A Proposal* for an Improved, Compliant, Safe and Environmentally Sensitive Lower Merri Creek Trail (MCT) and part Capital City Trail (CCT)



The Lower Merri Creek Trail has been a blessing for residents of Yarra, Darebin and Moreland during coronavirus isolation times. It has proved ideal for exercise and recreation within easy reach of the homes of thousands of northern suburbs residents. However, the Merri Creek environment is now much more than just a location for exercise. With many plantings around 30 years old, the contact with nature experience it offers dissipates anxiety, refreshes and invigorates. The atmosphere it exudes exemplifies in a microcosm what good urban liveability can be about. What's more, people are voting with their feet. The sheer number of users of recent weeks say they want more of this. The following proposal explores how this can be provided and how numerous problems with the Lower MCT that limit its capacity can be overcome.



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EXECUTIVE SUMMARY

The Proposal

• This paper outlines a proposal to re-build sections of the Lower Merri Creek Trail (MCT) mainly between Sumner Park in Brunswick and Heidelberg Road in Clifton Hill within the municipalities of Moreland, Darebin and Yarra. The proposal also incorporates a partly new route for the Capital City Trail (CCT) in the vicinity of Rushall.

The Problem

- Various problems exist with this section of the MCT. Some parts are:
 - sub-standard due to absence of upgrade since initial construction in 1985 a time when no guidelines existed to standardise construction. For example, one section of the MCT is only 1.4 metres wide, when the contemporary standard that permits higher volumes of safe use, is 3m.;
 - not located within or overlooking the creek valley and requires diversion of cyclists and walkers onto local streets. This arose from the difficulty of achieving an offroad location in 1985. These sections do not constitute a safe, accessible waterway trail, with users denied a waterway corridor experience and contact with nature;
 - unsafe due to regular flooding of some sections that puts users, including school children using the MCT to access local schools, at risk;
 - serviced by low level stream crossings that are regularly flooded and present grave risks for users. Inconsistently, in other locations on Merri Creek, low level crossings have been replaced in recognition of risk and a past fatality;
 - difficult for novice users and tourists to navigate due to lack of waterway corridor continuity, with sections of the MCT coming up out of the creek valley and onto main road bridges with narrow, sub-standard footpaths;
 - o located within the stream riparian zone that ideally should be given over to habitat and establishment of sound indigenous vegetation cover; and
 - difficult and onerous for Councils to maintain due to some MCT locations being subject to deposition of significant quantities of stream sediment (e.g. below Ida St. Reserve and under High St./Queens Pde.), or litter (e.g. at the low level bridges at Creek Pde. and East St., Northcote).
- All these problems are long-standing and persistent. The community has waited almost 40 years for these issues to be addressed. A resolution is long overdue.

The Coronavirus Context

- Social isolation required of the community during the coronavirus pandemic has caused an enormous lift in the use of local open space including the MCT. Numbers of cyclist, and more especially recreational walkers using the trail, has sky-rocketed and further underlined the need to address the above problems. On a more serious note, the section between Sumner Park and the Ida Street Reserve is not compliant with social distancing and a case exists for its closure during this time.
- Projects such as this proposal would be well suited to economic stimulus measures
 post-coronavirus. Inquiries need to be directed to Federal and State Governments to
 promote such projects as part of the economic recovery.

The Next Steps

• It is recommended that this proposal be followed up with functional and detailed design work. Various options exist for the conduct of this work. As the asset owners, it would be conventional practice for Darebin, Moreland and Yarra Councils to manage the process. Darebin, as the Council with most to gain from the proposal, could be well placed to lead and coordinate this design work. Another option, especially given experience with the lower Darebin Creek Trail, would be to commission VicRoads to lead the project through both its design and construction phases.

Preliminary Estimate Cost

A preliminary estimate cost of works recommended in this proposal is around \$8-10M.
 Vegetation management resulting from construction would be additional and could be in the order of \$1-2M.

The Benefits

- Trail Continuity a MCT that is located within the Merri Creek valley or overlooks it, achieves continuity for users who would no longer need to use footpaths on main roads and local streets to link up sections of the trail.
- Safety the proposed MCT offers a safe route that would comply with contemporary
 Melbourne Water guidelines ensuring users can continue to use the trail soon after
 most flood events and would be prevented from crossing on dangerous low level
 bridges during or immediately after floods. These new sections of the MCT would also
 mostly permit reasonable separation between all its users avoiding accidents.
- *User Experience* the proposed MCT provides an experience that offers tranquility, contact with nature and exposure to sites of geological and geomorphological significance (e.g. cliffs below Rushall Station). The proposed route immerses users in a natural environment that can re-fresh and re-invigorate and is critically important to wellbeing during the coronavirus lockdown.
- **Economic Stimulus** the circumstances for these works (low interest rates, the urgent need for economic stimulus and employment generation, likely availability of funds from other levels of government, works that can only be done via the public sector) could not be more opportune. Advantage must be taken of such circumstances to construct these works that will offer social benefit for the next 100 years or more.
- Environmental 35 years ago when the MCT was first built, its major environmental benefit was seen as permitting public access to a degraded resource that would generate public pressure for rehabilitation. This proved correct. Early construction of the MCT boosted efforts to turn wastelands into parklands. The works proposed here will be no different. The section where this most applies is at Rushall. Here, the creekside environment is highly degraded and the trail route will require vegetation works in order to have it constructed, and/or will require further vegetation management post construction.

The proposed works will also eliminate the option to permit through public access on the Darebin side of the stream downstream of High Street. This will help improve habitat values in this section. Overall, vegetation management works would extend over the entire project length from Sumner Park, Brunswick to Heidelberg Road.

1. Background – the growth in a significant community asset – the Merri Creek Trail (MCT)

In the early 1980s a proposal to build a path along Merri Creek downstream of Mahoneys Road to the Yarra River was first developed. From that time, sections of the trail were incrementally constructed. Trail works were undertaken by councils, of which there were eight at that time, along this urbanised section of Merri Creek.

By 1985, an opening event was planned for the MCT. This focused the minds of councils and works were rapidly progressed to meet the opening deadline. Land acquisitions occurred and some corners were probably cut with planning of the route not as thorough as what it may have been in less pressured circumstances.

The Prime Minister, the late Bob Hawke, formally opened the Trail on Sunday 6 October 1985. The opening of the MCT was an historic event and one that significantly increased the profile of the Merri Creek Parklands that, at the time, were in a very under-developed and highly degraded state having suffered decades of neglect and abuse following European settlement.

Since 1985, and especially in the last decade, numerous additional improvements to the MCT have occurred. Narrow reaches have been replaced with much wider trail sections; boardwalks have been constructed to raise the level of the trail to meet contemporary standards and keep people safe; flood-prone low level bridges have been replaced with higher crossings; the trail has been moved away from the top of creek bank to enable riparian zone rehabilitation and improved habitat; and non-slip surfacing has been applied to sections of the trail to prevent accidents.

Community use of the facility has grown enormously and justified the significant expenditure made by councils, sometimes with assistance from other levels of government.

Creek valleys are critically important to open space provision in the northern suburbs. They engage people with nature; they are an educational resource; they support the rehabilitation of indigenous species; and they provide a recreational link for pedestrians and cyclists. Many of these functions are possible because of safe, environmentally sensitive trail provision.

2. Today's MCT



In recent weeks during the coronavirus pandemic, use of the MCT has increased in proportions never before witnessed, as people flock to local parkland to exercise and make contact with nature for a short time before retreating to home isolation.

Thousands of people are now using the MCT on a daily basis, especially while Melbourne's autumn weather is still benign. High levels of use may continue for many more months until the health crisis abates.

The Lower MCT has come into its own as a major recreational resource for residents of Yarra, Darebin and Moreland.

However, in the context of the coronavirus crisis, the need for social distancing has also exposed the deficiencies of small sections of old, narrow (1.4m wide) parts of the MCT located in confined valley spaces. In these locations it is not possible to exercise social distancing given the number of pedestrian and cyclists currently using the MCT. This has added another dimension to the need to upgrade sections of the trail.



In overall terms, the MCT of 2020 has a diverse set of users. It has a significant number of commuter cyclists, especially between Bell Street and St. Georges Road, but also has strong use by recreational walkers and joggers throughout the day. Walking groups and older cycling groups are frequent users both during the week and at weekends. The trail is mostly 2.5 to 3 metres wide and is now much better signposted than in previous years. The popularity of the MCT has also brought issues, with speeding cyclists a perennial problem and even a threat to other users. The nature of the MCT as a shared trail is insufficiently understood by many of its users.

Today's MCT takes users through extensive areas of revegetated parkland, areas of geological significance, as well as remnant native grasslands. The MCT is now highly rated as one of Melbourne's tourist attractions.

3. Sub-standard sections of the MCT along the Lower Merri Creek

This proposal seeks to draw attention to sections of the Lower Merri Creek Trail where improvements are still required to create a fully off-road trail and bring it to a standard compliant with contemporary guidelines.

While it is recognied that the trail should be broadly located within the creek valley, or overlooking it, it also needs to be located with appropriate long-term environmental sensitivity and with regard to public safety. The proposal in part seeks to continue more recent works that have seen the MCT removed from top of stream bank locations where it unduly compromises rehabilitation of riparian environments and their associated habitat. This proposal focuses on the high use lower Merri Creek from Beavers Road, Northcote to Heidelberg Road in Clifton Hill. This section of the trail has the following issues.

3.1 Beavers Road

In 2019, Moreland and Darebin Councils agreed to proceed with a new \$3M bridge across Merri Creek from Beavers Road on the Northcote side, to Kingfisher Gardens on the Brunswick side. The followed extensive lobbying by the local community for the crossing. Darebin Council let a contract for bridge construction following completion of detailed design and at that time, it was due for completion around the middle of 2019. In more recent times works have stalled for reasons that are not entirely clear and the revised completion date of April 2020 has been exceeded. Some revegetation works will accompany the bridge construction. There does not appear to be any external grant funding associated with construction.



The partially constructed Beavers Rd. bridge with new unit development in the background

3.2 Sumner Park to Downstream of St. Georges Road

From the downstream end of Sumner Park, Brunswick, the MCT reverts to a narrow 1.4m width. This is an original section of the MCT built in 1985.

While Moreland has invested heavily in upgrading numerous sections of the MCT to achieve compliance with Melbourne Water Guidelines and deserves considerable credit for that, this section of the MCT has not yet been improved.

The trail is located below the 1 in 5 year flood event and therefore does not meet Melbourne Water Guidelines.

With today's coronavirus mandated need for 1.5m separation between people, this section of the MCT simply cannot conform to that requirement. Even if users step off the path onto the creek verge (possible only at some points), social distancing is still difficult, if not impossible. If the verge is muddy and slippery after a rainfall or flood event, distancing is further constrained.

Given this, a question does arise about whether this section of the MCT should remain open during the coronavirus crisis while social distancing is required.



MCT below the Alister St. levee bank looking downstream.

At only 1.4m wide, at the best of times, the MCT cannot safely accommodate recreational walkers, walkers with dogs, walkers with headphones, cyclists of all ages and abilities and parents with prams.

Currently, it clearly does not comply with COVID-19 social distancing requirements.



MCT downstream of the Glenlyon Road Drain at the southern end of Sumner Park,
Brunswick. Merri Creek at left.

The Merri Creek Trail Review (2007) indicated some of the issues with this section and indicated a number of options to deal with them. It is proposed that a new wider path be constructed on an elevated boardwalk and retaining-wall-supported bench along the levee bank at the rear of the Alister Street properties. The precise location of the trail would be determined by the 1 in 5 year flood event in relation to the levee bank.

Construction would also disturb vegetation planted along the levee and re-planting would be necessary. Revegetation will need to be included as a project component throughout.



New MCT proposed on elevated boardwalk and bench on levee bank downstream of Glenlyon Road Drain outfall and requiring a new crossing of the Drain outfall.

At its downstream end, the elevated boardwalk would come off the levee bank and meet the existing trail as it rises up to the Ida Street Reserve (marked with arrow below). From here, the trail could be taken up over the rise continuing south within the Reserve.



The existing sub-standard MCT shown at left in the photo above would be discontinued. This old section of the MCT is regularly subject to sediment deposition. These have formed significant mounds invaded by Kikuyu grass. The mounds mean that cyclists struggle to pass on the 1.4m wide trail as shown below. An accident is waiting to happen because of these unsafe, non-compliant conditions.

The abandonment of the trail here and its re-location to higher ground would mean that sediment benches could be planted and riparian habitat improved.



Obviously pedestrians have no opportunity to walk on the narrow 1.4m wide trail when cyclists approach from both directions.

Preliminary estimate cost for benched path and elevated boardwalk along Alister Street levee to Ida Street Reserve: \$0.6M

The proposed MCT would then run along the eastern side of the Ida Street public housing complex to the municipal boundary between Moreland and Yarra. The 220kV underground cable in this location would need to be avoided.



Proposed MCT through the eastern side of Ida Street Reserve

Taking the MCT up to this high level near the boundary facilitates a crossing to higher ground on the Darebin side.



Proposed bridge crossing point to the south side of the properties in Elizabeth Street,
Northcote

The new bridge was recommended in the Merri Creek Trail Review (2007) and would take the trail onto the Darebin side to the south of properties in Elizabeth Street, Northcote

Preliminary estimate cost for Ida Street Reserve to Elizabeth Street, Northcote, including bridge: \$1.9M

Downstream of Elizabeth Street, the trail would continue on the northern side of Merri Creek. The 220kV cable in this location would need to be avoided and worked around. The cable may follow at least some of the access track shown in the foreground of the photo below. The new MCT may need to be benched within the revegetated area at left of the photo to avoid the cable.



The access track down to beneath the St. Georges Road bridge is probably the location also of the Brunswick-Richmond 220kV cable.



Possible height (arrowed) of elevated boardwalk under the St. Georges Road

At the St. Georges Road bridge, where strengthening works are almost complete, an elevated boardwalk section (at a height as arrowed in above photo) may need to be hung off the northern abutment of the bridge to avoid interference with the cable and to assist transitioning of the MCT through to Green Reserve.

Downstream of the bridge, the MCT would also require combined boardwalk/benching to permit it to rejoin the existing MCT in Green Reserve, Northcote (as arrowed below). This would avoid following the route of the 220kV cable and take the MCT onto the existing trail over as short a distance as possible. Though uncertain, there appears to be some existing benching of this slope.



Proposed route for boardwalked and benched MCT from under St. Georges Road bridge to Green Reserve, Northcote.

Preliminary estimate cost Elizabeth Street to Green Reserve: \$0.7M

3.3 Downstream of Westgarth Street, Northcote to just downstream of Rushall Station Footbridge

From Green Reserve, the existing MCT extends to Westgarth Street and then to Cunningham Street along the east side of Merri Creek within the City of Darebin. Currently, the MCT joins local streets (Cunningham and McLachlan Streets) to transport users to the Rushall Station footbridge.

To avoid a 40 year problem of the MCT leaving the creek valley, and in light of the redevelopment of the former Monumental Masons site, it is now proposed to locate the MCT on the northern side of Merri Creek.



MCT looking north at Cunningham Street, where the trail connects to local streets.

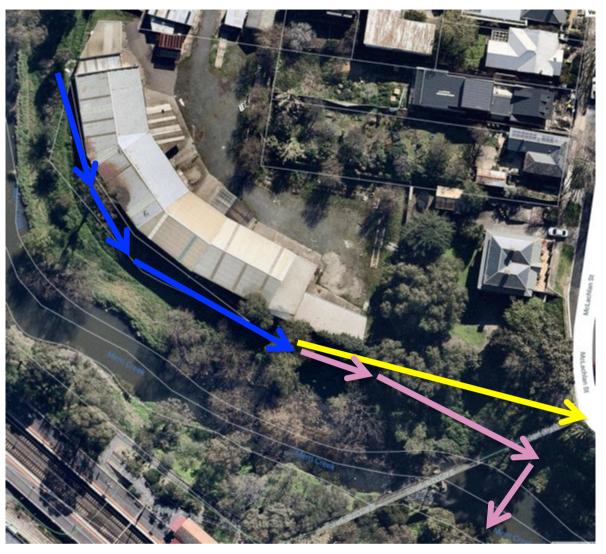
In addition, given City of Yarra has recently abandoned plans to construct the MCT through Rushall Reserve, the trail now must be constructed on the Darebin or northern side, if it is to be off-road - as was always intended. The MCT will therefore need to pass along the creek side of the proposed townhouse development at the former Monumental Masons site, skirting its perimeter.

Planning approval for the development of this site requires a 12 metre setback of buildings from the property boundary. The boundary roughly accords with the alignment of the retaining wall along the creekside of the site. Public land exists on the creek side of the development site and this is likely to offer sufficient room for construction of the MCT. However, if it is to be an elevated boardwalk, this could invite overlooking concerns and objection. The 12 metre setback could be used to achieve screening of the MCT in order to alleviate these concerns, albeit that this 12 metre setback is all within private land.

Depending on the preferred route, there may also be issues associated with some private land ownership in this vicinity. These matters will need to be worked through via either part purchase or lease of land.

Importantly, it should also be noted that this proposed new location for the MCT will also become the new route for the Capital City Trail (CCT), as the CCT uses part of the MCT to form its route in this vicinity. The CCT would then avoid being routed through the Rushall Station underpass. Instead, the CCT use the Koonda Lat bridge and the MCT parallel with Merri Parade and the new route proposed here around the former Monumental Masons property. The co-location of the CCT introduces a potential new funding source for this proposal.

The proposed new route for the MCT around the southern flank of the former Monumental Masons property is shown below on an aerial image. Two options for its downstream end are marked with yellow and pink arrows and these will be discussed below.



Aerial image of former Monumental Mason site, south side of Cunningham Street, with Rushall Station footbridge at the downstream end.

The route for the proposed MCT is marked in blue and located on public land on the creekside of the new development. Options 1 (yellow) and 2 (pink) for the more downstream section are shown.

The pink option would locate a new MCT bridge immediately downstream of the existing Rushall footbridge thereby helping reduce visual impacts on the upstream environment, especially when seen from the existing footbridge. It would also preserve the extended riffle upstream of the footbridge and minimise intrusion into it. These options are described below in more detail.



West end of Cunningham Street with former Monumental Masons site at left and proposed route for MCT as arrowed.



South or creek side of Monumental Masons site looking south-east with remnant Yellow Gum in centre. The retaining wall at left is thought to be the property boundary. Care would need to be taken with construction of the elevated boardwalk on the creekside of the root zone of the Yellow Gum. The elevated boardwalk would need to begin in the foreground of this photo.

The slope below the Monumental Masons site appears to be unconsolidated fill and is heavily weed infested. Given this and various other factors, the trail would need to be an elevated boardwalk structure. This would need to begin alongside where existing buildings begin to curve around the southern flank of the site.



The elevated boardwalk would roughly follow the alignment of the existing goat track (arrowed). Remnant Yellow Gum at right.



Minor retaining walls (arrowed) are evident on the south side of the Monumental Masons site and were presumably constructed to retain fill. The property boundary here is uncertain as it could be either the retaining wall or the fence line above.

There are two options for the boardwalked trail route after it leaves the former Monumental Masons site at its eastern end. A decision about a preferred option may pivot around the issue of whether there should be two bridge crossings in the same vicinity, or whether that would be unsightly and inappropriate in this location, or whether the footbridge should be retained. The two options are as follows.

(i) Option 1, yellow arrows from earlier image and below (New Bridge to Replace Old, Existing Rushall Footbridge, with its demolition) - continue to take the MCT on a raised boardwalk along the north side of the valley to have it rise up to near the existing Rushall Station footbridge roughly where McLachlan Street and Walker Street meet.

The new bridge would likely begin slightly further east in Walker Street to avoid too sharp a bend associated with bridge entry from the corner of Walker and McLachlan Streets. The new bridge would replace the old footbridge (very narrow - approx. 1.7m and condition unknown) and would be built to contemporary standards allowing a 3m. wide deck.

The old footbridge, owned and managed by VicTrack, would, with their permission, be demolished following construction of the new bridge. It is possible that construction of a new bridge in the vicinity of the old could cause the latter's closure at some point during construction. This may depend on the distance separating the two and set up points for cranes.

The new bridge could be curved and may not require connection to the same point on the south bank as the old bridge. While this is all uncertain at this stage, if the new bridge has a different connection point on the Rushall side, the old footbridge could potentially stay open for much of the time of construction. Disruption and potential closure of the existing footbridge would need to be factored into a decision about this option.



Option 1 - the rise up to the Rushall Station footbridge is steep and elevated boardwalk would be required to manage the slope and would be preferable to fill and benching. It may be desirable for the crossing to commence a short distance east along Walker Street, rather than at the corner of McLachlan Street.

(ii) Option 2 (pink option from earlier photo) - take the raised boardwalk from the western side of the Monumental Masons property around its southern flank. This would be the same location as for Option 1 through this section.



Proposed MCT around the southern flank of the former Monumental Masons property. It would roughly follow the alignment of the existing goat track which is discernible on the above photo.

At the downstream or eastern end of the former Monumental Masons property, Option 2 would diverge slightly from Option 1 by taking a lower or more southerly route — albeit still on an elevated boardwalk. From this point, Option 2 would form a horse-shoe shape to take it under the existing footbridge as shown below. This horse-shoe shape is required to permit a perpendicular crossing of Merri Creek, in line with Melbourne Water requirements, and to allow gentle curves to create safe conditions via good sightlines on the elevated boardwalk.

This route will optimise protection of the extended stream riffle upstream of the footbridge with location of the new crossing on its downstream side away from the extended riffle and the geologically significant cliff face that occurs immediately north of Rushall Station.

This option therefore seeks to take account of environmental sensitivities associated with Merri Creek. The option also implies that work would occur within the riparian zone with possible removal of invasive Wilows and other works to control significant weed infestations on the northern slopes.

Under this option the footbridge would <u>not</u> be demolished and would continue to serve local crossing needs. This would comply with heritage requirements should these apply to the bridge. The existing MCT would offer continuing connection to the old footbridge.



Option 2 – in totality from the downstream end of the former Monumental Masons property to where the MCT would re-join the existing trail downstream of Rushall Station and showing the horse-shoe bend to transition the trail under the footbridge and across Merri Creek in a viable and safe configuration.

Further detail about this route will be outlined on the following pages.



Notional location of the west end of the elevated horse-shoe shaped boardwalk as it approaches the Rushall footbridge. The proposed MCT would pass between the deciduous shrub at left (red arrow) and the pylon shown with a red arrow below.



The proposed MCT would pass under the footbridge on the south or stream side of the red arrowed pylon. It would then cross Merri Creek on an alignment perpendicular to the stream.



Approximate alignment of the proposed MCT under Option 2, indicating the location of the landing alignment on the south bank of Merri Creek in the location of Elm and Desert Ash saplings. The elevation of the bridge could be approximately as shown with the red arrow as this may approximate to the 10 year flood level.

Because the MCT would be raised on an elevated boardwalk on the north side and the bridge would be at a consistent height over Merri Creek, the MCT would continue to be elevated on the south side for some distance as the south side bank is lower than the elevated level of the MCT. However, this will prove useful as the terrain on the south side is uneven. Established large trees on the south side will need to be avoided and damage to revegetated understorey should also be minimised. It is anticipated that there will be sufficient room on the south side to enable the proposed MCT to be graded down from its elevated position to match back into the existing MCT (see below).



The existing MCT/CCT downstream of Rushall Station.

Option 2 would cause less disruption as it would leave the old footbridge in situ and it may only need to be closed for a short period during works when cranes lift sections of the new bridge into place. It would also remove a short section of steep gradient of the MCT travelling west up to Rushall Station from downstream.

As indicated previously, both options would provide a new route for the Capital City Trail (CCT) and resolve a perennial issue where this trail uses the Rushall Station underpass as part of its route.

Of the two options, Option 2 is recommended due to greater ease of construction and less cost.

Preliminary estimate cost:

Option 1 in its entirety from Cunningham St. - \$5M.

Option 2 in its entirety from Cunningham St. - \$4M.

3.5 High Street Underpass

At the City of Yarra's Brennan Street drain outfall, the MCT/CCT begins to drops down to a very low level to pass under High Street.

It is proposed that an elevated boardwalk be constructed from the Brennan Street drain outfall to convey users under High Street and connect with the existing new MCT/CCT that takes users alongside Coulson Reserve and Heidelberg Road to Hall Reserve.

It may be necessary to provide a new culvert crossing of the Brennan Street drain outfall depending on the alignment of the boardwalk in its approach to the High Street underpass.



The High Street bridge underpass. The new MCT/CCT (arrowed) would be elevated on a boardwalk under the bridge. Investigations would need to ensure cross-sectional area for flood passage under the bridge was not compromised.



Archway under High Street bridge and approximate alignment/elevation of boardwalk.

The elevated boardwalk would be anchored in the existing MCT/CCT under the arch of the bridge and would ensure sufficient head clearance for users.

As shown in the next photo, the MCT would then rejoin the new section of the trail downstream of High Street on the slope as it rises towards the Hurstrbridge rail line.

Minor disturbance of revegetation and gabion walls would be required immediately downstream of High Street.



Approximate point of join (arrowed) of elevated boardwalk with new section of MCT immediately downstream of High Street bridge. Photo looking south-east.

Preliminary estimate cost: \$0.25M

3.6 Former MCT - High Street to Heidelberg Road

The former MCT still exists downstream of High Street as no attempt has been made to close this unsafe section of the old MCT (see MCT Review, 2007).



Photo looking west along former MCT with stairs to Clifton Hill at left.

This is despite the new trail having been completed on the City of Yarra side more than two years ago.



Photo looking east with view of new section of MCT under Hurstbridge rail line. Stairs to Clifton Hill at right and Coulson Reserve beyond.

This unsafe section of former MCT has two low level bridges described in the MCT Review (2007) as "high risk".



The Creek Parade low level bridge looking south. This bridge does not meet contemporary standards for a stream crossing as defined by Melbourne Water.

Should a crossing point need to be retained, a high level crossing attached to the Hurstbridge rail line bridge is proposed here (and in the Merri Creek Trail Review, 2007) to permit pedestrian access. The Creek Parade low level bridge could then be removed.

Preliminary estimate cost for walkway on rail bridge and removal of Creek Parade low level bridge: \$0.9M



The East Street low level bridge looking north-west.

The dangerous low level crossings through this section should be progressively removed. It is proposed that this begin with removal of the East Street bridge – a recommended action in the Merri Creek Trail Review (2007).

Preliminary estimate cost for removal of East Street bridge: \$0.1M

It is proposed that in line with Merri Creek policy, the former trail between Ross Street and Cunningham Street be removed to allow The Parade to revert to merely an unmade road as it was in 1985. This would improve habitat values through this section of Merri Creek. Sightings of Echidnas, Swamp Wallabies and Kangaroos and many other fauna and reptiles have been observed through this section of Merri Creek over many years.



Preliminary estimate cost: \$0.1M

The Parade, a gazette road, had the MCT constructed on it in 1985. It is proposed to have The Parade revert to an unmade road as the MCT through here is now redundant.

4. Total Estimate Cost of Works

Based on the above figures and excluding the Beavers Road bridge because it is a current commitment, the total cost downstream of Sumner Park could be in the order of \$8.05M (or \$9.55M if Option 1 is adopted for the Rushall Station crossing).

It must be stressed that these cost estimates are merely back of envelope calculations. Costs derived from detailed design may be significantly higher due to a range of factors revealed by detailed investigation and design.

The construction of these new sections of the MCT would require, or result in the need for some extensive vegetation management works to remove weeds and revegetate with locally indigenous species. These works have not been costed here, but could be in the vicinity of \$1-2M. Some works, such as in-stream Willow removal, would likely be funded by Melbourne Water. Some grant funding may also be available from Melbourne Water.

5. Possible Priority Order of Implementation

The following lists the works in a priority order. These priorities are not intended to be definitive. Rather they suggest how parts of the proposal package could be split up if required. This might enable different Councils with varying budget priorities and capacities to pick up works at different times.

However, it is strongly recommended that there is merit in undertaking comprehensive functional and detailed design for the whole of the package to enable full understanding of all dimensions of the proposal. This may enable greater economies of scale with design and later construction. It may also facilitate attracting funds from other levels of government especially where preference is given to larger projects that can be demonstrated to cross Council boundaries and have a regional or sub-regional focus.

The following priorities are offered to discern relative importance between project parts and to distinguish discrete works projects.

1st Priority – Design, negotiation and construction of the MCT alongside the former Monumental Mason site and connection to MCT/CCT adjacent to Rushall Station

This has become more urgent since the City of Yarra decision to discontinue works to have the MCT located within Rushall Reserve. The development of the former Monumental Masons site presents a significant opportunity to construct the MCT concurrent with the site's development and have the offset land perhaps shaped to better accommodate the MCT.

Design work should proceed in the immediate term with initial evaluation of Options 1 and 2 at Rushall associated with the existing footbridge. This is a major project and could potentially involve demolition of the Rushall Station footbridge should Option 1 be preferred.

Equal 2nd Priority - High Street underpass

This will significantly improve safety for MCT users. The underpass possibly only has 1:1 year flood protection. It will also help resolve conflict further downstream associated with the former MCT and its low level crossings and conflict along The Parade, as users will be much less able to use the former MCT route. This project is relatively easy to implement and Its construction will help City of Darebin resolve issues associated with the former MCT along The Parade.

Equal 2nd Priority - Former MCT downstream of High Street

The issues here are ones that mainly rest with Darebin and would be assisted with implementation of the High Street underpass. As the MCT has already been constructed on the south side, the issues are not urgent from a purely MCT perspective. However, it is important to ensure that policy associated with the MCT being on one side of the stream only, is observed. In addition, while ever the two low level bridges are retained, critical public safety issues are also involved and should not be taken lightly.

These two sets of works of equal priority can be considered as one and should be implemented together.

4th Priority Sumner Park to Moreland/Yarra Boundary

As suggested above, these works could be separated out from additional works to continue the MCT downstream from the proposed bridge at the Moreland/Yarra Boundary over to Elizabeth Street, Northcote.

This smaller package of works would complete the downstream end of Moreland's works on the MCT and provide additional and much needed width to the MCT, as well as overcoming regular flooding and sediment deposition problems below the Ida Street Reserve.

Construction of this section of the MCT would also invite the high level crossing to be built over to Elizabeth Street.

As the works are entirely within Moreland, the ease of design and construction recommends this package as a higher priority than the one below.

5th Priority Moreland/Yarra Boundary to Green Reserve

This is a coherent package of works dependent initially upon the construction of the bridge over to Elizabeth Street.

This is an expensive package and is perhaps not as urgent as the higher priorities, nor as straightforward to design and implement. However, design and construction of the bridge does open up numerous other opportunities and this needs to be appropriately weighed up.

6. Capital Works in a Post Coronavirus Economic Stimulus World

At present, the depth of the global and national economic recession is only just starting to come into view. To address depressed economic circumstances, it is possible that the Federal Government could announce a significant economic stimulus package focusing on public sector works and job creation. This may go beyond, and address a different target to the Jobseeker wage subsidy scheme. It could also be supported by initiatives from the State sector.

Past experience with similar projects has demonstrated the benefits for workers engaged on the project to learn workplace skills and to access training opportunities important to future employment.

In the current circumstances, projects that can be quickly developed could become candidates for funding that might arise over the next six months or more.

The proposal presented here offers a great opportunity to implement works that could take advantage of such funding and these opportunities are likely to become increasingly apparent. Any preliminary work by Councils that could facilitate later grants and investment by other levels of government is to be encouraged.

7. Environmental Benefits of the Proposal

While there has been some passing reference in the above to improvements to the riparian zone of Merri Creek that might accrue from the above works, the following summarises these and other environmental benefits likely to arise. Benefits include:

- the act of physical access for trail construction will cause some weed management works with, for example, possible removal of Willows and other woody weeds at Rushall, along with associated understory weeds.
- post construction, there will be ongoing public pressure to rehabilitate highly degraded areas along the new MCT length (e.g. below the former Monumental Masons property and around the Ida St. Reserve and the Merri Creek frontage at Elizabeth St.);
- areas that have previously been revegetated, but perhaps largely neglected since (e.g. below Green Reserve), could be subject to increased investment given they will now come into regular public view;
- areas that have significant potential for habitat such as the Northcote Gorge between High Street and Heidelberg Road, will suffer less anthropogenic pressure due to reduced use of the former trail and its reversion to a walking track;
- natural stream processes will be permitted to proceed unencumbered by trail
 access, with sediment deposition on protected, inside bends (e.g. below the Ida St.
 Reserve) and the ability to plant them to create habitat in riparian areas; and
- public appreciation of the geology and geomorphology of the Merri Creek valley will be enhanced with opportunities, for example, to view the significant Rushall escarpment from the opposite side of the stream.

The proposed works are therefore intended to offer benefits not only for human use, but to also create new opportunities for habitat and stream rehabilitation.

The proposal seeks to finally secure works to implement a vision that was first articulated 40 years ago. The community has now waited long enough to realise this vision and the current circumstances present a great opportunity to bring it to fruition.

