Location

Ruffey Creek Linear Park is located within the suburbs of Templestowe and Doncaster in the west of Manningham. (Figure 2)

The Ruffey Creek is a tributary of the Yarra River and rises in Doncaster East near Blackburn Road and flows seven kilometers northwest to the Yarra River at Finns Reserve. The Ruffey Creek emerges above ground at Victoria Street and flows through Ruffey Lake Park and enters Ruffey Creek Linear Park at King Street. The Ruffey Trail commences in Ruffey Lake Park beside the Lake.

1.2 Background

Ruffey Creek Linear Park (RCLP) provides a habitat corridor along the Ruffey Creek from Ruffey Lake Park to Finns Reserve, where the creek enters the Yarra River. The bushland character of the Linear Park provides a surprising contrast to the surrounding suburban development and is highly valued and frequently used by the local community. A major feature of the park is the popular Ruffey Trail, which runs along the waterway and links to significant open space at each end of the Ruffey Trail and to Manningham's regional trail network.

The *Ruffey Creek Linear Park Concept Plan (1995)* provided a vision to create a linear park comprising a continuous link of publicly owned land along the Ruffey Creek. The Concept Plan recommended an ongoing strategy of land purchase, the staged development of a cycle/pedestrian path along the Ruffey Creek valley and vegetation and waterway management recommendations, including flood mitigation and water quality improvement features proposed in the Ruffey Lake Park Master Plan (1993).

Over the years Council has implemented recommendations of the Concept Plan including:

- Construction of the Ruffey Trail shared path, with the exception of the two missing links at the Eumeralla Avenue section and Parker Street-Foote Street section
- Construction of an underpass at Williamsons Road
- Improvements to the King Street underpass including path upgrade and lighting
- Construction of pedestrian refuges at Foote and Parker Streets
- Installation of wayfinding signage along the Ruffey Trail
- Ongoing bushland/ vegetation and waterway management of the Ruffey Creek corridor
- Land acquisition west of Williamsons Road to enable trail construction.

1.3 Study Area

The Ruffey Creek Linear Park Study Area (Figure 3) comprises Crown land, Council land and Melbourne Water land along the Ruffey Creek and environs and extends approximately three kilometres downstream of King Street in Doncaster to Wood Street, Templestowe. Small areas of private land are included within the study area.

The Linear Park covers an area of approximately 9.6 hectares and forms a narrow bushland corridor about 10-50 metres wide, but widening out significantly in a few locations.

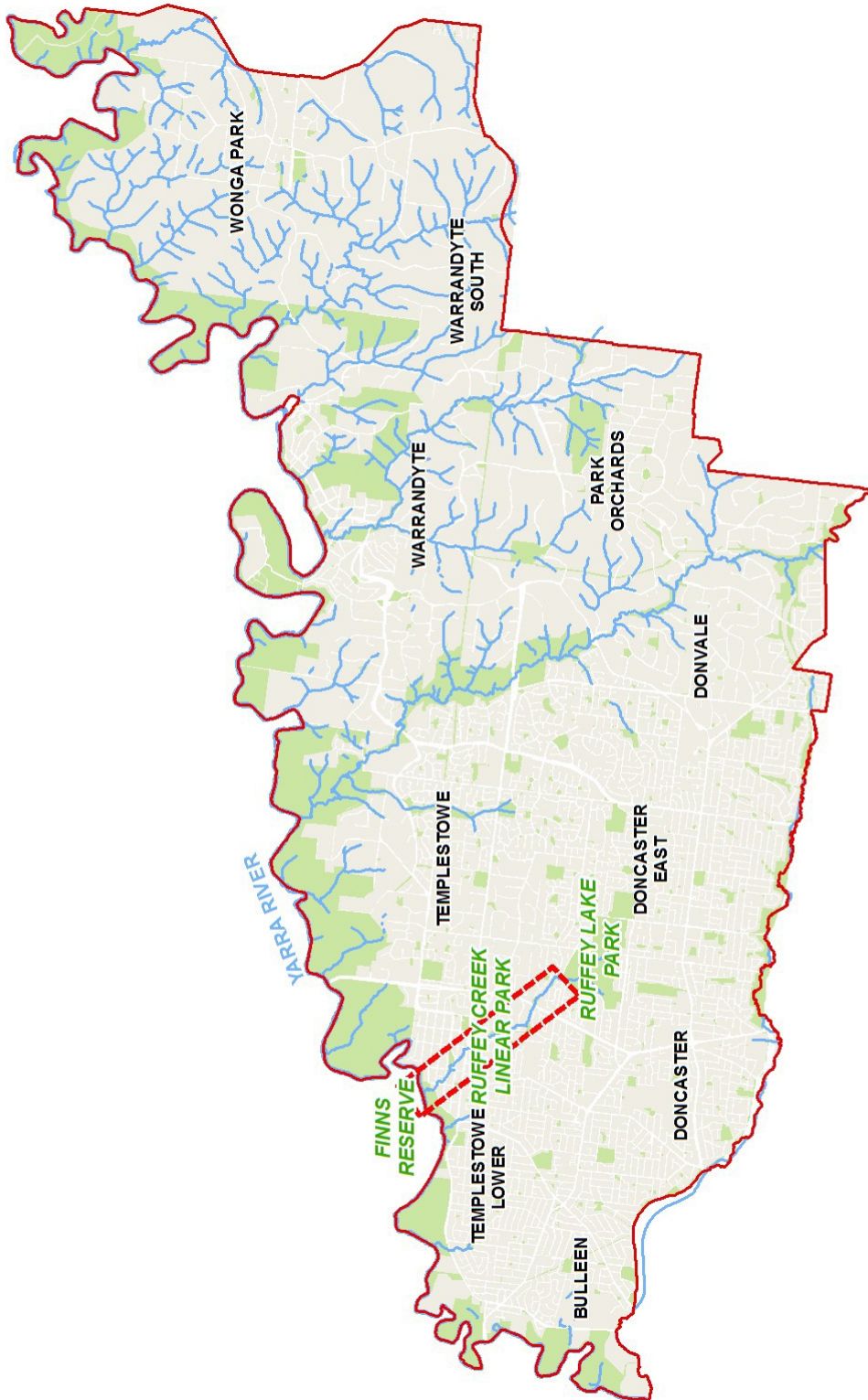


Figure 2: Location of Ruffey Creek Linear Park within the City of Manningham

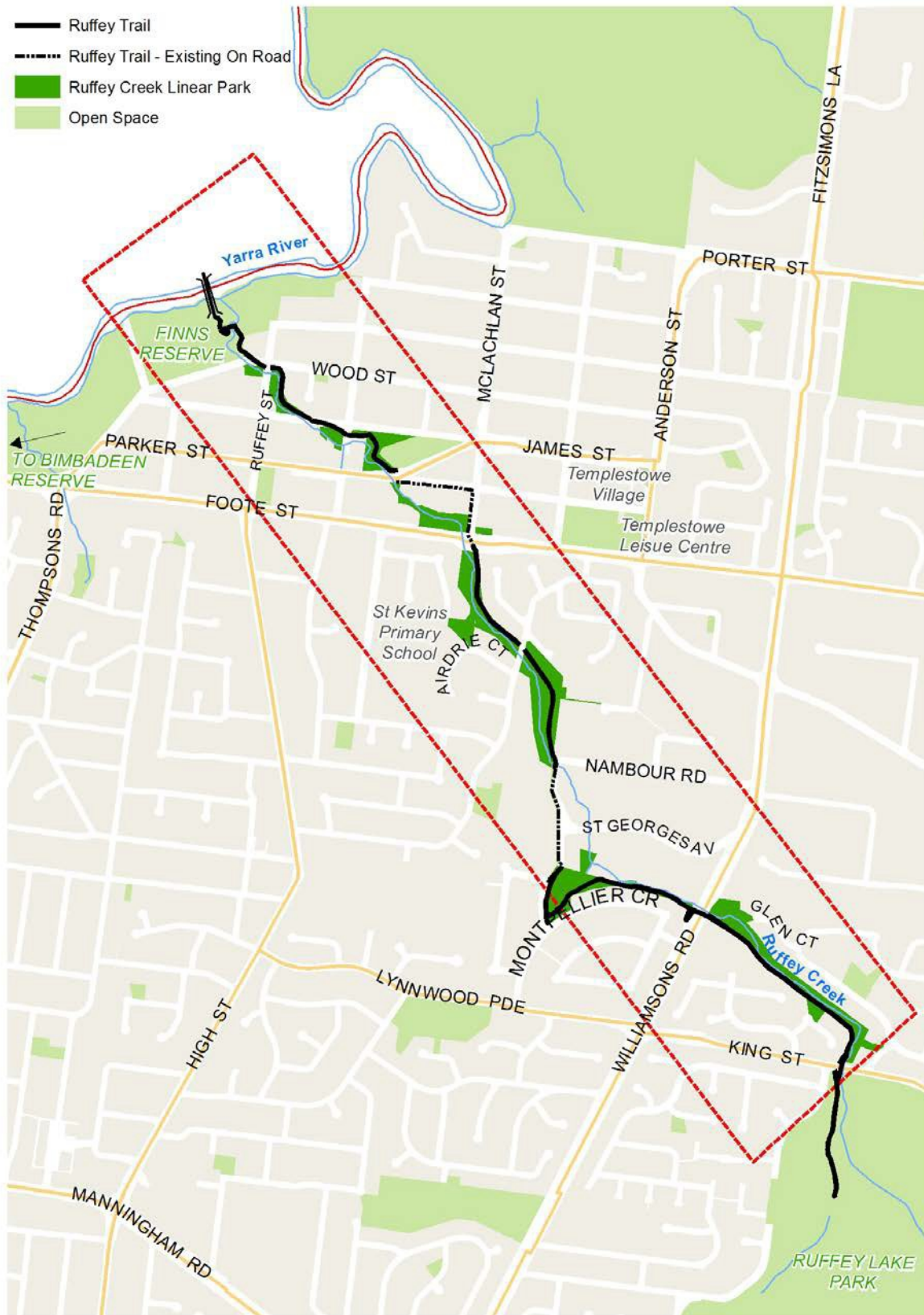


Figure 3: Ruffey Creek Linear Park Study Area

1.4 Purpose

Manningham City Council prepares Management Plans for complex open spaces such as Ruffey Creek Linear Park that accommodate a range of uses, facilities and services and/or open space areas, including sporting facilities, bushland, linear parks and other reserves with regional or district catchments. Such areas are important community assets and due to competing priorities and limited funding for development, it is crucial to plan and prioritise the use, development and management of these areas.

The purpose of the Ruffey Creek Linear Park Management Plan is to provide for:

- Future use, development, management and maintenance of the LinearPark
- Improved facilities for informal recreation
- Resolution of on-road sections of the Ruffey Trail and completion of missing links between Parker and Foote Streets and Eumeralla Avenue
- Indicative capital works expenditure to implement the Plan over the next ten years.

1.5 Methodology

The process for developing the Management Plan has included the following stages:

- Initial stakeholder and community survey of households surrounding the Linear Park and of park users
- Review of previous plans and related strategies
- Desktop ecological assessments
- Review and analysis of the recreation uses, including walking, dog walking, cycling and play
- Analysis of the infrastructure and facilities, including the trail network
- Liaison with other land managers and authorities
- Identification of key issues, constraints and opportunities
- Identification of recommendations to address key issues and opportunities.
- Development of the draft Management Plan
- Public exhibition of the draft Management Plan
- Consideration of submissions and endorsement of the final Management Plan by Council

Community consultation comprised a community survey mailed to all residences within 400 metres of the linear park. The survey results are summarised in Appendix 1. The draft Ruffey Creek Linear Park Management Plan was placed on public exhibition for six weeks from 16 May to 25 June 2017. A total of 39 submissions were received. The majority of the submitters supported the recommendations of the draft Management Plan, in particular the completion of the Ruffey Trail missing links between Parker and Foote Streets and Eumeralla Avenue as well as improved pedestrian and cycling safety infrastructure proposed at road crossings. The principle concerns raised in some of the submissions related to:

- Eumeralla Avenue link. Three local residents expressed concern in relation to potential safety and environmental impacts of the proposal to create an off-road shared path on the western side of Eumeralla Avenue between St Georges Avenue and Nambour Road.
- Dog controls. Eight submitters objected to and five submitters supported the proposed dog on-lead controls within five metres of the trail, when the trail is completed.
- Park management /maintenance. Nine submitters expressed concern about the poor management of the trail and suggested that maintenance of the trail be increased to improve safety of trail users.

On 26 September 2017 Council considered the submissions and endorsed the final Ruffey Creek Linear Park Management Plan and the recommendations will be implemented through Council's capital works program.

1.6 Monitoring and Review

Ongoing monitoring of this plan will be undertaken to ensure that objectives and recommendations remain relevant and meet the needs of the community. A full review of the Management Plan will be carried out by Council five years after the completion of all the capital works recommended in this Management Plan.

2. EXISTING CONDITIONS

2.1 Surrounding community

The Ruffey Creek Linear Park is situated in established residential areas developed mainly between 1950s and 1980s. Apart from Doncaster Hill, these areas will experience limited change with small to moderate population growth. The local population is characterized by a mixture of mature families with older children combined with a large increase in the aging population, particularly the over 60s. Households are becoming smaller, with an increase in empty nesters and lone person households. To accommodate the aging demographic, the demand for infrastructure such as seating will continue to increase and easy access to the Trail from the surrounding residential area will be important for this age group. Over half the survey respondents were over 60 years old and more than half comprise an adults only household.

By contrast, Doncaster Hill and areas along major arterial roads are the few areas in the City of Manningham which will significantly increase in population and grow younger over time. It is anticipated that children will increase from 17% to 25% of residents of Doncaster Hill in the next 20 years. Providing accessible, safe and interesting open space will be important for future generations living in high density areas with limited private open space.

Three schools lie to the south of Ruffey Creek, with St Kevin's school directly adjoining an area of environmental significance which previously formed part of the school's land.

Other nearby reserves include Swilk, Dellfield, Lynwood and Hillcroft Reserves.

Proximity to the Linear Park is highly valued by local residents within 400 metres walking distance. The Linear Park is more critical to those living beyond this distance, where there are a number of gaps in open space provision, noted in Manningham's *Open Space Strategy (2014)*.

2.2 Land tenure and management

Approximately two thirds of the land within Linear Park is owned and managed by Manningham City Council and Council manages Crown Land between James and Parker Streets as the Committee of Management. Melbourne Water freehold land comprises approximately one third of land within the Linear Park. Part of the Linear Park from Riverwood Lane around to Atkinson Street and at Wood Street and James Street is located on disused sections of road reserves. Figure 4 shows land tenure within the Linear Park and further details of land tenure and the land management regime of each agency are included in Appendix 4.

Ruffey Creek Linear Park is maintained by both Melbourne Water and Manningham City Council, with a focus on maintaining and improving vegetation along the Ruffey Creek corridor. Both Council's bushland management team and landscape works team are involved in different parts of the reserve, depending on their environmental values and maintenance regime. Maps 1-5 and Appendix 4 detail the complexity of land tenure and maintenance arrangements currently in place, including agencies having responsibility for maintenance of portions of each other's land.

Approximately 750 lineal metres of Ruffey Trail passes over Melbourne Water land within the Linear Park and Council will be required to enter into Melbourne Water Shared Pathways Agreement to ensure compliance with Melbourne Water requirements for shared paths.

The title of 63 Parker Street (occupied by Melissa's Café) includes Ruffey Creek and the northern bank of the creek. This includes approximately 100 m² of grass area adjacent to Ruffey Trail that Council has maintained for many years. The property boundary extends up to the edge of the shared path at one point, [Refer Figure 7].n existing Public Acquisition overlay (PAO1) exists over the rear portion of 3/59 Parker Street comprising the opposite (northern) bank of Ruffey Creek. The land is currently managed by Melbourne Water as a vegetated creek bank, (Refer Figure 7).

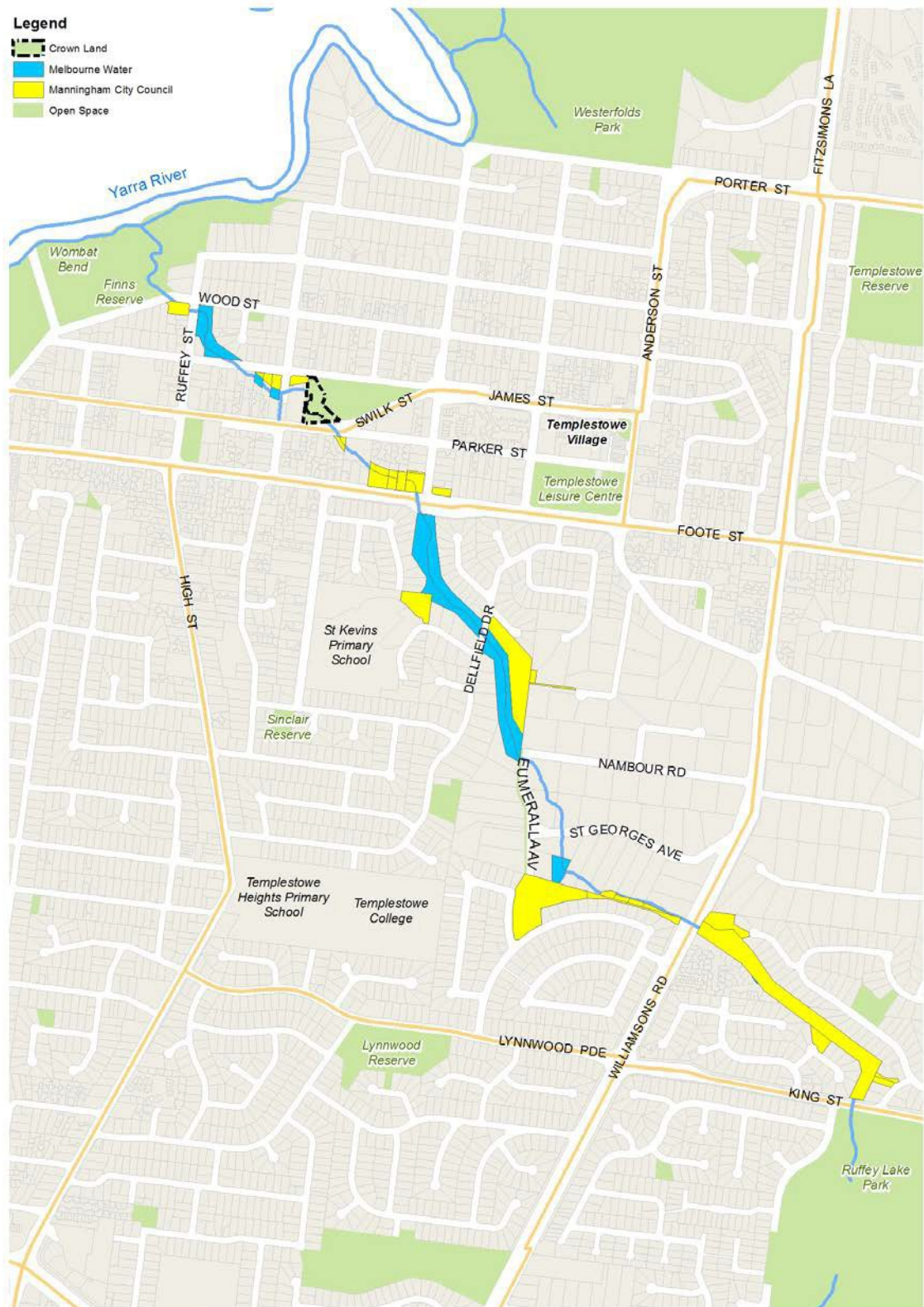


Figure 4: Land Tenure Ruffey Creek Linear Park

2.3 Natural environment

Ruffey Creek Linear Park forms a narrow gully line from King Street to the Yarra River at Finns Reserve in Templestowe. The Linear Park predominantly supports indigenous revegetation, along with areas of mown open space, remnant native vegetation and plantings. Most of the vegetation within the Linear Park is highly modified and fragmented.

Ruffey Biosite 30 identified in *Manningham Biosites Sites of (Biological) Significance Review (2004)* comprises 7.35ha of regionally significant bushland in three sections along the Ruffey Creek making it one of the smallest Biosites in Manningham. The sections include Finns Reserve, Ruffey Lake Park and the area between St Kevin's School site and Melbourne Water creek frontage, which is the only section of the Biosite in the Ruffey Creek Linear Park. It contains *Valley Grassy Forest* Ecological Vegetation Class (EVC) that has a High or Very High Conservation Status. A description of the Valley Grassy Forest EVC is provided in Appendix 3.

The Ruffey Creek Linear Park is listed as a high priority for management in Council's *Bushland Management Strategy (2012)*.

Unclassified Buffer Areas, which have been substantially modified so no longer fit in the EVC classifications, act as additional important ecological support for the core habitat of the Ruffey Creek Corridor. Buffer areas are located adjoining Melbourne Water land between James Street and Wood Street and between Foote Street and Dellfield Drive and in adjoining residential areas around Eumeralla Avenue to Williamsons Road. All remnant indigenous vegetation, even individual trees, are of value within buffer areas and should be conserved.

The vegetation corridor along Ruffey Creek provides habitat for a range of animals, including frogs, reptiles and a large variety of birds. A total of 50 vertebrate fauna species and 119 vascular flora species have been recorded for this Biosite.

2.4 Landscape characteristics

Ruffey Creek Linear Park contains a variety of landscape settings, along with the consistent presence of Ruffey Creek itself:

- *Restored Bushland*: Planted indigenous species have created the predominant landscape character.
- *Remnant vegetation*: Adjacent to St Kevin's School and where Ruffey Creek passes through Finns Reserve near the Yarra River.
- *Open mown areas*: Mown grass with scattered trees.

Most adjacent residential properties are screened by vegetation and paling fences, so their visual impact on the Linear Park is muted and they generally do not provide for passive surveillance of the Linear Park. This is reflected in community feedback that the Linear Park is perceived to be isolated and unsafe.

In general the Linear Park is noticeably different from its suburban surrounds in both its landscape character and the experience it offers visitors.

2.5 Cultural heritage values

The *Aboriginal Heritage Regulations 2007* require that a Cultural Heritage Management Plan be prepared for any development proposed in areas of cultural sensitivity. Areas of sensitivity relevant to Manningham and these guidelines include:

- Areas registered as a cultural heritage place and any land within 50 metres of that place; and
- Waterways and land within 200 metres of waterways, except where land has been significantly altered or disturbed.

The area of Cultural Heritage Sensitivity covers the full extent of Ruffey Creek Linear Park, and all land within 200 metres of the Ruffey Creek.

2.6 Ruffey Trail

The Ruffey Trail is a major feature of the Linear Park and is part of Manningham's regional shared path network as shown on Figure 5. Once the current Mullum Mullum Trail works are complete, Manningham will offer a 43 kilometre circuit along the Main Yarra, Mullum Mullum and Koonung Trails, with further off-road links to the CBD, Frankston, Diamond Creek and Greensborough. While the Ruffey Trail is not part of this circuit, it will act as an off-road link to the circuit from Doncaster Hill, Ruffey Lake Park and other residences within the area.

The Trail is 2.5 metres wide and forms a significant, almost continuous shared path along Ruffey Creek. It links to the Ruffey Lake Park trail network at King Street and to the Main Yarra Trail within the Yarra Valley Parklands.

Maps 1-5 show the location of the Trail within the Ruffey Creek Linear Park.

From Ruffey Lake Park downstream to Eumeralla Avenue, the Trail alignment follows the western side of the creek on Council land and passes through underpasses at King Street and Williamsons Road. The Trail is on-road along Eumeralla Avenue, then connects to the shared path on the eastern side of the creek at Nambour Road and continues on Melbourne Water land downstream to Foote Street.

Between Foote Street and Parker Street the route is again on-road due to land tenure constraints, meaning pedestrians and cyclists must use Parker and McLachlan Streets. Between Parker and James Streets the shared path crosses Crown Land and Council land on the eastern side of the creek which continues across James Street through Council land to Wood Street. The Ruffey Trail passes through three short sections of disused road reserves.

The Ruffey Trail crosses four major roads. Underpasses are provided at King and Williamsons Roads. Pedestrian refuges have been constructed at Foote and Parker Streets; community feedback included safety concerns and requested underpasses or signals at these two crossings.

The Parker Street designated route crosses two roads: the main road and a side street. This is particularly indirect and likely to be disregarded by users not inclined to detour. Council's *Bicycle Strategy 2013* contains a recommendation for a signalised crossing at Foote Street in the long term.

There are several pedestrian and cycling links to surrounding streets. Parts of the trail link to Council's Principal Pedestrian Network, which is designed to provide permanent footpath facilities and pedestrian linkages required to public transport, activity centres, schools and community facilities.

Incomplete sections of the Ruffey Trail are:

Between Parker and Foote Street

The *Open Space Strategy 2014* recommends that Council "acquire 700m² of 104-108 Parker Street to complete the Ruffey Trail link between Parker and Foote Streets' (Rec 8.1). Council is currently negotiating future acquisition of a portion of 104-108 Parker Street for improved access along the Ruffey Creek Linear Park as part of a residential subdivision. Two possible routes for this connection are discussed in Section 4.2.

Eumeralla Avenue

Eumeralla Avenue is currently used as an on-road link as part of the Ruffey Trail. There is no footpath so pedestrians as well as cyclists use the road. Sightlines are very limited in places due to topography and the road alignment. Eumeralla Avenue has very low volumes of vehicular traffic as its southern end is closed where it reaches the Council land within the Linear Park. There are eight residential driveways along Eumeralla Avenue: five north of St Georges Avenue and three to the south.

2.7 Nearby open space and linkages

The Ruffey Trail links to:

- *Finns Reserve*: Located at the confluence of Ruffey Creek and the Yarra River. It is a regional park containing the Wombat Bend All Abilities Playspace, public toilets and strategic links to the Main Yarra Trail and the wider Yarra Valley Parklands.
- *The Main Yarra Trail*: Links to the CBD to the west and connects to the Mullum Mullum Trail in Templestowe to the east. Making use of the Mullum Mullum Trail, it connects to the Koonung Trail forming part of the 43 kilometres trail circuit of the western part of Manningham.
- *Ruffey Lake Park*: A regional park upstream in Doncaster, which provides The Boulevard, Victoria Street and Church Road playspaces, barbeques, picnic facilities, public toilets, open parkland and an extensive internal circuit path network.
- *Doncaster Hill*: A link will be created from Doncaster Hill to the Ruffey Trail at Ruffey Lake Park to cater for the forecasted additional population in Doncaster Hill and encourage use of alternative transport, as per the *Manningham Bicycle Strategy 2013* and *Doncaster Hill Pedestrian and Cycling Plan 2010*.
- *Templestowe Village*: The increasing population in Templestowe Village will require access to the open space provided in the linear park, as per recommendation 9.5 of the *Open Space Strategy 2014*.

2.8 Access and awareness

Due to the number of road crossings, there are multiple access points to the Linear Park. These are supplemented by a few pedestrian links.

In a few locations, the presence of a park frontage is not clear due to the absence of paths or signage, or difficulty in distinguishing between public and private land. This lack of clarity impacts on both access and awareness and discourages community use of the Linear Park.

Topography is a constraint to accessibility in some places. In particular the pedestrian link from Duxson Drive is extremely steep.

2.9 Play

Currently there are no built playspaces in Ruffey Creek Linear Park, although there are major playspaces located at each end:

- one at Wombat Bend in Finns Reserve; and
- three within Ruffey Lake Park.

Through the *Open Space Strategy (2014)*, two new playspaces are proposed locally: one within the Linear Park near the junction of Montpellier Crescent and Romilly Avenue and another nearby at Swilk Reserve some 150 metres from the Trail in adjacent public open space.

The narrow linear form of the Linear Park means that open grassed areas for informal play such as ball games and kite-flying are limited. Some more open areas exist at:

- Montpellier Crescent/Romilly Avenue;
- James Street; and
- Kersey Place.

Ruffey Creek Linear Park does, however, provide excellent opportunities for nature play in the Park's more natural areas. It is important to acknowledge that the entire open space is an opportunity for play, not just proprietary built elements.

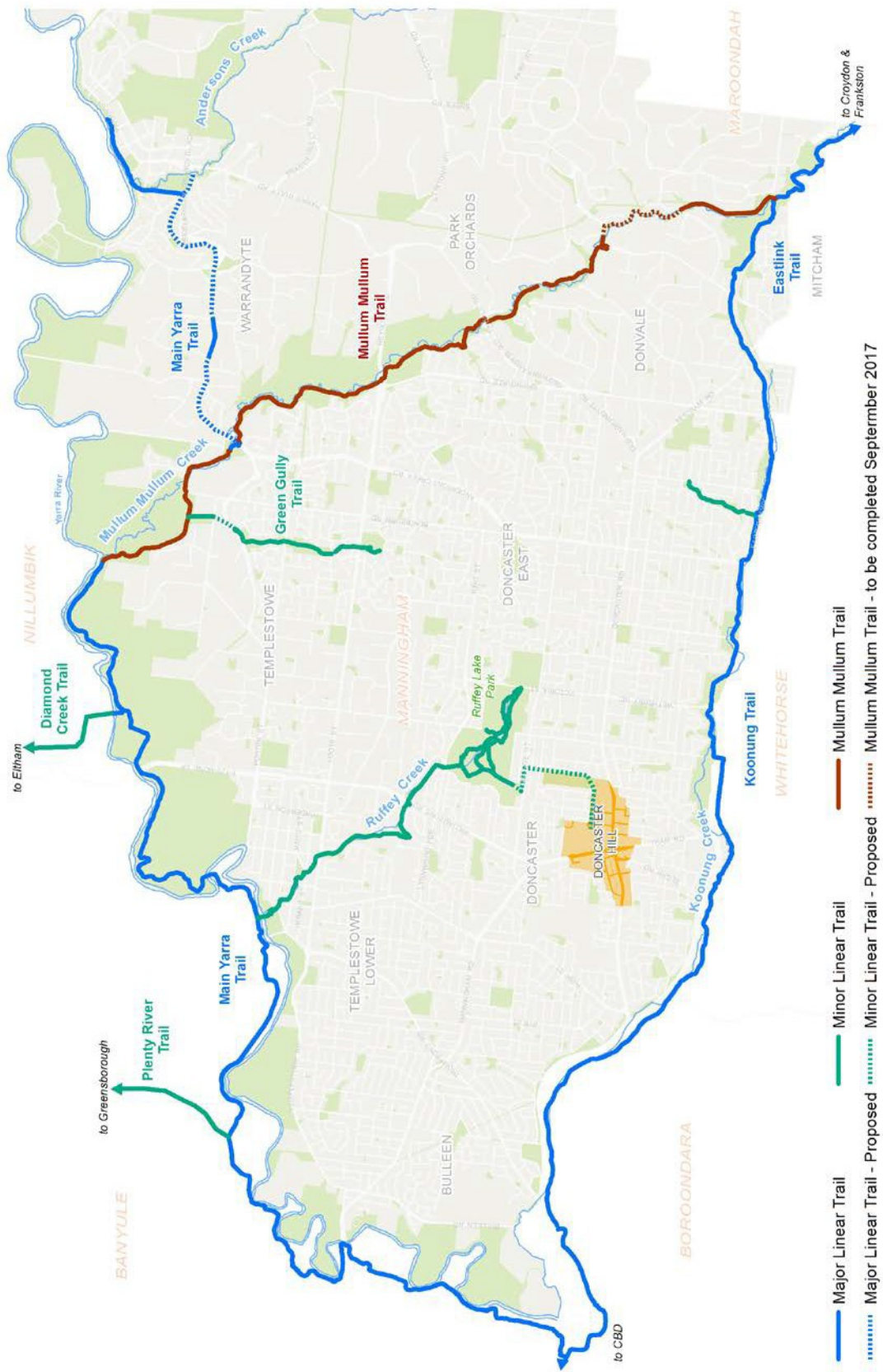


Figure 5: Manningham Trail Network

3. USE OF THE LINEAR PARK

The *Manningham Open Space Strategy 2014* classifies Ruffey Creek Linear Park as a reserve with a regional catchment and multiple functions. The Ruffey Trail is a major feature of the Linear Park which also offers informal recreation, flora and fauna habitat and pedestrian links to surrounding residential areas.

Community consultation has confirmed that the Linear Park is very popular for recreation and physical activity and is used on a regular basis. It is also highly valued by the local community for its natural attributes.

The use of the Ruffey Creek Linear Park is likely to increase as healthy active lifestyles are promoted by all levels of government. Further usage is also anticipated as population densities increase around Templestowe Village and Doncaster Hill. Facilitating increased use of alternative transport is an important aspect of this management plan, including the need to complete the two missing links of the Ruffey Trail.

3.1 Walking

Walking has numerous physical and mental wellbeing benefits and can be enjoyed by a wide range of people.

Walking is the most common recreational activity in Manningham. The *Active for Life Recreation Strategy (2010-2025)* found that 54% of residents rated walking as the most popular recreation activity, compared to state response of 33% and national 34%. Residents indicated that they use exercise as a form of transport (45%) with nearly all (90%) selecting walking as their preferred of travel. The most popular destinations for walking were to the shopping centre (45%) or the park (15%).

Factors which encourage walking and use of open space include:

- Interest
- Diversity
- Visual appeal
- Accessibility
- Legibility/ease of navigation
- Real and perceived safety.

Constraints to walking include:

- Distance to open space from local residences
- Topography
- Perceptions of personal safety risk
- Vehicular traffic and road crossings
- Poorly controlled dogs and dog litter
- Conflict with cyclists.

Approximately 74% of respondents to the Ruffey Creek Linear Park community survey use the Ruffey Trail for walking. Some local residents in the survey expressed concern with safety relating to road crossings, particularly Foote Street and Parker Street. Personal safety on the Trail was a concern primarily by women, and in many cases in response to isolated, but serious, violent crimes which have occurred elsewhere in Melbourne. Isolated and poorly lit areas are also perceived by some to be less safe.

Providing good pedestrian paths in urban settings is important in providing a healthy and convenient alternative to accessing everyday services. There are opportunities for improvements to the Ruffey Trail, particularly completing the missing links, maintaining the path standard and improving wayfinding, access and perceived safety.

Completion of the shared path to link to Doncaster Hill via Ruffey Lake Park, as recommended in the *Manningham Bicycle Strategy 2013* and *Doncaster Hill Pedestrian and Cycling Plan 2010*, is also a major opportunity. This will become increasingly important as the population of Doncaster Hill increases in the future. [Refer Actions 25, 26, 39 and 40]

3.2 Cycling

Cycling is the fourth main recreation activity in Manningham and is increasingly a choice for everyday transport. Manningham's linear parks play an important role in providing off-road cycling networks. The on-road network being developed in Manningham provides links to the off-road path network through the implementation of the *Manningham Bicycle Strategy 2013*, the *Principal Pedestrian Network (PPN)* and *Making Manningham Mobile 2010*, which are summarized in Appendix 2. Sharing of these pathways by pedestrians and cyclists will become increasingly important as these pursuits grow.

23% of respondents to the survey ride along the Ruffey Trail, which forms part of Manningham's regional trail network. With multiple access points, the Trail provides the local and wider population with access to an all-ages facility for recreational and commuter cycling.

It is anticipated that cycling activity will increase significantly due to a number of factors:

- Increasing population density and apartment living in Manningham is aligned with commuter cycling activity
- Completion of the Shared Trail between Doncaster Hill and Ruffey Lake Park
- Completion of the adjoining 43 kilometre circuit trail incorporating the Koonung, Mullum Mullum and Main Yarra Trails
- Completion of an off-road/shared road route for the Ruffey Trail will increase appeal

[Refer Sections 4.2-4.5, Actions 7-11, 15, 25, 26, 33, 34 and 36]

3.3 Dog walking

The benefits associated with dog walking are the same as those of walking and are also important for the dog's health and wellbeing. Dog walking is a popular activity along the Ruffey Creek Linear Park, which is a designated as a 'dog off lead' area throughout its entire length. 31% of survey respondents owned a dog and several respondents valued highly the 'dog off lead' policy.

However, a number of survey respondents expressed concerns regarding the behaviour of dogs off-lead, with some respondents saying that they no longer used the Linear Park for that reason. 16% of survey respondents stated that pet management would improve the Linear Park. Dog litter is a clear issue, with numerous survey comments regarding dog litter, with complaints about owners not picking up after their dogs or dumping bagged dog litter in the absence of litter bins.

Dogs can however have direct and indirect negative impacts on native vegetation and habitat through predation on wildlife, disturbance through noise and roaming, as well as the nutrient impact of dog litter.

It is proposed to amend dog controls when the trail is completed when usage can be expected to increase. The change will require dogs to be on lead within five metres of the Ruffey Trail, while dogs can be run off lead in larger open areas along the linear park such as Montpellier Crescent, and at each end of the trail at Ruffey Lake Park and Finns Reserve. This will create consistent dog controls on all regional linear shared path trails in Manningham. [Action 20]

On lead controls may also help reduce dog litter, and provision of bins along the trail will also assist. [Refer Action 28]

3.4 Nature appreciation

The Ruffey Creek Linear Park offers a distinct nature experience; a 'green oasis' offering escape from the suburban surrounds. Remnant vegetation is limited; the great majority of vegetation has been planted as part of rehabilitation of the waterway.

Maintaining the environmental values and character of the Linear Park is critical to the provision of most of the other benefits of the Linear Park that is recreational opportunities and experiences in a natural setting surrounded by an urban environment.

More than half the survey respondents (59%) did not know that the Linear Park was home to remnant native vegetation, indicating that there is for Council to support improved awareness and appreciation of the Park's natural values. This could include community education, planting programs and fencing to protect and highlight sensitive areas. [Refer Action 42]

4. MANAGEMENT, INFRASTRUCTURE & FACILITIES

4.1 Coordinated public land management

Both Council's bushland management team and landscape works team are involved in different parts of the Linear Park, depending on their environmental values and maintenance regime. Potential exists to increase areas of planting into some areas of mown grass to improve habitat values, and possibly create maintenance efficiencies by simplifying the areas requiring different maintenance regime and reducing mowing. Other areas which have been dominated by woody weed species could also be revegetated with indigenous species. A mown strip would be maintained along each side of the shared path. [Refer Actions 2-4]

Council's Parks and Recreation Unit is responsible for a huge open space network and at times planting can age or fail and require a periodic injection of funds to refresh. It would be timely to undertake a periodic review of all planted areas and undertake a comprehensive upgrade, including removal of large woody weeds, infill planting, mulching, and erosion management. [Refer Action 4]

4.2 Ruffey Trail

While most of the existing Ruffey Trail is in relatively good condition, there are some areas which require improvements to meet safety standards, including path upgrades, drainage measures and, in some circumstances, replacement of existing balustrades. [Refer Action 11]

Melbourne Water

The Ruffey Trail traverses Melbourne Water land along the eastern side of the creek in sections between Nambour Road and Foote Street and between James and Wood Streets, but Melbourne Water does not have ongoing responsibility for the ownership and maintenance of paths and crossings.

A more collaborative and coordinated approach to land management and maintenance between Melbourne Water and Council could create efficiencies and improve outcomes on the ground. [Refer Action 1]

A Shared Pathway Agreement for the use of Melbourne Water's land for the Ruffey Trail will be required to ensure compliance with Melbourne Water's requirements for shared paths located on its land. [Refer Action 2]

Road crossings

The Ruffey Trail crosses four heavily trafficked roads: King Street, Williamsons Road, Foote Street and Parker Street. King Street and Williamsons Road have underpasses to separate cars from other transport and recreation. Pedestrian refuges are provided at Foote Street and Parker Streets. Minor road crossings include Ruffey Street, Mahoney Street and Dellfield Drive.

There is a need for intersection and road crossing treatments, including tactile pavers and bicycle grab rails. [Refer Action 10]

A pedestrian operated signal is proposed at Foote Street in the long term in the *Manningham Bicycle Strategy (2013)* and a design which avoids the need to also cross McLachlan Street is preferred (Refer Figure 6). [Refer Action 25]

The Parker Street crossing follows a circuitous route. A more direct crossing should be investigated as part of the completion of the adjacent section of the Ruffey Trail. [Refer Action 26]

A speed hump at Dellfield Drive should be realigned with the Ruffey Trail to improve safety. Installation of speed humps on both approaches to the trail at Ruffey Street should also be considered and an at-grade treatment, such as a painted crosswalk, should be constructed to highlight the crossing point. [Refer Action 24]

Underpasses are often perceived as unsafe due to their isolation. However attractive and well-maintained spaces deter vandalism and improve perceptions of safety. Opportunities for public artwork on or in the vicinity of the underpasses should also be explored. [Refer Action 30].

Portions of the park which are currently designated road reserve should be correctively discontinued [Refer Action 6].

Foote Street to Parker Street link

Currently between Foote and Parker Streets pedestrians and cyclists use the on-road link along Parker and McLachlan Streets rather than follow the creek. In order to complete the missing link between Foote Street and Parker Street, there are two options for completion of the Trail on each side of the Creek, both require the purchase of land currently in private ownership.

The title of 104-108 Parker Street covers both sides of the creek and in order to construct the link along the creek a portion of this property on the western side of the creek needs to be acquired. The *Open Space Strategy* 2014 recommends that Council “acquire 700m² of 104-108 Parker Street to complete the Ruffey Trail link between Parker and Foote Streets’ (Rec 8.1). The residential sub-division of this property is currently being assessed and Council is seeking to acquire the required land at the same time. Should this negotiation not be successful, a Public Acquisition Overlay could be applied to ensure the creation of the trail in this location. Either option for the alignment of the link would require acquisition of this portion of 104-108 Parker Street.

Option 1 would require Council to purchase of a second parcel of land, being a portion of 111 Foote Street.

Both parcels for possible acquisition are shown in Figure 7, along with relevant land already subject to a Public Acquisition Overlay (Refer Figure 7).

Option 1: South/West route

Moving downstream from Foote Street it involves a 2.5 metre shared path heading west from the corner of Foote and McLachlan Streets for approximately 130 lineal metres to a boardwalk section to negotiate the very steep banks along the southwestern side of the creek. The shared path, with boardwalk sections, would continue on the southern side of the creek for approximately 100 metres to Parker Street.

The acquisition of a 75m² unfenced section of 111 Foote Street would enable a more direct trail route and ease of construction. This route is likely to cost significantly less than Option 1 as a footbridge would not be required. Due to significant cost savings, Option 2 is the preferred option to complete this section of the Ruffey Trail. [Refer Action 7]

This route does not lend itself as well to the creation of a trail head/picnic and rest area as this side of the creek is in close proximity to the busy and fast-moving traffic of Foote Street. If the trail head/picnic area was to remain on the north/east side of the Creek, it may not be as well used or effective in improving the amenity of the Trail, however it would still have value in providing passive recreation and amenity to the local community (Refer Figure 6).

Option 2: North/East route

Moving downstream from Foote Street it involves a 2.5 metre shared path from corner of Foote and McLachlan Streets along the northern bank of the creek for approximately 150 lineal metres to a footbridge over the creek. The shared path, with boardwalk sections, would continue on the southern side of the creek for approximately 100 metres to Parker Street. This option would bring the path directly past the proposed Trail Head and rest area (Refer Action 36, refer Figure 9).



Figure 6: Proposed off-road Trail between Foote Street and Parker Street, showing route options on both sides of Ruffey Creek



Figure 7: Potential Future Land Acquisition

4.3 Shared road

It is proposed to convert Eumeralla Avenue to a shared road south of St Georges Avenue meaning that pedestrians, cyclists and vehicles use the same paved area. Signage, traffic calming measures and paving treatments will indicate the status of the road for all users. An off-road shared path is also proposed to be created on the west side of Eumeralla Avenue between St Georges Avenue and Nambour Road.

A small section of shared road is proposed in Eumeralla Avenue south of St Georges Road, to improve pedestrian and cycling safety. A shared road gives equal priority to pedestrians, cyclists and vehicles. VicRoads standards for provision of safe shared roads will be met, including low speed limits and traffic calming treatments.

Changes to create a shared road may consist of:

- signage
- coloured surface treatment to the existing roadsurface
- speed hump or other traffic calming measures.

[Refer Action 8]

4.4 Shared path

A new off-road shared path is also proposed along the west side of Eumeralla Avenue. This is the safest option given restricted sightlines along this steep road. Path construction will also enable drainage improvements. (Refer Figure 7). [Refer Action 9]

4.5 Rest areas and trail heads

Good parking, amenities and recreational facilities are provided at both ends of the Ruffey Trail, but there are few features along the Trail. New rest areas, comprising seating and landscaping, proposed in the following locations:

- Kersey Place – (Refer Figure 9)
- McLachlan Street (Foote Street) – (Refer Figure 10)
- Dellfield Drive – (Refer Figure 11)
- Ruffey Street (west) – (seat and planting only)

McLachlan Street rest area would form a more significant feature on the Trail and act as a trail head. Features will include a shelter, picnic setting, seating, bike racks, drinking fountain and signage. Options for in-street parking in that location should also be explored.

A proposed new playspace at the Montpellier Street entrance will also provide a rest area for the Trail.

[Refer Actions 33 – 37]



Figure 8: Location of proposed Eumeralla Shared Road and Shared Path.

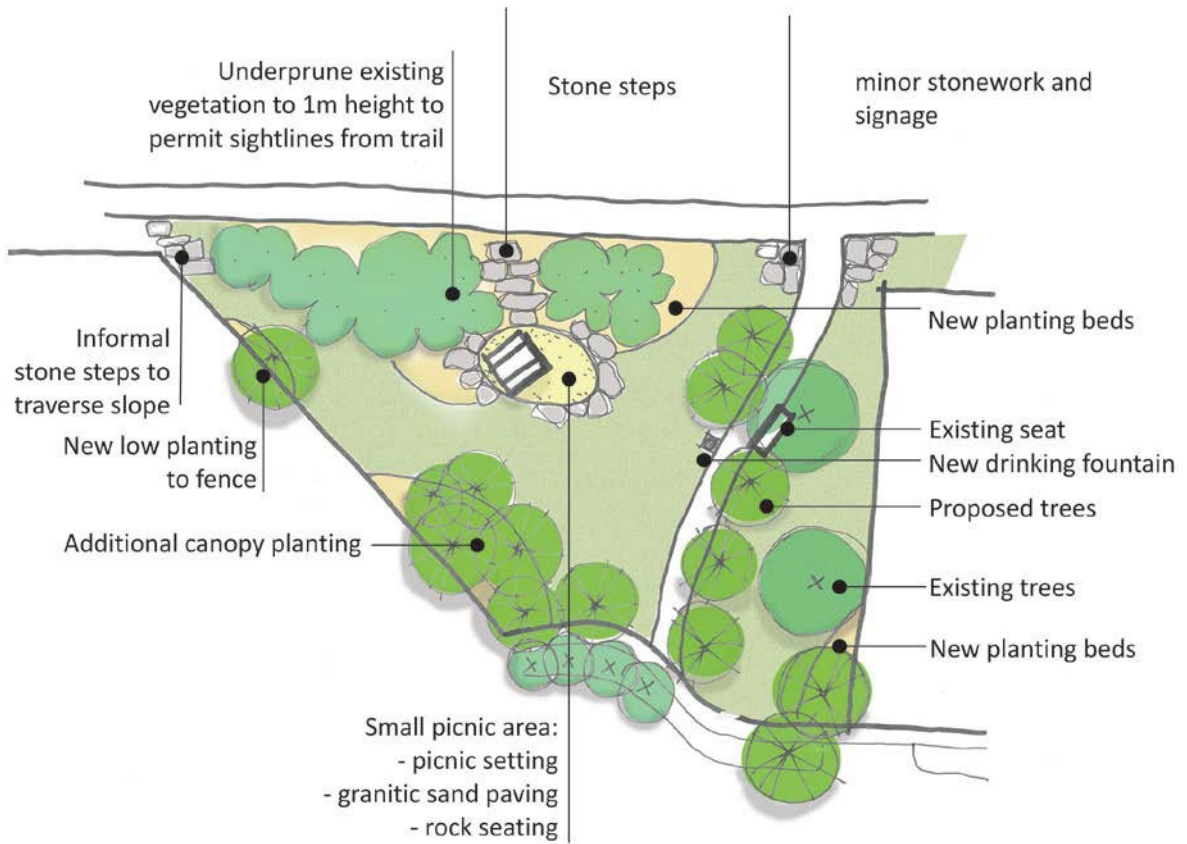


Figure 9: Kersey Place rest area concept



Figure 10: McLachlan Street rest area and trail head concept (incorporating path alignment option 1)

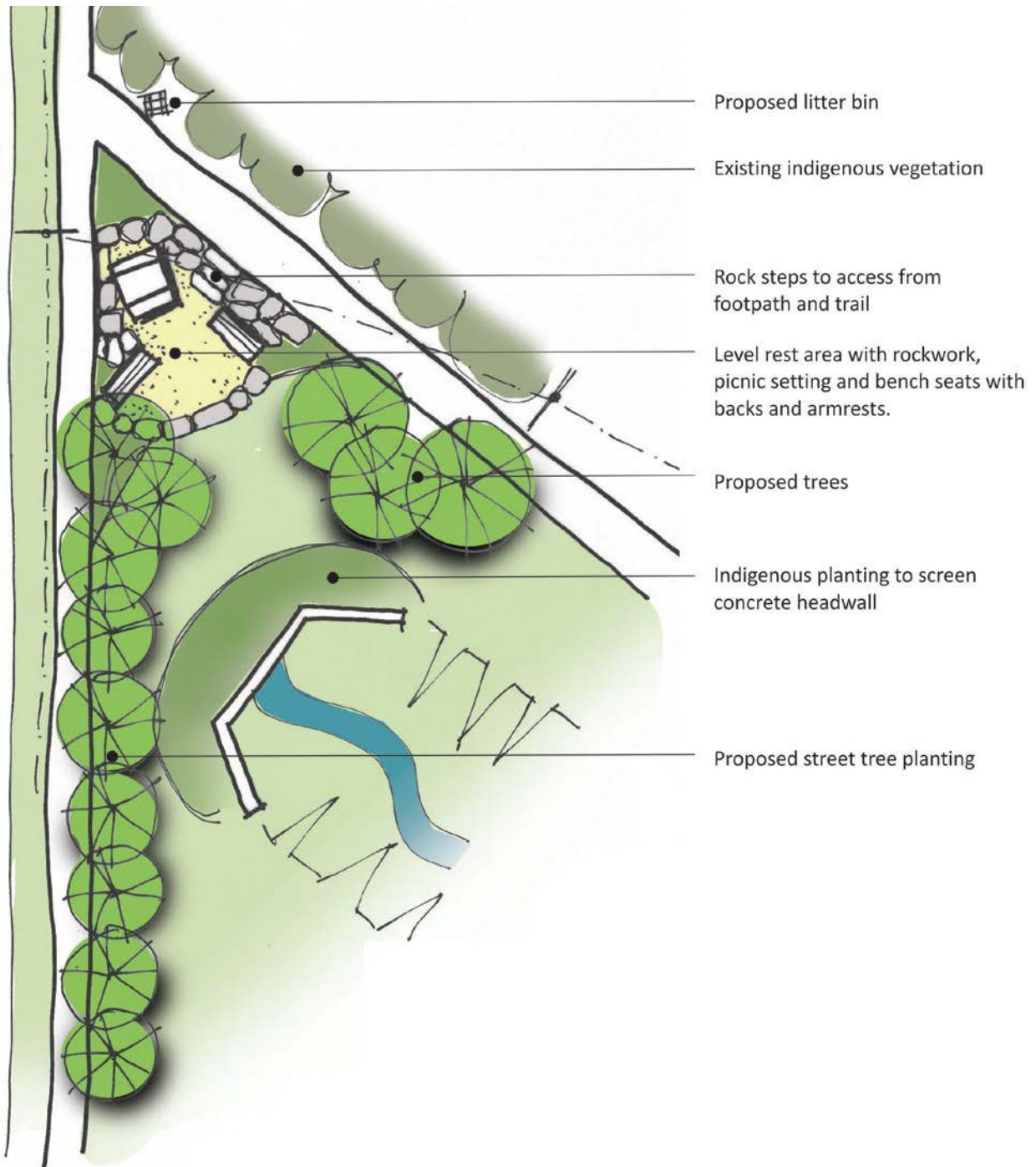


Figure 11: Dellfield Drive rest area concept

4.6 Pedestrian links

There is a pedestrian link from Airdrie Court to Ardgower Court past a constructed wetland towards the creek. However access to the Linear Park is limited due to steepness of the topography and lack of signage. Signage should be provided to demarcate public land and provide the opportunity for those that can navigate the slope. [Refer Actions 13 & 21].

A very steep sealed path connects to residential properties in Duxsons Drive however the path is not well signed and its steepness currently limits access. There are opportunities to construct steps due to the steepness of the path and provide wayfinding signs within the surrounding residential area to promote access to the Linear Park via this link. A handrail and bike channel will be provided. [Refer Action 15]

4.7 Secondary trail

The opportunity exists to develop a secondary trail network on the opposite side of the Ruffey Creek to the Ruffey Trail shared path. Some secondary routes already exist as large or narrow mown areas, but elsewhere this has not been provided or is not possible due to the narrowness of parts of the corridor or steep embankments.

The benefits of a secondary trail are:

- More immediate access to open space for local residents
- The creation of multiple walking routes throughout the Linear Park to provide options in terms of distance and varied experiences
- Promoting more opportunities for walking and other healthy activities.

Possible problems include:

- Ecological impacts through heavy use on unmown routes
- Raising unrealistic community expectations of a complete secondary trail the full length of the Linear Park
- Future impact on the character of the Linear Park if the secondary trail becomes so popular it needs to be sealed.

It is proposed to maintain and extend, where feasible, the existing informal secondary paths consisting of mown grass. Modest infrastructure works will be required, such as creating pedestrian openings in existing fences. The usage of these paths will be monitored to assess their environmental impact. If excessive soil compaction, erosion or vegetation damage occurs, these routes will be closed.

[Refer Actions 16, 17, 19 & 32]

4.8 Playspaces

The *Open Space Strategy* (2014) recommends provision of a new playspace in the linear park at the Montpellier entrance. This will serve the residents of an increasingly dense urban area in the Ruffey Open Space Precinct, as well as providing more diverse recreational opportunities and experiences along the Ruffey Trail. It will consist of a mixture of traditional built elements, as well as landscape elements inviting nature-based play.

In future the linear park will also benefit from a second new playspace to be located nearby in Swilk Reserve. [Refer Action 35]

More useable and amenable open space could be created by amending surface levels south of James Street, to effectively enlarge the park and reduce the area dedicated to road verge. This would better enable informal ball play or other activities requiring larger open grassed areas (Refer Figure 12) [Refer Action 38]

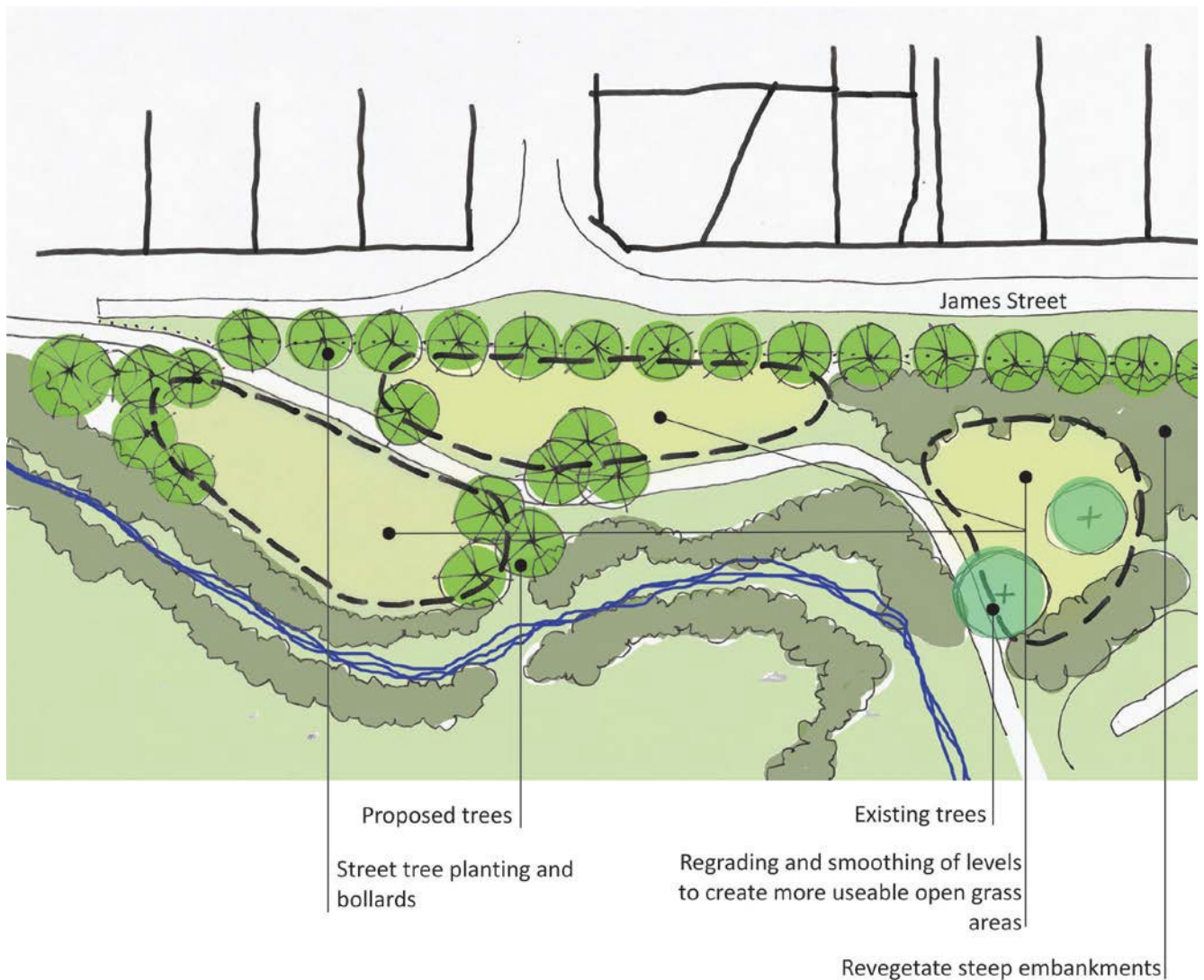


Figure 12: James Street open space concept

4.9 Minor infrastructure

Seats

There is currently very little seating along the Ruffey Creek Linear Park. Seating gives users the opportunity to rest and take time to enjoy the surroundings in areas offering more features or viewing points. Having regard to the ageing population, demand for infrastructure such as seating will continue to increase and it will be important to ensure that these areas are accessible and enjoyable for the local community. [Refer Action 31]

Signage

Directional signage along the Ruffey Trail was installed in 2010 and any remaining outdated old signs should be removed. A high-profile sign should be provided at the downstream end of the trail to improve awareness. Additional signage could improve access and awareness at a few entrances and provision of wayfinding signs in nearby neighbourhoods would promote public awareness and access to the Linear Park. [Refer Actions 13 & 14]

Bollards

In order to prevent cars entering the Linear Park, some areas will require bollards or fencing to be installed, such as the area along Melbourne Water land at Ruffey Street in Templestowe. [Refer Action 27]

Lighting

The underpasses at Williamsons Road and King Street are already lit. However Council's policy on lighting of reserves is that they are only lit at night where there is a pedestrian link to public transport or an activity centre. This applies to the path between Williamsons Road and Glen Court. Lifestyles are changing, however, and there is increasing interest in opportunities to exercise outside work hours, which in winter is often outside daylight hours. The opportunity exists to light the trail to allow evening and early morning exercise and cycling commutes, but would need to be considered as part of the development of a municipal-wide policy.

In the meantime, the following measures may assist:

- The effectiveness of existing spotlights on power poles as street lights could be improved by trimming branches that are casting shadows across the trail
- Existing street lights could be upgraded to enhance lighting conditions in the surrounds.

It is recommended that a closer assessment of lighting conditions be undertaken.

[Refer Actions 22 & 23]

Litter bins

Dog litter can regularly be seen in the Linear Park, most commonly that which has been collected in bags but not disposed of properly. Dog litter was a common complaint in the community feedback.

While Council's informal policy is to only provide litter bins at barbecues and district or regional reserves, but not elsewhere due to strict OH&S requirements for staff and contractors, which restricts the ability to provide bins away from roads, and well as due to the expense to the ratepayers. As such, bins have not typically been provided along regional trails. Any provision of bins must comply with occupational health and safety requirements for maintenance staff and contractors, Council must also consider the location of litter bins to avoid them being misused as sites for household waste dumping.

Visitors using the Linear Park, including dog owners will be encouraged to take their rubbish home, but bins will be provided at strategic locations, where accessible to maintenance staff. A bin should be provided at Dellfield Drive and be considered in the future at Ruffey Street and McLachlan Street rest areas. The last two locations have historically been problematic regarding dumping of household waste or hard rubbish, but the request from the community regarding additional bins is recognised. These areas will be monitored for any increase in litter which would require the installation of bins at these locations.

[Refer Action 28]

Fences

Council should work with adjoining landowners to encourage transparent fencing for the purpose of passive surveillance and improved amenity of both the Linear Park and the adjoining properties. [Refer Action 29]

5. ACTIONS

The following actions have been grouped under the objectives for the Ruffey Creek Linear Park Management Plan. Refer to *Future Work Program Maps 1-5* for location of actions. Costings are indicative only and funds have not yet been committed in the Council budget.

Objective 1: Management Partnerships							
A coordinated approach to the management of the linear park to maintain and enhance the positive aspects of the existing landscape, including remnant vegetation, the secluded native bushland character as well as some more open areas for informal recreation.							
Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
1	<p>Collaborate with Melbourne Water in ongoing maintenance and environmental improvement works including:</p> <ul style="list-style-type: none"> Mow along the western side of Ruffey Creek on Melbourne Water land between Eumeralla Avenue and Foote Street to create a circuit path (Maps 3 and 4) Possible revegetation of Melbourne Water land at 7 Eumeralla Avenue (Map2) Consider simplifying land tenure by Council accepting isolated parcel of Melbourne Water land comprising 41 square metres at 232 A Williamsons Road (Map1). <p><i>Refer Section 4.1 & 4.7</i></p>	All	P&R, CS, MW	\$50,000 (AG)			\$50,000 (AG)
2	<p>Enter into a shared path agreement with Melbourne Water for the use of the Ruffey Trail on Melbourne Water land.</p> <p><i>Refer Section 4.2</i></p>	All	P&R, CS				

Ruffey Creek Linear Park Management Plan 2017

Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
3	<p>Review all existing native vegetation and revegetated areas and undertake a comprehensive refresh of all beds, including, as required:</p> <ul style="list-style-type: none"> • Pruning • Removal of dead trees and other vegetation • Weed management • Infill planting • Mulching • Erosion/drainage management • Other works as required <p><i>Refer Section 2.3, 4.1 & Appendix 4</i></p>	All	P&R	\$65,000			
4	<p>Undertake ongoing vegetation maintenance on the bushland and landscaped areas of the park, including mowing, weed control and revegetation to extend remnant vegetation communities and fauna habitat.</p> <p><i>Refer Section 2.3, 4.1 & Appendix 4</i></p>	All	P&R				\$25000 bushland (AG) + \$2000 Mowing (AG)
5	<p>Extend revegetation planting where possible to improve habitat value, including on the embankment south of James Street to the east on Crown land.</p> <p><i>Refer Section 4.1 & Appendix 4</i></p>	5	P&R				

Ruffey Creek Linear Park Management Plan 2017

Objective 1: Management Partnerships							
A coordinated approach to the management of the linear park to maintain and enhance the positive aspects of the existing landscape, including remnant vegetation, the secluded native bushland character as well as some more open areas for informal recreation.							
Action No.		Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
6	In order to align the boundary of the linear park with areas maintained as parkland undertake a road discontinuances in vicinity of Riverwood Lane, Atkinson Street and James Streets and negotiate with the owners of 63 Parker Street for the acquisition of the section of the property on the opposite side of the creek. <i>Refer Section 2.2</i>	5	FS,				

Objective 2: Safe and Accessible							
Complete the two missing links of the Ruffey Trail and provide a level of safety with a well maintained shared path with improved access to surrounding residential areas to encourage recreation and sustainable transport.							
Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
7	Construct the Ruffey Trail between Foote and Parker Streets. Two trail routes have been investigated. Both options will require the acquisition of approximately 700m2 of 104-108 Parker Street as recommended in the Open Space Strategy 2014. Option 1: Construct a 2.5 metre wide asphalt shared path together with a boardwalk between Foote Street and Parker Street on the south side of Ruffey Creek. This option would also include the acquisition of a 75m2 portion of 111 Foote Street. Option 2: Construct a 2.5 metre wide asphalt shared path together with a footbridge bridge and boardwalk between Foote Street and Parker Street on the north side of Ruffey Creek	4	P&R, CS	1: \$437,143 2: 840,569			

Ruffey Creek Linear Park Management Plan 2017

Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
8	Convert Eumeralla Avenue south of St Georges Avenue to a shared road to improve safety for pedestrians and cyclists in consultation with local residents. <i>Refer Section 4.3</i>	2	ETS	\$15,000			
9	Construct a shared path on the western side of Eumeralla Avenue, between St Georges Avenue and Nambour Road in consultation with local residents. <i>Refer Section 4.4</i>	2	ETS	\$75,000			
10	Undertake improvement works including cycling infrastructure at road crossings, such as grab rails and fencing to improve safety and amenity. <i>Refer Section 4.2</i>	All	ETS		\$30,000		
11	Maintain and repair shared path surface, including drainage to improve safety. <i>Refer Section 4.2</i>	All	EO		\$155,000		
12	Improve safety near steep banks, using built and natural treatments as appropriate. Liaise with Melbourne Water where required. <i>Refer Section 4.2</i>	All	EO, ETS, P&R, MW	\$50,000			
13	Install signage in accordance with Council's Signage Strategy, including: Foote Street and Parker Streets entrances to the new section of Ruffey Trail (Map 4), Dellfield Avenue (Map 3); at the new section of the Ruffey Trail at northern	2,3,4	CS, EO		\$15,000		

Ruffey Creek Linear Park Management Plan 2017

Objective 2: Safe and Accessible							
Complete the two missing links of the Ruffey Trail and provide a level of safety with a well maintained shared path with improved access to surrounding residential areas to encourage recreation and sustainable transport.							
Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
	end of Eumeralla Avenue (Map 2); and at the top and bottom of the slope on Ardgower Court to highlight the park entrance (Map 4). <i>Refer Section 4.9</i>						
14	Provide a major identification sign comprising a laser cut steel similar to signage at the southern end of the linear park to highlight the northern entrance to the linear park. <i>Refer Section 4.9</i>	5	CS		\$10,000		
15	Upgrade link path to steps with bike rail and handrail, due to the steepness of the existing path. <i>Refer Section 4.6</i>	3	CS, EO		\$90,000		
16	Work with Melbourne Water to install steps to improve access to the secondary trail at the north end of Eumeralla Avenue. <i>Refer Section 4.7</i>	2	CS, P&R, MW				
17	Work with Melbourne Water to provide stairs with retaining wall and balustrade to improve access to secondary path south of Foote Street (4D). <i>Refer Section 4.7</i>	3	CS, P&R, MW				
18	Provide stone steps on the west side of the creek to access the mown track on the west side of Dellfield Drive. <i>Refer Section 4.7</i>						

Ruffey Creek Linear Park Management Plan 2017

Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
19	Extend mown path along the western side of the creek to connect to King Street. <i>Refer Section 4.7</i>	1	P&R				
20	Amend the Council Order under the Domestic Animals Act to require dogs to be on lead within five metres of the shared path, when the trail is completed as described in this document. Monitor compliance and dog activity in the linear park. <i>Refer Section 3.3</i>	All	HLL				
21	Install wayfinding signage in the surrounding residential areas, particularly at the end of courts to highlight pedestrian links to the park. <i>Refer Section 4.9</i>	All	CS, EO		\$20,000		
22	Inspect lighting conditions to maximize lighting effectiveness from adjacent streets, while avoiding unnecessary light spill into adjoining properties. <i>Refer Section 4.9</i>	All	EO	\$5,000			
23	Install lighting to pedestrian link between Williamsons Road and Glen Court <i>Refer Section 4.9</i>	1	ETS		\$10,000		
24	Remove existing speed hump and create a raised crossing trail link at Dellfield Drive. <i>Refer Section 4.2</i>	3	ETS			\$40,000	

Ruffey Creek Linear Park Management Plan 2017

Objective 2: Safe and Accessible

Complete the two missing links of the Ruffey Trail and provide a level of safety with a well maintained shared path with improved access to surrounding residential areas to encourage recreation and sustainable transport.

Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
25	Provide pedestrian operated signals at the Ruffey Trail at Foote Street/ McLachlan Streets as recommended in <i>Manningham Bicycle Strategy (2013)</i> . <i>Refer Section 4.2</i>	4	ETS	MBS funding			
26	Construct pedestrian refuge on the west side of the pedestrian bridge on Parker Street to realign with the trail and respond to likely pedestrian movements when the link between Foote and Parker Street is completed. <i>Refer Section 4.2</i>	4	ETS		\$45,000		
27	Install and upgrade bollards where required to prevent vehicular access. <i>Refer Section 4.9</i>	All	P&R		\$20,000		
28	Provide a litter bin at Dellfield Drive and monitor any increase in litter at Ruffey Street and McLachlan Street, which would require the installation of bins at these locations. <i>Refer Section 4.9</i>	3,4,5	CS, EO		\$2,000		
29	Promote and facilitate the use of transparent fencing treatments on boundaries between public and private space. <i>Refer Section 4.9</i>	All	CS, P&R				

Ruffey Creek Linear Park Management Plan 2017

Objective 3: Recreation opportunities

Improve visitor amenity and encourage opportunities for recreation, physical activity and connection with other people and the natural environment.

Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
30	Create a murals in the King Street and Williamsons Road underpasses. <i>Refer Section 4.2</i>	1,2	CS			\$20,000	
31	Provide seats along the linear park in a range of settings. <i>Refer Section 4.9</i>	All	CS, P&R	\$16,000			
32	Prune vegetation and construct steps on the south west side of Ruffey Creek to access the mown track on Melbourne Water land. <i>Refer Section 4.7</i>	2,3	CS, EO, MW			\$10,000	
33	Develop a small informal picnic area at Kersey Place with picnic table drinking fountain with additional canopy planting and improved trail access. <i>Refer Figure 9</i>	1	CS, EO			\$60,000	
34	Develop a small rest area at Dellfield Drive with picnic setting, seating and a litter bin and additional canopy planting. <i>Refer Figure 11</i>	3	CS, EO	\$30,000			
35	Upgrade the Montpellier entrance as a local park including a new playspace, landscaping and seating as recommended in <i>Manningham Open Space Strategy</i> (2014). <i>Refer Figure 8</i>	2	CS, ETS, EO		from OSDP Funded		
Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	

Ruffey Creek Linear Park Management Plan 2017

Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
36	Provide trail head facilities on Council land at 1 McLachlan Street, including shelter, seating, picnic setting ,drinking fountain, litter bin, car spaces for six cars, landscaping and fencing to delineate park boundary. <i>Refer Figure 9</i>	4	CS, ETS, EO		\$190,000		
37	Extend landscape area on Council land at Ruffey Street entrance and provide litter bin, seat and bollard/fencing to delineate park boundary. <i>Refer Section 4.9</i>	5	CS, EO			\$20,000	
38	Reshape earth fill and landscape Council land south of James Street. <i>Refer Figure 12</i>	5	CS, P&R, EO	\$35,000			
39	Upgrade secondary gravel path on the western side of Ruffey Creek to connect Ruffey Street to Riverwood Street. <i>Refer Section 4.6 & 4.7</i>	5	CS, P&R			\$10,000	
40	Support future trail connection from Ruffey Lake Park to Doncaster Hill as identified in <i>Manningham Bicycle Strategy</i> (2013). <i>Refer Section 3.2 & Appendix 2</i>	-	ETS	MBS funding			
41	Promote the benefits and use of the park on Council's website, brochures and events such as 'Spring Outdoors'. <i>Refer Section 3.4</i>	-	CS, P&R				
42	Engage and educate the community regarding the environmental values of Ruffey Creek Linear Park. <i>Refer Section 3.4</i>	-					

Ruffey Creek Linear Park Management Plan 2017

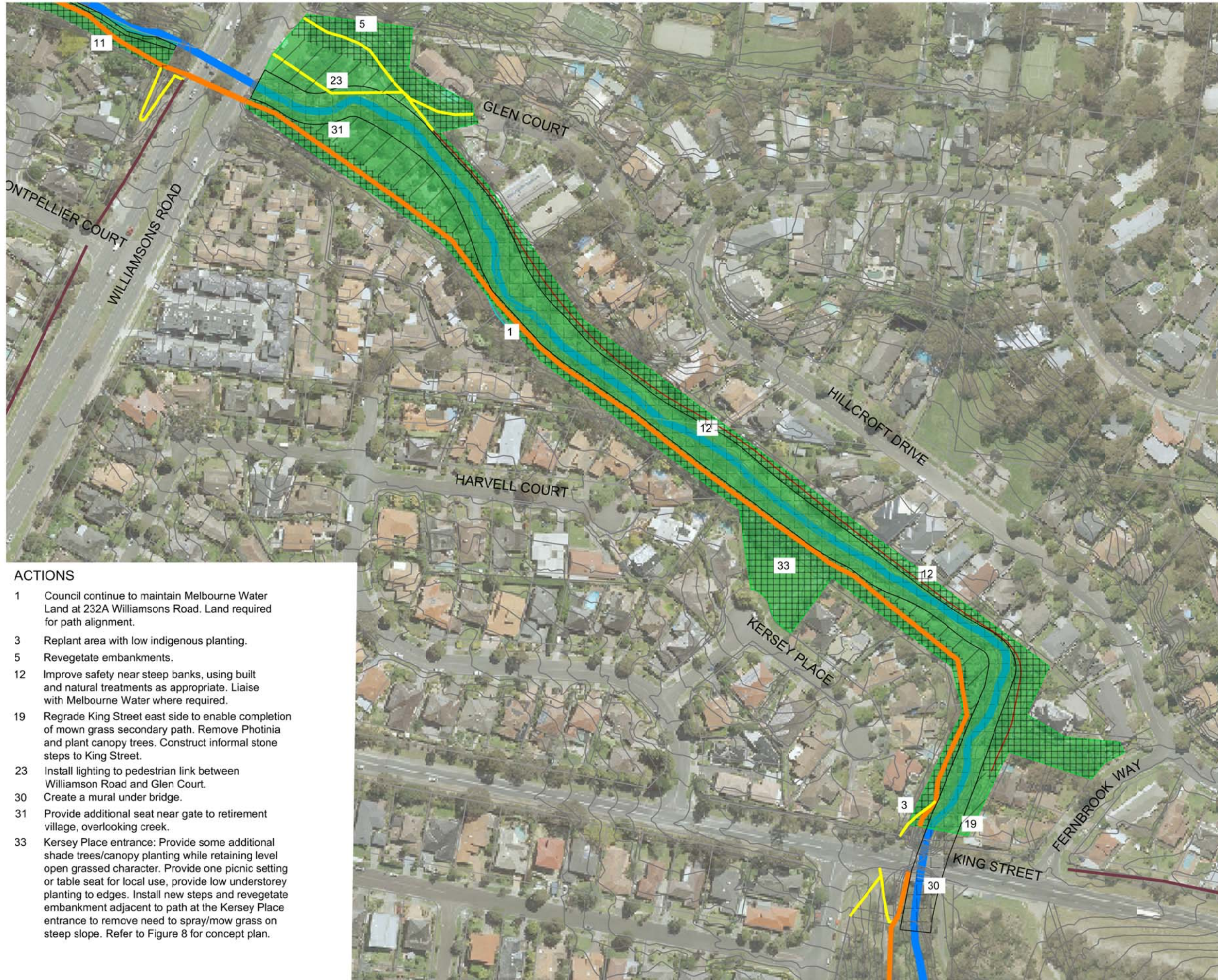
Action No.	Actions	Map Reference	Unit Responsible	Council Capital \$			Council Operational \$
				Stage 1	Stage 2	Stage 3	
43	Support recommendations of the Council 'Active for Life' Recreation Strategy <i>Healthy Habitats</i> Bushland Management Strategy. <i>Refer Section 2.1 & 2.3 & Appendix 3</i>	-	All				
44	Provide historical interpretation signs along the designated areas along the Ruffey Trail.				\$15,000		
	TOTAL COSTS			\$728,143/ \$1,131,569	\$602,000	\$160,000	Grand Total: \$1,490,143/ \$1,893,569

Abbreviations

- | | | | |
|-----|------------------------------------|------|--|
| CS | City Strategy | MBS | <i>Manningham Bicycle Strategy (2013)</i> |
| EO | Engineering Operations | OSDP | Open Space Development Program (Resort and Recreation Reserve Funds) |
| ETS | Engineering and Technical Services | | |
| FS | Financial Services | | |
| HLL | Health and Local Laws | | |
| P&R | Parks and Recreation | | |

RUFFEY CREEK LINEAR PARK MANAGEMENT PLAN

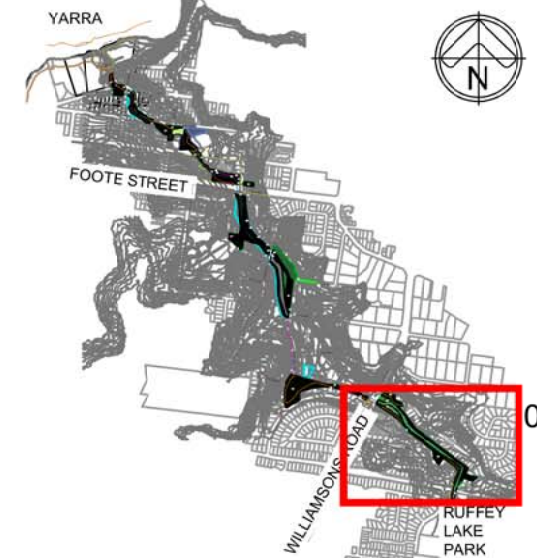
FUTURE WORKS PROGRAM



ACTIONS

- 1 Council continue to maintain Melbourne Water Land at 232A Williamson Road. Land required for path alignment.
- 3 Replant area with low indigenous planting.
- 5 Revegetate embankments.
- 12 Improve safety near steep banks, using built and natural treatments as appropriate. Liaise with Melbourne Water where required.
- 19 Regrade King Street east side to enable completion of mown grass secondary path. Remove Photinia and plant canopy trees. Construct informal stone steps to King Street.
- 23 Install lighting to pedestrian link between Williamson Road and Glen Court.
- 30 Create a mural under bridge.
- 31 Provide additional seat near gate to retirement village, overlooking creek.
- 33 Kersey Place entrance: Provide some additional shade trees/canopy planting while retaining level open grassed character. Provide one picnic setting or table seat for local use, provide low understorey planting to edges. Install new steps and revegetate embankment adjacent to path at the Kersey Place entrance to remove need to spray/mow grass on steep slope. Refer to Figure 8 for concept plan.

KEY PLAN



LEGEND

FEATURES

- Ruffey Creek
- Ruffey Trail Shared Path (sealed)
- Secondary Path (mown)
- Shared Road proposed
- Access Path
- Principal Pedestrian Network (PPN)
- Off Road Shared Path
- Biosites

LAND TENURE

- Manningham Council Land
- Melbourne Water Land
- Crown Land
- Proposed land acquisition for future trail link

LAND MANAGEMENT

Manningham

- Bushland Management
- Grass Mowing / Landscape Maintenance

Melbourne Water

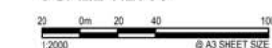
- Waterway Management
- Grass Mowing
- Bushland Management

MANAGEMENT PLAN / 17-001-01

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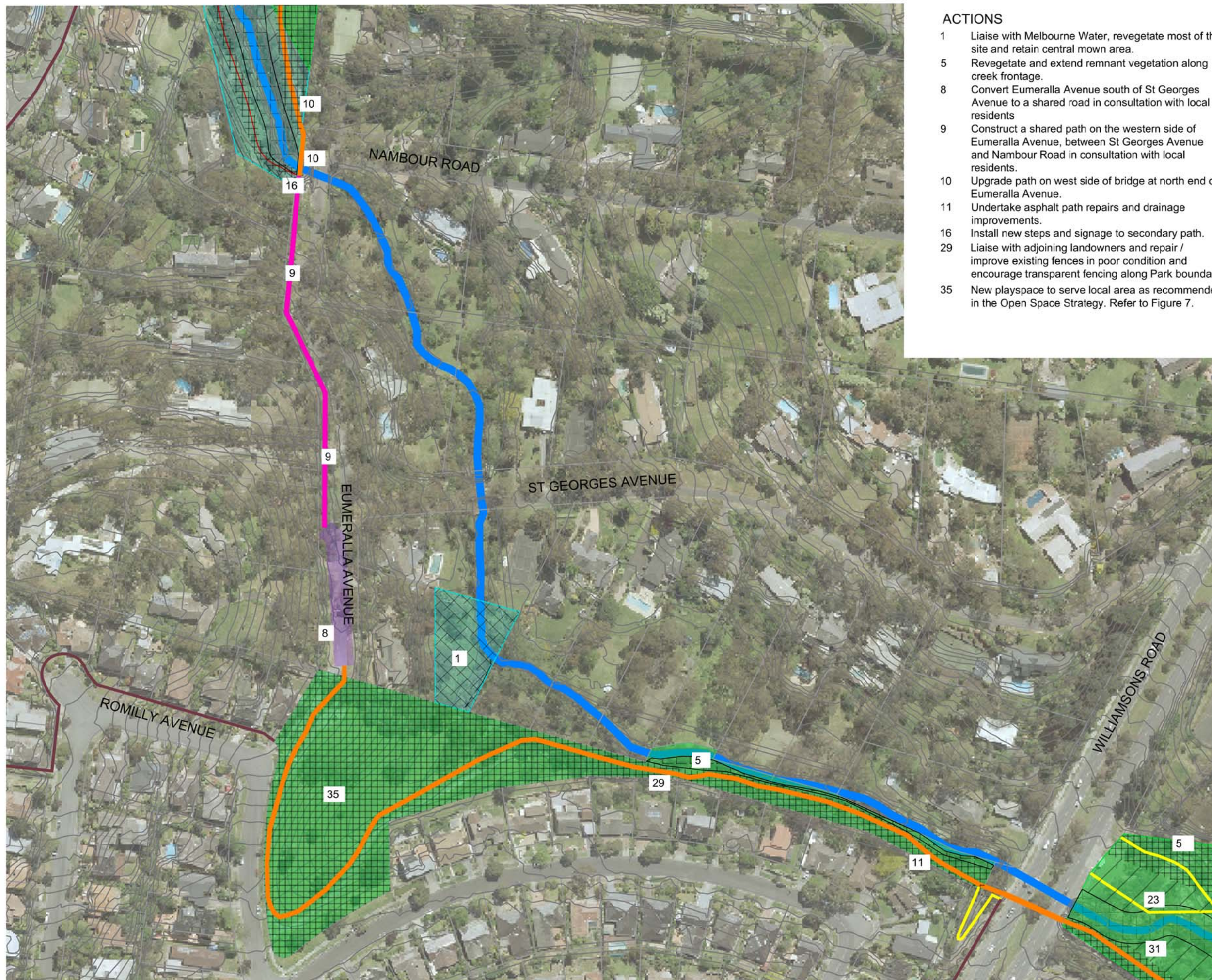
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RUFFEY CREEK LINEAR PARK MANAGEMENT PLAN

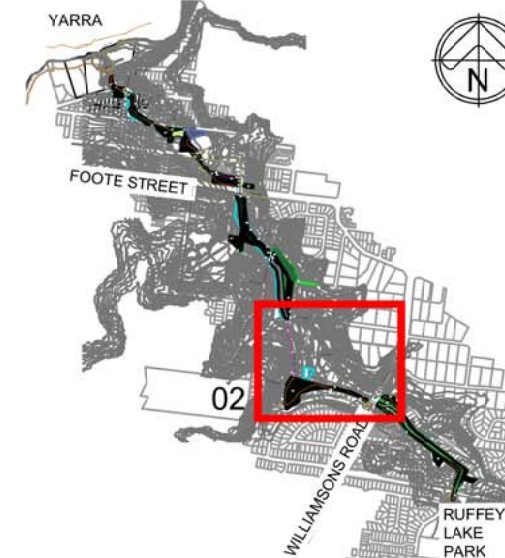
FUTURE WORKS PROGRAM



ACTIONS

- 1 Liaise with Melbourne Water, revegetate most of the site and retain central mown area.
- 5 Revegetate and extend remnant vegetation along creek frontage.
- 8 Convert Eumeralla Avenue south of St Georges Avenue to a shared road in consultation with local residents
- 9 Construct a shared path on the western side of Eumeralla Avenue, between St Georges Avenue and Nambour Road in consultation with local residents.
- 10 Upgrade path on west side of bridge at north end of Eumeralla Avenue.
- 11 Undertake asphalt path repairs and drainage improvements.
- 16 Install new steps and signage to secondary path.
- 29 Liaise with adjoining landowners and repair / improve existing fences in poor condition and encourage transparent fencing along Park boundary.
- 35 New playspace to serve local area as recommended in the Open Space Strategy. Refer to Figure 7.

KEY PLAN



LEGEND

FEATURES

- Ruffey Creek
- Ruffey Trail Shared Path (sealed)
- Secondary Path (mown)
- Shared Road proposed
- Access Path
- Principal Pedestrian Network (PPN)
- Off Road Shared Path
- Biosites

LAND TENURE

- Manningham Council Land
- Melbourne Water Land
- Crown Land
- Proposed land acquisition for future trail link

LAND MANAGEMENT

- Manningham
- Bushland Management
 - Grass Mowing / Landscape Maintenance
- Melbourne Water
- Waterway Management
 - Grass Mowing
 - Bushland Management

MANAGEMENT PLAN / 17-001-02

DATE: 30/03/17

DRAWN: S.R.

SCALE 1:2000



RUFFEY CREEK LINEAR PARK MANAGEMENT PLAN

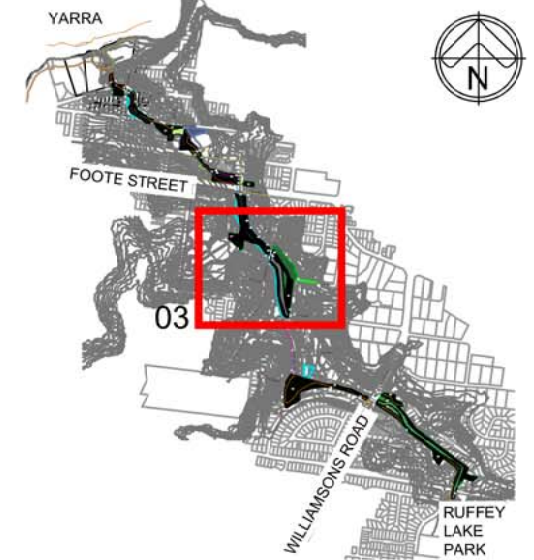
FUTURE WORKS PROGRAM



ACTIONS

- 3 Revegetate bank to improve habitat and reduce mown grass areas.
- 4 Provide low planting to soften the appearance of rear fences.
- 10 Remove barrier in centre of bike path. Replace ageing balustrade. Provide balustrade and / or amended fencing treatment at narrow entrance, to improve safety for cyclists.
- 11 Upgrade and resurface path and drainage to prevent cracking and leaf litter collecting on the path.
- 13 Replace ID signage on both sides of Dellfield Drive and remove obsolete signage.
- 15 Upgrade path to steps due to the steepness of the current path including handrail and bike channel.
- 18 Provide stone steps on south west side of creek to access mown track.
- 21 Manage dense growth to rear of 34-36 Ardgower Court, to provide mown grass access between Ardgower Court and the creek. Provide signage at top and base of slope to highlight pedestrian link to Ardgower Court. Upgrade path with clear delineation to meet up with mown path.
- 24 Move speed hump and realign to create raised crossing link for the trail. Install warning signage as required.
- 27 Upgrade existing treated pine fencing to Melbourne Water land on Dellfield Drive, to include pedestrian entrance to the mown grass track.
- 28 Provide a litter bin at Dellfield Drive and monitor any increase in litter at Ruffey Street and McLachlan Street which would require the installation of bins at these locations.
- 31 Provide bench seat with arm rests.
- 34 Provide a small landscaped seating area near the Dellfield Drive crossing. Refer to Figure 10 for concept plan.

KEY PLAN



LEGEND

FEATURES

- Ruffey Creek
- Ruffey Trail Shared Path (sealed)
- Secondary Path (mown)
- Shared Road proposed
- Access Path
- Principal Pedestrian Network (PPN)
- Off Road Shared Path
- Biosites

LAND TENURE

- Manningham Council Land
- Melbourne Water Land
- Crown Land
- Proposed land acquisition for future trail link

LAND MANAGEMENT

- Manningham
- Bushland Management
 - Grass Mowing / Landscape Maintenance
- Melbourne Water
- Waterway Management
 - Grass Mowing
 - Bushland Management

MANAGEMENT PLAN / 17-001-03

DATE: 30/03/17
 DRAWN: S.R.
 SCALE 1:2000



RUFFEY CREEK LINEAR PARK MANAGEMENT PLAN

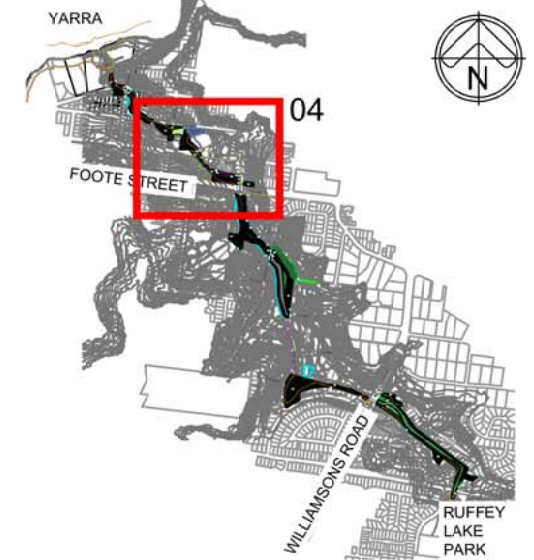
FUTURE WORKS PROGRAM



ACTIONS

- | | |
|---|---|
| <p>3 Remove of weedy species and exotics, including Loquats, bamboo, Ivy, pittosporum and jasmine. Revegetate Council land between creek and Foote Street and at 2 McLachlan Street.</p> <p>6 In order to align the boundary of the linear park with the area maintained as parkland negotiate land acquisition with owners of 63 Parker Street for section of land on the north side of creek and undertake the road discontinuance of Riverwood Lane between Ruffey Creek and Ruffey Street.</p> <p>7 Construct new shared path connection between Foote Street and Parker Street, including bridge and boardwalk as required. Land acquisition is required for 700m² of 104 - 108 Parker Street and potentially 75m² of 111 Foote Street to enable the shared path construction.</p> <p>11 Upgrade path drainage, levels and maintenance to prevent path narrowing through leaf litter and vegetative cover. Upgrade path immediately south of Foote Street.</p> <p>13 Replace directional signage information on completion of the shared path to Parker Street.</p> <p>17 Install stairs with retaining wall and fencing to improve access for secondary path.</p> | <p>25 Provide pedestrian operated signals at the Ruffey Trail at Foote Street as recommended in Manningham Bicycle Strategy (2013).</p> <p>26 Re-align Parker Street crossing with Ruffey Trail for pedestrian / cyclist safety. Replace treated pine bollards and barriers when completing the shared path link.</p> <p>28 Monitor any increase in litter at McLachlan St which would require a bin at this location.</p> <p>36 Provide trail head facilities on Council land including shelter, seating, picnic setting, drinking fountain, litter bin, car parking and landscaping. Revegetation of 3 McLachlan St, successively remove exotic species. Remove the redundant spoon drain within the reserve. Provide low planting to soften the appearance of rear fences. Refer to Figure 9 for concept plan.</p> <p>44 Provide historical interpretation signs along designated areas of the Ruffey Trail.</p> |
|---|---|

KEY PLAN



LEGEND

FEATURES

- Ruffey Creek
- Ruffey Trail Shared Path (sealed)
- Secondary Path (mown)
- Shared Road proposed
- Access Path
- Principal Pedestrian Network (PPN)
- Off Road Shared Path
- Biosites

LAND TENURE

- Manningham Council Land
- Melbourne Water Land
- Crown Land
- Proposed land acquisition for future trail link

LAND MANAGEMENT

Manningham

- Bushland Management
- Grass Mowing / Landscape Maintenance

Melbourne Water

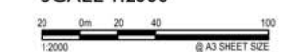
- Waterway Management
- Grass Mowing
- Bushland Management

MANAGEMENT PLAN / 17-001-04

DATE: 30/03/17

DRAWN: S.R.

SCALE 1:2000



RUFFEY CREEK LINEAR PARK MANAGEMENT PLAN

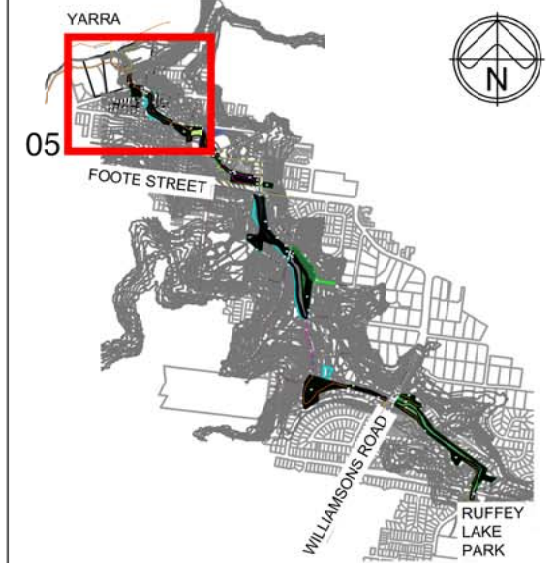
FUTURE WORKS PROGRAM



ACTIONS

- 5 Extend revegetation planting along creek between James Street and Crown land. Provide canopy trees and revegetation to minimise weed management and address mowing difficulties. Maintain Swilk Reserve bushland to continue with linear park.
- 6 In order to align the boundary of the linear park with the area maintained as parkland negotiate land acquisition with owners of 63 Parker Street for section of land on the north side of creek and undertake the road discontinuance of Riverwood Lane between Ruffey Creek and Ruffey Street.
- 11 Shared path paving - repair cracking. Adjacent to large Eucalypt repair path and improve drainage across path.
- 14 Major ID signage to highlight the trail: Laser cut steel to match signage at southern end in Ruffey Lake Park
- 27 Install bollards along Ruffey Street frontage.
- 28 Monitor any increase in litter at Ruffey St which would require a bin at this location.
- 31 Install a seat near the existing Golden Elm tree.
- 37 Provide canopy planting, bin, seat, bollards and gate at Ruffey Street
- 38 Reshape earth fill in this area to create more useable space. Provide street tree planting along James Street frontage. Revegetate edges of this area, retain central open grassed area for ball games and dogs. Provide a seat under canopy trees, where powerlines permit.
- 39 Improve path access to the street Upgrade secondary gravel path to connect Ruffey Street with Riverwood Street.

KEY PLAN



LEGEND

FEATURES

- Ruffey Creek
- Ruffey Trail Shared Path (sealed)
- Secondary Path (mown)
- Shared Road proposed
- Access Path
- Principal Pedestrian Network (PPN)
- Off Road Shared Path
- Biosites

LAND TENURE

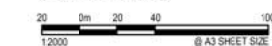
- Manningham Council Land
- Melbourne Water Land
- Crown Land
- Proposed land acquisition for future trail link

LAND MANAGEMENT

- Manningham
- Bushland Management
 - Grass Mowing / Landscape Maintenance
- Melbourne Water
- Waterway Management
 - Grass Mowing
 - Bushland Management

MANAGEMENT PLAN / 17-001-05

DATE: 30/03/17
DRAWN: S.R.
SCALE 1:2000



Appendix 1 Community Consultation

Community consultation comprised a community survey provided in hard copy to all residences within 400 metres of the Linear Park, and a web-based version of the same survey available to the general public.

The community was advised of the consultation through:

- Direct mail to 2295 nearby households
- Signage along the length of the Linear Park
- Manningham City Council website
- Notices in local newspaper
- Manningham Matters Council newsletter, mailed to all Manningham households.

A copy of the survey and associated flyer are shown below.

A total of 279 people responded to the survey. Community feedback suggests that the Linear Park is extremely popular for recreation and physical activity and is used on a regular basis. It is highly valued by the local community for its natural attributes being close to their homes and with good access. The majority of the respondents represented an aging population, with a large portion (60%) representing 'adults only household' and less than a quarter of households (23%) with primary and secondary school age children.

In summary:

- 43% of respondents were aged 35-59yrs and 52% were 60+years
- 60% of respondents were one person only households
- 29% of respondents visit the Park 2-3 times per week and 27% visit everyday
- 64% of respondents visit the Park on weekdays and 65 % visit on weekends
- 74% of respondents walk/run to the Park, 12% cycle to Park and 13% drive
- The main reasons for visiting the Park were for walking (79%), nature appreciation (36%), relaxing (36%), walking the dog (27%) and cycling (23%)
- All sections of the Ruffey Creek Trail were fairly evenly used by the respondents, with the exception of the on- road section between Parker and Foote Street which was used the least
- 24% of the respondents use the Trail as a pedestrian link to other destinations at least once a week, with 44 % who never use it for this purpose
- The most valued aspects of the Park were its closeness to home (80%), a path for walking (73%), a quiet place for relaxing (70%) and an area which valued for its natural environment (54%).

The most suggested areas of improvement of the Linear Park were:

- Completion of the Ruffey Trail, particularly removing the on-road sections of the trail
- Safe road crossings and links to the surrounding neighbourhoods
- Additional tree/native vegetation planting
- Additional seating
- Maintenance - weed control and habitat provision
- Maintenance - mowing
- Litter/dog litter bins.

Thank you for participating in this survey

15. If you would like to be kept informed on the Ruffey Creek Linear Park Management Plan, please provide your details below.

Full name: _____

Address: _____

Email: _____

Contact phone number/s (optional): _____

(Note: these details will not be passed on to any other organisation.)

1. FOLD UP

Delivery Address:
PO BOX 1
DONCASTER VIC 3108

No stamp required
if posted in Australia



Manningham City Council
Economic and Environmental Planning Unit
Reply Paid 1
Doncaster VIC 3108

2. FOLD DOWN

Return Details

Once you have completed the survey:

- Fold where indicated.
- Seal the edges with a staple or tape.
- Ensure that the postage details are facing outwards.
- Place it in the mail by **Monday 14 December 2015**
- You do not need a stamp.



Ruffey Creek Linear Park

Council is developing a management plan for Ruffey Creek Linear Park in Templestowe and is seeking feedback on your current use of the park and what you would like to see for its future.

Ruffey Creek Linear Park is an open space corridor spanning three kilometres and linking Ruffey Lake Park to the Yarra River in Templestowe.

The park offers a bushland experience for pedestrians and cyclists with an off road shared path, known as Ruffey Trail, travelling the length of the linear park with the exception of two sections: along Eumeralla Avenue and between Foote and Parker streets. The management plan is being developed to guide future development of the park, including works to complete the missing links along the shared pathway, and ensure the park responds to the local community's needs.

The Ruffey Creek Linear Park Management Plan will incorporate recommendations from Manningham's Open Space Strategy 2014, Bicycle Strategy 2013 and Bushland Management Strategy 2012.

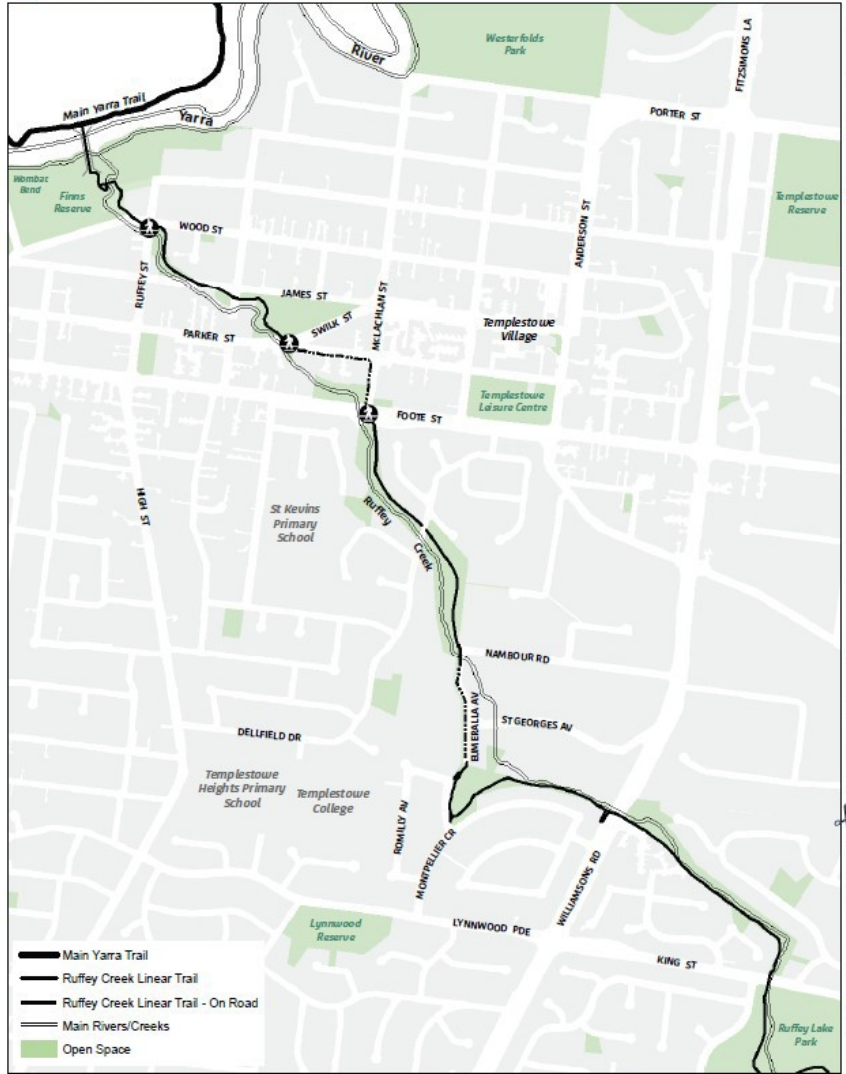


To have your say, please complete this survey by 5.00 pm on **Monday 14 December 2015.**



For more information, call Council's Senior Open Space Planner Anna Bunbury on 9840 9323 or to complete the survey online, visit www.yoursaymanningham.com.au/ruffey-creek-linear-park

Ruffey Creek Linear Park



Produced by Manningham GIS/GPS/3D
 Date: 14/10/2015
 GDA Viemap

- How often do you visit Ruffey Creek Linear Park?**

 - Everyday/most days
 - 2 – 3 times a week
 - Once a week
 - 2 – 3 times a month
 - Once a month
 - 2 – 3 times a year
 - Once a year
 - Less often
 - Never
- When do you usually visit the park?** (tick all that apply)

 - Weekdays
 - Weekends
 - Morning
 - Afternoon
 - Evening
- How do you usually get to the park?**

 - Walk/run
 - Cycle
 - Car
 - Bus
 - Other (please specify): _____
- What are your main reasons for visiting Ruffey Creek Linear Park?** (tick all that apply)

 - Walking
 - Running
 - Walking the dog
 - Cycling
 - Nature appreciation
 - Socialising
 - Relaxing
 - Other exercise
 - Group activity (please specify): _____
 - Other (please specify): _____
- Which sections of the path do you use?** (tick all that apply)

 - Yarra River to Parker Street
 - Parker Street to Footie Street
 - Footie Street to Dellfield Drive
 - Dellfield Drive to Montpellier Crescent
 - Montpellier Crescent to Williamsons Road
 - Williamsons Road to King Street
- How often do you use Ruffey Creek Linear Park as a pedestrian link: that is, using it as a way to get to a destination such as shops, public transport or to visit family/friends?**

 - Everyday/most days
 - 2 – 3 times a week
 - Once a week
 - 2 – 3 times a month
 - Once a month
 - 2 – 3 times a year
 - Once a year
 - Less often
 - Never
- What do you value most about Ruffey Creek Linear Park?** (tick all that apply)

 - Large linear park
 - Path network for walking
 - Path network for running
 - Connection to other trails
 - Path network for dog walking
 - Path network for cycling
 - Flora and fauna
 - Landscape/open space
 - Quiet and relaxing
 - Close to home
 - Good access to the park
 - Safe place to visit
 - Other (please specify): _____
- Is there anything that Council could do to improve Ruffey Creek Linear Park?** (tick all that apply)

 - Paths/pedestrian access
 - Parking
 - Seating
 - Signage
 - Provision of playspaces
 - Fitness equipment
 - Picnic facilities
 - Use of the underpass
 - Landscaping
 - Weeds
 - Indigenous flora and fauna
 - Pet management
 - Boundary fencing
 - Maintenance
 - Other (please specify): _____
- Is there anything that prevents you from using the park?**

- Do you have any other comments about Ruffey Creek Linear Park?**

- What is your gender?**

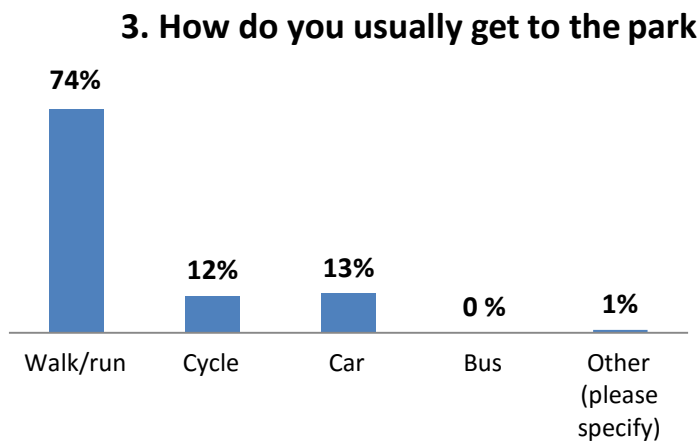
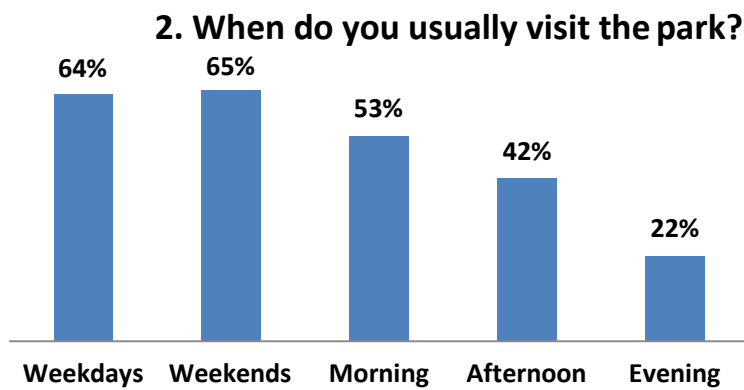
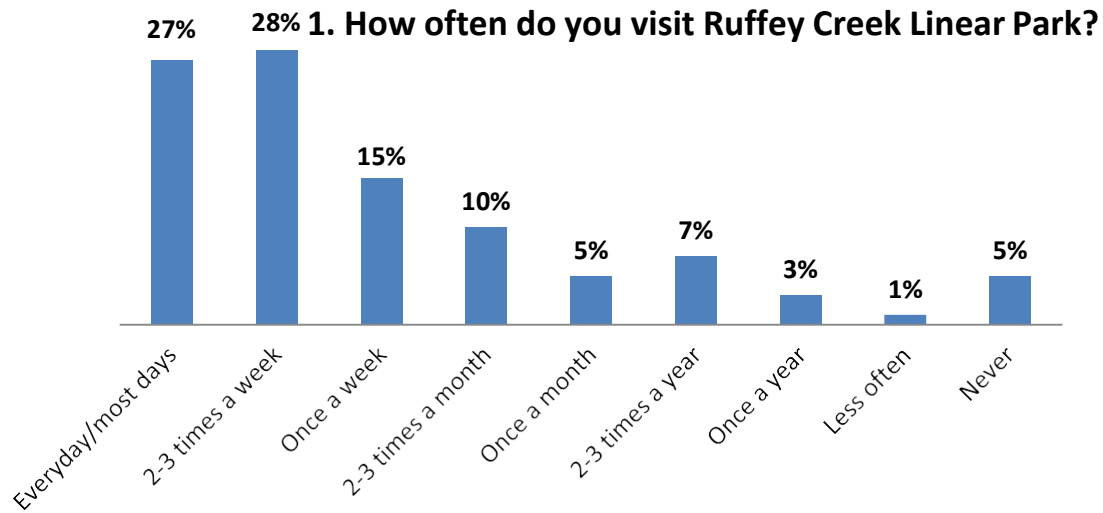
 - Male
 - Female
 - Other
- What is your age group?**

 - 15 – 17 years
 - 18 – 24 years
 - 25 – 34 years
 - 35 – 49 years
 - 50 – 59 years
 - 60 – 69 years
 - 70 – 84 years
 - 85+ years
- Which of the following best describes your household composition?**

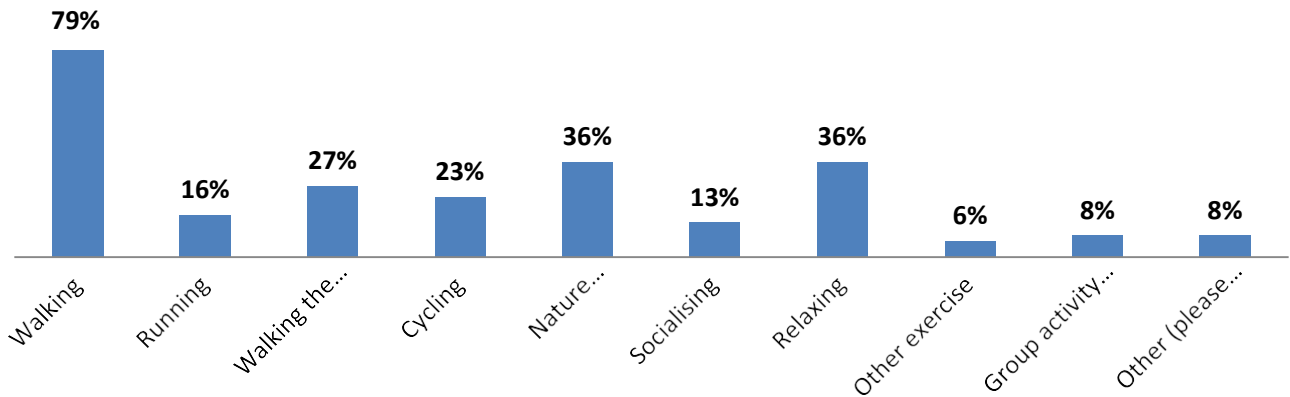
 - Adults only
 - Adults with pre-school aged children
 - Adults with primary school aged children
 - Adults with secondary school aged children
 - Adults with adult children
- Do you own a dog?**

 - Yes
 - No

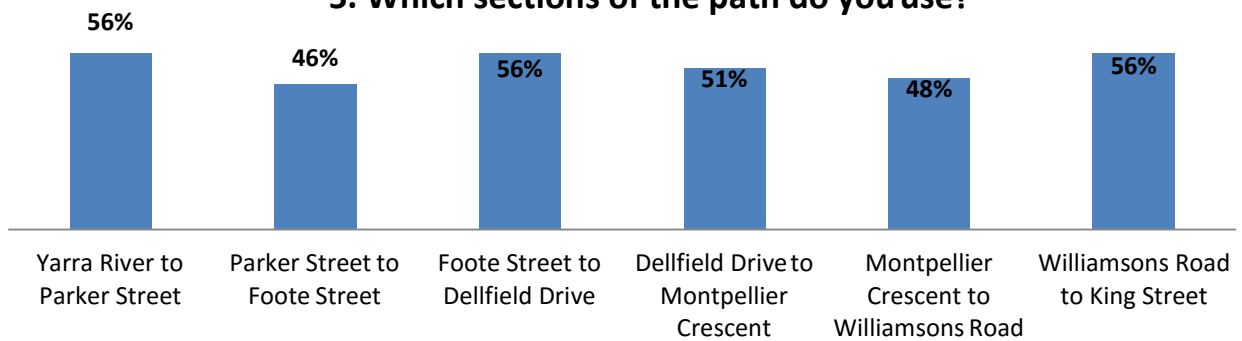
2015 Community Consultation – Summary Report



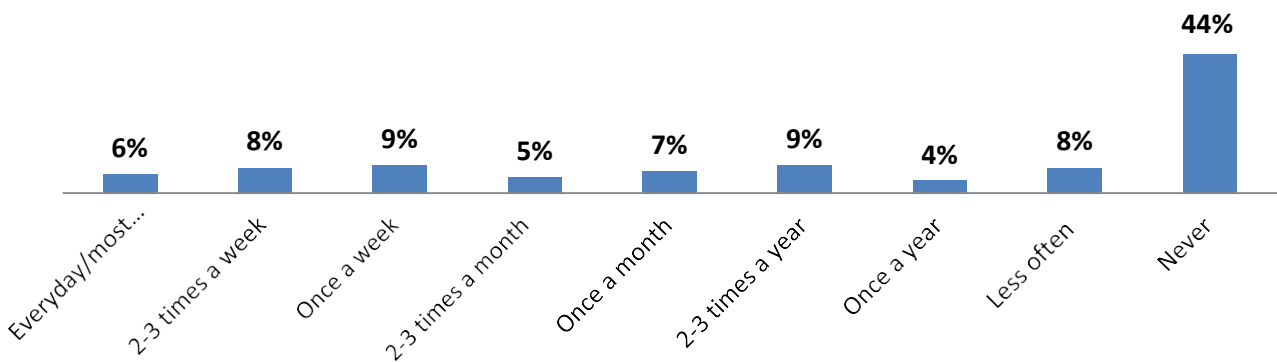
4. What are your main reasons for visiting Ruffey Creek Linear Park?



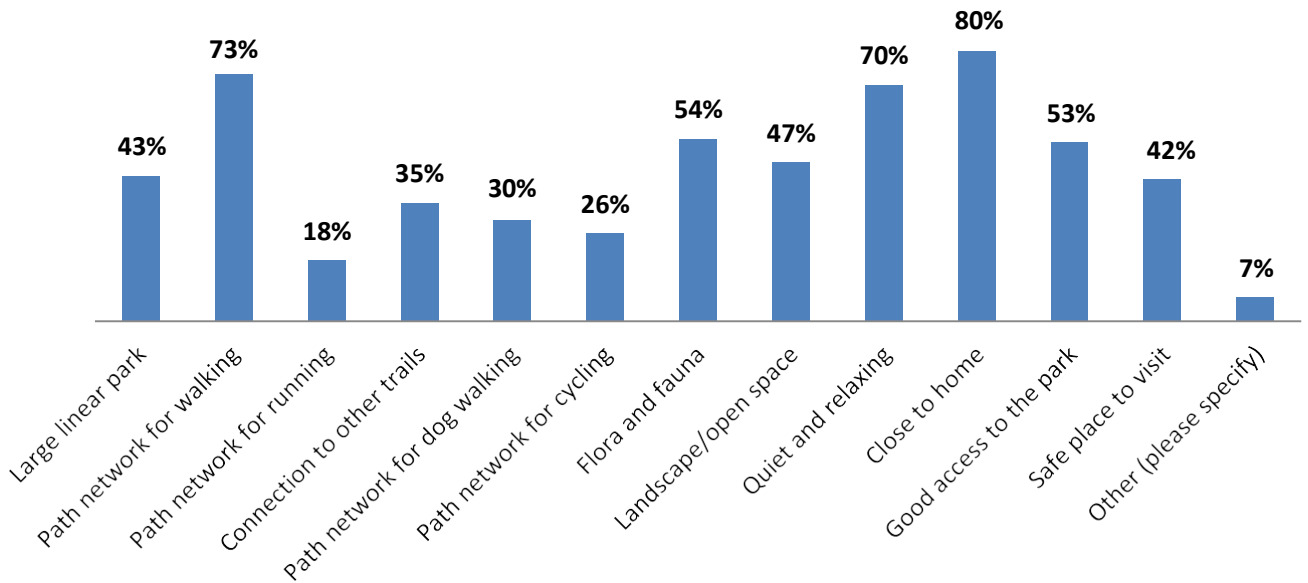
5. Which sections of the path do you use?



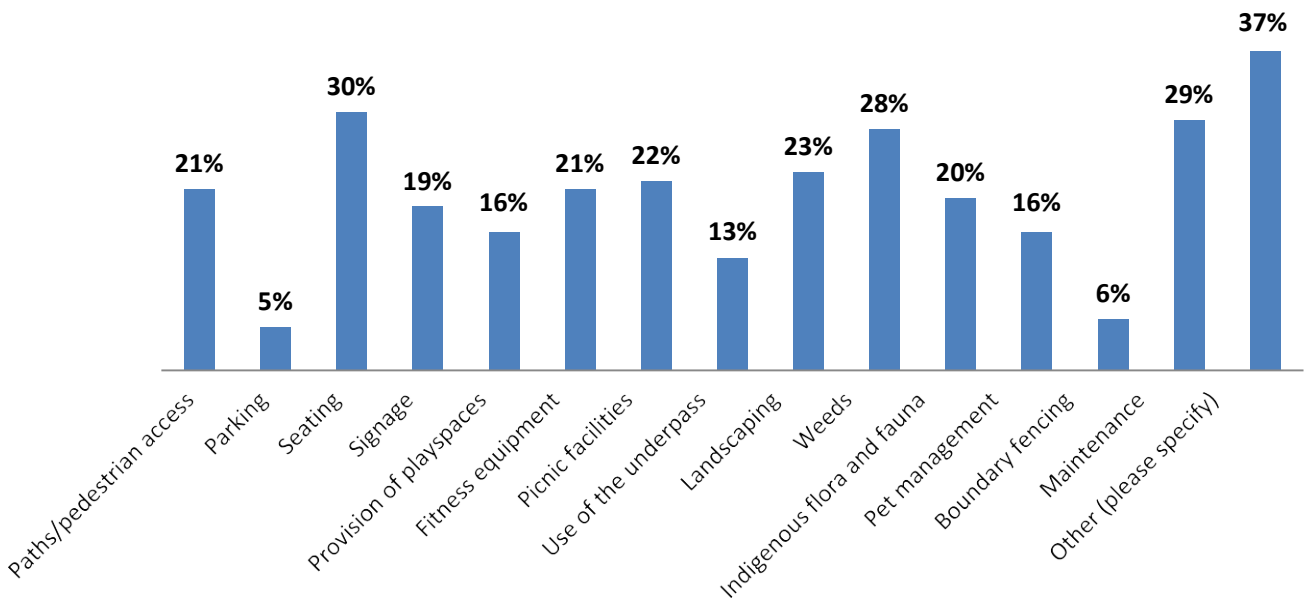
6. How often do you use Ruffey Creek Linear Park as a pedestrian link: that is, using it as a way to get to a destination such as shops, public transport or to visit family/friends?



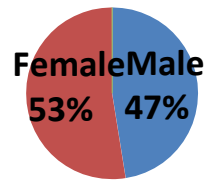
7. What do you value most about Ruffey Creek Linear Park?



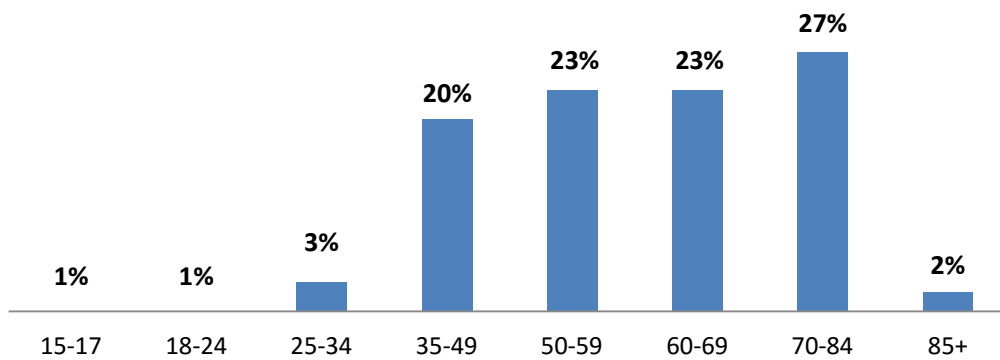
8. Is there anything that Council could do to improve Ruffey Creek Linear Park?



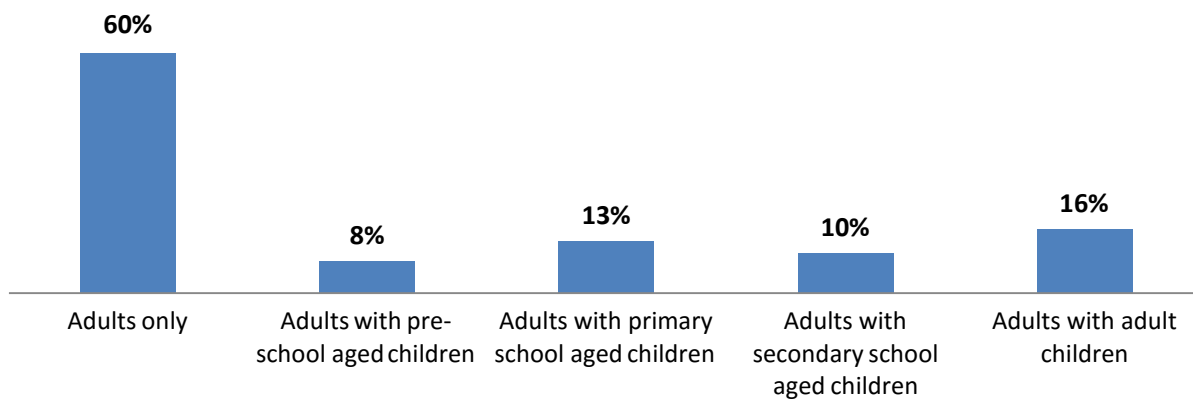
11. What is your gender?



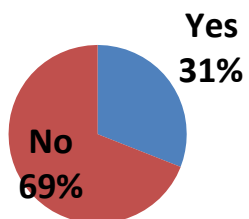
12. What is your age group?



13. Which of the following best describes your household composition?



14. Do you own a dog?



Appendix 2 Planning and Policy Context

Related Strategies

Manningham's Open Space Strategy (2014) classifies the Ruffey Creek Linear Park as a park with a regional catchment with the following functions:

- Linear Park
- informal recreation
- flora and fauna
- pedestrian link
- drainage.

Recommendations in the Strategy which directly relate to the Linear Park include completion of the Ruffey Trail, including one area designated for land acquisition to improve access along the Linear Park, and protection of vegetation along the Ruffey Creek Corridor.

Active for Life Recreation Strategy 2010-2025 aims to increase participation in a broad range of recreational activities, including walking and cycling, for improved health and wellbeing of the community. It seeks to provide choices to promote a healthier, more active community, to improve infrastructure in our parks and provide programs which support walking groups and the Council's annual walking event 'Walk It Up' held at Ruffey Lake Park. It recommends continued support of linear trail developments as identified through existing and proposed reserve Management Plans, including Ruffey Creek Linear Park. The Strategy is currently being reviewed.

Manningham Bicycle Strategy 2013 focuses on three objectives:

- Improve on-road and off road cycling infrastructure to connect to key destinations and generators
- Improve end of trip facilities at key destinations and improve bicycle facilities and key routes
- Undertake educational and promotional activities to increase the community's awareness of cycling as a viable form of transport for both commuting and recreational purposes

Ruffey Lake Park and Finns Reserve are described as primary destinations for attracting cyclists. In relation to the Ruffey Creek Linear Park the Strategy identified the following future cycling infrastructure:

- Complete the missing links along the Ruffey Trail between Parker Street and Foote Street and along Eumeralla Avenue;
- Provide pedestrian operated signals at Ruffey Creek Linear Park/McLachlan Street, as part of the planning and development for the Bicycle Strategy and Ultimate Bicycle network for additional safe crossing points within the municipality; and
- Construct an on-road connection with Ruffey Trail along Swilks /James Streets east towards Templestowe village, which was completed in 2015/16.

Walk Manningham Action Plan 2011 sets strategic directions and actions relating to improving walkability within neighborhoods. Safe and direct pedestrian links to open space tend to be associated with increasing walking for recreation and physical exercise. Completion of the Ruffey Trail will provide increased walking opportunities for health and wellbeing of the Manningham community.

The Principal Pedestrian Network (PPN) provides for the development of permanent footpath facilities and pedestrian linkages to public transport, activity centres, schools, community facilities and other pedestrian traffic generators and includes 564km of new footpaths. It is funded by Council's 10 year Capital Works

program. Footpaths identified in the PPN which connect to the Ruffey Creek Linear Park are shown in the Future Works Program Maps 1-5 and include:

- King Street, east of Ruffey Trail
- Williams Road, south of Ruffey Trail
- Romilly Avenue to Templestowe College
- Montpellier Crescent, south of Ruffey Trail to Lynwood Parade
- Dellfield Avenue, south of Ruffey Trail
- Parker Street, west of Ruffey trail to Finns Reserve
- Swilks/James Streets, east of Ruffey Trail to Templestowe Village
- Foote Street, west of Ruffey Trail to Herlihys Road.

Making Manningham Mobile 2010 is Manningham's integrated transport strategy, which aims to improve transport system performance by reducing the reliance on private vehicles and increasing sustainable transport use. The benefits include increasing health and wellbeing and reducing petrol consumption, road congestion, environmental impacts and road safety concerns. 28% of the respondents to the survey use the Ruffey Trail at least once a week as a way to get to a destination such as shops, public transport or visit family and friends.

Doncaster Hill Pedestrian and Cycling Plan 2010 works in partnership with the Making Manningham Mobile Strategy, seeking to improve the pedestrian and cycling environment specifically in and around Doncaster Hill. The purpose is to encourage a transportation mode shift and achieve associated environmental, social and health benefits.

Manningham Planning Scheme

Zones

Under the Manningham Planning Scheme the following five zones apply to the Ruffey Creek Linear Park:

Zone	Purpose	Applies To
Public Purpose and Resource Zone (PPRZ)	<ul style="list-style-type: none"> To recognize areas for public and recreation open space. To protect and conserve areas of significance where appropriate. 	Applies to approximately half of the Ruffey Creek Linear Park and includes the Crown land located between Parker and James Streets managed by Council as Committee of Management, areas of Melbourne Water land and Council land between Foote Street and Eumeralla Avenue and all the Council land between Williamsons Road and King Street.
Public use Zone-Service and utility (PUZ1)	To recognize public land use for public utility and community services and facilities.	Melbourne Water land on both sides of the Ruffey Creek between Wood Street and James Street and between Dellfield Drive and Eumeralla Dive and the large parcel of land at Montpellier Crescent.
Neighbourhood Residential Zone (NRZ)	To restrict housing growth in areas identified for urban preservation.	The area north of Wood Street and adjacent to Finns Reserve.
General Residential Zone (GRZ1)	To respect and preserve the neighbourhood character, while allowing moderate/incremental housing growth and diversity.	Sections of the Linear Park between James Street and Foote Street and includes the area required for future acquisition for the proposed trail alignment.
Low Density Residential Zone (LDRZ)	To provide low density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all waste water.	The on-road part of the Ruffey Trail area located adjacent to Eumeralla Avenue.

Overlays

The following Overlays apply to the Ruffey Creek Linear Park:

Bushfire Management Overlay (BMO)	Applies to Finns Reserve. The Linear Park includes the Ruffey Trail which extends north of Wood Street through Finns Reserve.
Schedule 2 to the Environmental Significance Overlay (ESO2) – Sites of Biological Significance	Both sides of the Ruffey Creek in Finns Reserve.
Schedule 3 to the Environmental Significance Overlay (ESO3) – Buffer Conservation Areas for Sites of Biological Significance	Both sides of the creek from James Street to Riverwood Lane; on both sides of the creek between Eumeralla Avenue and Foote Street; and to land adjacent to Montpellier Crescent.
Schedule 4 to the Environmental Significance Overlay (ESO4) – Sites of Biological Significance and Buffer Areas in Low Density Residential Areas	Land adjacent to Eumeralla Avenue, which is the on-road section of the Ruffey Trail
Schedule 5 to the Environmental Significance Overlay (ESO5) – Environmentally Significant Urban Areas	Small area located on the western side of Eumeralla Avenue.
Land Subject to Inundation Overlay (LSIO)	All land along the Ruffey Creek within the Linear Park.
Amendment C109 to the Manningham Planning Scheme (proposed Land Subject to Inundation (LSIO)).	This proposed overlay applies to all land along the Ruffey Creek within the Linear Park.
Schedule 5 to the Significant Landscape Overlay (SLO5) – Watercourse Areas	All land along the Ruffey Creek within the Linear Park.
Public Acquisition Overlay (PAO)	Portion of 3/59 Parker Street on eastern side of creek, for future acquisition for improved waterway management.
Schedule 8 to the Design and Development Overlay (DDO8) – Residential Areas Surrounding Activity Centres and Along Main Roads	Applies to land (in part) between Foote Street and Parker Street and includes the land covered by the Public Acquisition Overlay.

Appendix 3 Ecological Vegetation Class

EVC No: 47

EVC Name: Valley Grassy Forest

MCC Distribution: A dominant element fringing riparian and minor drainage lines throughout the study area except along the Yarra River flood plain in the far west at Bulleen. One of the most abundant EVCs in the study area.

Position in landscape: With the exception of the upper most minor gullies, Valley Grassy Forest is found fringing or buffering either Riparian Forest or Creekline Herb-rich Woodland. It is generally the dominant element of valleys on the Silurian low hills situated just above the alluvial terraces as controlled by soil patterns and moisture, which at this position in the landscape has little to do with aspect.

Geology/Soils:

Ecological notes: Valley Grassy Forest occupies the lower, middle section of a characteristic topo-sequence typical of the region's vegetation patterning on Silurian geology that is widespread throughout the foothills of north-east Melbourne. On a transect from ridgetops to the creek or river valleys the sequence is: Grassy Dry Forest; Valley Grassy Forest; (Creekline-herb rich Forest); Riparian Forest. Often the transition with Grassy Dry Forest involves mixed ecotones that may even represent discrete Floristic Communities or EVCs. Compared to Grassy Dry Forest, the most obvious differences in Valley Grassy Forest are structural, although there are notable floristic differences that, as would be expected, reflect the increasing moisture gradient and to a lesser extent soil depth and fertility. Both the floristics and structure of this vegetation, suggest fire is likely to be just as important to the ecology of Valley Grassy Forest as Grassy Dry Forest.

Structural and floristic description:

A medium forest (to 30 m) to woodland of the lower slopes of foothill valleys encasing riparian vegetation dominated by a canopy of medium to short mixed eucalypts over a range of tall to prostrate shrubs (< 5 m) virtually all of which are indigenous. The ground layer consists of a range of medium to small (<1 m) tussock and non-tussock forming grasses plus some mat-rushes and some sedges interspersed with a range of medium to small herbaceous dicots. Some common ground ferns and climbers/scramblers are also present. A limited range of exotics occur frequently in this vegetation but can become visually dominant in the more degraded sites.

The canopy is typically characterised by mixed eucalypts including: Yellow Box, Red Box, Red Stringybark, Narrow-leaf Peppermint and Bundy. Candlebark is also a commonly recorded codominant. Cherry Ballart, Black Wattle, Blackwood and Sweet Bursaria comprise the taller shrub layer or can even codominate with the eucalypts where canopy height growth is limited. Radiata Pine and Sweet Pittosporum are the only consistently present larger woody weeds of this EVC.

The typical medium to small shrubs include species such as Burgan, Drooping and Common Cassinia, Hedge Wattle and Common Heath. Also typical of the drier vegetation, prostrate shrubs are relatively common in Valley Grassy Forest: Common Hovea and Creeping Bossiaea. Only one exotic, Blackberry, features consistently in this element of the vegetation.

On the ground the most common indigenous graminoids include: Kangaroo-grass, Wattle Mat-rush, Weeping Grass, Yellow Rush-lily, Black-anther Flax-lily and Grey Tussock Grass. Whilst often in great abundance, like Grassy Dry Forest, three exotic grasses occur frequently in this vegetation: Sweet Vernal-grass, Large Quaking-grass and Panic Veldt Grass.

A great richness of herbaceous dicots are usually found in abundance within the graminoid intertices. Species such as Common Raspwort, Small Poranthera, Kidney-weed, Chocolate Lily, Small St John's Wort, Shady Wood-

sorrel and Bidgee-Widgee are examples. Cat's Ear, Ribwort and Common Century are the most commonly encountered exotic herbs - an element of the vegetation that is sometimes quite abundant.

The consistent present of the common ground ferns, Common Maiden-hair and Austral Bracken plus the four common climbers/scramblers, namely: Purple Coral-pea, Small-leaved Clematis, Common Appleberry and Love Creeper, are indicative of the increasing moisture gradient down slope from typical Grassy Dry Forest on the hill tops.

Comparison with general description:

In comparison with the description in Oates and Taranto (2001), Manningham's Valley Grassy Forest differs in the following ways:

- Whilst frequently present, Candlebark is rarely dominant and Messmate Stringybark is very rarely present.
- Low frequency of Golden Wattle and Lightwood.
- High frequency of a range of ericoid and other shrubs such as Honey-pots and Common Heath typical of Grassy Dry Forest
- High frequency of Silvertop Wallaby-grass and a lower frequency of Spear-grasses and other Wallaby-grasses (*Austrodanthonia* spp.)
- High frequency of Common Raspwort
- Low frequency of typical broad-leaf herbs such as Australian Buttercup and Austral Bear's Ears.

In general the Valley Grassy Forest of Manningham is likely a "dry" variant of that described for the greater Port Phillip region in Oates and Taranto (2002), and perhaps represents a discrete Floristic Community closely related to Grassy Dry Forest. Alternatively, community analysis could point to this vegetation being more comfortably considered a "wet" variant of Grassy Dry Forest or maybe even a complex ecotone between these two EVCs. It would appear that the composition and structure of the canopy and taller shrub layers has likely been used to drive the field-based EVC mapping in this area.

EVC	LIFE	ORIGIN	NAME	COMMON NAME	FAMILY NAME	REG?	MCC
FREQ	FORM						FREQ
Trees and Large Shrubs							
70	LS		Exocarpos cupressiformis	Cherry Ballart	Santalaceae		330
63	LS		Acacia mearnsii	Black Wattle	Mimosaceae		286
51	T		Eucalyptus melliodora	Yellow Box	Myrtaceae		265
48	LS		Acacia melanoxylon	Blackwood	Mimosaceae		240
45	T		Eucalyptus polyanthemos	Red Box	Myrtaceae		254
43	T		Eucalyptus macrorhyncha	Red Stringybark	Myrtaceae		342
34	T		Eucalyptus radiata s.l.	Narrow-leaf Peppermint	Myrtaceae		169
34	T		Eucalyptus goniocalyx s.l.	Bundy	Myrtaceae		280
34	LS		Bursaria spinosa ssp. spinosa	Sweet Bursaria	Pittosporaceae	EA92	222
29	LS	#	Pittosporum undulatum	Sweet Pittosporum	Pittosporaceae		240

EVC FREQ	LIFE FORM	ORIGIN	NAME	COMMON NAME	FAMILY NAME	REG?	MCC FREQ
29	T	*	<i>Pinus radiata</i>	Radiata Pine	Pinaceae		169
28	T		<i>Eucalyptus rubida</i>	Candlebark	Myrtaceae		100
24	T		<i>Eucalyptus viminalis</i>	Manna Gum	Myrtaceae		104
Shrubs and Prostrate Shrubs							
53	S		<i>Kunzea ericoides</i>	Burgan	Myrtaceae		220
44	S		<i>Cassinia aculeata</i>	Common Cassinia	Asteraceae		269
40	S		<i>Cassinia arcuata</i>	Drooping Cassinia	Asteraceae		205
38	S		<i>Acacia paradoxa</i>	Hedge Wattle	Mimosaceae		125
31	S	*	<i>Rubus fruticosus</i> spp. agg.	Blackberry	Rosaceae		159
29	S		<i>Epacris impressa</i>	Common Heath	Epacridaceae		158
28	PS		<i>Hovea heterophylla</i>	Common Hovea	Fabaceae		170
28	PS		<i>Bossiaea prostrata</i>	Creeping Bossiaea	Fabaceae	EA97	138
26	PS		<i>Acrotriche serrulata</i>	Honey-pots	Epacridaceae		221
26	S		<i>Platylobium obtusangulum</i>	Common Flat-pea	Fabaceae	EA97	171
26	PS		<i>Acacia aculeatissima</i>	Thin-leaf Wattle	Mimosaceae	EA97/92	121
25	S		<i>Dillwynia cinerascens</i> s.l.	Grey Parrot-pea	Fabaceae	EA97	240
25	S	*	<i>Rubus</i> sp. aff. <i>armeniacus</i>	Blackberry	Rosaceae		144
23	S		<i>Acacia genistifolia</i>	Spreading Wattle	Mimosaceae		171
23	S		<i>Coprosma quadrifida</i>	Prickly Currant-bush	Rubiaceae		120
21	S		<i>Pimelea humilis</i>	Common Rice-flower	Thymelaeaceae		211
21	S		<i>Daviesia leptophylla</i>	Narrow-leaf Bitter-pea	Fabaceae		155
20	S		<i>Cassinia longifolia</i>	Shiny Cassinia	Asteraceae		100
Large to small tussock and non-tussock forming graminoids							
69	MTG		<i>Themeda triandra</i>	Kangaroo Grass	Poaceae		340
63	MG		<i>Lomandra filiformis</i>	Wattle Mat-rush	Xanthorrhoeaceae		417
63	MG		<i>Microlaena stipoides</i> var. <i>stipoides</i>	Weeping Grass	Poaceae		468
58	SG	*	<i>Briza maxima</i>	Large Quaking-grass	Poaceae		328
44	MTG	*	<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	Poaceae		309
41	MTG		<i>Poa sieberiana</i>	Grey Tussock-grass	Poaceae		155

EVC FREQ	LIFE FORM	ORIGIN	NAME	COMMON NAME	FAMILY NAME	REG?	MCC FREQ
33	MG		Tricoryne elatior	Yellow Rush-lily	Phormiaceae	EA97/92	151
28	MTG		Joycea pallida	Silvertop Wallaby-grass	Poaceae		221
23	MTG		Dianella revoluta s.s.	Black-anther Flax-lily	Phormiaceae		130
23	MTG		Lepidosperma laterale	Variable Sword-sedge	Cyperaceae	EA92	163
20	MTG		Dianella revoluta s.l.	Black-anther Flax-lily	Phormiaceae		192
20	MG	*	Ehrharta erecta var. erecta	Panic Veldt-grass	Poaceae		148
Large to small herbaceous dicots and geophytes							
64	H		Gonocarpus tetragynus	Common Raspwort	Haloragaceae		419
59	H	*	Hypochoeris radicata	Cat's Ear	Asteraceae		478
43	SH		Dichondra repens	Kidney-weed	Convolvulaceae		175
40	SH		Poranthera microphylla	Small Poranthera	Euphorbiaceae		291
35	G		Arthropodium strictum s.l.	Chocolate Lily	Anthericaceae		220
34	H	*	Plantago lanceolata	Ribwort	Plantaginaceae		227
30	SH	*	Centaurium erythraea	Common Centaury	Gentianaceae		170
29	SH		Hypericum gramineum	Small St John's Wort	Clusiaceae		243
28	H		Oxalis exilis	Shady Wood-sorrel	Oxalidaceae		116
28	H		Acaena novae-zelandiae	Bidgee-widgee	Rosaceae		173
25	H		Brunonia australis	Blue Pincushion	Brunoniaceae	EA97/92	141
23	H		Viola hederacea sensu Willis (1972)	Ivy-leaf Violet	Violaceae		150
23	H		Drosera peltata ssp. auriculata	Tall Sundew	Droseraceae		216
21	H		Stackhousia monogyna	Creamy Stackhousia	Stackhousiaceae		75
20	G		Burchardia umbellata	Milkmaids	Colchicaceae		189
Ferns and fern allies							
33	GF		Pteridium esculentum	Austral Bracken	Dennstaedtiaceae		150
23	GF		Adiantum aethiopicum	Common Maidenhair	Adiantaceae		119
Climbers and Scramblers							
40	CL		Hardenbergia violacea	Purple Coral-pea	Fabaceae		227
36	CL		Clematis microphylla	Small-le Avenued Clematis	Ranunculaceae		134

EVC FREQ	LIFE FORM	ORIGIN	NAME	COMMON NAME	FAMILY NAME	REG?	MCC FREQ
23	CL		Billardiera scandens	Common Apple-berry	Pittosporaceae		142
20	CL		Comesperma volubile	Love Creeper	Polygalaceae		105
Other incl. Bryophytes							

Appendix 4 Land Tenure and Management Details

Approximately two thirds of the land within the Linear Park is owned and managed by Manningham Council and Council manages Crown Land between James and Parker Streets. Melbourne Water freehold land comprises approximately one third of land within the Linear Park. Figure 3 in Section 2 shows the location of these parcels.

Tenure	Area (ha)	No. of land parcels
Melbourne Water	2.97	8
Manningham City Council	6.10	22
Crown Land	0.44	3
PAO – future acquisition	0.02	1 (portion)
Proposed additional land acquisition	0.12	3 (portion)
Proposed road discontinuances	0.71	3 sections
TOTAL	10.36	40

Ruffey Creek Linear Park Land Tenure

Manningham City Council

Council freehold land comprises 22 land parcels with an area of 6.10 hectares and includes the following areas:

- Land on the eastern side of the Ruffey Creek in three contiguous land parcels at James Street;
- Land on both sides of the Ruffey Creek between Parker and Foote Street separated by private land. This area is a missing link on the Ruffey Trail;
- Land on the western side of the Ruffey Creek at Airdrie Court;
- Land adjoining Melbourne Water land between Dellfield Drive and Nambour Road; and
- Land between Montpellier Avenue and King Street

Melbourne Water

Melbourne Water land within the Ruffey Creek Linear Park comprises 8 land parcels with a total area of 2.97 hectares and includes the following areas:

- Land on both sides of the Ruffey Creek between Wood Street and James Street;
- Land on both sides of the Ruffey Creek in two separate small land parcels at James Street ;
- Land on both sides of the Ruffey Creek between Foote Street and Nambour Avenue; and
- Land predominantly on the northern side adjoining Council land at Montpellier Avenue.

Melbourne Water is a waterway and floodplain manager and has jurisdiction over the main waterways, including the Ruffey Creek. As waterway manager for the bed and banks of Ruffey Creek, Melbourne Water has the responsibility to review and approve new path proposals, including bridge crossings and boardwalks, along the waterway. It also has the responsibility to advise Councils about matters of flood risk and limitations in the design and construction of waterway paths and infrastructure.

Crown Land

Crown Land managed by Manningham City Council within the Ruffey Creek Linear Park comprises 3 land parcels with a total area approximately 0.44 hectares. It includes land on both sides of the Ruffey Creek between Parker and James Streets. The bushland within Swilk Reserve between the bowling club facility and James Street consists a small part of an adjacent Crown land parcel and will be managed as part of the Linear Park.

Land Management

Manningham City Council Maintenance Regime

Council manages its bushland and mown areas along the Ruffey Creek which require different levels of maintenance and are shown on Maps 1-5 and include:

Maintenance Program	Activities	Frequency
Mown Areas	Mown areas are those that are grass and mostly open and may contain scattered trees.	Every six weeks
Bushland Management	<p>The 'Minimal 'Weed Management Zone as defined by <i>Manningham's Healthy Habitats: Bushland Management Strategy 2014</i> applies to the management treatment for all Council's bushland areas within the Ruffey Creek Linear Park. These areas generally consist of lowest 'quality' indigenous vegetation. Dominated by weeds and sometimes with no or very little indigenous groundstorey vegetation, but still have habitat value. Supplementary planting of small shrubs, trees and vines can be undertaken to improve the creek corridor. The management objective for this zone is to manage woody and vine weeds and any other weed species where control is a legislative requirement. Aim to prevent further quality decline as far as practical. Supplementary planting may occur as appropriate to enhance diversity.</p> <p>Council undertakes weed control around planted tube stock in the riparian zone between King Road and Williamsons Road as part of the Melbourne Water Grant program. Targeted weed species include Kikuyu Grass <i>Pennisetum clandestinum</i>, Angled Onion <i>Allium triquetrum</i>, Wandering Trad <i>Tradescantia fluminensis</i>, Cle Avenuers <i>Galium aparine</i>, Oxalis species <i>oxalis incarnate/pescaprae</i></p> <p>Between Nambour Road and Dellfield Drive, weed control includes spraying, hand weeding and mow and catch of specific areas with some areas eventually never to be mown. Targeted weed species include:</p> <p style="padding-left: 40px;">Brown Top Bent <i>Agrostis capillaries</i>, <i>Watsonia meriana</i> cv <i>bulbilifera</i>, Sweet Vernal Grass <i>Anthoxanthum odoratum</i>, Wild Oats <i>Avenuaena fatua</i> and <i>Ehrharta</i> species <i>Ehrharta erecta</i> and <i>Ehrharta longiflora</i></p>	Two times per year; ultimately unmown.

Maintenance Program	Activities	Frequency
	Weed control of a small area of the Ruffey Biosite 30, comprising Council Land adjacent to the St Kevin's School between Airdrie Court and Melbourne Water Ruffey Creek frontage.	

Melbourne Water's Maintenance Regime

Melbourne Water's *Healthy Waterways* vision for Ruffey Creek is that the riparian vegetation quality remain low as it is highly modified, fragmented vegetation, but meets social and amenity requirements. Therefore the level of service and management of the Ruffey Creek is low compared to other priority waterways managed by Melbourne Water. The vegetation management approach along Ruffey creek is contained in the Melbourne Water's *Waterways Vegetation Management – Scope document* where maintenance outcomes must meet the visual, environmental and functionality values of the creek. Melbourne Water is responsible for maintaining the vegetation within the bed and banks 20 metres either side of the creek.

Maintenance undertaken by Melbourne Water along the Ruffey Creek is shown on Maps 1-5 and includes:

Maintenance Program	Activities	Frequency
Natural Resource Management	<p>Melbourne Water undertakes an Active Vegetation Preventative Maintenance Program (PM) for all of the Ruffey Creek corridor within the Linear Park. It is a maintenance program which focuses on weed control and revegetation. The weeds mainly targeted are <i>Watsonia Watsonia meriana</i>, Bridal Creeper <i>Asparagus asparagoides</i>, Arum Lily <i>Zantedeschia aethiopica</i>, Hawthorn <i>Crataegus monogyna</i>, Prunus, Tobacco and Broome. Juvenile tree and canopy species like Ash, Elm and Willow are also targeted but mature species are not treated or controlled.</p> <p>Melbourne Water is considering a grant to remove willows and woody weeds along the section of the Ruffey Creek between King Street and Williamsons Road.</p>	Monthly
Grass Management	<p>There are three Active Preventative Maintenance Programs for grass management. Two PMs involve a prescription for grass cutting to maintain the level of service associated with land asset. The areas include grass areas, nature strips and various handwork sites approximately 1.8 kilometres along the waterway between Riverwood Lane to Nambour Road at four visits per year.</p> <p>The third maintenance program involves grass cutting on land- edge treatment which extends approximately 1.8km along the Creek between the footbridge north of Ruffey Street (Finns Reserve) and Montpellier Reserve.</p>	<p>Four times per year:</p> <p>January, April, September and November</p>

