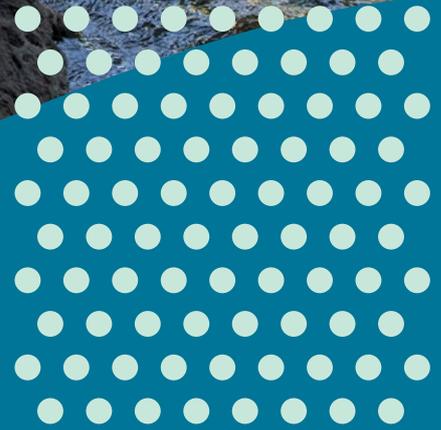




Stony Creek Rehabilitation Plan

2019 – 2029

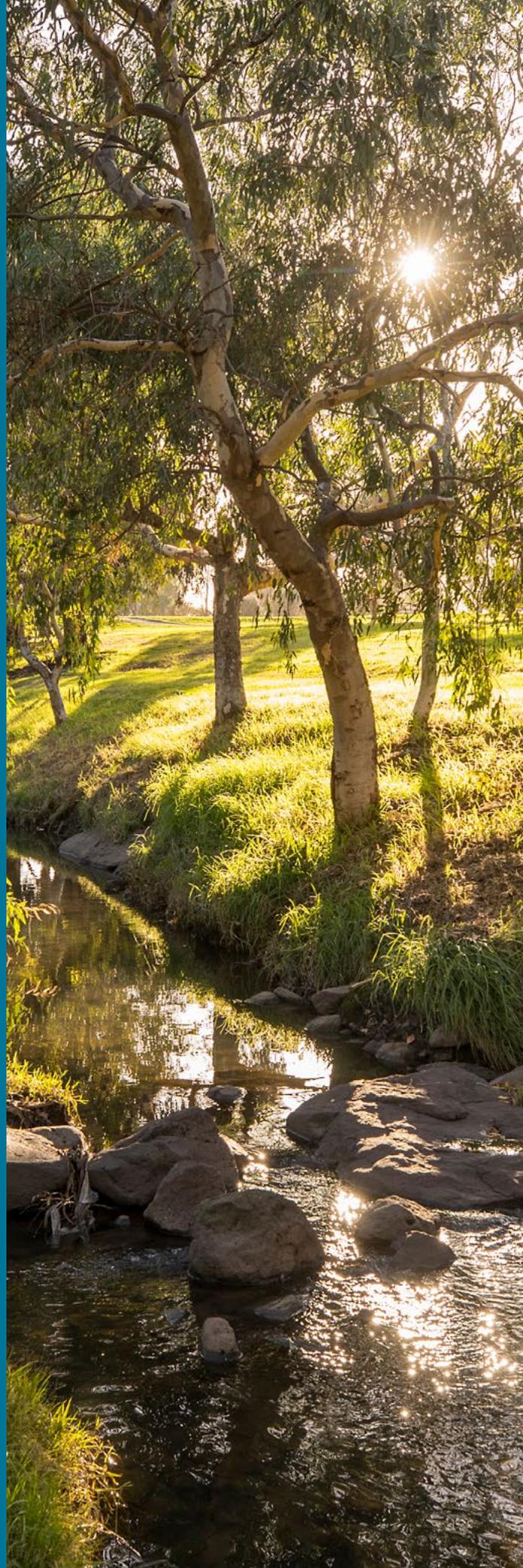


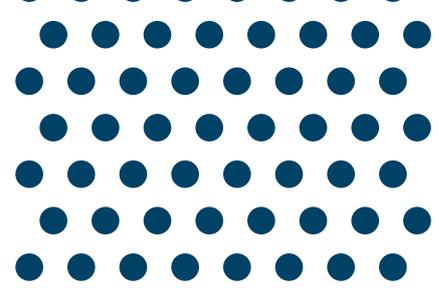
Acknowledgement of Country

Melbourne Water respectfully acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Owners and custodians of the land and water on which all Australians rely. We pay our respects to Wurundjeri, Bunurong and Boon Wurrung, their Elders past, present and future as Traditional Owners and the custodians of the land and water on which we rely and operate.

We acknowledge and respect the continued cultural, social and spiritual connections that all Aboriginal Victorians and the broader Aboriginal and Torres Strait Islander community have with lands and waters, and recognise and value their inherent responsibility to care for and protect them for thousands of generations.

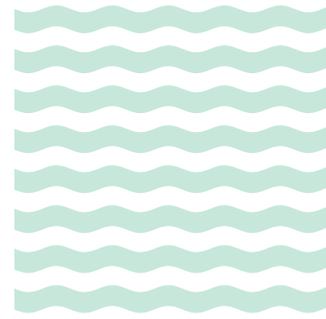
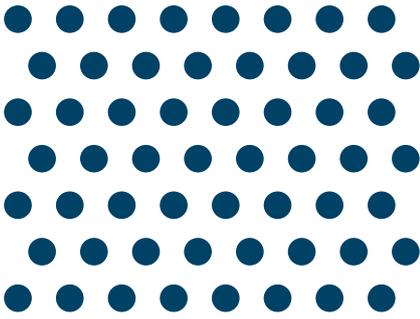
Melbourne Water acknowledge Aboriginal Victorians as Traditional Owners and in the spirit of reconciliation. We remain committed to working in partnership with Traditional Owners to ensure meaningful ongoing contribution to the future of land and water management.





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Executive summary

Stony Creek is an urban waterway that runs through Melbourne's western suburbs and flows into the Yarra River beneath the West Gate Bridge. It is highly valued by the local community, who describe it as "an oasis" and "a haven to escape to" from the noisy traffic of busy roads, and the stresses of everyday city life.

On 30 August 2018, a warehouse in the industrial precinct of Tottenham housing unregistered toxic chemicals caught fire and burned for two weeks. Firewater runoff washed into Stony Creek, causing the contamination and large-scale devastation of a five kilometre section of the creek across the residential suburbs of West Footscray, Kingsville, Yarraville and Spotswood. The incident, which affected the health and wellbeing of the local community and caused the loss of numerous plants and animals – including the death of more than 2,300 fish – has been described as the worst pollution event to a Melbourne waterway in almost 30 years.

The scale of the disaster, including the nature and extent of the contamination, the high level of community concern and significant public impacts, required a collaborative, multi-agency approach throughout the incident response and recovery efforts. Melbourne Water, Maribyrnong City Council, and the Environment Protection Authority (EPA) Victoria have continued to work closely together since the fire incident and are committed to helping Stony Creek recover.

As custodians of Melbourne's waterways, Melbourne Water understands how important waterways are to their communities. For this reason, Melbourne Water, together with our partner agencies and the local community, believed that a sustained effort was required to move beyond the recovery of Stony Creek and focus on a more positive phase of rehabilitation. Together, we wanted to develop a plan to restore, enhance and protect the condition of the creek and its surrounding environment into the future.

This rehabilitation plan has been developed in consultation with interested local community members, organisations and government agencies. Consultation and engagement has been undertaken through coordinated meetings with agencies and organisations, community events, online activities and conversations. The local community contributed their ideas, aspirations and priorities to support the long-term rehabilitation and future protection of Stony Creek. Their local insights, values and recommended actions have been used to create this rehabilitation plan.



The community vision for the future of Stony Creek is long-term and aspirational:

“We want to transform Stony Creek to be Australia’s best protected, connected and respected urban waterway – a healthy and clean natural community asset that consistently supports a thriving ecosystem. Once it’s completed, we want the Stony Creek Rehabilitation Project to be seen as a showcase for how community, government and business can partner to achieve enduring physical, social and ecological health benefits. The final outcome will connect communities to each other, communities with nature, and allow life to thrive in and along Stony Creek for generations to come.”



As a ten year strategy, the Stony Creek Rehabilitation Plan will establish the foundation for long-term rehabilitation and will help bring the community's vision to life by fostering collaborative partnerships and identifying key actions for delivery over the next ten years. While most of the actions identified by the community are achievable within this timeframe, some of the community aspirations for the rehabilitation and future protection of Stony Creek require significant, long-term changes to be made. These are likely to be achieved in a period beyond the life of this plan, although progress will be made and reported on as part of the commitments to this plan.

While being led by Melbourne Water, this plan has been jointly developed with Maribyrnong City Council, EPA Victoria and the community. The plan is consistent with agency policies and strategies including Melbourne Water's Healthy Waterways Strategy (2018-2028), Maribyrnong City Council's Stony Creek Future Directions Plan 2019, and EPA Victoria's policies and guidelines. All agencies are committed to working together to implement and/or facilitate the delivery of the rehabilitation actions. Accountability for the implementation of actions is indicated in the plan by the assignment of a lead role and support role (where required) to each action. Actions have been assigned to government agencies, organisations, and the community.

1. From disaster to recovery

Stony Creek has a long history of pollution and contamination due to decades of industrial activity. It currently suffers from urban influences such as impacts from residential and industrial development, pollution and litter, stormwater discharges, and noxious spills. Due to these influences and pressures, environmental values of Stony Creek generally tend to be low. However, the creek is highly valued by the local community for its social and recreational values, as well as the native plants and animals that it supports. An overview of the Stony Creek catchment, including its fascinating history, unique values and challenging management issues, is provided in Appendix A.

Despite Stony Creek's history with pollution and contamination, the catastrophic incident that occurred in August 2018 has been described as the worst waterway pollution event in Melbourne in almost 30 years.







The incident

In the early hours of the morning on Thursday 30 August 2018, a large fire broke out in a warehouse next to Stony Creek in the industrial precinct of Tottenham.

The warehouse was filled with unregistered containers of toxic chemical waste and the fire was soon of a scale that required extensive resources from the Metropolitan Fire Brigade (MFB). The MFB's response to the fire became the largest response to a structural fire since the Coode Island incident in 1991. A large smoke plume extended from the fire in a south-easterly direction over a number of suburbs including West Footscray, Yarraville, Kingsville, Spotswood, Brooklyn and Altona North. As a consequence, a number of roads, schools, childcare centres and businesses in the local area were closed due to concerns about air quality and risks to public health. The fire was considered to be under control late that evening but the MFB remained on site for a week to control flare ups and hotspots across the site.

Firewater runoff containing chemicals from the warehouse washed into the creek before measures were able to be put in place to divert it elsewhere. The toxic runoff flowed downstream for five kilometres, causing widespread damage to the Stony Creek environment including a significant loss of plant and animal life. After contaminated flows receded, a black sludge was left on vegetation and rocks throughout the creek. Extensive concern and anxiety from the local community resulted from the visual impacts of the contamination, as well as the strong chemical odour that lingered in the area for many months.



Figure 1: Location map of fire incident and the focus area for recovery and rehabilitation



Contamination in the creek after the fire incident



Response

Along with the MFB's response to the fire, a number of other government agencies became involved to mitigate the impacts of the fire and to provide critical information to concerned community members.

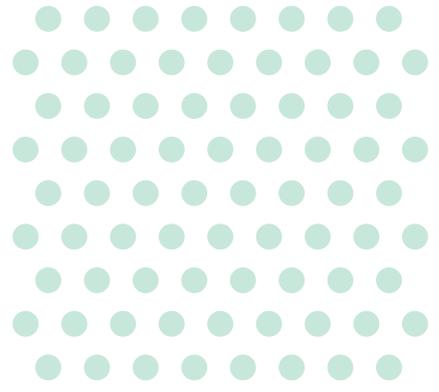
Melbourne Water pumped contaminated water from the creek into nearby sewer manholes, removing over 70 million litres of polluted water and 170 cubic metres of contaminated sediment over two weeks. Pollution containment structures were installed in the creek to collect floating contaminants for removal by suction trucks. More than 2,300 dead fish were collected from the estuary and many dead eels were collected further upstream.



Public warning signs were installed along the five kilometre section of affected creek. EPA Victoria conducted air and water quality sampling and published relevant information on their website. Maribyrnong City Council hosted two community meetings in the week after the fire to provide information to the community. Information was also circulated through media channels including radio, television and social media.

The local community played an active part in the immediate response; convening a meeting to coordinate action, involving local and national media, writing letters to Ministers, organising protests and information stalls, and sharing information amongst their networks through a number of channels including social media.





Recovery

Recovery committee

A recovery committee was established and met for the first time on 10 September 2018. This was chaired by Maribyrnong City Council and attended by Melbourne Water, EPA Victoria, Hobsons Bay City Council, the Department of Environment, Land, Water and Planning (DELWP), the Department of Health and Human Services (DHHS), the MFB, Victoria Police and Worksafe.

A recovery plan was developed and included a range of actions to remediate the natural environment including water and sediment quality monitoring. This helped to inform a program for on-ground recovery works.

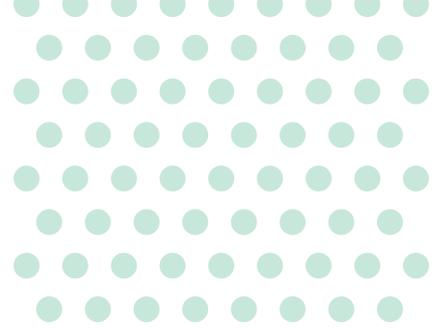
Stakeholder Advisory Group

A Stakeholder Advisory Group was established by Maribyrnong City Council in December 2018. The advisory group is represented by residents and members of key stakeholder groups, community groups and businesses to advise on the development and implementation of the recovery plan. The first meeting was held on 28 February 2019. The group continue to meet monthly and is attended by agency representatives from Maribyrnong City Council, EPA Victoria and Melbourne Water, along with the community representatives.



Clean up works to remove polluted water and toxic sludge





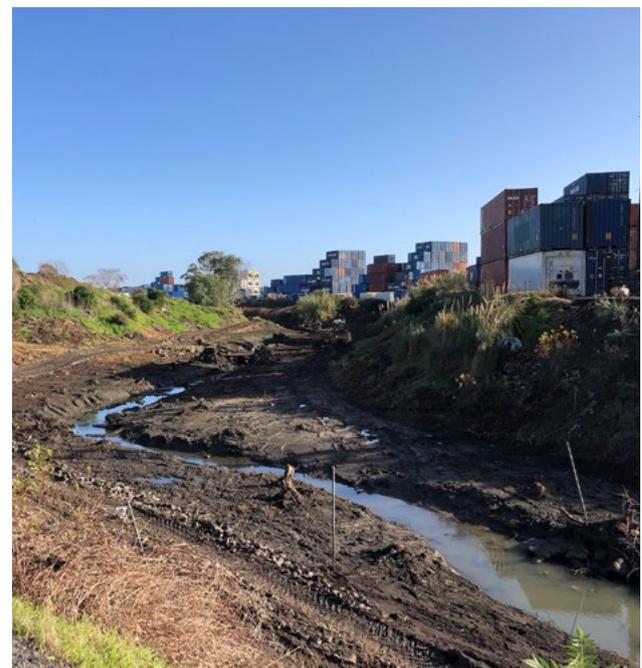
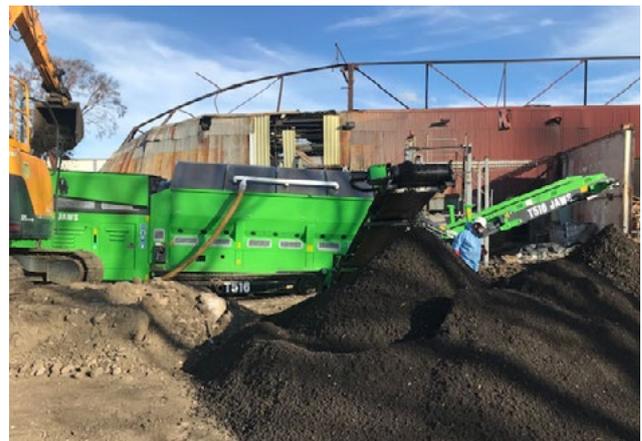
On-ground recovery works

Initial recovery efforts focused on the most publicly used and visited parts of Stony Creek including Cruickshank Park in Yarraville. In the interests of public health and safety, the priority was to clean up and prevent further contamination downstream of the park. The decision to start in Cruickshank Park was made through discussions between Melbourne Water, Maribyrnong City Council, EPA Victoria, Friends of Stony Creek and Friends of Cruickshank Park.

Clean up works included scraping the creek banks and pressure-washing rocks and vegetation to remove toxic sludge, removing affected trees and shrubs, and placing pollution containment barriers in the creek to capture and prevent contaminants from spreading downstream.

Between March and July 2019, 2,500 cubic metres of contaminated sediment was removed between the fire site and Paramount Road. The sediment was processed, treated and tested before being safely transported off-site for disposal to a secure landfill site nominated by EPA Victoria.

Recovery efforts are ongoing. Works are being coordinated across multiple agencies and are guided by advice from contaminated land specialists. The recovery efforts are highly complex and have required careful planning due to many factors including the nature and extent of contamination, treatment and disposal options of the sediment, and access for machinery. The priority is to ensure the health and safety of personnel, the community and the environment at all times.



Community consultation during the incident and recovery

The immediate response and recovery efforts required a coordinated, multi-agency approach to inform the community. This included:

- An incident response taskforce
- Public meetings to provide information, answer questions and respond to concerns
- A Facebook live chat on a weekday evening for those who were unable to attend public meetings
- Social media updates
- Dedicated recovery pages on agency websites
- Door knocks to homes
- Community bulletins delivered to 12,250 households and businesses
- A community information day in November 2018.

The community information day provided an opportunity for local community members to talk to staff from Melbourne Water, Maribyrnong City Council and EPA Victoria about the incident response works, concerns about impacts to the creek and public health, and monitoring results. It also provided an opportunity for agency staff to understand the concerns, interests and needs of the community in moving beyond the recovery phase. While we heard a lot of concerns from the community, we also heard that people wanted to help and get involved. We were able to seek input from community members to help us design how they could be involved in the development of a rehabilitation plan.

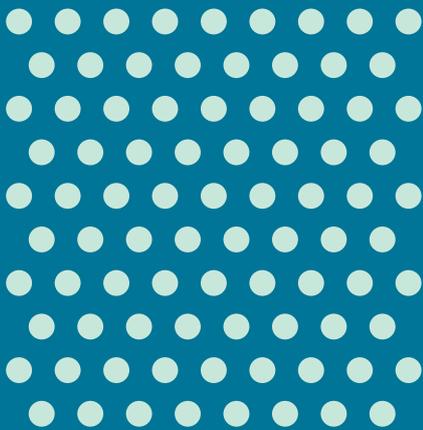
Monitoring

Testing of sediment in and around the creek is being undertaken by EPA Victoria as the on-ground recovery works progress to ensure the creek is remediated to appropriate levels. The EPA continues to monitor the environment in the affected areas and provide advice around potential impacts to human health. Air and water quality monitoring has been undertaken throughout the remediation works, and officers carry out regular inspections of the fire site to ensure appropriate risk controls are in place. Results of testing and monitoring are regularly published on EPA's website. Melbourne Water also conducts regular inspections to monitor conditions in the creek.



2. The plan for rehabilitation

The Stony Creek Rehabilitation Plan establishes the foundation for the rehabilitation and protection of Stony Creek following the fire incident in August 2018. The plan provides guidance for delivering the community's vision and long-term aspirations for Stony Creek by fostering collaborative partnerships and identifying a range of key actions for delivery by local and state government agencies, Traditional Owners and the community over the next ten years.



The rehabilitation plan focuses on a five kilometre reach of Stony Creek from the fire site in Tottenham to the Stony Creek Backwash (estuary) in Yarraville, within the local government areas of City of Maribyrnong and City of Hobsons Bay. The focus area for the rehabilitation plan is shown in Figure 1 (page 9).

While the City of Brimbank is outside the scope of this plan due to its location higher in the catchment of Stony Creek, it is recognised that polluted stormwater and other issues from the area may affect the rehabilitation planning area. Melbourne Water's Healthy Waterways Strategy ensures that a whole-of-catchment view will remain a key focus in the entire Stony Creek system.



3. Working together towards rehabilitation

To ensure a unified approach to the delivery of actions within the rehabilitation area, the Stony Creek Rehabilitation Plan has been developed in line with the roles and responsibilities of key partner agencies. It also aligns with a range of legislative, policy and strategic frameworks including Melbourne Water's Healthy Waterways Strategy, Maribyrnong City Council's Stony Creek Future Directions Plan and open space strategies, and EPA Victoria's environmental policies, legislation and guidelines.

Note: there are many other strategies, policies and legislation that may be relevant to the rehabilitation focus area. The following section provides an overview of the most relevant material.





Melbourne Water's role

Melbourne Water is a statutory authority owned by the Victorian Government whose responsibility under the *Water Act 1989* is to manage and protect Melbourne's major water resources on behalf of the community.

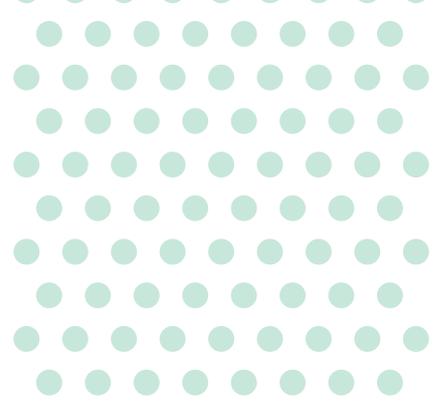
Melbourne Water manages Melbourne's water supply catchments, treats and supplies drinking and recycled water to the three metropolitan retailers (South East Water, Yarra Valley Water and City West Water), treats most of Melbourne's sewage, and manages waterways (rivers, creeks, wetlands and estuaries) and major drainage systems in the Port Phillip and Westernport region. The Waterways and Drainage Charge, which is paid by property owners and collected by the metropolitan retail companies on Melbourne Water's behalf, funds this work.

As the caretaker of waterway health, Melbourne Water's role involves coordination and integration with agencies who hold complementary responsibilities that impact waterways and stormwater. These agencies include local councils, Parks Victoria, other water corporations, EPA Victoria, the Port Phillip and Westernport Catchment Management Authority (CMA), the Department of Environment, Land, Water and Planning (DELWP), and the Department of Health and Human Services (DHHS).

Melbourne Water works closely with councils and local communities to protect rivers, creeks and bays, provide alternative water sources and improve the stormwater that flows into local waterways by integrating stormwater management processes into the urban landscape. Melbourne Water works to:

- improve local waterways by undertaking regular and extensive monitoring, investigations and research to better understand them
- maintain healthy waterways by removing litter and weeds, and planting native trees and shrubs
- ensure local waterways aren't threatened by growing communities and that new developments don't increase flood risk through planning, and by providing advice to assist future development.





Healthy Waterways Strategy

Melbourne Water's work is guided by the Healthy Waterways Strategy (2018-2028), the overarching planning document for the management of waterways in the Port Phillip and Westernport region. It provides direction to guide regional, catchment and sub-catchment scale decisions about the planning, delivery and integration of works. The strategy brings together world leading science and community knowledge to outline visions for each catchment, define performance objectives for achieving those visions, and set priorities for catchment actions.

For each of the five major catchments within the Port Phillip and Westernport region – Werribee, Maribyrnong, Yarra, Dandenong and Westernport – the strategy provides detailed, catchment-specific visions, goals, long-term targets (10 to 50 years), and 10-year performance objectives.

Performance objectives are short-term quantitative steps to achieve the strategy's waterway targets. Examples include maintaining recreational water quality at a specific location or increasing participation rates. Waterway condition (eg. water quality or extent of native vegetation) and key value targets (frogs, fish, birds, amenity etc.) are those which will be attained in the longer term (10-50 years) through the successful achievement of the performance objectives.



Performance objectives for Stony Creek and its estuary

Table 1 outlines the performance objectives for the Stony Creek catchment and its estuary which appear separately in the strategy.

Table 1: Performance objectives for Stony Creek and its estuary

Location	Condition supported	Performance objectives
Stony Creek	Access	Increase access to and along waterways from 33% to 51% (about 2km) by filling gaps and improving connections to existing path networks - align with priorities in the Stony Creek Directions Plan.
Stony Creek	Participation	Increase participation rates from very low to high; support community groups and citizen science and build capacity of business/industry through waterway health education.
Stony Creek Estuary	Estuarine vegetation	Protect remnant estuarine vegetation communities, particularly coastal saltmarsh, through targeting key invasive plant species.
Stony Creek Estuary	Flow regime	Maintain critical flow components in refuge reaches to protect in-stream environmental values.
Stony Creek Estuary	Access	Maintain and support existing access opportunities.



Table 2 shows the waterway conditions and key values for Stony Creek and its estuary that are expected to improve. The full list of conditions and values can be found in the strategy document.

Monitoring and evaluation

The establishment of monitoring, evaluation, reporting and improvement (MERI) processes at the start of the Healthy Waterways Strategy ensures that the correct data will be gathered initially and throughout the duration so that a robust evidence-base can be drawn on to assess progress, effectiveness, impact and improvement opportunities.

The MERI Plan outlines monitoring requirements for all the regional and sub-catchment performance objectives in the strategy. The plan will include detailed monitoring and evaluation plans (MEPs) for key values and conditions for each of the three ecosystem types – rivers, wetlands and estuaries. The MERI Plan will span the full ten years of the strategy implementation and will provide an end of strategy review to guide a refresh of the document in 2028. The MERI Plan will not be limited to evaluating actions solely carried out by Melbourne Water but will include all management activities that contribute to performance objectives. As such, it is expected that partner organisations will contribute data and information as it relates to indicators prescribed in the MERI framework or the MEPs.

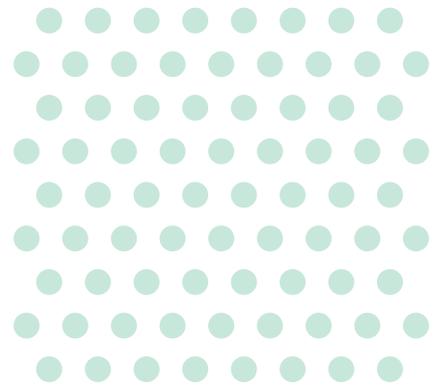
The management of rivers, wetlands and estuaries in the region will be conducted within an adaptive management framework. At the core of adaptive management is the ability to learn from previous experience, update management approaches to reflect the knowledge gained and changes in our environment that occur during implementation, and manage uncertainty such as increase in temperature, changed rainfall patterns or sea level rise. Adaptive management will happen at a range of spatial and temporal scales and across all the partners involved in the Healthy Waterways Strategy.

The key investigative pathways through which adaptation may occur include:

- Surveillance – environmental scans and broad-scale condition monitoring will highlight what is changing and what the drivers are
- Intervention – monitoring effectiveness of works and evaluation of investment programs will highlight what is working well and what can be improved
- Research – improving knowledge about values and threats, and testing program logic assumptions will allow conceptual and quantitative models to be refined over time allowing better strategic decisions to be made. Research into new technologies and management approaches will ensure the most cost-effective actions are being implemented.

There are several key groups that play an important role in enabling adaptive management for the Healthy Waterways Strategy: the Regional Leadership Group, Science Panel, Melbourne Water, and Catchment Collaborative Forums. The Collaborative Forums will be fundamental in enabling adaptation to occur by providing inputs to determining performance criteria, being an audience for evaluations – helping to judge success, sharing learning beyond forums (ie. back into agencies or groups) and advocating for change where necessary. Regular progress reporting through Catchment Forums on the achievement of targets and key outcomes from surveillance monitoring, intervention monitoring and research will be critical to understanding issues and making decisions about how to adapt.

Where performance objective targets within the catchment programs are significantly off track according to performance criteria, decisions need to be made about increasing resources or changing the target. Through consensus, the Catchment Forums will have the ability to modify targets or performance objectives in the Co-designed Catchments Programs based on new information. This will be the mechanism by which the current Healthy Waterways Strategy performance objectives for Stony Creek will be reviewed and modified in light of the impacts to the creek after the warehouse fire in August 2018.



The Healthy Waterways Strategy has identified that some waterways cannot be maintained for one or all values without an unreasonable and inequitable investment, due to the pressures predominately from past or future urban development, along with climate change. For these reasons, some key values are expected to remain in very low condition within the Stony Creek catchment over a longer timeframe.

Cultural values

As outlined in the Healthy Waterways Strategy, which was developed in consultation with the Wurundjeri Tribe Council, the Bunurong Land Council and the Wathaurung Aboriginal Corporation (Wadawurrung), the overarching goal for recognising Aboriginal waterway values is:

Traditional Owners have a recognised role as custodians of waterways and their cultural values. Their unique perspective and knowledge allows them to influence the agenda for waterway management and actively participate in caring for their Country.

This is supported by a series of agreed principles on how this goal will be achieved:

- 1 Traditional Owners are involved at all levels of waterway management – planning, prioritisation and delivery
- 2 Traditional Owner groups have the resources and expertise to support a self-sustaining 'waterway business'
- 3 Traditional Owners are included in planning and prioritisation processes as early as possible
- 4 Where possible, waterway management programs are designed to match the existing capability of Traditional Owner groups and participation increases their capability for involvement in future programs
- 5 The internal collaborative processes of Traditional Owner groups are supported with time and/or resources by waterway management partners
- 6 Waterway management is a job that an individual Traditional Owner can aspire to.

The entire Stony Creek catchment is on land for which Registered Aboriginal Party status is undecided. Wurundjeri, Bunurong and Boon Wurrung peoples have expressed their connection to the land and its waters. Melbourne Water will engage with all three groups during the implementation of the Stony Creek Rehabilitation Plan.

For more information about the Victorian Aboriginal Heritage Council and the process of appointing registered Aboriginal parties, visit Aboriginal Victoria's website: <https://w.www.vic.gov.au/aboriginalvictoria/heritage/registered-aboriginal-parties.html>

More information on the performance objectives, targets and goals for Stony Creek can be found in the Healthy Waterways Strategy Maribyrnong Catchment program. Visit Melbourne Water's Your Say page at <https://yoursay.melbournewater.com.au/healthy-waterways>.

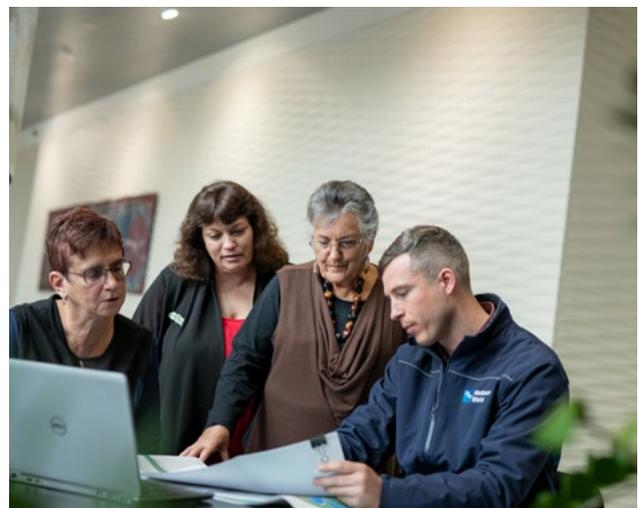


Table 2: Waterway conditions and key values for Stony Creek and its estuary

		Current state	Current trajectory	Target trajectory		
Stony Creek	Waterway condition	Stormwater condition	very low	very low	low	Stormwater condition is measured by directly connected imperviousness (DCI), which is the proportion of the impervious surface in the catchment that is directly connected to a stream through a conventional drainage connection. The current state is very low and the target is low.
		Water for environment	low	very low	low	Water for environment indicates compliance with flow requirements of freshwater river systems. These are identified through FLOWS method, or (where there is no flow study) Flow Stress Ranking (FSR), which indicates the level of threat to river health based on the level of water extractions by rural, urban and industry users. The current state is low and the target is low.
		Vegetation quality	very low	very low	low	Vegetation quality is a description of quality of vegetation relative to Ecological Vegetation Classes (EVCs) and accounting for grassland or sparsely treed woodland communities which do not exhibit 100 per cent canopy cover. The current state is very low and the target is low.
		Water quality (environmental)	very low	very low	low	Water quality (environmental) indicates compliance with the State Environment Protection Policy (SEPP) Waters of Victoria environmental water quality objectives (EPA Water Quality Index) using the Yarra and Bay Report Card scoring method. The current state is very low and the target is low.
		Access to waterway	low	low	high	Access to the waterway and riparian corridor supports a range of on water, in water and beside water experience and is an enabling condition for all three social values. The current state is low and the target is high.
		Litter absence	high	mod.	high	Litter absence is a strong indicator of stream health - clean waterways are healthy waterways and aesthetically pleasing. Litter detracts from the sense of naturalness and creates a perception that a place is uncared for. It also detracts from the enjoyment of active and passive recreation. The current state is high and the target is high.
		Water quality (recreational)	very low	very low	high	Water quality (recreational) is critical to minimise human health risks. Exposure to pathogens (disease causing microorganisms) via primary (e.g. swimming) and/or secondary (e.g. boating) can lead to illness. Water quality guidelines set water standards primary and secondary contact. The current state is very low and the target is high.
		Participation	very low	very low	high	Participation in waterway management creates and enhances a sense of community. Similarly, citizen science strengthens social capital by increasing knowledge of environmental / ecosystem services, skills and capacities, allowing people to meet and enhance social networks. The current state is very low and the target is high.
Key value	Birds	N/A	low	mod.	There is currently insufficient data to assess the birds (riparian) score in Stony Creek. Current trajectory is likely to low with fewer than expected species recorded, because of habitat degradation due to increased disturbance and introduced predators as well as effects of climate change. Significant species include Eastern Great Egret and Intermediate Egret and (rarely) Common Sandpiper. Target is moderate.	
	Fish	low	mod.	mod.	Fish are currently rated as low due to a lack of suitable instream and riparian habitat, urban stormwater (particular poor water quality from industrial sites) and barriers to fish migration, particularly many reaches where the channel is highly modified. The increased current trajectory score is due to climate change increasing habitat suitability for common and widespread species. Improvements to fish passage and instream habitat will ensure a moderate rating in the long term.	
	Vegetation	very low	very low	low	Vegetation is very low overall as a result of large scale land use change. Revegetation and improvements to existing vegetation will in the long term improve score to low.	
	Amenity	high	high	very high	Amenity, which is based on level of satisfaction, is currently high and is expected to remain high in the long-term; target is to improve to very high.	
	Community connection	high	high	very high	Community connection, which is based on level of satisfaction, is currently high and is expected to remain high in the long-term if opportunities keep up with population growth; target is to improve to very high.	
	Recreation	high	high	very high	Recreation which is based on level of satisfaction, is currently high and is expected to remain high in the long-term if supply keeps up with population growth; target is to improve to very high.	

Table 2: Waterway conditions and key values for Stony Creek and its estuary (continued)

		Current state	Current trajectory	Target trajectory		
Stony Creek	Waterway condition	Flow regime	very low	very low	low	Flow regime relates to the degree of change from 'natural conditions'. The current state is very low and the target is low.
		Longitudinal extent	high	very high	very high	Longitudinal extent is associated with barriers that interfere with the movement of water. The current state is high and the target is very high.
		Water quality	very low	very low	mod.	Water quality incorporates compliance with EPA Victoria's water quality guidelines for estuaries. The current state is very low and the the target is moderate.
		Estuarine vegetation	very low	very low	low	Estuarine vegetation is associated with the extent to which estuarine vegetation extent and condition is modified. The current state is very low and the target is low.
		Estuarine connectivity	very low	very low	low	Estuarine wetland connectivity relates to the proportion of the estuary that is connected to its fringing wetlands. The current state is very low and the target is low.
	Key value	Vegetation	low	very low	low	Vegetation is low with a current trajectory of very low. Reducing threat of invasive weeds to the little remaining areas of saltmarsh will maintain vegetation at low. Adopting some climate change adaption strategies may mitigate some risk to vegetation, however, the estuary is fringed by highly industrialised and urbanised environments allowing little potential for vegetation communities to migrate into more favourable less saline conditions.
		Amenity	low	low	mod.	Amenity which is based on the presence of facilities and activities that support passive enjoyment of the estuary is currently low and is likely to remain low in the long-term; the target is to improve to moderate.
		Recreation	mod.	mod.	high	Recreation, which is based on the presence of facilities and activities that support active recreation in the estuary, is currently moderate and is expected to remain moderate in the long-term if supply keeps up with population growth; the target is to improve to high.

How to read the scores

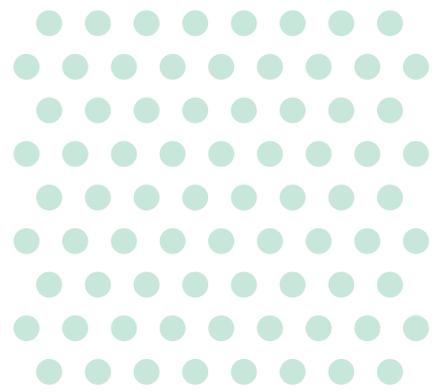
Current state - current score of waterway key values and waterway conditions

Current trajectory - long-term scores if current policies and effort continue

Target trajectory - targets for the long-term scores to be achieved through implementing the strategy

Score key: ■ Very low ■ Low ■ Moderate (mod.) ■ High ■ Very high

For a description of scores, see the metrics tables at the end of the Healthy Waterways Strategy.



Maribyrnong City Council's role

Council is responsible for roads, parks, waste collection, land use, local laws, urban planning, recreation, community development, health protection and emergency management in the City of Maribyrnong.

The Council collects rates from residents and businesses in the municipality to help fund the delivery of community infrastructure and local services.

Maribyrnong City Council implements policies, regulations and programs set by other levels of government, and responds to local community needs. As the closest level of government to the community, Council is best placed to respond to and advocate for community challenges and needs. The Council represents its community through considering its diverse needs in decision making, advocacy and support and ensuring resources are well-managed and governed responsibly and accountably.

Maribyrnong City Council manages the open space corridor on both sides of Stony Creek, as well as stormwater management around the creek. It has responsibilities for:

- Planning and advocating for improved future connections along the corridor
- Improving stormwater connections to the creek with planning and infrastructure upgrades through water sensitive urban design (WSUD) initiatives
- Collaborating with the community towards sustainable practices, improving flora and fauna, and water health education.

These will be achieved through implementing an updated Stony Creek Future Directions Plan (2019).





Council's policies and strategies

'Stony Creek will become a major linear park system with improved open space and pathway links along its entire length' – **Maribyrnong Municipal Strategic Statement** (clause 21.03).

This vision is consistent with the **Maribyrnong City Council Plan 2017-2021** strategic objectives of:

Healthy and inclusive communities

Council will provide and advocate for services and facilities that support wellbeing, healthy and safe living, connection to community, cultural engagement and whole of life learning.

Quality places and spaces

Council will lead the development of integrated built and natural environments that are well maintained, accessible and respectful of the community and neighbourhoods.

Mobile and connected city

Council will plan and advocate for a safe, sustainable and effective transport network and a smart innovative city.

Clean and green

Council will strive for a clean, healthy city for people to access open spaces, cleaner air and water and respond to climate change challenges.

It is further articulated in the **Maribyrnong 2040 Community Plan** values of:

- living well
- shaping our natural and built environments
- linking people and places.

Maribyrnong Open Space Strategy 2014

The Maribyrnong Open Space Strategy adopted in 2014 shows that the open spaces along our waterways (Stony Creek and the Maribyrnong River) are the most frequently used and highly valued spaces in the city. The linear open space along Stony Creek forms an important movement and recreation corridor. Consequently, the Maribyrnong Open Space Strategy contains the strategic objective to:

'[E]stablish a continuous open space corridor along Stony Creek... to protect and expand habitat and biodiversity values to include compatible and safe recreational use and access, including shared trails'.

The Strategy specifically recommends to:

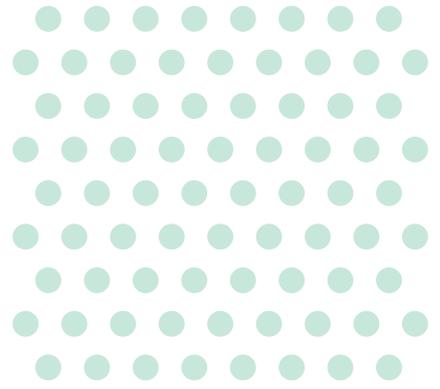
'Continue to improve the natural character and values of the Stony Creek corridor to encourage visitation and use.'

Stony Creek is highly valued by the Maribyrnong community as an urban waterway and remains in a naturalistic setting for much of its length as articulated in the **2010 Plan for Stony Creek**:

'It is the centrepiece of the highly used Cruickshank Park, and even in less patronised and degraded areas provides a uniquely natural experience – a cool and sheltered microclimate tucked under the tree canopies – in contrast to its wider setting. The differences in the character of Stony Creek are varied for its eight kilometre length, and include a sometimes fast flowing urban drain where the creek is channelled in the southern parts of Yarraville, to a broad and open salt marsh environment under the looming and iconic structure of the West Gate Bridge.'

The Stony Creek Future Directions Plan 2011

The Stony Creek Future Directions Plan 2011 translated the plan for Stony Creek 2010 into on-the-ground improvement plans for discrete sections of open space along the creek. Many of the actions within the plan have been implemented and there is now a need to update the plan to address the entire length of the creek.



Stony Creek Future Directions Plan (2019 update) – in progress

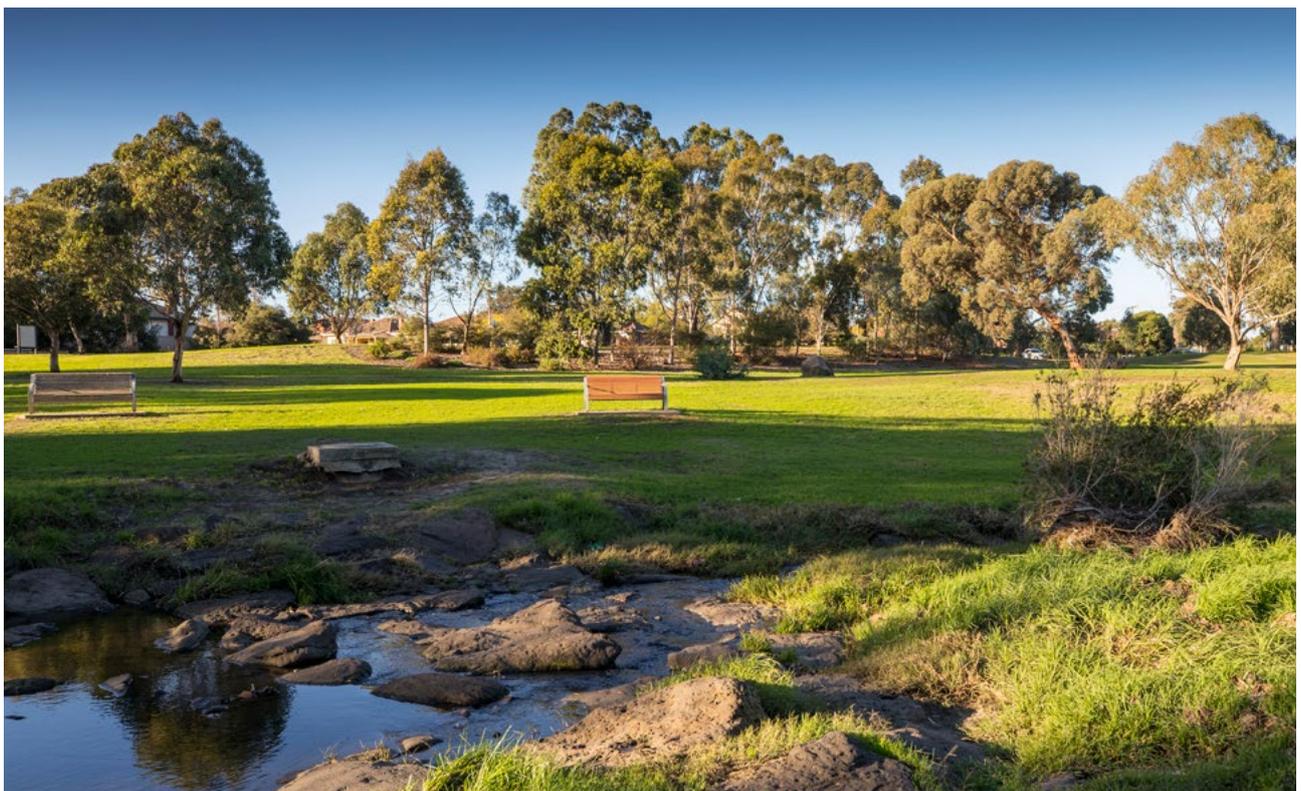
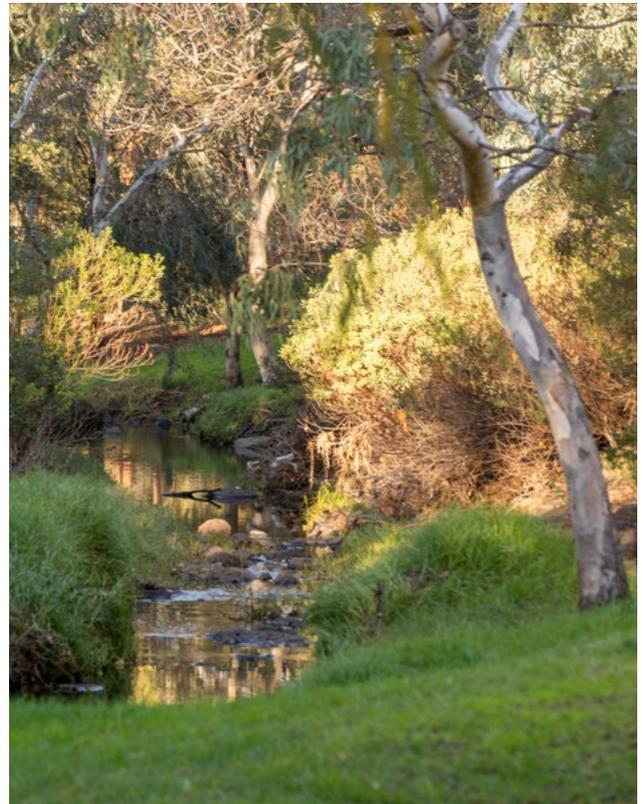
Community consultation from mid-2018 and post-fire is being used to inform the development of an updated Stony Creek Future Directions Plan in 2019.

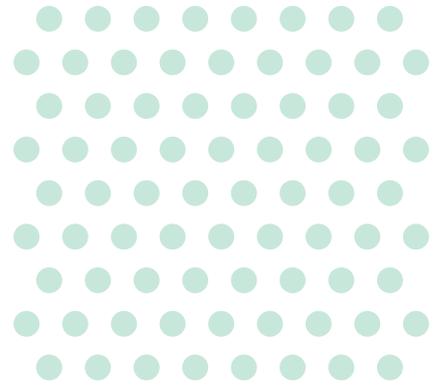
The Future Directions Plan 2019 will bring together a plan for the entire open space corridor within Maribyrnong. It will consider matters raised through the Stony Creek Rehabilitation Plan, and identify locations for open space access and amenity improvements along the corridor.

The draft Future Directions Plan is being prepared for community consultation in late 2019. It will include an estimated cost plan for implementation.

Integrated Water Management Strategy – in progress

Maribyrnong City Council is developing an Integrated Water Management Strategy to guide stormwater management across the whole City. This whole-of-catchment approach will establish the policy context, and prioritise improvements to stormwater management.





EPA Victoria's role

The Environment Protection Authority (EPA) Victoria is an independent statutory authority under the *Environment Protection Act 2017*.

The Act defines EPA's powers, duties and functions, and provides a framework for the prevention and control of air, land and water pollution, industrial noise and waste.

EPA Victoria works closely with the Department of Environment, Land, Water and Planning (DELWP) and Sustainability Victoria to develop environment protection policy and legislation and to deliver programs that support environmental protection. The agency's purpose is to protect the environment and people by preventing and reducing harm from pollution and waste. It does this in several ways, including by holding polluters to account, and helping people to understand, own and address their harmful impacts on the environment.

The EPA helps to protect Victoria's water environments through environmental laws, policies and regulatory controls, and by working in partnership with Victorian communities, including businesses, government, individuals and groups. A key part of the agency's role is to investigate pollution reports from the community.

EPA's policies, legislation and guidelines

Compliance and enforcement

As an environmental regulator, the EPA's role is to monitor industry and ensure it complies with the *Environment Protection Act 1970 (EPA Act)* – a framework and laws to protect the environment in Victoria, which also sets out a series of overarching principles that the EPA must consider. The EPA and its authorised officers are also responsible for ensuring compliance with the *Pollution of Waters by Oils and Noxious Substances Act 1986*.

The EPA's compliance and enforcement policy articulates the approach, method and priorities for ensuring compliance with relevant environmental Acts.

Regulatory controls

EPA Victoria uses measures provided under the EPA Act to prevent pollution and protect water environments to the levels required by state environment protection policies (SEPPs).

These include:

- works approvals and licences
- research development and demonstration approvals
- emergency approvals
- commissioning approvals
- notices
- compliance and enforcement powers.

Legislation and policies

State environment protection policies (SEPPs) are made under the *EPA Act* and set in law the community's expectations, needs and priorities for protecting and sustainably using Victoria's water environments.



Introduction of new legislation

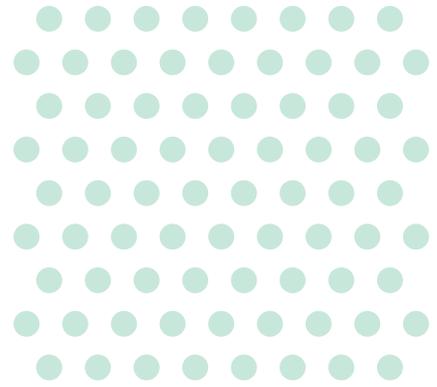
A new *Environment Protection Act* will come into effect in July 2020. The new *Environment Protection Amendment Act 2018* (The Act) signals an important change in how EPA Victoria will regulate pollution, waste and contamination into the future.

The focus of the new Act is preventative rather than the former reactionary approach after a pollution event has occurred. At the centre of the new Act is the general environmental duty (GED) which is a new concept for Victoria's environmental protection laws. The general environmental duty will apply to any person or company conducting an activity which poses risk to human health or the environment from pollution or waste. General duty regulation is well understood – a general duty sits at the heart of Occupational Health and Safety laws throughout Australia.

Fines have been substantially increased in the new Act, aligning Victoria with other Australian jurisdictions. For businesses in serious breach of the Act, the consequences could be fines in excess of \$3.2 million. Deliberate, or repeat offenders, could also face time in jail.

Further information about the new *Environment Protection Amendment Act 2018* can be found on EPA Victoria's website at www.epa.vic.gov.au.





Waterways of the West

In response to strong community advocacy and policy drivers for the protection of urban waterways, the Victorian Government announced the Waterways of the West Ministerial Advisory Committee (MAC) in August 2018.

The Waterways of the West includes the Maribyrnong River, Werribee River and Moonee Ponds Creek, their tributaries and other rivers, creeks and wetlands such as Stony Creek, Kororoit Creek, Skeleton Creek, Lollypop Creek and Little River. The MAC includes members with extensive experience in waterway management, planning and local government, along with Wurundjeri and Wadawurrung Traditional Owners. The MAC have been tasked with investigating the issues affecting these waterways, and to make a range of recommendations on how best to protect their health, amenity, access and community values for generations to come.

A discussion paper will be released for public consultation and will outline the issues, challenges and opportunities on how best to protect the health, amenity, access and community values of waterways in the west of Melbourne, including Stony Creek.

The Waterways of the West MAC are working with the community, Traditional Owners and agency stakeholders to develop recommendations that will then be presented to State Government for consideration. The Draft Stony Creek Rehabilitation Plan will be considered by the Waterways of the West MAC in developing their recommendations.

The final Waterways of the West Action Plan will be developed and released by State Government in 2020.

Traditional Owner engagement and inclusion

The Waterways of the West MAC have established partnership arrangements with the Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation and Wadawurrung Aboriginal Corporation, who have Registered Aboriginal Party status over areas within scope. This includes dedicated resourcing to allow for appropriate and meaningful engagement in the Waterways of the West program, and Traditional Owner-led projects that will inform the Action Plan. The MAC will engage with Bunurong Land Council and Boon Wurrung Foundation, which have declared an interest in the scoped areas where the Registered Aboriginal Party is yet undecided. This will include multiple walks on Country with Elders.





4. How the community helped shape the plan

While we heard a lot of concerns during the incident and initial recovery stages, people also told us they wanted to help and get involved. Early community input was used to design how local residents could be involved in the development of a rehabilitation plan.





The community's ideas and aspirations for the rehabilitation of Stony Creek were categorised under five key themes that were identified for the plan:



Waterway health

Ideas on planting trees and other vegetation, habitat improvements for local biodiversity (eg, frogs, birds, fish).



Water quality

Treating stormwater, litter control and preventing pollution.



Access and connectivity

Improving access and connectivity to the creek, unrestricted views and recreational activities.



Amenity

Cool and shady spaces to escape the busy urban landscape, to meet with friends and family, to exercise and connect with nature.



Education and community participation

Improving community and industry awareness and knowledge about the creek (eg. interpretive signs, educational programs and activities).



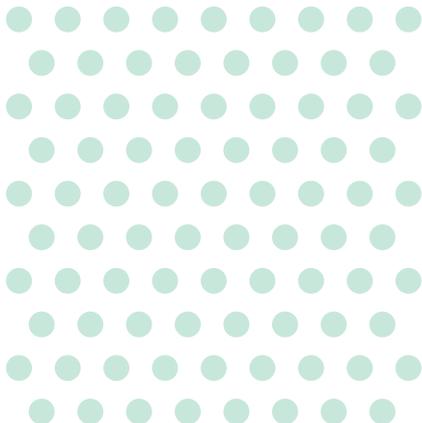
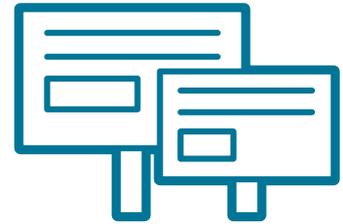
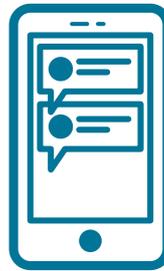


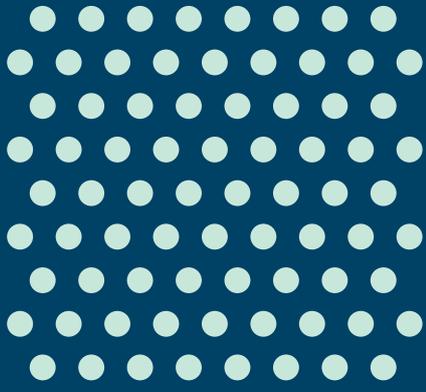
Communications channels

A number of communications channels were used to inform the community about the consultation process for rehabilitation planning. These included:

- Community bulletins
- Social media advertising – these posts were shared by community groups, government agencies and other stakeholders
- Media releases in local newspapers
- Public signage at highly visited locations in the rehabilitation focus area
- Flyers posted up on local noticeboards and in community hubs
- Melbourne Water and Maribyrnong City Council websites
- Emails to local community groups, government agencies, local organisations and other stakeholders.

A community information pack containing a promotional postcard, community bulletin, community workshop information sheet and application form was distributed to households and businesses in the area.





Who we reached



12,250 community information packs were posted in letterboxes



There were 2,206 views of the Your Say page during the initial community consultation period



Approx. 200 people shared their feedback in person at two community 'pop up' information events in February 2019



24 passionate community members participated in a two-day workshop in March 2019



A total of 237 stories and ideas were shared online and in person



Our social media post to promote the launch of the Your Say online platform reached 18,484 people in the local area

Demographics

- ▶ Most community members who participated in online activities and face-to-face events live in the suburbs of Yarraville (42%) and West Footscray (42%)
- ▶ Of the people who participated in online activities and community events, 59% were female; 41% were male
- ▶ We reached people from a diverse range of age groups, ranging from 18 to 74 years, but the most represented age brackets were 35-44 (33%) and 45-54 (28%)



Online engagement

The Your Say online platform was used as a channel for the local community to provide their feedback, and for people to see others' contributions.

Online engagement tools included:

- A visual story board where people could share their stories
- An interactive map of the focus area, where people could provide suggestions on rehabilitation and to share their ideas for broader projects, activities and programs
- A prioritisation tool where people could rank their preferences of key themes.

The Your Say platform was highly used; more than 1,000 people visited the page and/or used the interactive digital tools over the initial consultation period, with a total of 2,206 views of the webpage during this time.

Community 'pop up' information events

Two community 'pop up' information events were held in Cruickshank Park in February 2019 so that people could share their feedback in person. Approximately 200 community members shared their stories, ideas and aspirations for the rehabilitation of Stony Creek on a map of the focus area and story board, replicating the tools available on the Your Say platform.

Community members were also encouraged to register their interest for the community workshop.

Pop ups were attended by staff from Melbourne Water, Maribyrnong City Council and EPA Victoria to answer questions that the community had about different aspects of the recovery and rehabilitation stages.





Community workshop

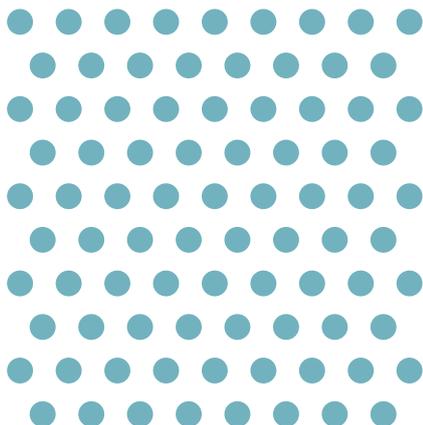
In late March 2019, twenty four passionate community members participated in a two-day workshop, facilitated by an independent practitioner. As part of the selection process, applicants were independently considered to ensure that there was an appropriate demographic representation of the local community.

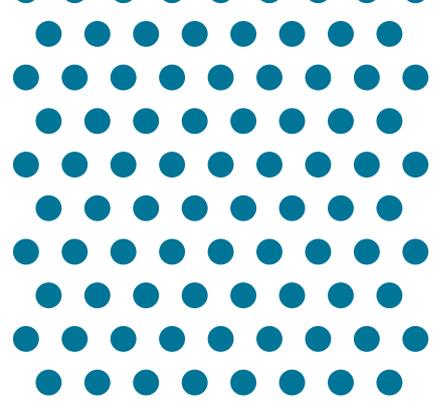
The purpose of the workshop was to further understand the community's values of Stony Creek, to explore their ideas and aspirations for rehabilitation, and to identify desired outcomes, key priorities and actions for the plan.

The first day of the workshop focused on providing participants with information to enable them to participate in a meaningful way. This included presenting information about the recovery works, other planned works, and technical information about the recovery and rehabilitation stages. Presentations were given by agency staff and participants were able to ask questions and to identify areas where further information was required.

The second day of the workshop focused on providing opportunities for community members to prioritise all of the broader community's ideas, including their own, and formalise these into actions.

Following the workshop, a summary report of outcomes and recommendations was made available to the participants and the broader community. The summary report is provided in Appendix C.



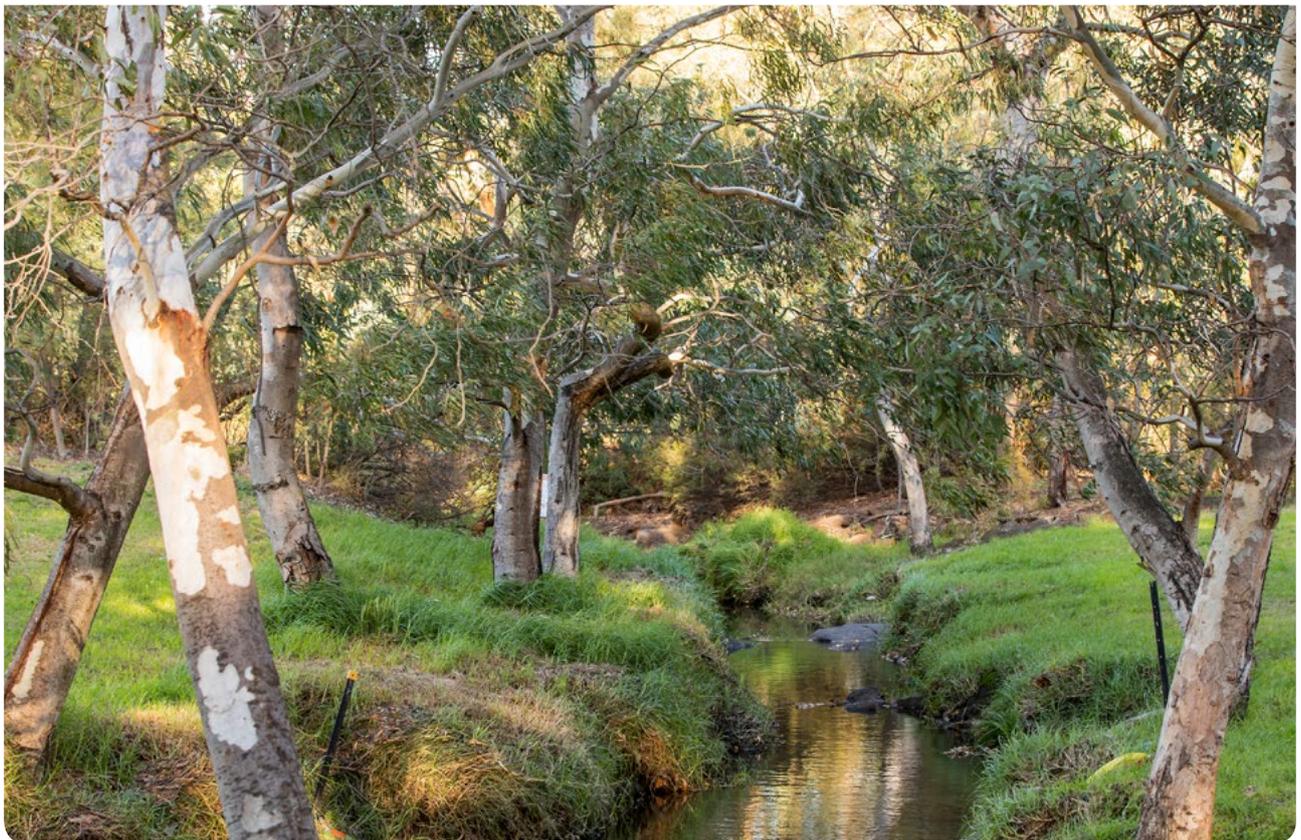


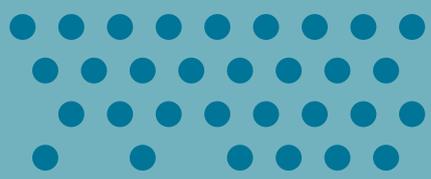
The community's vision

On the second day of the community workshop, participants developed a long-term and aspirational vision for Stony Creek:



“ We want to transform Stony Creek to be Australia's best protected, connected and respected urban waterway – a healthy and clean natural community asset that consistently supports a thriving ecosystem. Once it's completed, we want the Stony Creek Rehabilitation Project to be seen as a showcase for how community, government and business can partner to achieve enduring physical, social and ecological health benefits. The final outcome will connect communities to each other, communities with nature, and allow life to thrive in and along Stony Creek for generations to come. ”



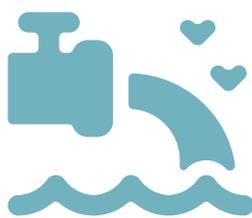


Workshop participants also developed overarching vision statements for each of the five key themes for rehabilitation:



Waterway health

"We want Stony Creek to be Australia's best protected, connected and respected urban waterway that consistently supports a thriving ecosystem."



Water quality

"Return the creek to a healthy state and address legacy water quality and sediment quality issues. The focus should be on remediation including de-contaminating and improving sediment quality, managing stormwater discharge and improving water quality. Where possible, creek pollution should be dealt with at the source."



Access and connectivity

"Providing access to and interaction with the water/creek made possible through one continuous, connected and shared pathway, thereby enhancing the physical, emotional and mental wellbeing of the community."



Amenity

"A creek that is naturalised, accessible and continuous along the whole creek corridor, celebrating the regeneration of our creek and diversity of amenity creating positive outcomes for education, health and both physical and mental well-being. An oasis within the city that allows for flora and fauna to thrive."



Education and community participation

"Educating community (residents and industry) to care for Stony Creek through partnerships with Indigenous People and by focusing education on practices that support the health of waterways and use Indigenous knowledge and wisdom. Overall diverse learning opportunities and sustained, responsive, proactive and accessible communication are vital to the overall strategy and ongoing collaboration between all major parties."

What's special about Stony Creek



We heard so many great stories from people about why they love Stony Creek, what they enjoy doing there, and why they visit it.

The creek is highly valued for the opportunities it provides for the community to connect with each other and with nature. It's a great place for active recreational activities such as walking, jogging and cycling, and for exercising dogs. Stony Creek offers a place for relaxation and provides a haven away from the noisy traffic of busy roads and the stresses of everyday city life. For people with families, Stony Creek is a unique place to walk with their children, to educate them about the environment, and it provides a space for them to play and interact with nature.

Many local community members told stories of how they like to enjoy the sounds and sights of life in and around the creek – the birds, fish and frogs, the flowing water, the trees and other plants that provide habitat for wildlife.

For some local community members, it evokes memories of childhood adventures of playing in the creek on the way home from school, or of riding to school across paddocks before the area was urbanised and industrialised.

Here's a snapshot of some of the stories we heard:



"Stony Creek is a place to escape the local urban environment, to interact with nature, to relax, exercise, walk our dogs, and spend time with family and friends."



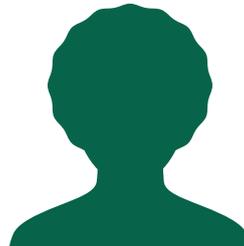
"Our dogs swim in the water, and our kids play on the stepping stones, explore, interact with nature, use their imaginations and learn about the environment."



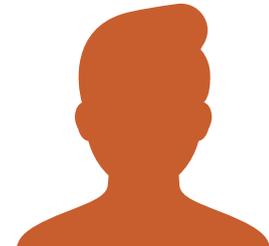
"I have loved spending time along the creek with my daughter, walking, playing, planting trees, picking up litter, and teaching her about the environment and the need to value and protect it."



"I love that this is a place where the locals can connect with each other and with nature. This is my slice of country life when I can't get to the country. It helps me unwind"



"I love to wander along the creek, meandering and flowing alongside the water, listening and watching the birds and greeting others along my journey."



"My dog loves taking me for a walk to Cruickshank Park. She ensures I get out and interact with people. Working in a stressful corporate environment, I often forget how nice my community is."



"It has been a delight to see the fruits of our community's hard work with birds, frogs, plants increasing in numbers over the years, and seeing the community gravitate to this oasis in the suburbs."



"My son and his friends would play in the creek on his way home from school. Preserve and continue to support this lovely place."



"I like seeing the fish and the eels in the creek and stepping across the stones. I like looking at the birds - sparrows, magpies, herons" – Olive, 4 yrs old



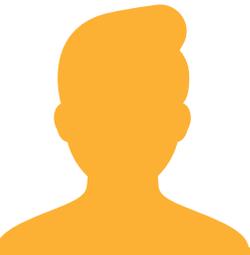
"The things I love about Stony Creek are the life in and around the creek – the plants, birds, frogs and insects. There are places along the creek where you can walk in shade or sun, hear the water and wildlife, see the changing seasons in the vegetation. The creek brings out the community – walking, playing, sitting, working together to plant trees."



"We've lived on the edge of the creek for 30 years and reared our children here. We walked every day to kindergartens and playgrounds. Walked our dog and kicked footballs and done countless walking laps. We want the waterway back to being safe to play on for our grandchildren."



"We like the park and creek for the skating places, the dinosaur park, the trees to climb in and listening to the frogs at night. We also like to see the big flows of rain – water that comes through the creek in a storm."



"I lived in the area most of my life, went to Kingsville State School. We played at stony creek when it was thistles and limestones. My sister rode horses there, my brother's stolen car was dumped there. I have been a member of the Friends of Stony Creek for 29 years. Helped plant, clean and protect the creek. Am horrified about what happened but with work it will recover, better than ever."



"Before the fire destroyed this valuable water source, I enjoyed seeing children from local daycare centres playing and exploring by the water. This is so very needed in a time when we are becoming glued to technology. Before the fire I also enjoyed the sound of the frogs and birdlife. It seemed like all that fell silent after August 2018. These sounds have slowly started to return, but we need to ensure that all this wildlife is given our protection."



"For the future, I want a creek that is a living waterway, with frogs, eels and all the other... creatures that are part of a healthy ecosystem. I want the creek to wind through a vegetation corridor so that birds and insects can travel the length of the creek and connect to vegetation in Hyde Street Reserve, Cruickshank Park and local gardens. I'd like an accessible walking trail alongside the length of the creek."



Community ideas and priorities

This section provides a summary of the community's ideas for rehabilitating Stony Creek.



34 IDEAS

Access & connectivity

- More rocks (stepping stones) to walk across the creek.
- Provide safe pedestrian and cycling access along the full length of the creek, right through from Sunshine to the Stony Creek Backwash.
- Construction of footbridges and paths at various locations.



32 IDEAS

Water quality

- Placement of litter traps at various locations.
- A constructed wetland to capture pollutants from stormwater runoff before it enters the creek.
- Install streetscape water sensitive urban design features including raingardens.



28 IDEAS

Waterway health

- More native plants – not only large trees but shrubs and grasses to help provide habitat for ground-dwelling animals.
- More deep ponds with reeds and water plants. Healthy habitats for fish, frogs and water critters.
- Weed control and maintenance of grass.



18 IDEAS

Amenity

- Removing or modifying the concrete channel to make it more 'natural'.
- Community artwork on the sides of the concrete drain.
- BBQ area and public toilets.
- More cool and shady spaces.



7 IDEAS

Education

- Educational and interpretive signs, art pieces along the length of the creek.
- Extension of the Community Garden Centre as a hub for educational programs (eg. about native flora and fauna) and an avenue for social connectedness.

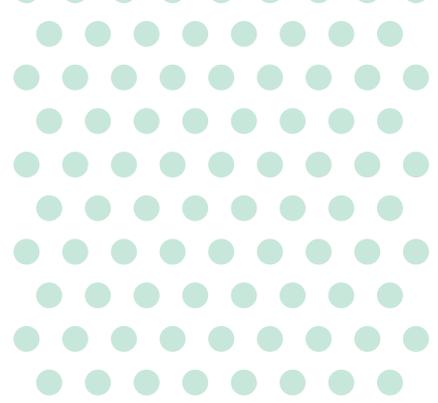


21 IDEAS

Other

- Stronger enforcement and compliance on illegal issues.
- Clearly identify and protect the natural floodplain of the waterway from development.
- Install basketball rings and a modern skate bowl for active recreation.

The full list of community ideas is provided in Appendix B.



Priorities

The community's top priorities for rehabilitating Stony Creek were waterway health and water quality.

ACCESS Improving access and connectivity to the creek, unrestricted views and recreational activities.

ACCESS

WATER QUALITY Treating stormwater, litter control and preventing pollution.

WATER QUALITY

WATERWAY HEALTH Planting trees and other vegetation, habitat improvements for local biodiversity (eg. frogs, birds, fish).

WATERWAY HEALTH

AMENITY Cool and shady places to escape the busy urban landscape, to meet with friends and family, to exercise and connect with nature.

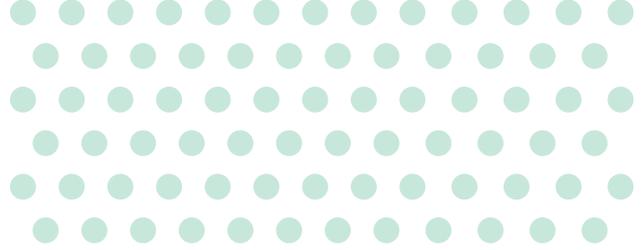
AMENITY

EDUCATION Improving community and industry awareness and knowledge about the creek (eg. interpretive signs, educational programs and activities).

EDUCATION

1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0





How the community's ideas became actions for the plan

As part of the two-day workshop in March 2019, community members were provided with the full list of rehabilitation ideas that were submitted online and in person at community events.

A summary of the main ideas from this list was provided to participants at the beginning of the second day. These ideas were collated into a shortlist and checked for wording by participants before all ideas were then ranked in order of importance, following deliberation by the group. The ideas were not separated in terms of higher or lower order. Ideas that were provided with an asterisk (*) were identified as aspirational ideas that may require further investigation and significant time to be realised, and may not be possible to include as part of the scope for the rehabilitation plan. Regardless of this, these were ranked with all the other ideas to provide an accurate portrayal of recommended actions for the plan.

An inter-agency workshop was held in April 2019 between Melbourne Water, Maribyrnong City Council and EPA Victoria to review the recommended actions and priorities from the community workshop. Collectively, we worked through each action to assign roles and responsibilities, including estimated timeframes for completion, and some notes about how the actions would be implemented. This began the formation of an Action Plan.

Long-term aspirations

In the community workshop, participants were asked to complete the statement:

“It is the year 2030 and Stony Creek”

A selection of personal responses are provided below:

- ▶ *“It's 2030 and Stony Creek is alive. Creek continues to teach us how to care for country. Stony Creek's Nature Play Space is an exemplar of water conservation and environmental education and community connections”*
– **Gowrie Clare Court Childcare Centre staff**
- ▶ *“It's 2030 and Stony Creek and the surrounding open space is an important place for Spotswood people to connect to nature/history, relax and to walk and ride”*
- ▶ *“It's 2030 and Stony Creek will be clean and lined with red gums and grasses. The concrete drain is gone and there is a bridge from over Mimi the Dinosaur in McNish Reserve to Cruickshank Park BMX track and tennis courts”*
- ▶ *“It's 2030 and Stony Creek is host to a happy, active and engaged community, who cycle and walk along the creek corridor admiring the nature, birds, fish and critters”*
- ▶ *“It's 2030 and Stony Creek is a continuous corridor of nature where the community gravitate to relax, exercise, interact with nature, walk dogs, learn about the environment, observe the native flora and fauna and is visited by communities across the country as an example of successful urban waterway renewal between community, indigenous groups and government agencies”*
– **Darren**
- ▶ *“It's 2030 at Stony Creek and I am working at the stormwater retention wetland leading a weeding and planting day and educating local families about the flora and fauna we see”*
– **Clare**
- ▶ *“It's 2030 and Stony Creek is a living green wonder nature land that inspires me”*
– **Steve**

The children's future vision of Stony Creek - Artwork from Gowrie Clare Court Children's Centre presented at the workshop



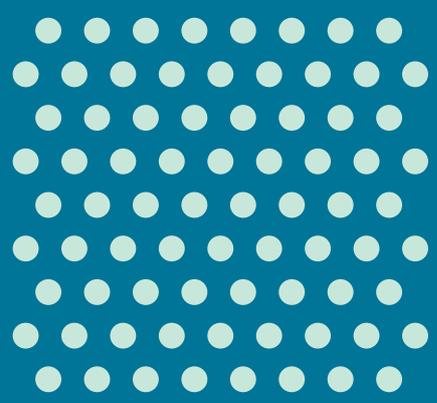
The children from Gowrie Clare Court have been privileged to partake in a caring, reflective and reciprocal relationship with Stony Creek and Cruickshank Park for years. We enter into our interactions with them thinking about how humans and waterways co-exist and are co-dependant.

We sit with paint, paper and 'Welcome to Country' by Joy Murphy and Lisa Kennedy and respond to the questions, "what would make Creek and Park happy and healthy?" "What would a healthy future Creek look like?"

"Creek needs people, makes it happy," Ryan says.

"Splash, splash, splash! Jump! Jump!" Moshi and Emily giggle as they play splashing in Creek.

Seeing images of Wurundjeri people living respectfully with waterways, the bilby group agrees that Park and Creek should go back to how healthy it was before settlers came to Australia.



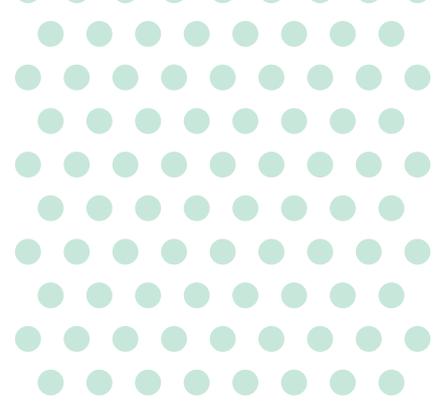
5. Actions to restore, enhance and protect Stony Creek into the future

As outlined in the previous section, recommended actions were identified, refined and prioritised by community members in a deliberative workshop. Melbourne Water, Maribyrnong City Council and EPA Victoria reviewed the list of identified actions in an inter-agency workshop. Each action was assigned roles and responsibilities, estimated timeframes for completion, and some details about how each action would be implemented. This helped form the final Stony Creek Rehabilitation Action Plan.

In the Action Plan, each action has been allocated a code which indicates its priority (1 being highest priority; 10 being lower priority); in accordance with how the community ranked them. Accountability for the implementation of actions is indicated by the assignment of a lead role/s and support role/s (where required). Actions have been assigned to government agencies, organisations and the community. The 'community' includes Friends groups, other community groups and organisations, private and public landholders, education providers, and other interested community members.

While most of the actions identified by the community are achievable within the timeframe of this ten-year plan, some of the community aspirations for the rehabilitation and future protection of Stony Creek require significant, long-term changes to be made. For example, the actions to pursue public acquisition of private land throughout the Stony Creek catchment (Actions WH 2 and AM 2) are likely to take a long time and may not be achieved over the life of this plan; however, progress that is made will be reported on as part of the commitments to this plan.





Stony Creek Rehabilitation Action Plan 2019 - 2029

Each action has been allocated a code (eg. WH 1, WH 2 etc) which indicates its priority (1 being highest priority; 10 being lower priority), in accordance with how the community ranked them.

Actions marked with an asterisk (*) have been identified as needing significant further investigation and/or may be very costly.

Actions marked with a hash symbol (#) will be incorporated into Maribyrnong City Council's Stony Creek Future Directions Plan 2019. The plan will include an estimate of funding required for implementation.

The funding column indicates how actions will be funded or where funding is yet to be determined. Many actions can be resourced internally through existing budgets and human resources. Some actions cannot be funded up-front due to annual business planning constraints; however those that are listed as unfunded provide a foundation for coordinated efforts between agencies and the community to leverage additional resources when they become available.

For actions marked with a dollar sign symbol (\$), funding under Melbourne Water's programs (eg. incentives, minor capital works and maintenance) is available on an annual basis (subject to business planning cycles). Projects are assessed against a range of criteria to inform priority funding allocation, and priority will be given to initiatives in the Stony Creek catchment where they are directly associated with actions in the rehabilitation plan.

The greatest opportunities for community involvement in delivering actions will be through existing groups such as the Friends of Stony Creek and Friends of Cruickshank Park. Grants and support programs for on-ground works including revegetation and weed control, and capacity building initiatives such as water quality monitoring, are available through a number of agencies. For example, Melbourne Water's incentives program provides financial and technical assistance to landowners, local government, public land managers (eg. Parks Victoria) and community groups to help improve the condition of waterways. Waterwatch programs are designed to connect communities with their local waterway, providing training and tools so they can become involved in monitoring waterway health. The data collected contributes to scientific research, management planning and on-ground actions that improve the health of waterways.

More information on community grants can be found on the Melbourne Water and Maribyrnong City Council websites.

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Waterway Health	WH 1	Investigate reasons for poor water quality (eg. low dissolved oxygen levels) in Stony Creek and develop options and/or strategies to improve them	Melbourne Water EPA Victoria	Maribyrnong Council	By the end of 2020	An investigative project will be undertaken to determine the cause/s for poor water quality. A report will be developed which will provide recommendations on feasible options to address water quality issues. This will be supported by compliance inspections undertaken by EPA Victoria throughout the Stony Creek catchment.	EPA Victoria has provided funding to Melbourne Water to implement this action.
Waterway Health	WH 2	Gain access to areas of the creek corridor that are in private ownership so that the creek's health and public access to it can be managed in a connected way *	Maribyrnong Council	Melbourne Water	2024 – 2029	Planning mechanisms will be investigated, such as public acquisition overlays and design guidance for improved built-form outcomes in areas adjacent to the waterway. The Stony Creek Future Directions Plan 2019 will identify opportunities to increase public access along the creek. #	Planning investigations will be funded by Maribyrnong Council.
Waterway Health	WH 3	Ensure that planning controls are appropriate for long-term protection of Stony Creek and take action where these controls have been contravened eg. encroachment, filling etc.	Maribyrnong Council	Melbourne Water	2020 – 2021	Planning mechanisms will be investigated by Maribyrnong Council, such as public acquisition overlays and design guidance for improved built form outcomes in areas adjacent to the waterway. #	Planning investigations will be funded by Maribyrnong Council.
Waterway Health	WH 4	Create off-stream habitats for frogs and birds	Melbourne Water	Maribyrnong Council Community groups (eg. Friends groups) Private landowners Public land managers	2020 – 2022	A Melbourne Water habitat and amenity improvement project will be developed and implemented. The project will include riparian revegetation, invasive weed control and creation of off-stream habitat features. Friends groups will be consulted in the development of the project. There are potentially more opportunities for habitat improvements through Melbourne Water's incentives program. Community groups and local government can apply for grants to create or improve habitat (eg. planting). Melbourne Water's Waterwatch program will continue to promote and support the construction of frog ponds in private properties.	To be funded under Melbourne Water's existing programs. \$
Waterway Health	WH 5	Improve environmental flows in Stony Creek by removing upstream diversions to Kororoit Creek and Maribyrnong River	Melbourne Water	-	By the end of 2021	A feasibility study will be undertaken to determine the hydraulic impacts of adjusting flow regimes in Stony Creek as well as the recipients of current diversions. The first step is to work out whether adjusting the flow regime in Stony Creek is feasible from a flood protection/management perspective.	To be funded under Melbourne Water's existing programs. \$

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Waterway Health	WH 6	Plant aquatic vegetation to promote oxygenation of the water and provide habitat for aquatic animals	Melbourne Water	-	2025 – 2029	It is expected that some natural regeneration of aquatic plants in the creek may occur following the recovery of the system. Future investigations (eg. WH 1) and implementation of aquatic revegetation will be undertaken once recovery works have been completed and riparian plantings have established.	To be funded under Melbourne Water's existing programs. \$
Waterway Health	WH 7	Plant native vegetation to establish a continuous corridor along Stony Creek. Design revegetation to retain important sightlines in public areas	Melbourne Water Maribyrnong Council West Gate Tunnel Project	Community groups (eg. Friends groups) Traditional Owner groups	2020 – 2022	A Melbourne Water habitat and amenity improvement project will be developed and implemented. The project will include riparian revegetation, invasive weed control and creation of off-stream habitat features. Friends groups will be consulted in the development of the project. Melbourne Water will also work with Council and community groups (eg. Friends groups) to identify further opportunities for revegetation. The West Gate Tunnel Project will be expanding the Stony Creek Reserve between Hyde Street and Williamstown Road by turning vacant industrial land into new open space and planting woodland tree species to increase tree canopy cover for the area. More information is available on the West Gate Tunnel Project website: http://westgatetunnelproject.vic.gov.au/about/keytopics/open-space . The Stony Creek Future Directions Plan 2019 will identify locations for new and expanded planting and revegetation opportunities. # Traditional Owner groups and community groups (eg. Friends groups) will be provided with opportunities to get involved in planting initiatives – eg. through Melbourne Water's incentives program and minor capital works program.	To be funded under Melbourne Water's existing programs. \$ Maribyrnong Council will continue to support community planting projects and resource on-going revegetation programs. To be funded and delivered by the West Gate Tunnel Project.
Waterway Health	WH 8	Adjust/widen channel form to allow for high catchment flows, slow flows to promote pollution capture, connection to floodplain for habitat purposes and introduce deeper pools to allow habitat diversity and accessible areas for desilting	Melbourne Water	Maribyrnong Council	By the end of 2021	Opportunities for adjustment of channel form for the purpose of pollution control and management have arisen through recovery activities and investigations (especially upstream of Paramount Road). Further development of these opportunities and incorporation of habitat improvement features will continue where possible. Land availability and flooding constraints reduce opportunities downstream of Paramount Road, but off-stream habitat and riparian and in-stream habitat will be improved through other actions (eg. WH 4, WH 7 and WH 10).	To be funded under Melbourne Water's existing programs. \$
Waterway Health	WH 9	Improve quality of Stony Creek to allow natural re-colonisation by native animals including fish	Melbourne Water	-	2019 – 2029	Melbourne Water's approach over the life of the plan will be to improve habitat in order to allow re-colonisation by native fauna (eg. through Actions WH 4, WH 6, WH 7, & WH 10).	To be funded under Melbourne Water's existing programs. \$

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Waterway Health	WH 10	Control weeds throughout Stony Creek to maintain and improve habitat and contribute to overall amenity	Melbourne Water	<p>Maribyrnong Council</p> <p>Community groups (eg. Friends groups)</p> <p>Private landowners</p> <p>Public land managers</p> <p>Parks Victoria</p> <p>Hobsons Bay Council</p>	<p>Review and revision of weed control regime by the end of 2020</p> <p>Weeds will be controlled on a scheduled basis every year</p>	<p>Weeds are controlled on an ongoing basis through Melbourne Water's and Maribyrnong Council's programmed maintenance regimes. These regimes will be reviewed to ensure adequacy of timing and coordination of weed control objectives.</p> <p>Melbourne Water will work with Parks Victoria, Maribyrnong Council and Hobsons Bay Council to align weed control efforts along the entire extent of Stony Creek.</p> <p>Weeds will also be targeted as part of Melbourne Water's minor capital works project to be delivered in 2020 - 2022.</p> <p>Weed control can be undertaken by interested community groups (eg. Friends groups), public land managers and private land managers through grants that are available under Melbourne Water's incentives program.</p>	To be funded under Melbourne Water's existing programs. \$
Water Quality	WQ 1	Undertake catchment-wide stormwater quality and quantity planning to avoid implementation of solutions in an isolated fashion	Maribyrnong Council	<p>Melbourne Water</p> <p>EPA Victoria</p> <p>Hobsons Bay Council</p> <p>Brimbank Council</p>	2019 – 2022	<p>The Maribyrnong Integrated Water Management Strategy will analyse and plan for stormwater quality from a whole-of-catchment perspective and identify a coordinated program of prioritised actions.</p>	<p>Maribyrnong Council will consider future funding of stormwater management through the Integrated Water Management Strategy. The development of the strategy has been co-funded by Melbourne Water through the Living Rivers Program.</p> <p>Maribyrnong Council will also seek external funding opportunities to contribute towards projects including Melbourne Water's incentives program and City West Water fund.</p>

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Water Quality	WQ 2	Install water quality sensors throughout the catchment to investigate sources of pollution and litter, and enable a targeted response	Melbourne Water EPA Victoria	Maribyrnong Council	By the end of 2021 By the end of 2019	<p>A current Melbourne Water research partnership project is using water quality sensors to investigate sources of pollution and litter in other catchments. A project will be implemented in the Stony Creek catchment as part of this research partnership. This will be supported by compliance inspections undertaken by EPA Victoria throughout the Stony Creek catchment.</p> <p>An Officer for the Protection of the Local Environment (OPLE) will be embedded into Maribyrnong Council offices. OPLEs are employed by EPA and they respond to smaller-scale and lower risk pollution and waste reports. These include dumping, litter, noise, dust, odour and illegal chemical and waste stockpiling from small-to-medium business and industry. The OPLE role contributes to delivering timely responses to local pollution and waste issues and also supports EPA's work to prevent illegal waste stockpiling and activities as part of their focus on waste crime.</p> <p>In 2019-20, EPA Victoria's industry compliance program will conduct 250-300 inspections and OPLEs will complete at least 1000 inspections (state-wide).</p> <p>EPA Victoria is committed to a strong place-based approach to how they serve Victoria's communities. A new western metropolitan region and team is being established to cover seven local government areas (which includes Maribyrnong Council) with an office located in Sunshine.</p>	<p>EPA Victoria has provided funding to Melbourne Water to install water quality sensors in the Stony Creek catchment.</p> <p>The Victorian Government provided \$3.4 million for the expansion of the OPLE pilot project. Funding for the Maribyrnong Council OPLE has been allocated.</p>
Water Quality	WQ 3	Work with industry to ensure compliance regarding stormwater management and pollution prevention	EPA Victoria	Melbourne Water Maribyrnong Council	2019 – 2021	<p>Increased industry understanding of stormwater quality control obligations will be targeted during routine inspections of industrial areas in the Stony Creek catchment. This will be supported by EPA Victoria's Industry Guidance Unit. Preventative Guidance has been developed specific to a particular practice/activity that is common across a number of industry sectors (eg. liquid storage and handling).</p> <p>EPA will report on the success of engagement with industry through the Stony Creek annual report card on progress of actions.</p> <p>Increased vigilance by the community and through technological solutions (see Action WQ 2) is likely, and will be responded to by EPA Victoria.</p> <p>Maribyrnong Council's OPLE will support EPA's work to prevent illegal waste stockpiling and activities as part of their focus on waste crime.</p>	This will be funded and resourced internally at EPA Victoria, therefore no additional funding for this action is required.

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Water Quality	WQ 4	Implement water sensitive urban design (WSUD) features in appropriate locations (eg. raingardens, permeable pavements, road run-off diversion to median strips, swales, streetscape features etc)	Maribyrnong Council	Melbourne Water	2019 – 2029	The Stony Creek Future Directions Plan 2019 will identify WSUD opportunities. #	<p>Maribyrnong Council is preparing a whole-of-catchment Integrated Water Management Strategy which will prioritise implementation and funding for WSUD features.</p> <p>Council will also seek external funding opportunities to contribute towards projects including Melbourne Water's incentives programs and City West Water fund. \$</p>
Water Quality	WQ 5	Provide incentives for private and public landholders to implement stormwater quality improvement measures on their land	Melbourne Water EPA Victoria	<p>Maribyrnong Council</p> <p>Private landowners</p> <p>Public land managers</p>	2021 – 2029	<p>Melbourne Water does not currently have an incentives program that funds all landholders to implement stormwater quality improvement measures on their land but is working to broaden and enhance current incentives and grants offerings by creating a single incentives program. It is anticipated that this will be available in the next two years. Once this new program has been rolled out to all customers, Melbourne Water and Maribyrnong Council will explore if stormwater quality improvement measures could be incentivised in the Stony Creek catchment.</p> <p>The preference is for educational programs, including Maribyrnong Council's Sustainable Living Program, for residential landowners to improve stormwater quality on their land, whilst enforcement is likely to be more feasible and effective for industrial and/or commercial landowners.</p>	To be funded under Melbourne Water's existing programs. \$
Water Quality	WQ 6	Construct a wetland or similar water quality treatment asset to capture pollutants and litter from upstream tributaries and drains	Maribyrnong Council	Melbourne Water	2024 – 2029	Maribyrnong Council's Stony Creek Future Directions Plan 2019 and Integrated Water Management Strategy will consider wetland and stormwater treatment opportunities. #	<p>Maribyrnong Council is preparing a whole-of-catchment Integrated Water Management Strategy which will prioritise implementation and funding for stormwater treatment.</p> <p>Council will also seek external funding opportunities to contribute towards projects including Melbourne Water's incentives programs and City West Water fund.</p>

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Water Quality	WQ 7	Harvest stormwater where possible to reduce direct stormwater flows from drains into the creek and to irrigate parks and sports fields	Maribyrnong Council	Melbourne Water	2024 – 2029	Maribyrnong Council's Stony Creek Future Directions Plan 2019 and Integrated Water Management Strategy will consider stormwater harvesting opportunities. #	Maribyrnong Council is preparing a whole-of-catchment Integrated Water Management Strategy which will prioritise implementation and funding for stormwater harvesting. Council will also seek external funding opportunities to contribute towards projects including Melbourne Water's incentives programs and City West Water fund.
Water Quality	WQ 8	Appoint a dedicated resource to coordinate new stormwater quality assets, inspect new assets and ensure appropriate maintenance	Maribyrnong Council	Melbourne Water	2019 – 2020	Maribyrnong Council will appoint a Water sensitive urban design (WSUD) Officer – with support from Melbourne Water's Living Rivers program – to plan and prioritise future stormwater improvements which includes a key focus on the Stony Creek catchment. The role will include liaison with the community about initiatives in the Stony Creek catchment. The Living Rivers program offers councils funding, expertise and guidance to build their understanding, skills and commitment to manage stormwater within an integrated water management approach.	The WSUD officer position will be jointly funded by Maribyrnong Council and Melbourne Water's Living Rivers program. Funding has been allocated.
Water Quality	WQ 9	Place litter traps in appropriate places throughout the Stony Creek catchment	Melbourne Water	Maribyrnong Council EPA Victoria Brimbank Council	2020 – 2021	Melbourne Water will lead the development of a litter source reduction plan to determine major types and sources of litter (eg. 'hotspots') in the Stony Creek catchment (including the Brimbank Council area). This plan will help to target activities to reduce litter including possible strategic placement of litter traps.	EPA Victoria has provided funding to Melbourne Water to implement this action.
Water Quality	WQ 10	Regular reporting by Council and EPA on compliance with stormwater management regulations across the catchment	Maribyrnong Council EPA Victoria	-	On an annual basis, 2020 – 2029	EPA Victoria will publish annual statistics on inspections and pollution reports. Maribyrnong Council will publish a development report for the Stony Creek catchment. A link to these reports will be included in the tool developed for Action E 6. Maribyrnong Council and EPA Victoria will investigate the opportunity to use technology such as a sensor network to monitor stormwater quality across the catchment.	EPA Victoria and Maribyrnong Council will resource this internally; therefore no additional funding for this action is required.

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Education & Participation	E 1	Engage and educate industry about better practices	EPA Victoria	Maribyrnong Council Melbourne Water	2019 – 2029 By the end of 2019	<p>Increased industry understanding of stormwater quality control obligations will be targeted during routine inspections of industrial areas in the Stony Creek catchment. This will be supported by EPA Victoria's Industry Guidance Unit. Preventative Guidance has been developed specific to a particular practice/activity that is common across a number of industry sectors (eg. liquid storage and handling).</p> <p>An Officer for the Protection of the Local Environment (OPLE) position will be embedded into Maribyrnong Council offices. The OPLE role supports EPA Victoria's work to prevent illegal waste stockpiling and activities as part of their focus on waste crime.</p> <p>EPA Victoria will report on the success of engagement with industry through the annual report card on progress of actions.</p>	<p>To be funded and resourced internally at EPA Victoria, therefore no additional funding for this action is required.</p> <p>The OPLE position is funded by the Victorian Government. Funding has been allocated.</p>
Education & Participation	E 2	Play-based learning and participatory community assets	Maribyrnong Council Education providers	Community groups	2022 – 2025	<p>Maribyrnong Council will work closely with all education care services and encourage play-based learning.</p> <p>The 'Youth Rangers' program with Friends of Cruickshank Park and Maribyrnong Council promotes play-based learning.</p>	Outdoor play-based learning programs may be eligible for Maribyrnong Council's community grants program and other State Government grant opportunities.
Education & Participation	E 3	More signage along the creek (especially in parks) about littering, impacts on stormwater, and directional signage to the community garden and other assets	Maribyrnong Council	Melbourne Water EPA Victoria	By the end of 2021	<p>Signs will be installed at high visitation locations including main entrances and shared paths in Cruickshank Park.</p> <p>Other wayfinding signage will be considered through the Stony Creek Future Directions Plan 2019. #</p>	<p>Funding for signage has been allocated.</p> <p>Funding requirements for wayfinding and interpretive signage will be estimated in the Stony Creek Future Directions Plan. #</p>
Education & Participation	E 4	Community education around rainwater harvesting on residential sites – support for residents to invest in hardware	Maribyrnong Council	-	By the end of 2020	<p>Community education around rainwater harvesting on residential sites can be incorporated into Maribyrnong Council's Sustainable Living Program, which will feature public workshops on this topic.</p> <p>Public workshops will be advertised through channels such as Council's website, social media and community bulletins.</p>	The Sustainable Living Program is funded through existing budgets.

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Education & Participation	E 5	Use the Community Garden Centre as a hub for communication, education about supporting native flora and fauna, stewardship programs, encouraging folks to use more sustainable practices in their own gardens, etc.	Maribyrnong Council	Community groups Interested community members	By the end of 2020	Maribyrnong Council's existing 'My Smart Garden' program promotes habitat planting and sustainable gardens to the community. This program can look to focus several workshops on the Stony Creek corridor and the Yarraville community.	The 'My Smart Garden' program is supported through existing budgets.
Education & Participation	E 6	Create a creek-wide map of actions currently underway and planned	Melbourne Water Community groups	Maribyrnong Council	2019 – 2020	Melbourne Water and other partners will work with the community to develop a mapping tool identifying the rehabilitation actions and other initiatives which will help to show their location and distribution along the creek's length. This will also be used to report on progress of actions.	Funding to be determined.
Education & Participation	E 7	In partnership with Traditional Owners; returning Aboriginal ways of knowing, being and doing to waterways and the land	Melbourne Water Maribyrnong Council Traditional Owner groups	-	2019 – 2029	<p>Engagement with Traditional Owner groups is a continual and on-going process, as outlined in the 2018-2028 Healthy Waterways Strategy and Melbourne Water's commitment to protect and promote cultural and historical connections to waterways.</p> <p>There are three Traditional Owner groups who each claim the land in the Stony Creek catchment as their Country – the Wurundjeri Woi Wurrung, Bunurong and Boon Wurrung Foundation.</p> <p>The Traditional Owner groups have limited resources, and requests for their time and services on projects, programs and initiatives are in high demand. While the Traditional Owner groups have expressed interest in being involved in the development and implementation of the Stony Creek Rehabilitation Plan, more appropriate and meaningful engagement will be undertaken through their involvement in the Waterways of the West initiative which includes Stony Creek. Refer to Section 3 on page 27 for more information.</p>	<p>Engagement to be resourced internally at Melbourne Water and Maribyrnong Council.</p> <p>Involvement of Traditional Owner Groups in activities will require funding from a number of different programs.</p> <p>The Waterways of the West Ministerial Advisory Committee includes dedicated resourcing to allow for appropriate and meaningful engagement in the Waterways of the West program, and Traditional Owner-led projects.</p>

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Education & Participation	E 8	Routine publishing of test results on publicly available websites	EPA Victoria Melbourne Water Maribymong Council	Community groups (eg. Friends groups)	2019 – 2029	Melbourne Water shares water quality results with EPA Victoria and the Department of Environment, Land, Water and Planning (DELWP), who set policies and objectives for improving river health, and audits any changes to the monitoring network. Water quality data is available to download from the DELWP Water Measurement Information System (http://data.water.vic.gov.au/). Data and information on community water monitoring is available at: www.vic.waterwatch.org.au . A link to existing data repositories is recommended to be included in the tool developed for Action E 6.	This action is resourced internally by all agencies; therefore no additional funding is required.
Education & Participation	E 9	Education pieces along the trail linking to the Maribymong River to create a unifying element	Maribymong Council	Melbourne Water Traditional Owner groups Community groups	2020 – 2021	Interpretive and educational signage will be considered through the Stony Creek Future Directions Plan 2019. #	Funding requirements for interpretive and educational signage will be estimated in the Stony Creek Future Directions Plan. #
Education & Participation	E 10	Have more frequent community 'pop up' information events in Cruickshank Park for residents to find out about the creek	Maribymong Council Melbourne Water Community groups (eg. Friends groups)	EPA Victoria Community groups Interested community members	On an annual basis, 2019 – 2029	Events will be held annually to educate the community on waterway health and provide information about the creek (eg. education on urban impacts to local waterways, indicators of waterway health, as well as plants, macroinvertebrates, fish, birds and frogs living in and near the creek). Events will be centred around community activities such as planting days, and will coincide with annual report card updates to report back to the community on progress of rehabilitation actions. Community groups can apply for grants from Melbourne Water and Maribymong Council through their incentives programs to support community events that are centred around activities such as planting days, weed control or other working bees.	Maribymong Council and Melbourne Water will continue to support events that are centred around community activities.
Education & Participation	E 11	Facebook page for the community to identify fish in the creek – even just size, location, number of fish, colour etc.	Community groups	Melbourne Water	2019 – 2021	The local community will lead the development of this project with support from Melbourne Water's Waterwatch team as required (eg. for help to identify fish species etc).	No funding required.

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Education & Participation	E 12	Develop regulations holding industrial groups accountable for damage, continue to inform and support these groups to make better choices in their industrial practices	EPA Victoria	Maribyrnong Council	Mid 2020	This will be achieved through legislation under the new <i>Environment Protection Amendment Act 2018</i> outlined in Section 3.	No funding required.
Amenity	AM 1	Add more plantings throughout the Stony Creek corridor	Maribyrnong Council Melbourne Water West Gate Tunnel Project	Community groups (eg. Friends groups) Public land managers Private land owners	2020 – 2022	A habitat and amenity improvement project will be developed and implemented through Melbourne Water's minor capital works program and will include riparian revegetation and creation of off-stream habitat features. Friends groups will be consulted in the development of the project. Revegetation along the creek can be undertaken by interested community groups, public land managers and private land owners through grants that are available under Melbourne Water's incentives program. The West Gate Tunnel Project will be expanding the Stony Creek Reserve between Hyde Street and Williamstown Road by turning vacant industrial land into new open space and planting woodland tree species to increase tree canopy cover for the area. More information is available on the West Gate Tunnel Project website: http://westgatetunnelproject.vic.gov.au/about/keytopics/open-space . The amenity value (eg. shading, sightlines etc) of future revegetation will be considered through Maribyrnong Council's Stony Creek Future Directions Plan. #	To be funded under Melbourne Water's existing programs. \$ To be funded and delivered by the West Gate Tunnel Project. Future revegetation will be estimated in the Stony Creek Future Directions Plan. #
Amenity	AM 2	Investigate the acquisition of land adjacent to the creek through sections of private ownership and widen the corridor *	Maribyrnong Council	-	2019 – 2029	Planning mechanisms will be investigated such as public acquisition overlays and design guidance for improved built form outcomes in areas adjacent to the waterway.	Maribyrnong Council will fund planning investigations.

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Amenity	AM 3	Conduct a feasibility study into naturalising the concrete channel from Cruickshank Park to Hyde Street starting with the Cruickshank Park section *	Maribyrnong Council	Melbourne Water Community groups	2021 – 2026	<p>Melbourne Water has a pilot program called 'Reimagining Your Creek' which is designed to explore how concrete and earthen channelised waterways can be returned back to a more natural state to improve liveability, amenity and health and wellbeing outcomes for the community. There is an Expression of Interest (EOI) process for the program, where Council and the community can apply together through the recommendation of potential sites that satisfy program selection criteria.</p> <p>Due to the high costs for naturalisation determined through the pilot program, Melbourne Water will now be leading an approach that is more in line with the current Healthy Waterways Strategy, and the funding process for the next pricing submission. That process requires the potential site selection to align with the performance objectives identified within the strategy. Sites that align with the performance objectives will be given high priority as they relate to delivering amenity for the community.</p> <p>It is also important to note that not all channels can be naturalised; the ability to do so is based on a number of contributing factors that need to be met in order for naturalisation to be successful and safe to the community. Naturalising channels can also be very costly, and strong delivery partnerships are essential.</p> <p>Due to the learnings from the Upper Stony Creek Transformation project and significant costs related to asbestos remediation, sites contaminated with asbestos will be scrutinised and may require an upfront and comprehensive geotechnical assessment to determine if the project poses a high risk. If it does, it may not proceed.</p>	Funding to be determined.
Amenity	AM 4	More nature-based play to engage kids with their local flora and fauna	Maribyrnong Council	Community Education providers	2022 – 2025	Nature-based play opportunities will be investigated through the Stony Creek Future Directions Plan 2019. #	Funding requirements for nature-based play will be considered in the Stony Creek Future Directions Plan. #

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Amenity	AM 8	Rainwater storage for irrigation in Cruickshank Park to provide green spaces even over summer, and prevent barren sections during dry periods	Maribyrnong Council	Melbourne Water	2022 – 2025	Maribyrnong Council's Stony Creek Future Directions Plan 2019 and the Integrated Water Management Strategy will consider stormwater harvesting opportunities. #	Maribyrnong Council is preparing a whole-of-catchment Integrated Water Management Strategy which will prioritise implementation and funding for stormwater harvesting. Council will also seek external funding opportunities to contribute towards projects including Melbourne Water's Incentives program and City West Water fund.
Amenity	AM 9	Provide public toilet facilities to support extended visits to the park	Maribyrnong Council	-	2022 – 2025	Public toilet provision is guided by Council's Public Toilet Strategy and will be considered in the Stony Creek Future Directions Plan. #	Maribyrnong Council is preparing a 10 year program for investment in public toilets.
Amenity	AM 10	Create an art/ sculpture trail through the park	Community groups Interested community members	Maribyrnong Council	By the end of 2028	The community will need to provide a proposed design for the art/sculpture trail and submit an application under Maribyrnong Council's community grants program.	Funding to be determined under Maribyrnong Council's community grants program. External funding such as local business sponsorship and State Government grants should also be investigated.
Amenity	AM 11	Provide a BBQ area – this will be conducive to the children's play equipment and the basketball area. It will bring more families in to enjoy the facilities	Maribyrnong Council	-	2022 – 2025	Barbeque areas will be considered in the Stony Creek Future Directions Plan. #	Funding requirements for barbeque areas will be considered in the Stony Creek Future Directions Plan. #
Access	AC 1	Construct a shared path along the creek from Paramount Road to Matthews Hill in Sunshine, investigating connectivity beneath rail embankments*	Maribyrnong Council	Melbourne Water Vic Track Private landowners	2024 – 2029	Shared path locations and connectivity will be considered in the Stony Creek Future Directions Plan. #	Funding requirements for shared path networks will be considered in the Stony Creek Future Directions Plan. #

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Access	AC 2	Construct a footbridge for all active transport modes connecting Park Avenue and Cala Street *	Maribyrnong Council	Melbourne Water	2020 – 2022	The Cala Street shared user path bridge is included within the Stony Creek Future Directions Plan and the West Footscray Neighbourhood Plan. #	Funding for the footbridge is included in Maribyrnong Council's City Infrastructure Plan.
Access	AC 3	More active transport access to the creek from Spotswood (west side) and South Kingsville	Hobsons Bay Council West Gate Tunnel Project	Melbourne Water	2022 – 2025	Access improvements across the creek in lower sections will occur through the West Gate Tunnel Project, including a new bridge across the creek in Stony Creek Reserve and a new shared path from the Reserve through to Spotswood Station via Hall Street. More information is available on the West Gate Tunnel Project website: www.westgatetunnelproject.vic.gov.au/community/cycling-benefits .	To be funded and delivered by the West Gate Tunnel Project.
Access	AC 4	Install more rocks (stepping stones) to walk across the creek	Maribyrnong Council	Melbourne Water	2020 – 2021	There are several existing rock crossings in Stony Creek already. Generally, stepping stones can create public safety issues, however options will be considered for installing more rocks for stepping stones in highly used areas where there is a need.	An investigation to consider options for installing additional stepping stone rocks will be resourced internally. Funding for the implementation of this action will be determined pending the recommended option/s.
Access	AC 5	Construct a shared path from Paramount Road to Cruickshank Park	Maribyrnong Council	-	2022 – 2025	Shared path locations and connectivity will be considered in Maribyrnong Council's Stony Creek Future Directions Plan. #	Shared path locations and connectivity will be considered in Maribyrnong Council's Stony Creek Future Directions Plan. #
Access	AC 6	Activation of under-utilised parts of the creek by constructing pathways and/ or a boardwalk along the creek *	Maribyrnong Council	Melbourne Water	2024 – 2029	Path locations and boardwalks outside of the main shared path network will be considered in Maribyrnong Council's Stony Creek Future Directions Plan. These may also take the form of informal pathways or walking tracks. #	Funding requirements for paths and/or boardwalks will be considered in the Stony Creek Future Directions Plan. #
Access	AC 7	Investigate improvements to active transport at the Geelong Road and Somerville Road intersection to improve pedestrian connectivity, efficiency, and safety *	Maribyrnong Council VicRoads	-	2019 – 2021	Improvements to major intersections connecting the active transport network will be considered in the Maribyrnong Bicycle Strategy.	The development of the Maribyrnong Bicycle Strategy is funded by Council. Funding requirements to improve intersections will be subject to VicRoads estimates and budgets.

Key theme	Code	Action	Lead	Support	Timeframe	Implementation	Funding
Access	AC 8	Open up access and views over the waterway through the coordinated removal of fencing onto the creek	Melbourne Water	Maribyrnong Council	2024 – 2029	Fencing along the concrete channel downstream of Francis Street is required for public safety purposes so removal may not be possible. Staged removal or replacement of this fencing to open up views will be considered and may be linked to potential future naturalisation of concrete channels (see Action AM 3).	Melbourne Water will conduct an investigation to assess fencing for public safety issues and risk management. In implementing this action, Melbourne Water will need to allocate funding for fencing according to priorities across the Port Phillip and Westport Region.
Access	AC 9	Provide lighting to extend accessibility times especially during winter, make people feel safer and able to see each other, eg. bike riders, kids, people and dogs	Maribyrnong Council	-	2022 – 2029	Lighting suitability and extents will be considered in Maribyrnong Council's Stony Creek Future Directions Plan. #	Funding requirements for lighting will be considered in the Stony Creek Future Directions Plan. #

Reporting back on progress



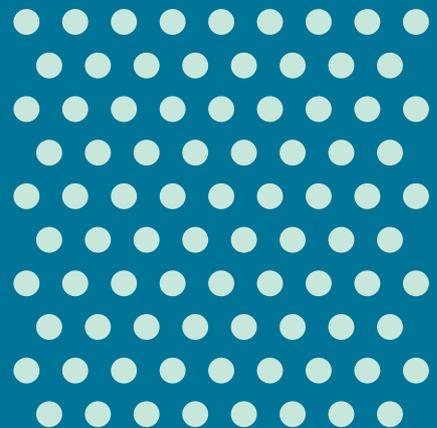
Melbourne Water, Maribyrnong City Council and EPA Victoria are committed to continuing engagement with the community and key stakeholders over the life of the plan, and to provide updates on progress of rehabilitation actions.

The avenues for progress updates include:

- **Annual Waterways Local Updates**

Melbourne Water's annual Waterways Local Updates outline the services and work we've delivered in your council area to enhance waterway health and build resilience to flooding. Updates are provided at the end of each financial year and can be found on Melbourne Water's website.

- **Online updates on agency websites**
- **Email updates and meetings with local Friends groups**
- **As per Action E 6, Melbourne Water and other partners will work with the community to develop a mapping tool identifying the rehabilitation actions and other initiatives which will help to show their location and distribution along the creek's length. This will also be used to report on progress of actions**





- **An annual report card**

Melbourne Water will provide an annual report card update to the community on the status and progress of actions, including achievements and challenges, and a snapshot of what's planned for the year ahead. This will enable agencies, other key stakeholders and the community to provide input and jointly monitor and measure progress of actions.

The report card update will be presented each year at a community information event in Cruickshank Park, which is centred around a community activity such as a planting day (refer to Action E 10).

- **Maribyrnong City Council will report back on actions incorporated in their Stony Creek Future Directions Plan 2019 through their own reporting mechanisms**

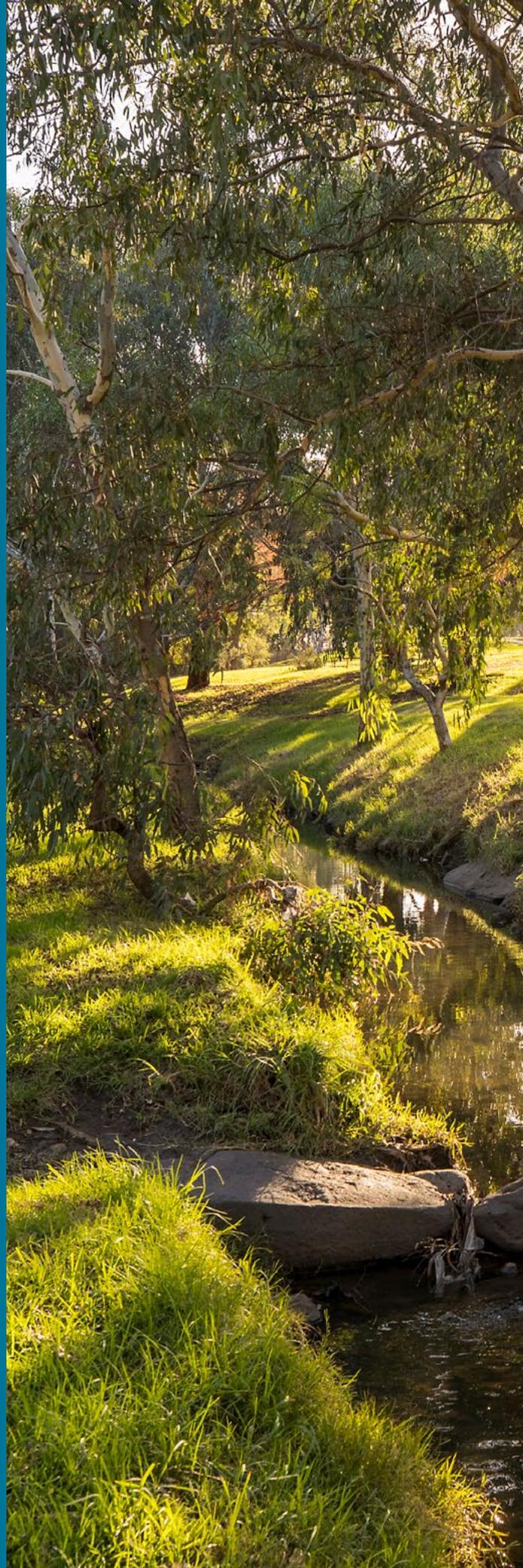
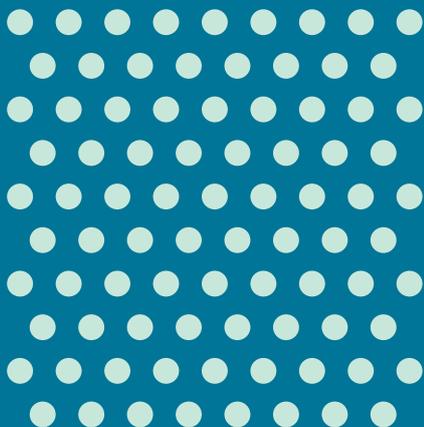


References

City of Maribyrnong Open Space Strategy, September 2014. Prepared for Maribyrnong City Council by Thompson Berrill Landscape Design Pty Ltd in association with Environment & Land Management Pty Ltd.

Friends of Stony Creek Incorporated website, last modified 2013.

Eidelson, Meyer, 1951. "Stony Creek: The journey of a waterway and its people." First published in 1997 by the Friends of Stony Creek, Yarraville.





Appendices





Appendix A:

Stony Creek – a valued urban waterway with a rich history

Stony Creek is located in the western suburbs of Melbourne and flows into the Yarra River.

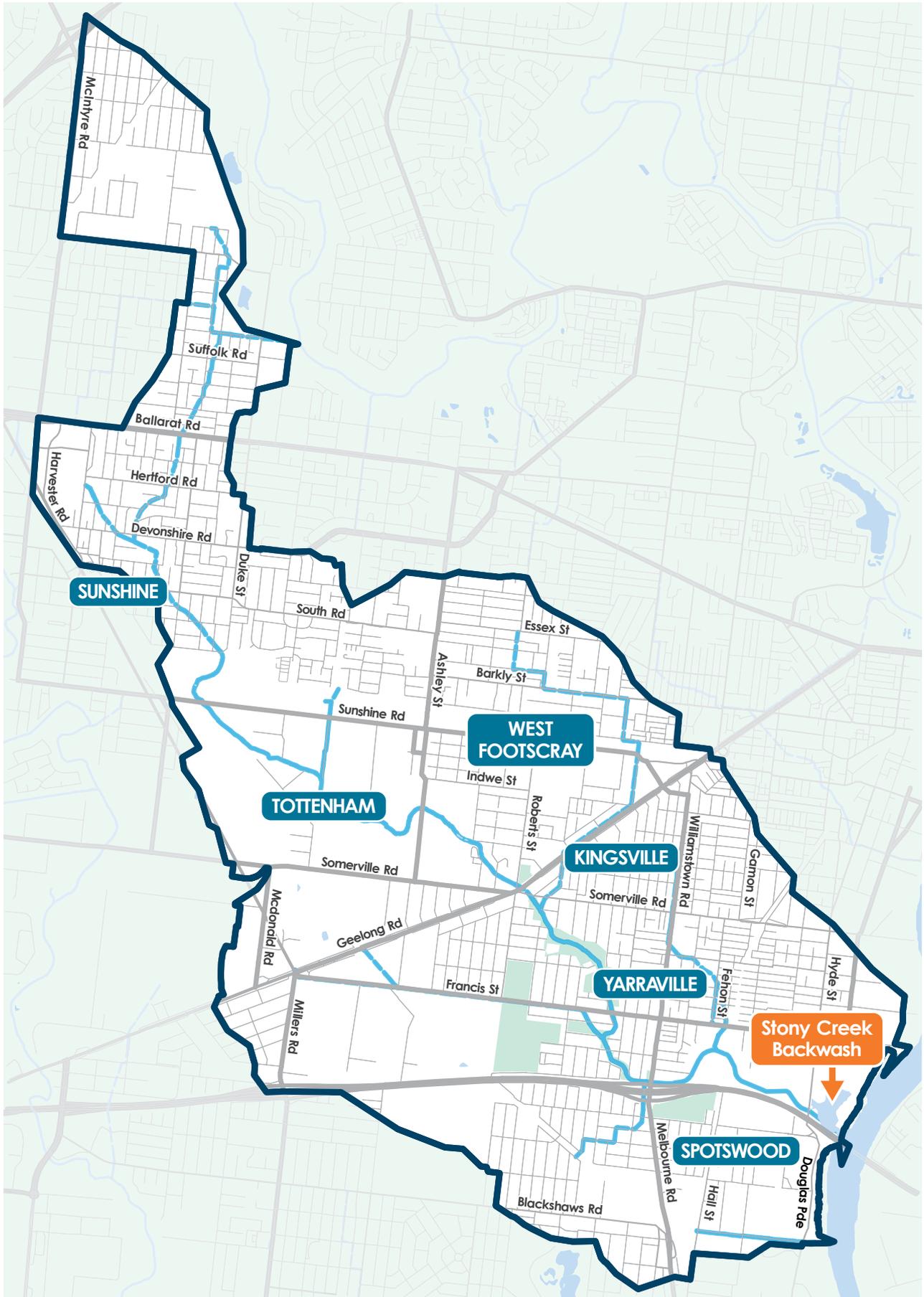
It originates in St Albans and flows downstream through the suburb of Sunshine and the Tottenham industrial precinct, continuing through the residential areas of West Footscray, Kingsville and Yarraville before entering the Stony Creek Backwash (estuary) and Yarra River at Spotswood under the West Gate Bridge (Figure 2). It is an incised stream which flows through a gently graded valley form through the municipalities of Brimbank and Maribyrnong, towards the Yarra River in the City of Hobsons Bay.

The Stony Creek catchment has limited natural areas as a result of current and past land use, extensive urbanisation and heavy industrialisation. Some sections of the creek have been highly modified from its natural state during historical development. It now flows above ground for most of its length either in a modified natural channel or a concrete lined channel, including the section south of Francis Street (downstream of Cruickshank Park), which was channelised and lined with concrete in the mid to late 1960s to prevent flooding and erosion.

Stony Creek's estuarine confluence with the Yarra River is approximately 2.5km upstream of the Yarra River entrance to Port Phillip Bay near Newport. The system is highly modified with bank stabilisation to prevent flooding and erosion. The substrate is primarily silt and sand. The Stony Creek Backwash, which was a former bluestone quarry, supports patches of Mangrove and Saltmarsh in the lower reaches of the estuary.



Figure 2: Map of Stony Creek catchment





History

Stony Creek has a fascinating history which is well documented by Maribyrnong City Council, local Friends groups and others. Extracts from this documentation have been included in the following section. Details for the full versions can be found in the reference section.

Traditional Owner connection to Country

Traditional Owners have lived in the region for tens of thousands of years; they have a physical and spiritual connection with the landscape and waterways through significant places, artefacts, language, stories and traditions.

Traditional Owners relied on local rivers and creeks as an important source of food, water, ritual and ceremony. They continue to have a spiritual and customary living relationship with water in all its forms through creation of stories, use of water as a resource and knowledge about sharing and conserving water.

The entire Stony Creek catchment is on land without one designated Traditional Owner. The Victorian Heritage Council have not yet made a determination on who the right people for Country are. There have been several applicants since 2007 for this Country/land and water; presently, Wurundjeri Woi Wurrung and Bunurong both claim this land as their Country. Boon Wurrung Foundation have similar claims.

Quarrying in the 1850s

After European settlement in Melbourne in the early 1800s, the area around Stony Creek was mined for its basalt (bluestone) resources in the mid to late 1800s, and there were at least eleven quarries in what is now the Cruickshank Park open space reserve (City of Maribyrnong Open Space Strategy, 2014; Friends of Stony Creek, 2013; Eidelson, 1951). The bluestone was used to build some of Melbourne's earliest public buildings including Pentridge prison and St Paul's Cathedral, as well as the Stony Creek Rail Bridge between Spotswood and Yarraville (Eidelson, 1951).

Early industrialisation – 1870s to 1880s

Several industries were established on the banks of Stony Creek from the 1870s to 1880s including the Melbourne Woollen Mills, the Victorian Meat Preserving Works, glue works, Victoria Export Canning Works, Smelting/Cement Works, tanneries and others. Many of these industries generated noxious waste which was thought to have been disposed of directly into Stony Creek or nearby quarries (Friends of Stony Creek, 2013).

"Quarrying is indicated to have commenced along Stony Creek in approximately 1854. A number of quarries were ultimately established in the vicinity of the Hyde Street Reserve, Westgate Golf Course and also within what is now Cruickshank Park. The basalt rock extracted from the quarries was loaded onto barges and transported to Melbourne to be used as ballast or for the construction of many of Melbourne's early buildings. Significant quarrying ceased in the 1880s due to the progressive decrease in demand for ballast and basalt as a construction material."

– Friends of Stony Creek



Landfilling – 1900s to 1970s

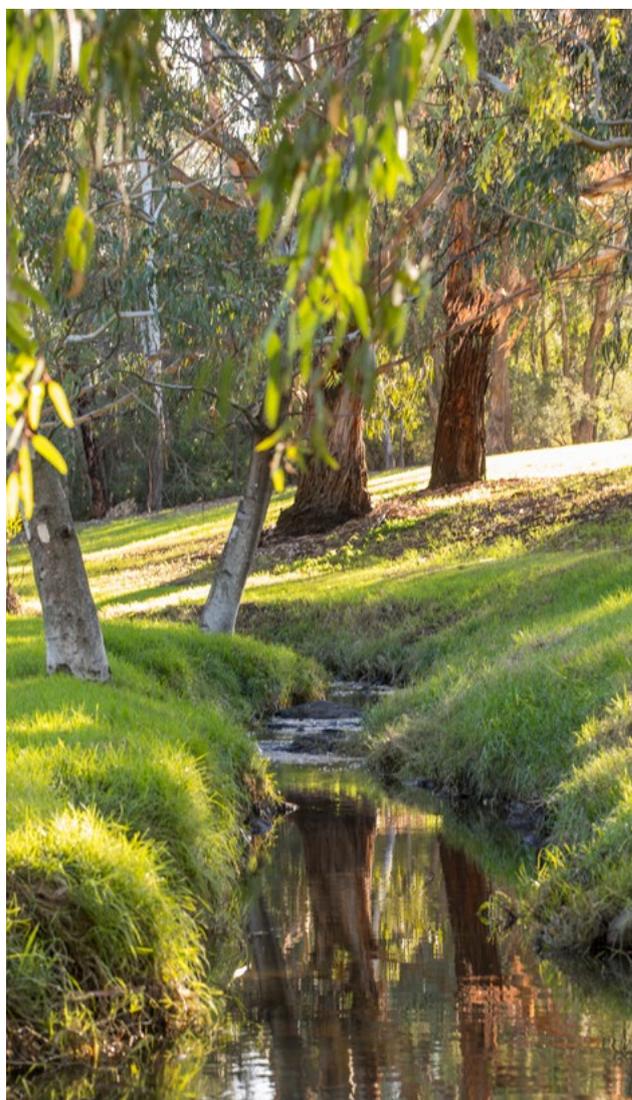
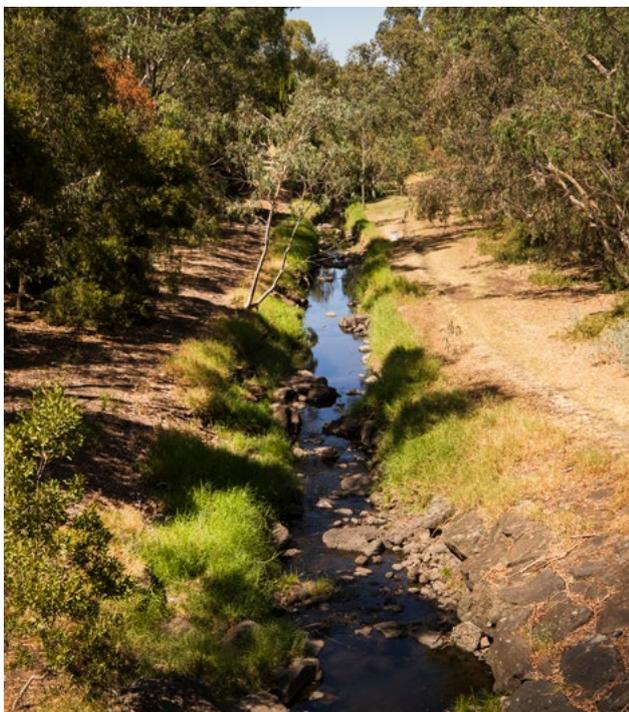
As quarrying activities scaled down, a period of landfilling took place, as many of the former quarry holes were used for informal waste disposal (Friends of Stony Creek, 2013).

According to documentation sourced by the Friends of Stony Creek, significant landfilling also occurred in the estuarine parts of Stony Creek during the 1900s.

1970s to current – from wasteland to parkland

In 1971, local residents in conjunction with Maribyrnong City Council created a design for an open space reserve along Stony Creek in Yarraville and started work to progressively transform the former quarry and landfill sites into community parkland, which was named Cruickshank Park (City of Maribyrnong Open Space Strategy, 2014; Friends of Stony Creek, 2013). The park has been planted with extensive native and indigenous vegetation over the past twenty years to improve its character and use (City of Maribyrnong Open Space Strategy, 2014).

“Landfilling was performed at the Hyde Street Reserve, initially filling old quarry holes, and progressively moving south and easterly to reclaim former swampland. The waste deposited here includes a variety of residential and industrial wastes. By the early 1970s the majority of the site had been filled...”





Today

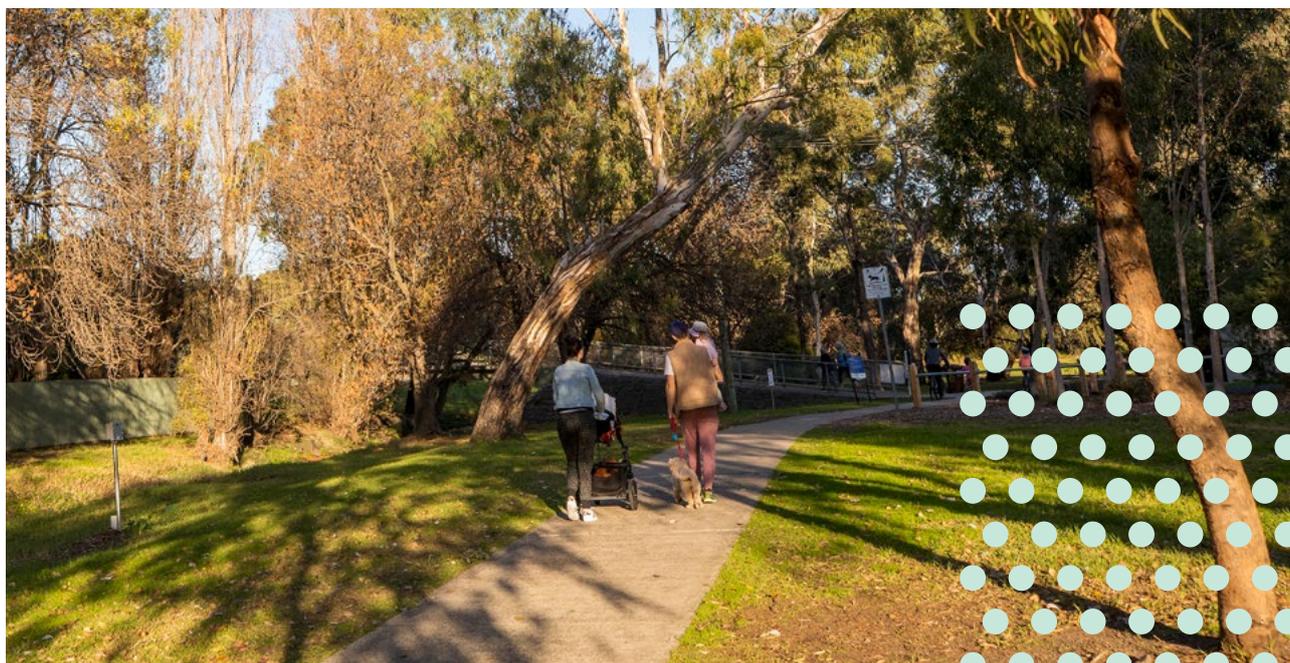
Stony Creek is highly valued by the community due to its social, recreational and nature conservation values.

The community use and visit the open spaces along the creek for many recreational activities, most notably dog walking. Playgrounds are highly visited, and shared paths alongside the creek are frequently used for commuting and for jogging, walking and cycling. The creek is also valued as a place for people to socialise and meet with others, and as a place for children to play. It is used by several local schools and childcare centres for outdoor-based education.

The most popular and highly visited section of Stony Creek is Cruickshank Park due to its extensive open space reserve. The remaining sections have relatively low usage levels because of their remoteness, lack of accessibility from residential areas, and the industrial setting (City of Maribyrnong Open Space Strategy, 2014).



There are two community groups who are active in the rehabilitation focus area and other parts of Stony Creek. The Friends of Stony Creek and Friends of Cruickshank Park have undertaken countless activities to restore and enhance the creek's environment and amenity, including revegetating many parts of the creek, as well as advocacy work and educating the community to raise awareness of the creek.

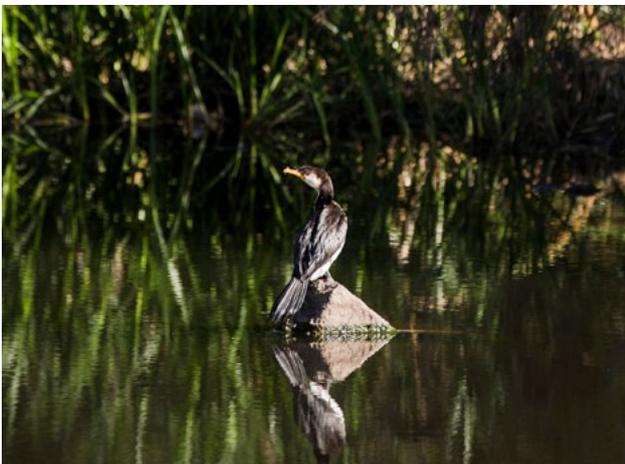


Environmental values

Although environmental values generally tend to be low, Stony Creek supports a range of native plants and animals that are important to the community.



White-faced Heron



Little Pied Cormorant

Birds

The majority of bird species around Stony Creek have been recorded in the lower estuary around Hyde Street Reserve and the Stony Creek Backwash. More than 100 species have been recorded in the Stony Creek catchment and about 31 of these species are reliant on water for food – these species are listed in Table 3. However, these birds are not solely reliant on Stony Creek, as other food sources and roosting areas are available nearby and are easily accessible.

Table 3: List of bird species in the Stony Creek catchment that are reliant on water for food

Waterfowl	Black Swan Pacific Black Duck Grey Teal Chestnut Teal Northern Mallard
Grebes	Hoary-headed Grebe Australasian Grebe
Rails, Gallinules and Allies	Eurasian Coot Purple Swamphen
Shorebirds	Masked lapwing Black-fronted Dotterel Pied Oystercatcher
Gulls, Terns and Skimmers	Silver Gull Pacific Gull Crested Tern Fairy Tern
Cormorants and Anhingas	Australasian Darter Great Cormorant Little Black Cormorant Pied Cormorant Little Pied Cormorant
Pelicans	Australian Pelican
Hérons, Ibis and Allies	White-necked Heron Great Egret Intermediate Egret White-faced Heron Cattle Egret Nankeen Night-Heron Australian White Ibis Straw-necked Ibis Royal Spoonbill



Frogs

Historically, a low number of frogs have been observed in the Stony Creek catchment, although recent records gained through Melbourne Water's Frog Census App have substantially increased available information on frog populations in and around the creek.

Table 4 shows the frog species that have been recorded in the Stony Creek catchment. There is evidence that the Eastern Banjo Frog may have avoided the worst impacts of the 2018 fire incident and runoff because of its burrowing abilities – they can seek refuge in the earth or adjacent to waterways, and even in backyards. There have been signs of recovery in the Stony Creek system since the fire, with tadpoles sighted in some parts of the creek in early 2019.

Table 4: List of frog species recorded in the Stony Creek catchment

Spotted Marsh Frog	<i>Limnodynastes tasmaniensis</i>
Eastern Banjo Frog (Pobblebonk)	<i>Limnodynastes dumerilii</i>
Common Eastern Froglet	<i>Crinia signifera</i>
Striped Marsh Frog	<i>Limnodynastes peronii</i>



Common Eastern Froglet (Photo - Peter Robertson)



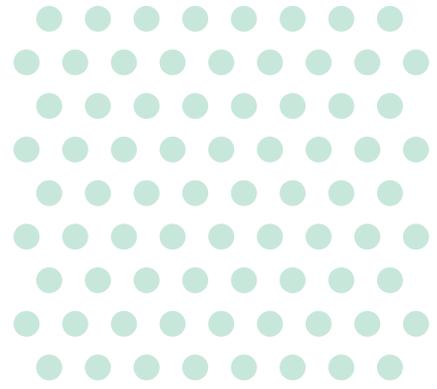
Eastern Banjo Frog (Photo - Peter Robertson)



Spotted Marsh Frog (Photo - Peter Robertson)



Striped Marsh Frog (Photo - Peter Robertson)



Fish

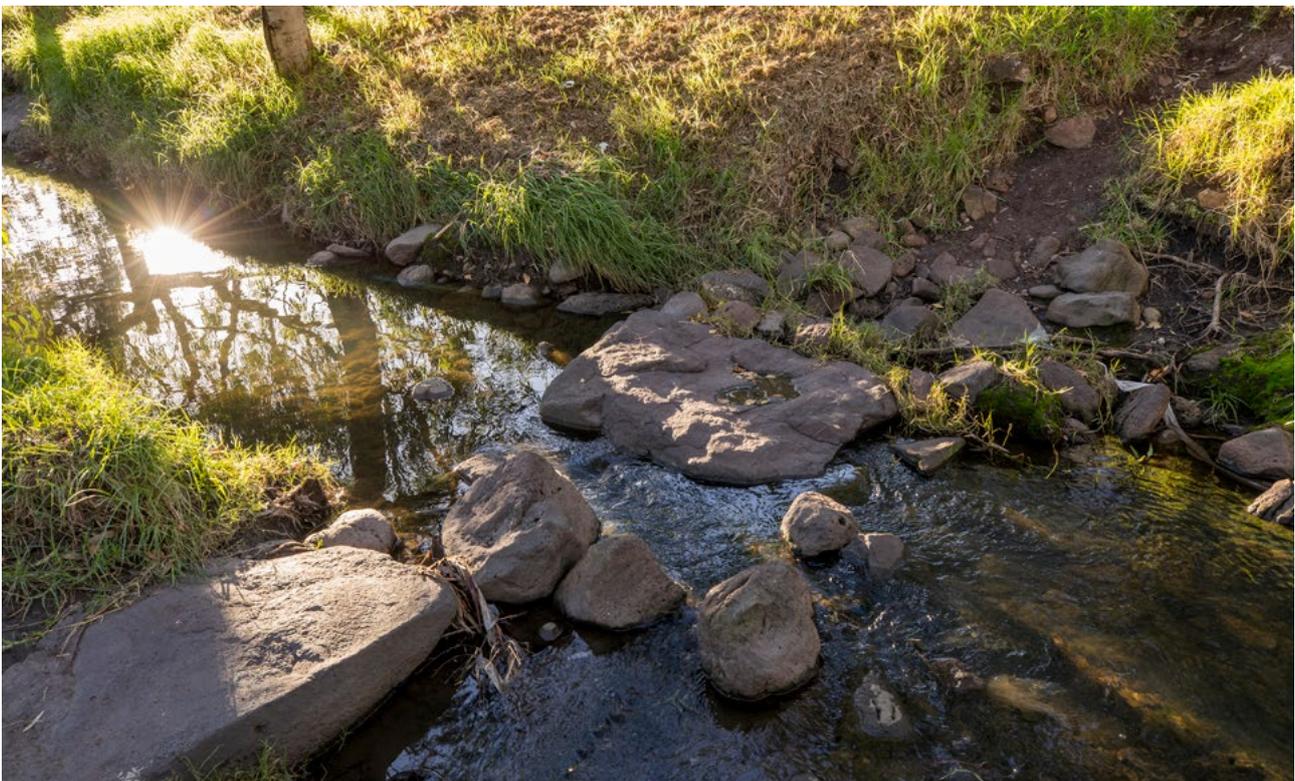
Apart from the mangrove and saltmarsh vegetation in the Stony Creek Backwash (estuary), there is very little in-stream habitat and aquatic vegetation cover in the creek to support fish. Overall, there is a low number and diversity of fish populations in Stony Creek. Populations include migratory native fish including Short-finned Eels and Common Galaxias. These species are considered to be relatively tolerant to poor water quality (including low levels of dissolved oxygen) and habitat condition, as are the invasive Oriental Weatherloach, which are found in higher numbers in the creek.

The lack of other migratory species in the lower section of the creek indicates that conditions are unsuitable for a diverse range of freshwater fish.

Eastern Gambusia are likely to be distributed throughout the lower section of Stony Creek. Flat-headed Gudgeon are capable of existing in many conditions including highly saline environments such as the Stony Creek estuary. The estuary also supports populations of Black Bream and Goby species.

Table 5: List of fish species that are found in the Stony Creek catchment

Black Bream	<i>Acanthopagrus butcheri</i>
Bridled Goby	<i>Arenigobius bifrenatus</i>
Tamar Goby	<i>Afurcagobius tamarensis</i>
Flat-headed Gudgeon	<i>Philypnodon grandiceps</i>
Large-mouthed Goby	<i>Redigobius macrostoma</i>
Smooth Toadfish	<i>Tetractenos glaber</i>
Yellowfin Goby	<i>Acanthogobius flavimanus</i>
Short-finned Eel	<i>Anguilla australis</i>
Oriental Weatherloach	<i>Misgurnus anguillicaudatus</i>
Eastern Gambusia	<i>Gambusia hollbrooki</i>
Common Galaxias	<i>Galaxias maculatus</i>





Vegetation

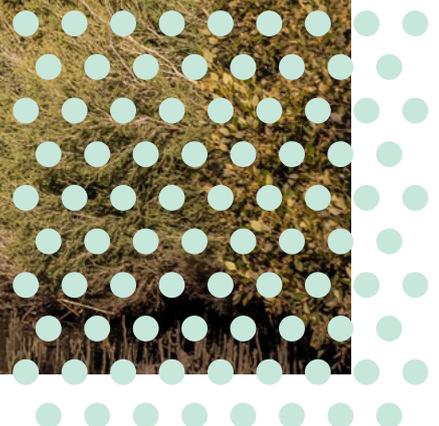
Prior to European settlement, much of Melbourne's volcanic plains were almost treeless and covered with native grasslands. Stony Creek would have once had two main Ecological Vegetation Classes (EVCs) associated with the waterway including Riparian Woodland (EVC 641) and Coastal Saltmarsh (EVC 9). Occasional trees would have included River Red Gums, Sheoke, Buloke, Wattle and Banksia. Native grasslands would have included a diversity of species with Kangaroo Grass dominating on well drained fertile soils and Wallaby Grass and Tussock Grass dominating along the drainage lines. Larger wetlands would have been fringed with Tangled Lignum and River Red Gums (City of Maribyrnong Open Space Strategy, 2014).

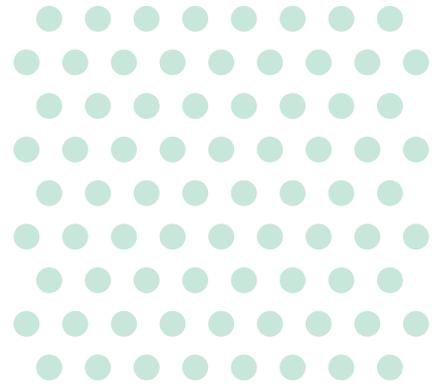
Like most urban waterways, native vegetation has been severely depleted along Stony Creek since European settlement and only small isolated remnants remain. However, the active community groups in the Stony Creek catchment have undertaken extensive revegetation works along the creek over several years, which have enhanced the natural biodiversity values of the area.

Upstream of Paramount Road through Tottenham, the creek flows through industrial land and is contained in a narrow modified channel, with established native and exotic trees and vegetation. Many of the large exotic trees such as Willows, Poplars and Desert Ash were removed to create machinery access for the removal of contaminated sediment as a result of the fire incident in 2018.

Between Roberts Street and Paramount Road the creek flows in a modified natural channel, with a combination of exotic and native vegetation and mostly through a public open space reserve. Recent revegetation works in this section have aimed to contribute to its biodiversity values. The main tree and shrub species around the creek close to Paramount Road include River Red Gum, Lightwood, Blackwood, Silver Wattle, Woolly Tea-tree, and River Bottlebrush, along with several mature exotic trees such as Willows and Poplars. Except for some small areas with revegetated groundcover species such as Spiny Mat-rush, the ground layer is mostly dominated by exotic grass species such as Kikuyu.

In Cruickshank Park, extensive plantings over the past twenty years provide canopy cover and shade to the waterway (City of Maribyrnong Open Space Strategy, 2014). Indigenous and native trees, shrubs and some groundcover species have been used to revegetate the banks of the creek and in various garden beds throughout the open space park areas. The main tree and shrub species that are found in Cruickshank Park are River Red Gums, Lightwood, Blackwood, Silver Wattle, Hedge Wattle, Woolly Tea-tree and River Bottlebrush. Several mature exotic trees such as Willows, Desert Ash and Poplars also grow along the creek. The ground layer is mostly dominated by exotic grass species such as Kikuyu, with some small areas of revegetated groundcover species such as Spiny Mat-rush, Tall Sedge and remnant Juncus species. At the downstream end of Cruickshank Park the creek is contained in a concrete lined channel to the West Gate Golf Course.





Through the West Gate Golf Course, the creek returns to a modified natural channel, however the riparian values are minimal with the golf course extending across the creek and containing limited overstorey trees or native vegetation.

The vegetation in the lower section of Stony Creek near Hyde Street is of local significance due to the presence of saltmarsh and mangrove vegetation. Some relatively broad areas of Saltmarsh and scattered White (or Grey) Mangroves survive between the railway line and Hyde Street. Downstream of Hyde Street, a healthy White Mangrove forest exists along the shore of the tidal Stony Creek Backwash and is backed by more areas of saltmarsh. The mangrove forest in the Stony Creek Backwash was re-planted after an ink spill killed the original forest in the 1980s (Friends of Stony Creek, 2013).

Although the inland edges of the saltmarsh are threatened by high threat environmental weeds such as Couch and Kikuyu, the estuarine areas of Stony Creek (muddy banks and mangroves) provide the highest quality habitat for a wide range of fauna, particularly migratory and resident shorebirds. Saltmarsh provides suitable habitat for a range of reptiles such as skinks and snakes, and smaller insectivorous birds such as Superb Fairy-wrens, Australasian Pipits, and White-fronted Chats.

The well-vegetated banks on sections further upstream also have the potential to support migratory shorebirds, with Latham's Snipe being the most likely – in addition to Egrets and Gallinules (Rails/Crakes/Bitterns) that may also occur occasionally.



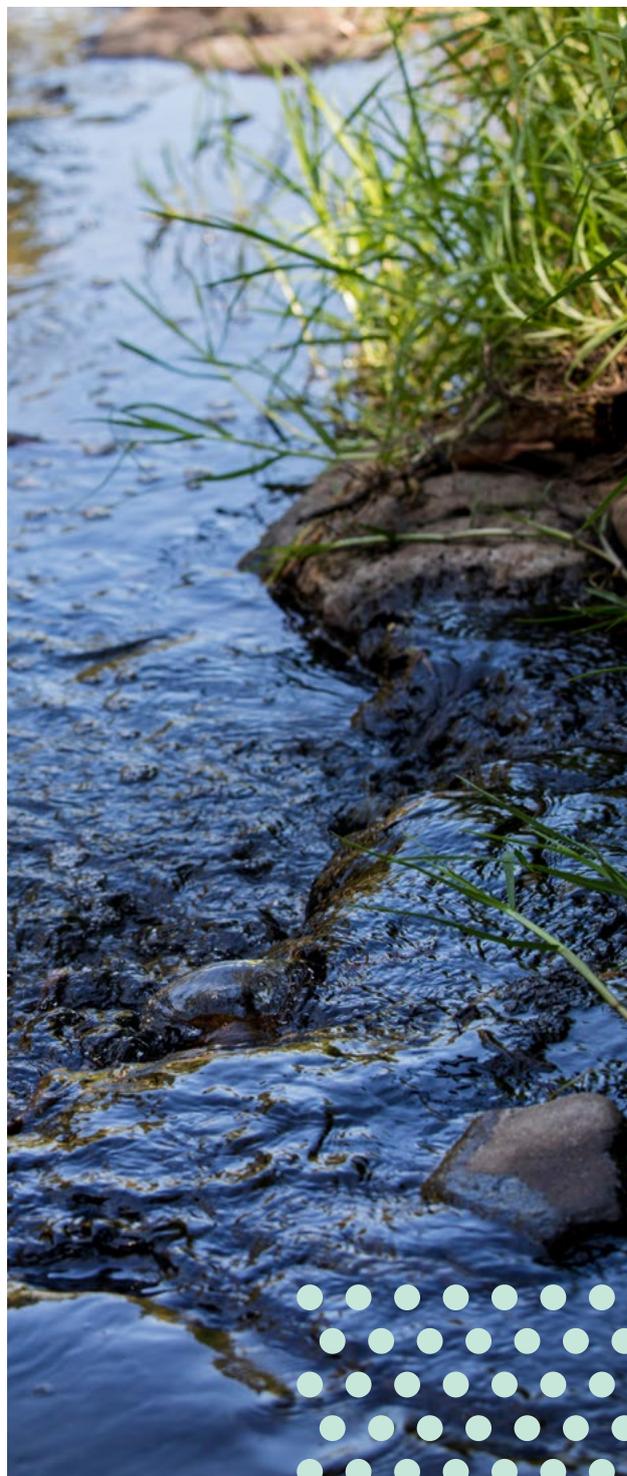


Urban impacts to waterway condition

Stony Creek suffers from urban influences such as impacts from residential and industrial development, pollution and litter, stormwater discharges into the system, and noxious spills.

Urbanisation imposes a range of pressures on waterways through direct modifications, wastewater and stormwater inputs (including impervious surfaces directly connected to streams through conventional drainage) and the introduction of pest species. This triggers changes in hydrology (flow regimes), stream channel form and stability, water quality, and aquatic plants and animals, which has a significant impact on ecological condition.

Where traditional stormwater management and drainage practices are used, urbanisation drastically changes the water quality and flow regime of rivers and creeks. Most rainfall becomes surface runoff which is directed to waterways through the drainage network. This means urban waterways like Stony Creek receive 'pulses' of polluted runoff almost every time it rains. Urbanisation also generally results in lower stream baseflows due to reduced infiltration and recharge to groundwater throughout the catchment.





The natural water cycle cannot function properly in urban areas because buildings, concrete and other sealed surfaces prevent water from soaking into the ground. As a result, natural water flows are altered and stormwater is created. Stormwater – rain that has collected on urban surfaces such as roofs, roads, footpaths and other sealed surfaces – flows directly into waterways via the stormwater drainage network. In urban areas, water cycle problems include:

Water quality – when water comes in contact with urban surfaces, it becomes contaminated with oil, metals, litter and other pollutants. Stormwater drains do not usually have any treatment systems, so pollutants are carried directly into waterways and bays.

Altered flow regimes – when it rains, the volume of stormwater entering waterways in urban areas increases. What would usually soak into the ground floods into the stormwater drainage network, where it is transported directly to waterways. High volumes of stormwater impact waterways by:

- Damaging habitat for aquatic animals such as fish and invertebrates
- Disturbing the breeding cycles of aquatic animals
- Eroding stream banks
- Increasing turbidity and pollution levels
- Altering natural flood cycles.

Flooding – During heavy rainfall events, large volumes of stormwater collect on sealed surfaces and flow into the stormwater drainage network. Flooding can occur when the volume of stormwater exceeds the capacity of the stormwater drains and waterways. This can cause flooding in areas that are not necessarily close to waterways.

Decreased soil moisture – Most urban surfaces are sealed, or impermeable. They prevent rainwater from soaking into the soil as it does in the natural water cycle. Low soil moisture in urban areas can impede healthy growth of plants, so irrigation is required to keep trees, plants and grass healthy. In Melbourne, many trees have developed shallow root systems as a result of years of surface irrigation, making them unstable.

Stony Creek is also affected by a lack of sufficient in-stream habitat and very low levels of dissolved oxygen, which make it difficult for most fish and frog species to flourish. The creek also lacks natural wetlands that would provide a natural filtering mechanism from the urban impacts. There is, however, a great opportunity to make significant environmental gains through long-term rehabilitation efforts, particularly through water sensitive urban design initiatives.

Appendix B:

Community stories, ideas and aspirations





Stony Creek Rehabilitation

Your Creek. Your Stories. Your Ideas.

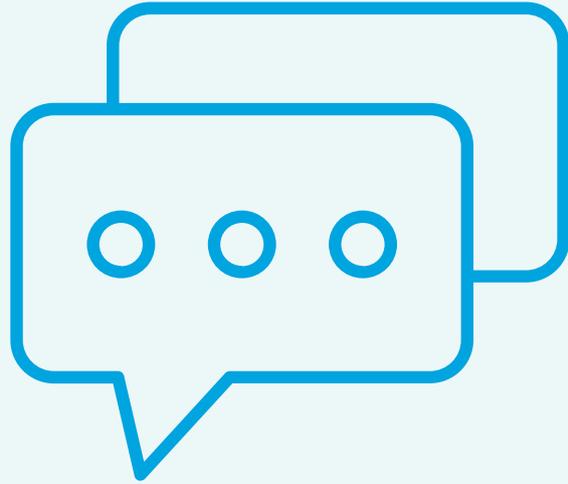
Your Stories

We invited people to share their stories about what Stony Creek means to them, what they enjoy about the creek environment, why they like to visit it and what they do there. We asked people to share some photos and images of their favourite spots.

These are your stories that we heard online and in person at our community events.

The stories and photos will help us to create a community-focused rehabilitation plan to help restore and enhance the condition of Stony Creek and its surrounding environment.

They were also used anonymously in the two-day community workshop in March 2019.



Your Stories about Stony Creek



Water quality and ecosystem recovery

Just upstream from the focus area (Sara Grove) on a number of occasions I have seen pollution entering from the stormwater drain (discoloured water and froth). Reducing the amount of pollution that directly flows into the creek should be a top priority. As for restoration because of the heavily degraded state and high pollution levels of the creek the best location to start is actually from where it connects to the Yarra. The tidal flushing of water in this area is likely to mean that this region will have the highest water quality and biodiversity including a number of brackish fish species.

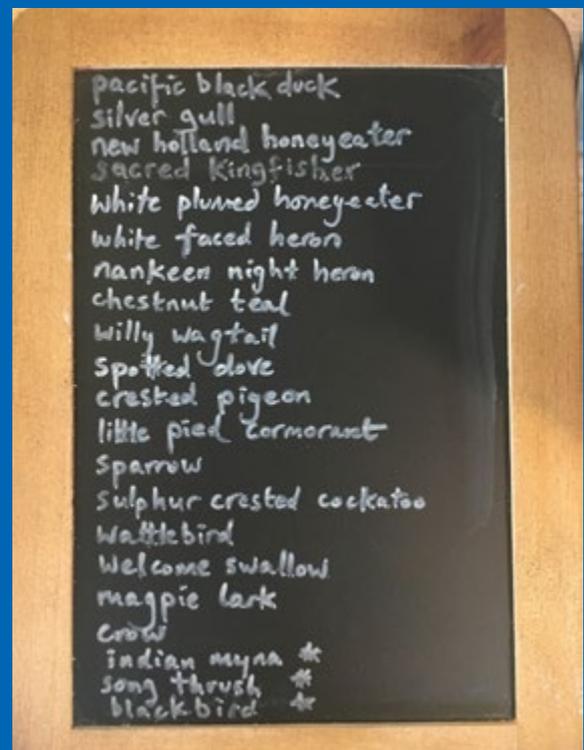
Work from this area heading up-stream plantings/ assisting recruitment of indigenous reed beds to remove as much pollution, nutrients and reduce the turbidity of the water. Also install litter traps, additional funding for rubbish removal this not only will assist the environment but improve public perception of the value of the creek. Finally biodiversity monitoring (flora/fauna - invertebrate, fish, mammal and bird) with community involvement of the estuarine region to discover what survives and record the positive effects of restoration over time. Consider involvement of other community groups to assist in monitoring such as ANGFA (Australia New Guinea Fishes Association), NFA (Native Fish Australia) and FNCV (The Field Naturalists Club of Victoria).

Stony Creek

Stony Creek is an incredibly important community resource and recreation space. What I would like to know is what has happened to the owners of the building that caught fire and turned our beloved community space into a stinking, toxic cesspit. Court cases pending? Charges laid? Prison sentences? Hefty fines that actually hurt the offending party?

Waterways are very important in urban landscapes

See photo attached for a list of birds I've seen along a short stretch of Stony Creek between Paramount Rd and Waratah St in only 12 months. How special! Waterways in the west are valued by the local community, but are calling out for the kind of investment provided to the the waterways in Melbourne's east and north (Yarra, Merri, Darebin). Merri Creek, having been cleaned up since the 1970s, now has a festival! The Merri has benefited from gentrification and deindustrialisation. Stony Creek is a long way from this (It has been left behind and is the most polluted waterway in Victoria). Despite this, it remains a refuge for wildlife and the community in a very urban context. We love Stony Creek. Well done and thank you Melbourne Water for investing in this rehabilitation plan.



A little creek goes a long way

Waterways are the life lines of all communities and we are so blessed and fortunate to have this little one in our backyard.

The devastation of this local site should NOT have happened and it is my hopes that the recent incident will be the catalyst for new protection laws and respectful ways to treat the environment be developed and implemented.

NO toxic waste should be entering the waterways and new laws about grey water safe products only to be used needs to happen.

Continuing pollution

My concern is the continual pollution of Stony Creek. Main sources of pollution are the two large drains at the end of St Leonards Ave. Yarraville and from pipes somewhere east of the Werribee train line. (have narrowed it down to three) I have contacted environment protection on many occasions with no results. This is very frustrating. I have records of reports going back to 2015. The pollution I report on is from the same sources time and time again. Nothing seems to be done about these polluters. Am I wasting my time reporting these pollution events?

Planting

I love to take my kids to planting days and help plant indigenous species along the creek. We talk about the plants, we meet others in the community. We feel like we have done a good thing for the public space, the wildlife and the community. It's a time when my children will happily work as part of a team to get the job done. They enjoy using the tools and especially filling buckets to water the plants in. I really enjoy this time with my children and the sense of community we get. If we see native birds, we talk about them. If we see evidence of pests like weeds or rabbits we talk about them. We talk about plastic pollution and often pick up litter. We talk about the importance of putting rubbish in the bin and recycling what we can. We talk to the Park Ranger and council staff, which is always informative.

Cruickshank Park

Since moving to Yarraville (close to Cruickshank) we visit and walk around Cruickshank Park every day. Our dog takes a dip in the creek several times on the way around and our children loved climbing across the rocks and playing in the water. We've met dozens of people from the area also walking their dogs in the park and developed a real sense of community. All that has changed since the fire. We have to walk elsewhere because the creek isn't safe for the dog or kids. The sense of community around the park has largely vanished and it's always extremely quiet if we do venture down there. It's had a serious impact on our enjoyment of our suburb (we have to pack two kids and the dog into our car every day if we want to exercise the dog, as we can't risk him swimming in the creek). We really want to see the water restored to acceptable levels immediately so we can go back to our lifestyle as it was, and as we loved it.

A living waterway

The things I love about Stony Creek are the life in and around the creek – the plants, birds, frogs and insects. There are places along the creek where you can, or could, walk in shade or sun, hear the water and wildlife, see the changing seasons in the vegetation. The creek brings out the community – walking, playing, sitting, working together to plant trees.

For the future I want a creek that is a living waterway, with frogs, eels and all the other macro and micro creatures that are part of a healthy ecosystem. I want the creek to wind through a vegetation corridor so that birds and insects can travel the length of the creek and connect to vegetation in Hyde St Reserve, Cruickshank Park and local gardens. I'd like an accessible walking trail alongside the length of the creek.

I want a cleaner waterway with interventions to stop pollutants and litter entering the creek. I'd love to do Waterwatch and not need to use a high-range phosphorus kit anymore.

Chillin' by the water

My dog loves taking me for a walk to Cruickshank Park. She ensures I get out and interact with people. In all honesty, I come out here and find that people are beautiful. Working in a stressful corporate environment, I often forget how nice my community is.



We used to come every day - we don't go anymore

This park was a daily visit for myself and my dog, Shelby (my dog) would go splashing and swimming in the creek everyday, rain, hail or shine and it was beautiful that she could do this.

We would meet up with all our friends, two and four-legged and walk and talk about things. Shelby would fossick through all the bushes, reeds and the creek to her hearts content.

I then had a child and it was so important to keep going to the park as it brought an extra element of enjoyment and learning opportunities for her. The sights, sounds, things to touch and feel, now the creek and surrounding banks are polluted it is 100% out of bounds.

My child now goes to Clare Court Childcare and the option to go 'Out and About' in the park is gone. It has taken away the education opportunities for children to be on the land and learn more about the environment, heritage and community.

It is so important to get everything clean and safe for adults, children and pets alike to get their park back.

Stony Creek: connecting us all to the big picture

I love discovering and exploring different parts of stony creek that are accessible to the public. For West Footscray, an area associated with factories, major rail routes and major roads, it is one of few the few ways to connect with nature without having to get into a car. While traditionally neglected by industry and regulations that don't protect it, it has huge potential to provide an inner city escape for residents, workers and a refuge for wildlife. The most upper part of Stony Creek accessible in the municipality of maribyrnong is at the base of Matthews Hill Braybrook. Full of litter but close to nesting cockatoo hollows and rare wild grasses remnant of our grassy plains. Imagine what it can be with some appreciation and TLC.

Wandering & Foraging

I love to wander along the creek, meandering and flowing alongside the water, listening and watching the birds and greeting others along my journey. Whilst I wander I observe the vegetation and where abundant I like to forage, for (so-called) weeds that are edible, alongside samphire and pigface. Unfortunately with the pollution from the fire, I am not foraging, and am hoping the creek life will regenerate soon.

Time for generational change

Stony Creek is a place to escape the local urban environment, to interact with nature, to relax, exercise, walk our dogs, and spend time with family and friends. Our dogs swim in the water, and our kids play on the stepping stones, explore, interact with nature, use their imaginations and learn about the environment.

It has been a delight to see the fruits of our community's hard work with birds, frogs, plants increasing in numbers over the years (until recently), and seeing the community gravitate to this oasis in the suburbs.

I have loved spending time along the creek with my daughter, walking, playing, planting trees, picking up litter, and teaching her about the environment and the need to value and protect it. Sadly our kids have also learnt first hand about the devastating impact of chemicals on the environment, and just our fragile the environment is.

It has been overwhelming at times to witness the utter devastation following the chemical discharge, to see everything in the creek literally die, and to be constantly reminded by the smell. At times the situation simply felt utterly hopeless, especially as impacts continued to spread and exacerbate by flood waters. Recently with low rainfall we have seen the odours largely abate, grass start to grow, and birds and frogs appearing again.

With that sense of hope comes a trepidation that without significant, generational change, this could just happen again. Therefore, not only does rehabilitation need to entail restoration of the values of the creek, but also enhanced catchment protection, management, regulation, education and compliance to protect Stony Creek from pollution.

Stony Creek in full flow - Cruickshank Park

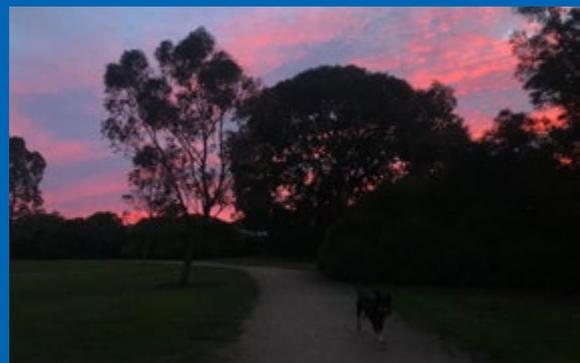
I love to walk the children to school and check on the creek. We talk about the turbidity of the water, how much flow there is, any visible contamination or rubbish. On this occasion (26th April, 2017) the creek was in full flow after heavy rain. So the children and I talked about how paved surfaces and roofs allow the water to get to the drainage system and then to the creek very fast. We talked about erosion. Then we talked about rainwater tanks and soil surfaces which allow the water to soak in and recharge the underground aquifer. Seeing the creek on the verge of flooding and sometimes breaking it's banks is both thrilling and reminds me of how much we have altered the natural environment.



My slice of country in the burbs

I love that this is a place where the locals can connect with each other and with nature. This is my slice of country life when I can't get to the country - Stony Creek around Cruickshank Park helps me unwind. Before the fire destroyed this valuable water source, I enjoyed seeing children from local daycare centres playing and exploring by the water. This is so very needed in a time when we are becoming glued to technology.

Before the fire I also enjoyed the sound of the frogs and birdlife. It seemed like all that fell silent after August 2018. These sounds have slowly started to return, but we need to ensure that all this wildlife is given our protection.





Street team stories

These were stories that we heard in person at our community events in February 2019 and we entered in to our online 'Your Say' page as anonymous entries.

"Having natural beauty and open space to walk. I'd like to see the park kept undeveloped as possible."

Anonymous

"We've lived on the edge of the creek for 30 years and reared our children here. We walked every day to kindergartens and playgrounds. Walked our dog and kicked footballs and done countless walking laps. We would like the waterway back to safe contact levels and also surrounding soil safe to play on for our grandchildren. Please take care to achieve this."

Anonymous

"My son and his friends would play in the creek on his way home from school. Preserve and continue to support this lovely place."

Anonymous

"I lived in the area most of my life, went to Kingsville State School. We played at Stony Creek when it was thistles and limestones. My sister rode horses there, my brother's stolen car was dumped there. I am a member of the Friends of Stony Creek for 29 years. Helped plant, clean and protect the creek. Am horrified about what happened but with work it will recover, better than ever."

Anonymous

"Most Sunday evenings I come for a walk for about half an hour around Cruickshank Park. It's the one time of the week that I spend time by myself and clear my mind. The gentle-ness of the park is calming. I find a little bit peace! Seeing other people (and their dogs) all doing the same thing is a community in itself. It would be sad to lose this."

Anonymous

"We like the park and creek for the skating places, the Dinosaur Park, the trees to climb in and listening to the frogs at night. We also like to see the big flows of rain – water that come through the creek in a storm."

Anonymous

"Walking. Bringing generations to the lovely open space in the west."

Anonymous

"I like seeing the fish and the eels in the creek and stepping across the stones. I like looking at the birds – sparrows, magpies, herons."

Olive, 4 years old

"Cleaning under Geelong Road and Sommerville Road may require extra manholes for access for cleaning and would be ideal. If any problems arise in the future would like to see more rockery in Stony Creek if viable."

Anonymous

"Cruickshank Park has been a wonderful community connection for dog owners and community members of all ages. As a dog owner it is where I have got to know lots of locals. Since the water pollution a lot less people come here as it is not safe to let the dogs run free – unless they are obedient lol. I hope the creek and the community will return to pre-fire condition."

Anonymous

"We often walked our dog in the park most evenings. But after the factory fire we could really smell the toxins when in the park and this is the first time we have returned since the factory fire. As we did not want our dog or children exposed to the chemicals and did not want to risk our dog getting into the water. We have lived in Yarraville for 26 years and have spent many weekends in the park with firstly our nephew and then later on our children and their friends. The park is a great size and has great paths, equipment, tennis courts and so on. I think surrounding factories should be checked out to ensure something like this does not happen again. Apart from the inconvenience to the locals it has devastated the local sea life and could have been a lot worse – impact on locals' houses and people and so on."

Anonymous

"Love the trees and the gardens. Love the waterway before contamination. As I am not a local I travel here as Brimbank (my local park) is full of snakes. The Ranger doesn't manage mowing and the grass is too long. The fact this has an off lead time is great for both people who love to walk their dogs on or off lead."

Christine

"Getting the creek back to a quality where kinder kids can cross the creek and have lessons by the creek as they used to."

Anonymous

"Love seeing the unbridled joy of the kids and dogs at Cruickshank Park. It's rare and special around here."

Anonymous

"Sad about Creek – burnt by fire. We would love more animals – eels, goldfish, bunyips, pobblebonks, jellyfish. Sad about fish."

Children from the Gowrie Clare Court Childcare Centre

Our stories matter - from the Gowrie Clare Court Children's Service

When discussing remediation works with the children at Gowrie Clare Court we hear how they miss their old connection with the creek – crossing the stepping stones, listening for frogs, discovering clues about the fish, eels and yabbies we know used to call the creek home - exploring her textures and many moods.



Since the Yarraville factory fire last year we have not ventured closer than the footpath. From afar we gaze at her and wonder ... Where are the fish and frogs now? Is the water still yucky? How can we stop people putting rubbish in there again?

The creek may be out of bounds to us but she still has so much to teach us. Clare Court educators are engaging more actively than ever with groups such as Melbourne Water and the Friends of Cruickshank Park and Stony Creek. For thousands of years she was an important source of food to the local Marin Balluk people. Less creek and more swamp, she was an abundant winding tidal tributary to the Yarra, or Birrarung in local Woi wurung language.

Her salty, brackish water prompted early settlers to put the creek to work as a drain, carrying waste away from local industry and into Port Phillip Bay. In some places she was redirected underground. In others her banks were concreted and contained. These colonial interventions hastened her flow, polluted her water and re-cast creek as a toxic hazard to be avoided.

In recent years, urban renewal and steps to protect and support our natural resources have brought the creek back into a more respectful relationship with the children and families of this community. With our creek connection just beginning to provoke deep learning with country, it was devastating to stand by and watch the creek die in the aftermath of the factory fire.

With hope and determination we look forward to a day when we can again connect with the creek: cross stepping stones, test our toes in the water, watch for heron and yabby.

The work with children is inspired by Indigenous knowledge gleaned from Bruce Pascoe (Dark Emu), the team at Yarn Strong Sista (Annette Sax and Jenaya) and examples of deep cultural commitment to land care (such as the innovative work at the Cape Otway Light Station and the Gadubanud Talking Hut), we hope our stories are heard and our leaders listen to our call for a healthy, respectful restoration of creek; and an action plan that acknowledges the traditional custodians of this life-giving waterway.

Anthropologist Anna Tsing, in her 2015 book *The Mushroom at the End of the World: On the Possibility of Life in the Capitalist Ruins*, proposes storying as a vital element of hope.

"If a rush of troubled stories is the best way to tell about contaminated diversity, then it's time to make that rush part of our knowledge practices. Perhaps ... we need to tell and tell until all our stories of death and near death and gratuitous life are standing with us to face the challenges of the present. It is in listening to that cacophony of troubled stories that we might encounter our best hopes for precarious survival."

(Tsing, 2015, p 36)

Stony creek shapes early years learning



Photo: Carley Rawle

Walking with Wurundjeri Country during Waring Wombat season (late autumn early winter) invites young children and educators to attend to learning with cool, rainy climates. Whilst we travel with Stony Creek we question, what will its floodwaters teach us about local ecology? How will rainfall and urban water infrastructure impact creek flora and fauna? The creek appears clear and healthy today as we hop from rock to rock, we delight in seeing small fish and yabbies whirling within currents. We breathe in the scent of eucalypt. It is peaceful here in this moment thinking and moving with Stony Creek parklands.

Further upstream, heron is perched adjacent to flowing waters. Mindful of not interrupting heron's feeding ritual we move quietly out of the creek and gather on the banks. Gazing at the water's edge we notice lots of yabbies crawling across the clay soils and moving upward along willow tree bark. We are curious: what produced this phenomenon? Have big rains affected burrowing stability? What is taking place in the life cycle of a yabby during winter climates? As we observe the yabbies, Daisy releases a scream, a flock of magpie fly in and ingest the yabbies. We take a deep breath, in an attempt to resettle uncomfortable feelings. Charlotte holds Daisy's hand, "lets sing yabby back into the water." As the two young children sing another child calmly

supports the group's growing ecological resilience. "Its ok, heron and magpie have to eat to stay alive, oh look that magpie there (pointing) is eating worms." Charlie deepens the discussion; "I eat fish and yabby, just not from here because creek is polluted." As young children and educators engage in thinking with these complex ecological relationships, Oscar propels into action, his hand skimming the surface of the water and scooping up a plastic chip bag from the creek. "Plastic makes animals sick," he says. We layer further questions of industrial waste and material composition into our creek encounter. Entangled among multiple histories, cultural colonial and environmental stories, these young children decide it is time to make a stand. Leaning on a gum tree we write with charcoal a letter to our local community urging them to care more deeply with this place. We acknowledge that the Wurundjeri people have always known how to care with and for Country, and as they continue to, it is time to join them in the regeneration process.

Moments of lively engagement like this raise questions, feelings, sensations and stories of this place that have far-reaching implications for our early years curriculum. We fold in the experiences of imperfect and complex worlds our young children inherit and co-inhabit alongside all living things. We notice the continuation of life in precarious times, we bare witness to the determination of a multispecies community surviving complex environmental and cultural issues. We fold in the questions of floodwater and yabby as we bravely endure our squirmy feelings around feeding cycles. And we become mindful as we act to shield heron from plastics. Creek holds our tears, discomfort, excitement, questions, knowledge, laughter, hope and our resilience. Creek demands that we pay attention as young children identify that we are not separate from the world. Creek invites us to generate activism.



Photo: Carley Rawle



Photo: Carley Rawle

This above encounter took place one month before the West Footscray fire destroyed all creek life including frog, yabby, fish, birds and more. Young children and educators now walk with Wurundjeri Country along concrete paths positioned far from Stony Creek. Our bodies no longer fold in the sensations of cool flowing creek water. Instead we fold in the atrocities of human capitalism and we live with the memory of black smoke and the smell of acetone. Conversely, we live hopeful of coexisting within a healthier and more respectful future environmental and cultural world. Water is harmonious and central to life on this planet. Let's support Stony Creek's regeneration.

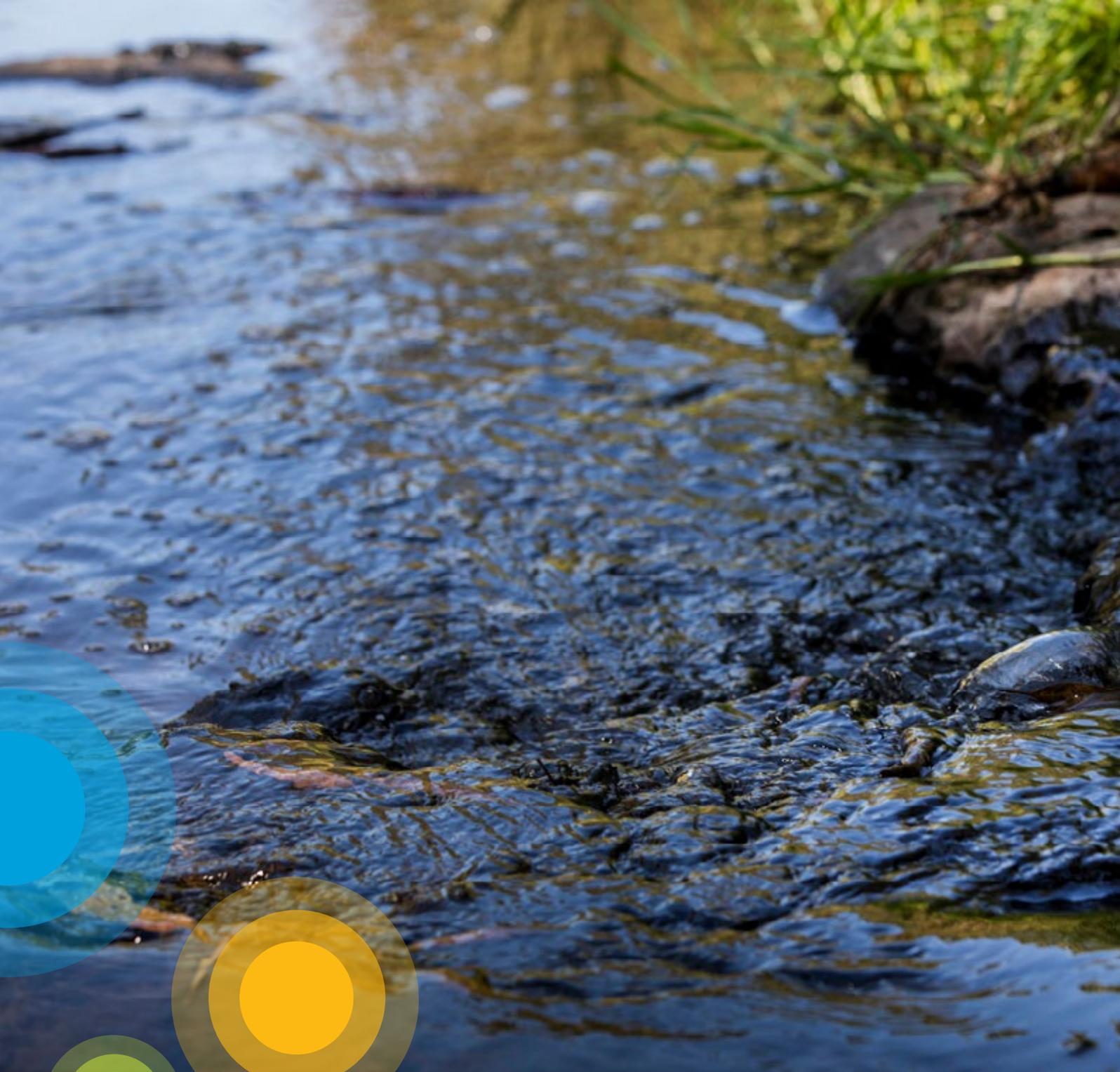
Young children think with concepts of time as a means of processing Stony creek egeneration in their kindergarten art studio after the West Footscray fire.

Author:

Carley Rawle

Early Childhood Teacher

Gowrie Clare Court, Yarraville



Your ideas and aspirations for the long-term rehabilitation of Stony Creek

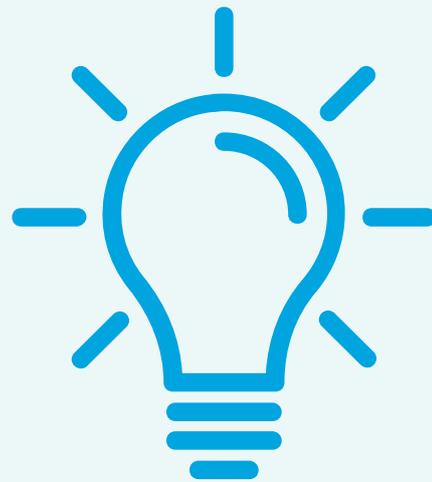
We asked people to share their ideas and aspirations for how they would like to see Stony Creek rehabilitated in the long-term.

From planting trees and restoring habitats to increase biodiversity (eg. frogs, birds, fish), enhancing shading, community education programs and activities, interpretive signs, preventing litter and pollution, and improving accessibility and connectivity along the creek, we asked to hear what most matters to you!

These are your ideas and aspirations that we received online (on a spatial-based map) and in person at our community events.

The ideas and aspirations will be used in the development of a community-focused rehabilitation plan to help restore and enhance the condition of Stony Creek and its surrounding environment.

They were also used in the two-day community workshop in March 2019, where participants identified key priorities and actions to incorporate into the plan.





Waterway Health

Ideas on planting trees and other vegetation, habitat improvements for local biodiversity (eg. frogs, birds, fish)

Remove channel walls

- Make this area of the creek as nice as it used to be In Cruickshank Park before the fire. Remove the cement channel walls and promote nature to return.
- Removal of the concrete channel and naturalisation of the creek.
- GET RID OF THE CONCRETE CHANNELS!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! and return to native vegetation.
- These sections of concrete can't be removed until we get serious about addressing stormwater volumes upstream and substantially lowering how much directly connected impervious areas discharge to the creek through planning, WSUD and large-scale stormwater harvesting (even events from the creek) to manage flow volume and frequency. We need a catchment-wide approach with a bit of vision.
- Removal of the concrete from Cruickshank Park through to the West Gate Golf Course is desperately needed.
- Re-naturalisation between Cruickshank Park and Golf Course

Vegetation

- I'd like to see the revegetation project use only native plants that fit with riparian areas and then blend into gum trees. This will help support our local wildlife.
- Provide a continuous vegetation corridor through this area to connect with the upstream and downstream vegetation. Ideally, remove the concrete channel.

Vegetation (continued)

- Some native reed beds in the waterway to help with frog habitat.
- A healthy habitat for water critters and places to explore with children.
- More native revegetation beds in Cruickshank Park.
- Clearing grass and weeds from Stony Creek banks. Plant indigenous grass/ plant varieties.
- More deep ponds with reeds and water plants.
- Riparian vegetation along creek banks, though not too wide in some places - still provide visual access to water.
- More natives planted. Seating here would be great.
- More attention paid to increasing the biodiversity and replanting and engagement with the adjoining businesses to ensure they are respecting the health of the waterway.
- Planting of aquatic plants and other riparian vegetation can then be planted and will play an important role in keeping the waterway healthy.
- Less accessible areas to focus design on plants and animals in creek.
- Submerged vegetation.
- Improving access and ecology of backwash south bank.
- Capping and revegetation of embankments where inert wastes are exposed.

Wetlands

- Wetlands would help to remove pollutants and capture litter, as well as improving biodiversity and amenity.
- Investigate a constructed wetland.

Optics

- Visual access to the creek is important to make people aware of natural resources in the area.

Fauna

- Protect the birds and ducks in the drain beyond Francis Street.
- More frogs please.
- More regeneration of native ecosystems.
- Wildlife improvement. Open information reporting and strategies to community.
- Create off-stream habitats for frogs, birds etc. using wetlands and other water sensitive urban design. Look to treat runoff from surrounding streets and instead transform into habitat corridors.
- More attention paid to increasing the biodiversity and replanting and engagement with the adjoining businesses to ensure they are respecting the health of the waterway.
- Providing habitat for aquatic native fauna.
- Create some small terracing within the waterway to again improve capacity for aquatic fauna to thrive whilst also increasing oxygenation of the river.
- Less accessible areas to focus design on plants and animals in creek.
- Introduce native fish.
- Frog bog.
- Improving access and ecology of backwash south bank

Clean up

- Clean out the underpass below the Geelong / Somerville Road intersection.
- Could there be some kind of focus, as part of the big picture of reviving the creek, of removing the vast amount of rubbish/plastic around the golf course. This is a part of the creek where you find many ducks and other birds who have to side step masses of rubbish as part of their daily life. If you could find ways to engage the community to be part of this process in an ongoing way - (not just a one-off cleaning day!) that could be one piece of the bigger puzzle of improving the health of the creek and getting people to understand its value. Organise clean up days, provide equipment and rubbish removal. Get kids involved. Also, it would be good to get the maintenance team at the golf course on board as well, who don't seem to engage with the creek running through the golf course at all.



- Mapping storm water drains and water run off to identify the worst spots.

Planning controls

- This development was set back to protect the active floodplain of the waterway and designed to overlook it. Ensure all planning applications first and foremost consider fundamental floodplain principles and protect the natural active floodplain of waterway first with technical engineering details and responses considered second.
- Clearly identify and protect the natural floodplain of the waterway from development. Where the active floodplain has been compromised by placing land into private ownership and unpermitted filling, establish a public acquisition overlay to reacquire the floodplain into public ownership and restore the floodplain.
- Rectify encroachment of filling from adjacent land into the creek reserve. Filling has created unstable embankments, with evidence of construction materials being washed downstream, clogging the creek.



- Put into Stony Creek rehab plan that the (5.7%) community contribution from planning applications to develop land along the corridor must be applied to acquiring more public land along the creek frontage.
- Land use issues clearly a long-term issue to address to aid access and planning for rehabilitation activities.

Large-scale stormwater harvesting

- WSUD and large-scale stormwater harvesting (even events from the creek) to manage flow volume and frequency. We need a catchment-wide approach with a bit of vision.
- WSUD.

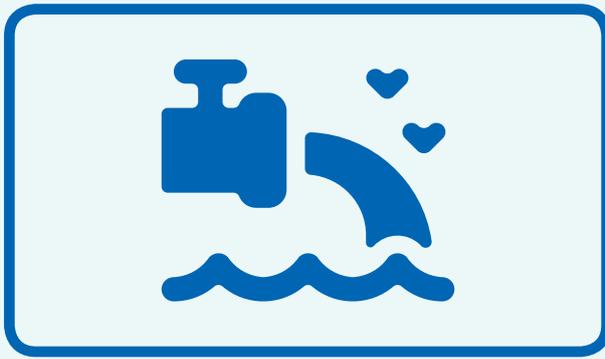
Aerate the creek

- Aerate the creek bed down-stream from the fire site to release heavy metals, paint and pollutants capture and filter the dirty water down-stream.
- Improve low oxygen levels.

Widen the creek

- Waterway form. The creek is too narrow for the flows it experiences. While the creek recovers from the fire, re-work selected sections to widen the channel to accommodate urban flows and lower sections of the floodplain to re-connect it with the creek.
- Widen creek channel/floodplain to host mix of deeper pools and mostly intermittent wetlands able to slow stormwater flushes and clean water entering from drains and adjacent impermeable estates. Remedy intrusive land uses. Improve low flow from Sunshine by fine-tuning old upstream diversions pictured. Maximise trail connectivity including to regional networks to encourage passive surveillance, as suggested along with many more good ideas by others here.





Water Quality

Treating stormwater, litter control and preventing pollution

Litter traps

- Placement of a litter trap to capture waste from upstream industrial areas.
- Placement of a litter trap to capture waste from industrial areas.
- Placement of a litter trap to capture waste from upstream areas.
- Litter trap on drain to catch litter!
- Hard rubbish – litter traps.
- Permanent grate across Charlotte Street drain (litter, safety).

Stormwater/pollution from industry

- Rectification of a stormwater pipe which drains a carpark often used for truck washing. Broadly all industrial facilities in the catchment must have appropriate stormwater management systems.
- Prevent run-off from industrial zones entering residential waterways.
- Introduce a stormwater code of practice for industrial sites (like Hume) to provide effective stormwater management including structural separation of working areas and active management of litter. Apply for all new planning permits and introduce program with coordinator and incentives to encourage voluntary compliance at existing sites.
- Goes for the whole of Melbourne - every individual and every business needs to treat stormwater with respect. I constantly see construction sites with no bunding or other form of sediment capture. I constantly see people washing cars with the soapy water draining directly to stormwater. Melbourne is very, very backward in these areas.

Stormwater/pollution from industry (continued)

- Provide appropriate waste disposal infrastructure for local businesses. Bin storage should not be located directly adjacent to the creek in order to prevent litter entering the creek due to overfull bins or if bins tip over.



- The warehouse where the fire was needs to be completely cleaned of all hazardous material. There's no point doing anything else if it's all going to be killed every time there's heavy rain.
- Finding illegal stormwater run off.

Incentives and regulations for neighbouring households

- Work with property owners adjacent to the creek with direct connections to install WSUD within private or public land to disconnect and treat these. Establish an incentive program to encourage this.
- Ensure all new developments in the catchment comply with Clause 56, Amendment C154 and SEPP requirements. WSUD to be installed to treat stormwater discharges. Council to report annually on number of developments within catchment and percentage in compliance with planning requirements.



- Incentives? Repercussions?

Permeable pavements

- Trial installing permeable pavements using locally sourced recycled materials on Council roads during streetscape renovations.

Preventative rubbish/pollution entering waterways

- Trial installing permeable pavements using locally sourced recycled materials on Council roads during streetscape renovations.

Desilting of sediment

- Convert these straight channels into a chain of pools, some deeper to slow the flow and drop-out sediment with riffles and rock-crossing in narrower sections. Points like these have easier access for de-sedimentation.
- Clean out probably required - Geelong/Roberts/Somerville.

Wetlands

- This would be the perfect place for a constructed wetland to capture pollutants from Stony Creek and the Francis St main drain that enters the creek at this location. There is ample parkland on either side and a school nearby to create educational opportunities. This is also the likely location where a party from Sir Charles Grimes' schooner first surveyed the creek in 1802: "The captain Mr Grimes, and self went up the river opposite to the place that the survey was left off on the 2nd. The captain sounded the mouth of the river; the other party along the shore. I went up a creek about a mile and a half; it was salt, and ended in a swamp; a run from the plains comes into it in wet weather. There is a few trees by the sea side; behind, a level plain to the mountains. Soil six inches deep of stiff black earth, white clay at bottom, and many large stones. The country appears the same for fifteen or twenty miles."



Safe for kids and dogs

- I would love to see the waterhole in Cruickshank Park safe for kids and dogs to splash in again.

Submerged vegetation

- Introduce submerged vegetation into online pools by throwing in a few plants. This will treat stormwater pollutants and help to break down the mess from the fire.

Wetlands (continued)

- Construct a wetland/sediment basin to help capture pollutants and litter from upstream. Currently sediment clogs the drainage line and litter accumulates in down-stream vegetation, or washes into the Yarra River.



- Perhaps a wetland after the industrial estate to filter out chemical/oil run off.
- Sedimentation and treatment wetlands on significant tributary drains.

Stormwater harvesting/water sensitive urban design (WSUD)

- Stormwater harvesting at large drain inlets like this one could irrigate the park and sports fields and reduce direct stormwater outflow volumes and frequency.
- Large volumes of untreated stormwater from Geelong Road flow straight into the creek while the wide median strip is dry. Divert flows from the road into WSUD and passive irrigation within the median.
- Install streetscape WSUD including raingardens and passively irrigated trees when doing streetscape works.
- Stony Creek has numerous directly connected stormwater outlets entering it through parks and waterway corridors. Divert these into WSUD assets to disconnect frequent storm event flows by gravity or a small sump and pump into WSUD assets or over riparian swale and buffer areas. Bypass baseflows.

Preventative rubbish/pollution entering waterways

- I would like to see the under-utilised Bassett Reserve turned into a holding pond for local stormwater. It should have a litter trap, reed beds, an overflow to the creek under Geelong Road and include further plantings of native trees. It should also have an access path and bird-hide to encourage peaceful time in natural surrounds.
- Clean up the drains entering the creek beneath Geelong Rd / Somerville Rd.
- Surely we can find space through this section of Cruickshank Park to introduce wetlands or raingardens to treat stormwater flows before discharging to the creek.



- Complete elimination drains into creek upstream.
- Remove the rubbish more often from the drain beyond Francis Street.
- There are huge quantities of rubbish accumulated inside private fence-lines along the waterway boundary. Work with property owners to clean this up before it is blown/washed into the creek.
- Catchment inputs into creek/need better understanding of potential contaminants/treat issue at source.
- Where is the source of rubbish that ends up in Stony Creek?
- Treat all stormwater prior to it entering the creek.
- Terraforming riverbed to assist with natural filtration WSUD.



Access

Improving access (eg. dog access) and connectivity to the creek, unrestricted views and recreational activities

Safe bike paths and pedestrian access between Paramount Road and Cruickshank Park

- Continue the bike path! It's a nice ride and then goes into an industrial area then through to a very busy Francis St.
- I dream of a bike-path from Paramount Rd to Cruickshank Park for this to connect West Footscray to this wonderful park, building a pedestrian bridge over the busy Geelong Rd. I feel I risk my life every time I cross that road. It will make it easier also for kids who go to school there.
- Please improve pedestrian access across this horrendous stretch of road. Try walking it with kids and you will understand how horrible it is. I would suggest moving the pedestrian crossing away from this intersection, perhaps off Basset reserve instead. The council is planning new pedestrian paths through the reserve to the ex. Bus stop, why not extend the journey to a dedicated pedestrian traffic crossing here...as well.as reducing the speed limit in this zone.
- Another vote for a footbridge. It will help improve both safety for people to cross and also protect the creek are from erosion.
- Add a nice walkway that goes over the river and through the entire park not just the eastern end.
- Everglaid - if safety is the key for the creek crossing maybe a ford like the one in Cruickshank park is a better option.
- Please complete the path here so that people can complete running and riding loops at the bridge.

Safe bike paths and pedestrian access between Sunshine and Paramount Road

- Open up access to this area by constructing a pathway. Ultimately a pathway should extend along the creek from Paramount Road to Mathews Hill in Sunshine. This would allow pedestrians/cyclists travel from Sunshine to the Yarra River along the creek.
- Paramount Road toward Sunshine.
- Safe bike path to Sunshine please (whole length of creek).
- Just reiterating that there really needs to be a cycle/walking path right through from Sunshine. Otherwise we cannot appreciate and fully utilise our natural resource with having the creek right here. Access and appreciation of our natural resources and waterways is critical as the inner west grows.
- Pedestrian and cycling access along the creek to provide passive surveillance of the neighbouring industrial zone.

This path should extend all the way to Sunshine and ultimately down the railway line to Newport.

- Provide trail tunnels under/through rail embankments either side of Sunshine Road immediately adjacent to course of creek. Look at trail tunnel through Hampshire Road overpass embankment for inspiration.
- Crossing this stretch of road is terrible. It isolates the Tottenham pocket of West Footscray.

Safe bike paths and pedestrian access between Sunshine and Paramount Road (continued)

- Removal of fences beneath railway line to allow access. Construct pathways under railway line and then north-south adjacent to railway line to avoid having to walk through the golf course.



- Provide trail tunnels under/through rail embankments either side of Sunshine Road immediately adjacent to course of creek. Look at trail tunnel through Hampshire Road overpass embankment for inspiration.

Boardwalks along the creek

- Activation of this area by constructing pathways/boardwalk along the creek.
- Construction of a boardwalk through the salt marsh area to allow access and also protect this sensitive ecosystem.
- Creek connectivity for cyclists and pedestrians is really important. This encourages people to really value the creek. The creek does not get enough use at the moment because access is a big issue, particularly along the industrialised sections.
- Introduce a program to help adjacent private properties open up access and views over the waterway through coordinated removal of fencing onto the creek, combined with works to restore the amenity and access to the waterway corridor.

Footbridge Park Ave to Cala Street

- A footbridge from Park Ave to Cala St would greatly improve access, amenity and safety along the creek. In this section people currently carry prams, bikes and kids across the boulders.
- Ensure the proposed Cala Street Bridge crossing is built – engage with local residents around the design and placement – don't just put in a boring bridge. Make it something special!
- Please add a footbridge to connect Park Ave and Cala St. At the moment the only way to cross Stony Creek is to hop across the rocks and this becomes very dangerous in the rain. The footbridge is identified as a project in the recently adopted West Footscray Neighbourhood Plan.
- Introduce a walking trail through this section of the creek to connect Roberts Road to Waratah Street and complete the link to Paramount Road. Establish a crossing near Cala Street. Revegetate.
- Please construct a footbridge connecting Park Ave and Cala St. This is a bad accident waiting to happen!
- Establish a crossing near Cala Street. Revegetate.
- Connecting bridge across Stony Creek. We need a footbridge here and also think about good cycling access and connection so people can ride up and down the waterway.

Pathway between Waratah and Roberts Street

- A path along Stony Creek between Waratah St and Roberts St and a pedestrian bridge over Geelong Rd is very important for safety, access and amenity along the creek. Many more people would access and enjoy the creek if they could safely cross Geelong Rd by foot or bike. I provided this feedback to Maribyrnong City Council West Footscray traffic study, but don't think it came out as a priority (West Footscray north of the train line seems to have been prioritised).
- Please complete the path between Waratah St and Roberts St along Stony Creek and provide safer pedestrian crossing over Geelong Rd.
- Please construct a proper path between Waratah St and Roberts St. The existing trail is dangerous and probably full of snakes.
- Introduce a walking trail through this section of the creek to connect Roberts Road to Waratah Street and complete the link to Paramount Road.
- Approaching from the north, I have to cross five separate roads with my 4yo to access the park. It's ugly, noisy, time-consuming and filthy with exhaust fumes. I didn't even know there was any path on the other side of Roberts Rd heading west because it is so badly disconnected. It's bigger than this project; the State Government needs to invest in people-orientated infrastructure as the inner west is urbanised. This area is disconnected from all major active transport corridors and Stony Creek can help connect them.

Stepping stones across creek

- More rocks (stepping stones) to walk across the creek.
- Access to stepping stones across the creek and safe water. Know environment and you can love it!

Improved access from Spotty

- Connection across the Hyde Street reserve from Spotswood.
- Safe access to backwash area by foot/bike from Spotty.
- More reasons/relevance to people in Spotswood (west side) and South Kingsville.
- More walking access to creek from Spotswood (west side) and South Kingsville.

Access through golf course/ connection to Westgate

- Formalise access through golf course.
- Lower Stony Creek – access and connection as part of Westgate tunnel.

Acquire private land for public use

- Approach companies/land owners to get access through from Indwe Street to the river (Indwe park and Opera Australia) and rest of Paramount Rd.
- Acquire more private land across the creek for public use and connection.



Amenity

Improving access (eg. dog access) and connectivity to the creek, unrestricted views and recreational activities

Lighting in park

- Lighting in park.

Weed management

- There's been quite a bit of work on the northern side of the creek in this area, but the southern side is overgrown with grass and weeds. We need to improve both sides of the creek, not just the side with the walking path.
- Include southern side of creek of Hyde Street Reserve into the reserve – weed management, erosion control, decontamination and rehabilitation.
- The area around the creek here is very dirty and unkempt even though it's an important spot for access and wildlife. Improving this area by giving it a good clean out of rubbish and planting trees and shrubs would seem a good pay off for people even further down the creek. I am confident local people would pitch in to help make this area inviting rather than a little scary would make it so much easier to get around the suburb etc. There's also a bit of a dead end at the part of the trail that meets the street and it would be great to have a little bridge or continuous path to link the two parts of the community.
- Clear the weeds from the drain beyond Francis Street.

Public toilets

- Public toilets - adopt toilets like the ones at Yarraville Bus Station. They are timed so the operating hours can be decided.
- People need toilets to support spending longer periods of time in this park (was the highest used park in the council until the fire).
- With the community garden and playground, tennis courts close by and bmx track it is the ideal place to put them.
- Toilets in the Clare Court precinct.
- Public toilets! Somewhere in the park, preferably one in two locations.
- Public toilets - to support the playground time spent for adults and children. If a BBQ was installed this would be complimentary and essential to the facilities - Kids may get away with peeing in a bush, but I know I could be arrested for it.

Widen the corridor

- Acquire land adjacent to the creek and widen the corridor. Add access paths, pedestrian bridges, a safe crossing on Paramount Road and picnic facilities, indigenous tree plantings, bird habitat and protection. Perform regular ongoing maintenance of the new park.

BBQ area

- BBQ area - this will be conducive to the children's play equipment and the basketball area. Bringing more families in to enjoy the facilities.
- If a BBQ was installed this would be complimentary and essential to the facilities.
- BBQ is great but let's include information and challenge thinking.

Recreational facilities

- This area has a lot more potential, but is disconnected and under-developed. How about a modern skate bowl and/or fully developed bmx park, or both? Basketball rings would be welcome if this area is a focus for active recreation. A rope bridge connecting to the playground on the east side would help connect this space and add passive surveillance, and would keep dogs out of the waterway. Lots of room for tree planting and shade as well.
- Along with more regular cleaning of this area some seating would be great, maybe a water fountain and something to engage kids with their local flora and fauna. My kids and I have built cubbies here but it would be great to have some more interaction for children with native plants so they can interact with their own little piece of wilderness.
- Drinking water.

Crossings and connections

- Provide a crossing here to continue the path.
- Bridges over creek in Cruickshank Park to connect community.

Naturalising the creek

- Conduct a feasibility study into naturalising creek in some form from Cruickshank Park to Hyde Street starting with Cruickshank Park section.
- Remove concrete drain up to Francis Street. Remove sections in different areas along the creek.
- Calming and relaxing. Birds, habitats, nature.
- Naturalisation of the concrete channels.
- I am all for native plants and the large gums are just so beautiful, purposeful and important however I think soil testing needs to be done to fully understand what the land can support and sustain, let's be honest the soil quality here is very poor and planting the wrong plants for the current soil could pose issues in the future with root systems not being stable etc.
- Improve quality of creek – results in improved amenity.
- There's quite a few large trees in the area, perhaps a few more sections of native understorey growth to help protect lizards etc.

Lighting for safety and security

- Consider lighting or other ways to ensure adequate safety and security.
- Lighting to extend accessibility times especially during winter, make people feel safer and being able to see each other, e.g. bike riders, kids, people and dogs.

Irrigation for greener park

- Rainwater storage for irrigation in Cruickshank Park so we can have green spaces even over summer.
- Re-direct excess water after rain events into underground water tanks along Stony Creek into Cruickshank park to allow for appropriate irrigation.
- Having sprinkler systems at the parks would ensure it doesn't look like a barren wasteland in summer which would, in-turn, increase people actually making use of the park for picnics and other recreation.

Dog facilities

- A fully fenced dog park with water elements.
- Dog poo composting bin.
- Retain dog off-lead at Cruickshank Park. Change dog off-lead hours on weekends and allow dogs off-lead before 10am.
- Dog times in Cruickshank Park from 8am - 10am and 3pm - 5pm every day of the week dog on lead all the time. Dogs on leads playground near Sommerville Rd, on lead McNish Reserve.
- More water bowls for dogs through the park would help stop dogs going to the creek for a drink.

Concrete space for skaters

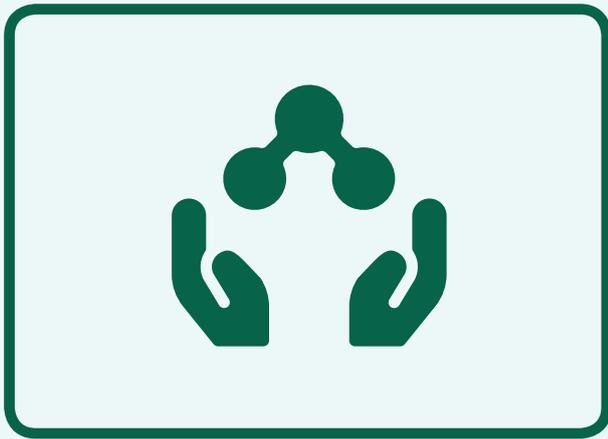
- The concrete channel is 'dead space' but can be easily adapted to incorporate skateable space above the primary channel, which would be a way of maintaining flood conveyance and improving the functionality and amenity of the corridor at lower cost. The wetlands should be higher up where longer detention times can be accommodated, although off-line storage might work here.
- Flood ways and drains are used by skaters all over the world. Our attitudes are unduly conservative (no one skates when it rains anyway). Mesh fences are ugly and blight the area. Ask Richard Simon and Playce to get involved - see also the great work on the Cardinia Skate Strategy. Activate this dead space.

Cool spaces

- Cool open spaces - rising temperatures.
- A place that attracts community reflection.

Public art

- Allow graffiti artists to do murals on the sides of the drain beyond Francis Street.



Education and Community Involvement

Improving access (eg. dog access) and connectivity to the creek, unrestricted views and recreational activities

Gardens and Eco advice

- Employ Community Garden Centre as a hub for education about supporting native flora and fauna, encouraging folks to use more sustainable practices in their own gardens, etc.
- Community stewardship programs on the old nursery site in Waratah Street/Lay Street?
- Planting day – opportunity for education on plants.
- Eco-friendly community centre as an extension of the community garden => Provide greater access to workshops, ranger programs, an avenue for social connectedness.
- Community education around rainwater harvesting on residential sites – support for residents to invest in hardware.

Publishing ongoing testing and current actions

- Routine publishing of test results on publicly available websites (Council, EPA, Melbourne Water). By routine I mean ongoing, not just after an incident/issue.
- Creating a creek-wide map of actions currently underway and planned.

Industry education

- Develop regulations holding industrial groups accountable for damage, continue to inform and support these groups to make better choices in their industrial practices.

Community involvement in monitoring

- Facebook page for community to identify fish in the creek - even just size, location, number of fish, colour.

Education of council and community

- Connecting story/history of Stony Creek to western waterways.
- Please provide some realistic advice about water quality for dogs. I assume council won't say it's ok for a very long time because of liability if any dogs get sick but can you please provide some details regarding the specific hazards at this time and likely risks for dogs who swim in the creek? Some more detailed information would be helpful.

Signage/information about the creek

- Education and art pieces along the trail linking to the Maribyrnong to create a unifying element.
- Have more frequent pop-ups/information/noticeboards in Cruickshank Park for residents to find out about the creek.
- More signage re. littering, impact on stormwater, directional signage to community garden etc.
- Informing general community of the broader range of activities and progress on managing the impacts – i.e. dogs can/cannot access water?
- More education about the creek => valuing it.

Early childhood – bush kinders

- Using the creek and play education.



Other ideas

Other ideas and aspirations for rehabilitation of the creek

Concrete removal

- Remove concrete please.
- Remove concrete!!!!

Specific suggestions

- Repair the tree trunk and roots at stone crossing down from kinder.
- More rock at dog pond. A rock wall to make the water flow on the corner.
- Prioritise stormwater management by appointing a full time Council WSUD officer to coordinate new Council WSUD assets, inspect new private assets and ensure appropriate maintenance occurs.
- Process – avoid piecemeal response. We need a clear project manager co-ordinating the response.

Reconnect flows

- Reconnect upstream low flow diversions into Kororoit and Maribyrrong.
- Re-connect Stony Creek from Paramount Road to Sara Grove.

Recreation planning/integrated planning

- With the Western Distributor introduced, Geelong Road could be narrowed. Develop and deliver a plan to broaden the median strip, plant more trees, introduce WSUD and passive irrigation and create a bike path along the length of the road. We need a big vision!
- This is meant to get a bridge with the Westgate Tunnel project. Are the opportunities to integrate works to reduce costs?

With Traditional Owners

- In partnership with traditional owners; returning Aboriginal ways of knowing, being and doing to waterways and the land.

Greater integration with Hobsons Bay Council

- Greater integration with Hobsons Bay.

Appendix C: Community workshop summary report

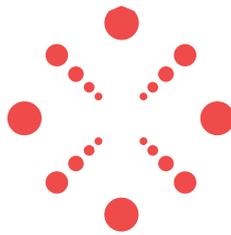


Stony Creek Rehabilitation Community Workshop

Summary Report

4 April 2019

Prepared by



MAX HARDY

CONSULTING

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Preamble

Melbourne Water engaged Max Hardy Consulting to design and facilitate a community workshop to inform a new long-term rehabilitation plan for Stony Creek. The plan is being prepared following the events of the large warehouse fire that occurred in West Footscray on 30 August 2018. This plan is being developed in close collaboration with other agencies, Maribyrnong City Council and the Environment Protection Authority (EPA) Victoria, to ensure a united approach to rehabilitation efforts. Importantly, the plan is being developed in consultation with the local community, who have provided valuable information regarding community values and expectations, ideas and aspirations and desired outcomes for the future of Stony Creek.

The rehabilitation planning is occurring alongside the on-ground recovery works, which have been on-going since the fire incident. Since the event, a range of initiatives have been undertaken to ensure the community is involved with the rehabilitation planning. This has included the development of a Stakeholder Advisory Group to provide an advisory role on the development and implementation of the Recovery Plan for Stony Creek, as well as broader community engagement through face-to-face methods (community ‘pop up’ information events in February 2019) and digital engagement tools (‘Your Say’ webpage open for community feedback in February and March 2019) to help shape the rehabilitation plan.

This report focuses on the outcomes from the two-day community workshop which was held on Sunday 17 and Sunday 24 March 2019, and included 24 self-nominated community representatives. All participants were required to attend both days, and to actively engage in deliberation processes and making judgements based on the information that was provided.

The remit

The purpose of the day was to provide a response to the following remit:

“What are the local community expectations, values and aspirations for the rehabilitation of Stony Creek?”

- 1. To what extent does the local community believe the plans that Melbourne Water, EPA and Maribyrnong City Council have for the restoration and rehabilitation of Stony Creek are acceptable and appropriate?*
- 2. What measures could Melbourne Water, EPA, Maribyrnong City Council and the community take to complement works already being planned and/or undertaken for the rehabilitation of Stony Creek?*
- 3. How can Melbourne Water work with key stakeholders (eg. other government agencies, businesses, community groups, other organisations) and the community to ensure that Stony Creek is appropriately rehabilitated?*

Engagement outcomes

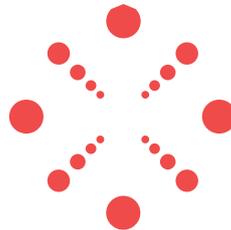
The desired outcomes from this workshop were to:

- Further understand what the local community values about Stony Creek and their ideas and aspirations for rehabilitation
- Review the extent to which Melbourne Water understands the values and aspirations of the community, and amending as appropriate
- Gain an in-depth understanding of the challenges and opportunities for rehabilitating the creek
- Invite further ideas for improving remediation efforts
- Outline objectives and desired outcomes for the plan
- Identify key priorities, actions and projects to incorporate into the plan
- Create opportunities for open and deliberative conversation with the community
- Build on, and recognise work being undertaken by community groups.

Summary Report: Stony Creek Rehabilitation Community Workshop

Sunday 17 & Sunday 24 March 2019

Compiled by Max Hardy Consulting



MAX HARDY

CONSULTING

1.0 Introduction

This report provides the outcomes from the community workshop held in March 2019. It reflects the opinions of those that participated in the workshop although not necessarily the opinions of any single individual. All attempts have been made in the production of this report to remove any professional biases or re-interpretation of the community's opinions. This report is put forward as a community interest component for the development of the Stony Creek Rehabilitation Plan.

The report is in response to the remit:

“What are the local community expectations, values and aspirations for the rehabilitation of Stony Creek?”

- 1. To what extent does the local community believe that the plans Melbourne Water, EPA and Maribyrnong City Council have for the restoration and rehabilitation of Stony Creek are acceptable and appropriate?*
- 2. What measures could Melbourne Water, EPA, Maribyrnong City Council and the community take to complement works already being planned and/or undertaken for the rehabilitation of Stony Creek?*
- 3. How can Melbourne Water work with key stakeholders (eg. other government agencies, businesses, community groups, other organisations) and the community to ensure that Stony Creek is appropriately rehabilitated?*

1.1 Community workshop participants

Community members responded to an invitation to participate in the workshop which was advertised on social media, the Your Say page, and in a community information pack which was distributed via letterbox drop to 12,000 households and businesses in the local area. A total of 31 applications were received. All applicants were offered the opportunity to participate, and 24 people elected to participate over the two days. The panel consisted of the following members:

- Darren Bennetts
- Clare Sheppard
- Tony Smith
- Elena Pereyra
- Rowena Joske
- Hayden Davies
- Ross Kingston
- Emma Coats
- Gracie Pupillo
- Catherine Hamm
- Peter Anderson
- Miriam Brown
- Natalie Bailey
- Sam Daly
- Emma Whitereese
- Jake Collier
- Rhiannon Smolski
- Rosa McKenna
- Erica Peters
- Sue Vittori
- Michael Clarke
- Lola Anderson
- Steve Wilson
- Rob Crittenden



Figure 1 – Photos from Day 1 of the community workshop

2.0 Workshop structure

Community workshop participants were provided with information covering a range of relevant topics in order for them to provide detailed and informed recommendations for the rehabilitation plan.

The first day of the workshop focused on providing a series of presentations by agency staff followed by Q&A discussions. This included the following presentations:

- Description of the incident and impacts to Stony Creek – Thomas Hurst, Melbourne Water
- Post-fire water and sediment quality monitoring – Leon Metzeling and Chris Peska, EPA
- Healthy Waterways Strategy – Apanie Wood, Melbourne Water
- Stony Creek biodiversity values and physical condition – Richard Akers, Melbourne Water
- Melbourne Water's programs for rehabilitation planning – Thomas Hurst, Melbourne Water
- Maintenance and community involvement in parkland – Ben North, Maribyrnong City Council
- Cruickshank Park Masterplan and other open space planning – Joanna Bush, Maribyrnong City Council

Participants were provided with the opportunity to ask questions to the presenters and key agency staff, and to identify areas where further information was required.

The second day of the workshop focused on providing opportunities for the community to prioritise ideas across five categories identified for the rehabilitation plan:

1. Waterway health – Ideas on planting trees and other vegetation, habitat improvements for local biodiversity (eg, frogs, birds, fish)
2. Water quality – Treating stormwater, litter control and preventing pollution
3. Access – Improving access (eg. dog access) and connectivity to the creek, unrestricted views and recreational activities
4. Amenity – Cool and shady spaces to escape the busy urban landscape, to meet with friends and family, to exercise and connect with nature
5. Education and community participation – and aspirations for rehabilitation of the creek

Participants were provided with a full list of the ideas and aspirations that were submitted online and in person at community information events. A summary of main ideas from this full list was provided to participants at the beginning of Day 2. The prioritisation of these ideas and the rationales given form the basis of this report.

The agenda for the two-day workshop is provided in Appendix A of this report.

3.0 Community vision for Stony Creek

During the workshop, one of the participants suggested that a vision statement be developed – the intent being to galvanise community values and aspirations, and provide a foundation for the rehabilitation plan. It was identified that an overarching vision would help to ensure a dynamic plan was developed that responds to the complexity of the process.

A sub-group of four participants developed a core vision statement for the Stony Creek Rehabilitation Plan, outlined below:

“We want to transform Stony Creek into Australia’s best protected, connected and respected urban waterway that consistently supports a healthy ecosystem. The Stony Creek Rehabilitation Project will be seen as a showcase for how community, government and business can partner to achieve enduring physical, social and ecological health benefits. The outcomes will connect communities to each other and allow life to thrive”

4.0 Prioritising ideas

The community workshop participants were tasked with prioritising the ideas that were gathered online through the ‘Your Say’ page, in person at the community ‘pop up’ information events, and Day 1 of the community workshop. These ideas were collated into a shortlist, checked for wording by participants, before all ideas were then ranked as a group following a period of deliberation. The ideas were not separated in terms of higher or lower order. Ideas that were provided with an asterix (*) were identified as aspirational ideas that may require further investigation and significant time to be realised, and may not be possible to include as part of the scope for the rehabilitation plan. Regardless of this, these were ranked with all other ideas to provide an accurate recommendation of the community aspirations for Stony Creek.

4.1 Waterway Health

Waterway health refers to all practical measures relating to improving the health of Stony Creek overall. The overarching statement for waterway health that was developed by the workshop participants was:

“We want Stony Creek to be Australia’s best protected, connected and respected urban waterway that consistently supports a thriving ecosystem”

This includes actions relating to planning controls, biodiversity, pest and weed management and improving creek flows.

The shortlisted ideas for the Waterway Health category included:

1. Plant aquatic vegetation to promote oxygenation of the water and provide habitat for aquatic animals
2. Ensure that planning controls are appropriate for long-term protection of Stony Creek and take action where these controls have been contravened e.g. encroachment, filling etc.

3. Gain access to areas of the creek corridor that are in private ownership so that the creek's health and public access to it can be managed in a connected way
4. Plant native vegetation to establish a continuous corridor along Stony Creek. Design revegetation to retain important sightlines in public areas.
5. Control weeds throughout Stony Creek to maintain and improve habitat and contribute to overall amenity.
6. Create off-stream habitats for frogs and birds
7. Improve environmental flows in Stony Creek by removing upstream diversions to Kororoit Creek and Maribyrnong River
8. Investigate reasons for low oxygen levels in Stony Creek and develop strategies to improve them
9. Re-introduce native animals including fish
10. Adjust/widen channel form to allow for high catchment flows, slow flows to promote pollution capture, connection to floodplain for habitat purposes and introduce deeper pools to allow habitat diversity and accessible areas for desilting.*

A prioritisation activity was undertaken where participants were asked to rank all recommendations in terms of their impact on Waterway Health. The top five priorities were:

1. Investigate reasons for low oxygen levels in Stony Creek and develop strategies to improve them
2. Gain access to areas of floodplain that are in private ownership so that the creek's health and public access to it can be managed in a connected way
3. Ensure that planning controls are appropriate for long-term protection of Stony Creek and take action where these controls have been contravened e.g. encroachment, filling etc.
4. Create off-stream habitats for frogs and birds
5. Improve environmental flows in Stony Creek by removing upstream diversions to Kororoit Creek and Maribyrnong River

The results of this ranking activity are shown in Figure 1.

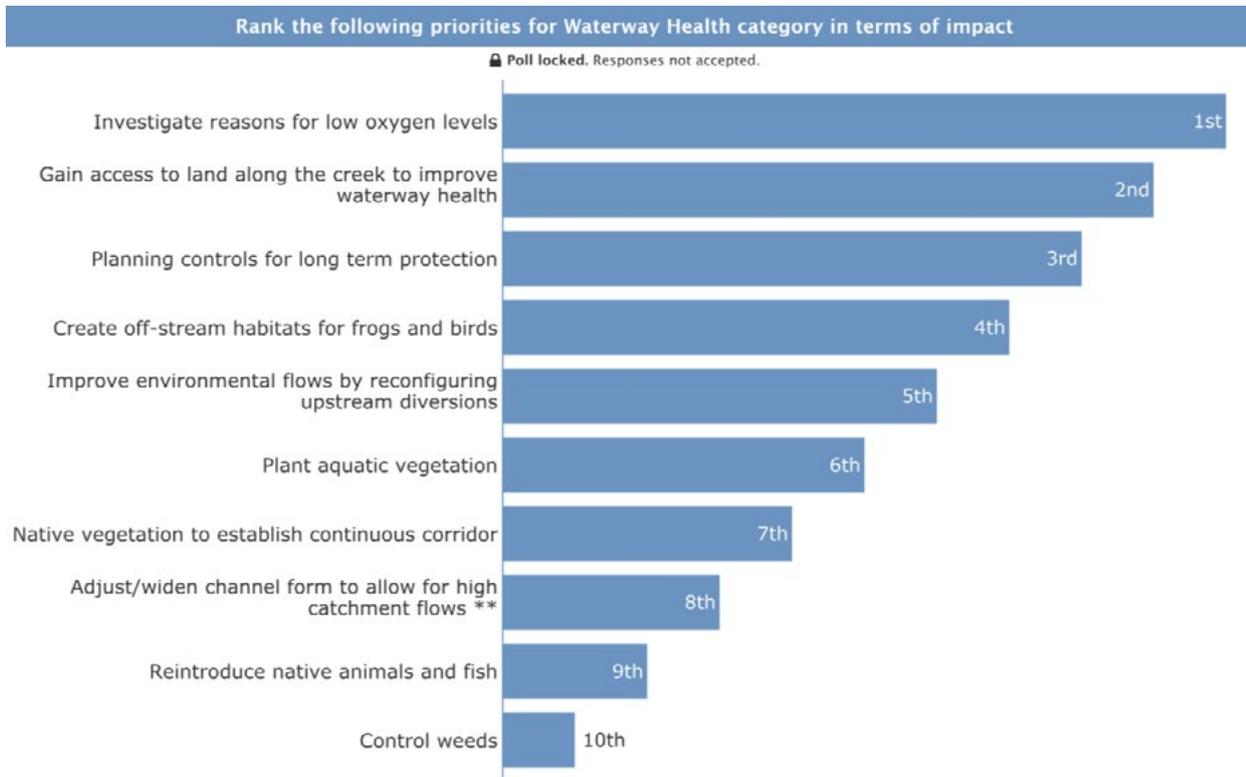


Figure 1 – Poll results for priority activities relating to Waterway Health

4.2 Water Quality

Water quality is a specific category that is associated with recommendations to improve water quality such as addressing stormwater impacts, industry compliance, water sensitive urban design (WSUD) measures, and water quality monitoring and management. The overarching statement that participants developed for water quality was:

“Return the creek to a healthy state and address legacy water quality and sediment quality issues. The focus should be on remediation including de-contaminating and improving sediment quality, managing stormwater discharge and improving water quality. Where possible, creek pollution should be dealt with at the source.”

The shortlisted recommendations for Water Quality included:

1. Place litter traps in appropriate places throughout the Stony Creek catchment
2. Work with industry to ensure compliance regarding stormwater management and pollution prevention
3. Provide incentives for private and public landholders to implement stormwater quality improvement measure on their land
4. Regular reporting by Council and EPA on compliance with stormwater management regulations across the catchment
5. Harvest stormwater where possible to reduce direct stormwater flows from drains into the creek and to irrigate parks and sports fields

6. Install water quality sensors throughout the catchment to investigate sources of pollution and litter, and enable a targeted response
7. Implement WSUD features in appropriate locations e.g. raingardens, permeable pavements, road run-off diversion to median strips, swales, streetscape features etc.
8. Undertake catchment-wide stormwater quality and quantity planning to avoid implementation of solutions in an isolated fashion
9. Appoint a dedicated resource to coordinate new stormwater quality assets, inspect new assets and ensure appropriate maintenance
10. Construct a wetland or similar water quality treatment asset to capture pollutants and litter from upstream tributaries and drains*

A prioritisation activity was undertaken where participants were required to rank all recommendations in terms of their impact on Water Quality. The top five priorities were:

1. Undertake catchment-wide stormwater quality and quantity planning to avoid implementation of solutions in an isolated fashion
2. Install water quality sensors throughout catchment to investigate sources of pollution and litter and enable targeted response
3. Work with industry to ensure compliance regarding stormwater management and pollution prevention
4. Implement WSUD features in appropriate locations e.g. raingardens, permeable pavements, road run-off diversion to median strips, swales, streetscape features etc.
5. Provide incentives for private and public landholders to implement stormwater quality improvement measure on their land

The results of this prioritisation activity are provided in Figure 2.

Rank the following priorities for Water Quality category in terms of impact

🔒 Poll locked. Responses not accepted.

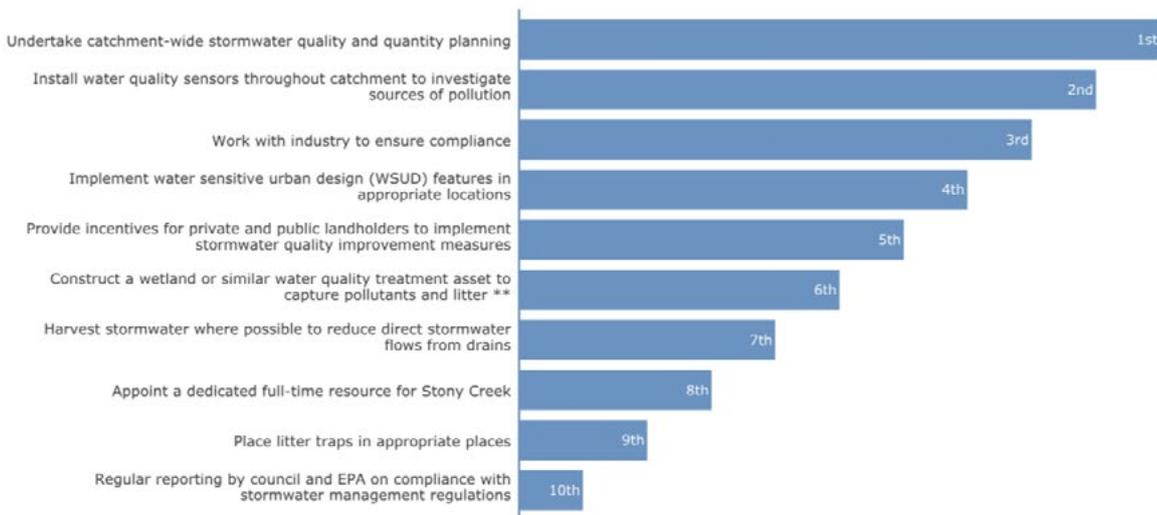


Figure 2 – Poll results for priority activities relating to Water Quality

4.2.1 Additional comments

Some additional comments were identified as important for the category of Water Quality. The comments identified that recommendations such as litter traps which are highly achievable although not transformative on water quality should still be enacted early, even though they may not be identified as a high priority.

4.3 Access

Access recommendations include all recommendations relating to all modes of active transport, as well as other improvements to make access equitable and safe. The overarching vision statements for access included:

“Providing access to and interaction with the water/creek made possible through one continuous, connected and shared pathway, thereby enhancing the physical, emotional and mental wellbeing of the community.”

The shortlisted recommendations for Water Quality included:

1. Construct a shared path from Paramount Road to Cruickshank Park
2. Investigate improvements and an active transport bridge at the Geelong Road and Somerville Road intersection to improve pedestrian connectivity, efficiency, and safety. *
3. Construct a shared path along the creek from Paramount Road to Matthews Hill in Sunshine, investigating connectivity beneath rail embankments*
4. Activation of under-utilised parts of the creek by constructing pathways and/or a boardwalk along the creek
5. Open up access and views over the waterway through the coordinated removal of fencing onto the creek

6. Construct a footbridge for all active transport modes connecting Park Avenue and Cala Street *
7. Provide lighting to extend accessibility times especially during winter, make people feel safer and able to see each other, e.g. bike riders, kids, people and dogs
8. Install more rocks (stepping stones) to walk across the creek
9. More active transport access to the creek from Spotswood (west side) and South Kingsville

A prioritisation activity was undertaken where participants were required to rank all recommendations in terms of their impact on Access. The top five priorities were:

1. Construct a shared path along the creek from Paramount Road to Matthews Hill in Sunshine, investigating connectivity beneath rail embankments *
2. Construct a footbridge for all active transport modes connecting Park Avenue and Cala Street *
3. More active transport access to the creek from Spotswood (west side) and South Kingsville
4. Install more rocks (stepping stones) to walk across the creek
5. Construct a shared path from Paramount Road to Cruickshank Park

The results of this prioritisation activity are provided in Figure 3.

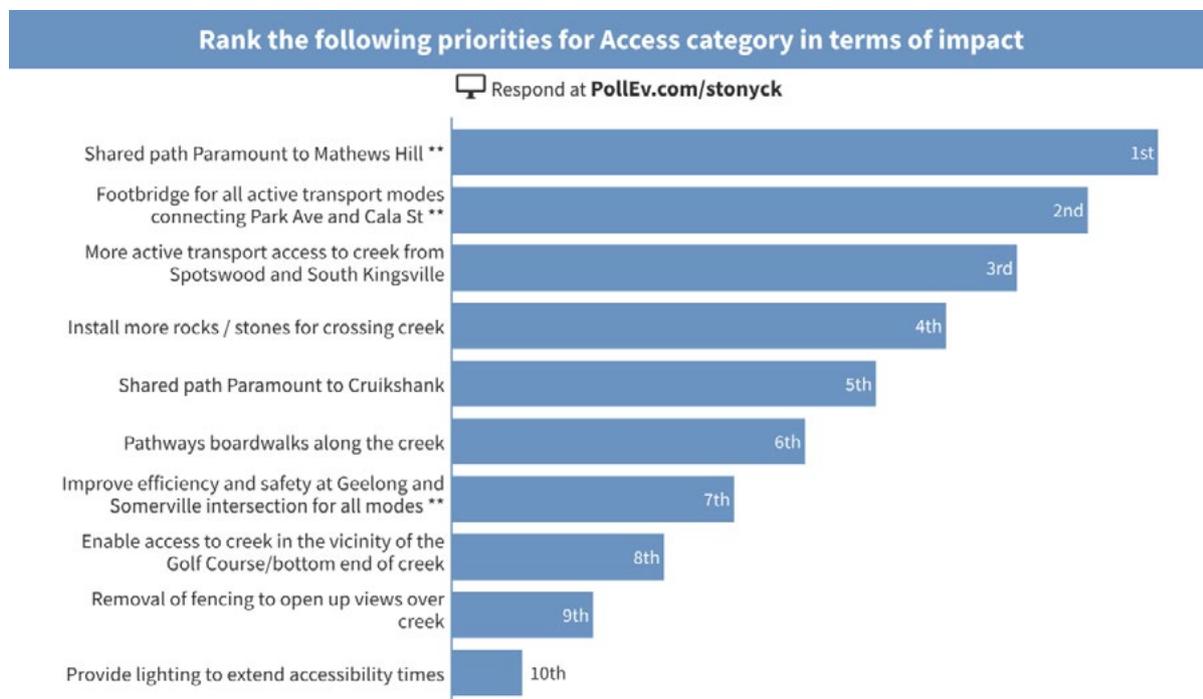


Figure 3 - Poll results for prioritising Access recommendations

4.2.1 Additional comments

There were a number of additional comments that were raised about access issues, including the need for more detailed locations to be identified and discussed to ensure tangible action. Other comments included:

- Much better access to the golf course and down near the river
- Working with the West Gate Tunnel project to open up the land near Hyde Street Reserve and Scienceworks to create an integrated access and amenity area
- What is important is the reason behind access – doesn't just allow for dog walking but also increases connection with the creek and within the community
 - Sends a message to industry that it isn't just 'their' space
- Not just a pedestrian bridge but more about protecting active transport amenity, safety and providing an efficient crossing
- A big picture plan is required – philosophy, safety etc
 - Specific elements to 'sit' within the plan

4.4 Amenity

Amenity recommendations include all recommendations relating to the look and feel of the creek corridor, and the ability to use the creek for a variety of purposes. The overarching vision statement that was developed by the workshop participants was:

“A creek that is naturalised, accessible and continuous along the whole creek corridor, celebrating the regeneration of our creek and diversity of amenity creating positive outcomes for education, health and both physical and mental well-being. An oasis within the city that allows for flora and fauna to thrive.”

The shortlisted recommendations for Amenity included:

1. Improved weed management along the creek corridor e.g. adjacent to Hyde Street Reserve and the drain beyond Francis Street
2. Provide a public toilet to support extended visits to the park
3. Investigate the acquisition of land adjacent to the creek through sections of private ownership and widen the corridor *
4. Provide a BBQ area – this will be conducive to the children's play equipment and the basketball area. It will bring more families in to enjoy the facilities
5. Create an art/sculpture trail through the park
6. More nature-based play to engage kids with their local flora and fauna
7. Conduct a feasibility study into naturalising the concrete channel from Cruickshank Park to Hyde Street starting with the Cruickshank Park section*
8. Rainwater storage for irrigation in Cruickshank Park so we can have green spaces even over summer, and prevent barren sections during dry periods

9. Install streetscape water sensitive urban design (WSUD) including raingardens and passively irrigated trees along the creek corridor when doing streetscape works
10. Add more plantings throughout the Stony Creek corridor

A prioritisation activity was undertaken where participants were required to rank all recommendations in terms of their impact on Amenity. The top five priorities were:

1. Add more plantings throughout the Stony Creek corridor
2. Investigate the acquisition of land adjacent to the creek through sections of private ownership and widen the corridor *
3. Conduct a feasibility study into naturalising the concrete channel from Cruickshank Park to Hyde Street starting with the Cruickshank Park section*
4. More nature-based play to engage kids with their local flora and fauna
5. Install streetscape water sensitive urban design (WSUD) assets including rain gardens and passively irrigated trees along the creek corridor when doing streetscape works.

The results of this prioritisation activity are provided in Figure 4.

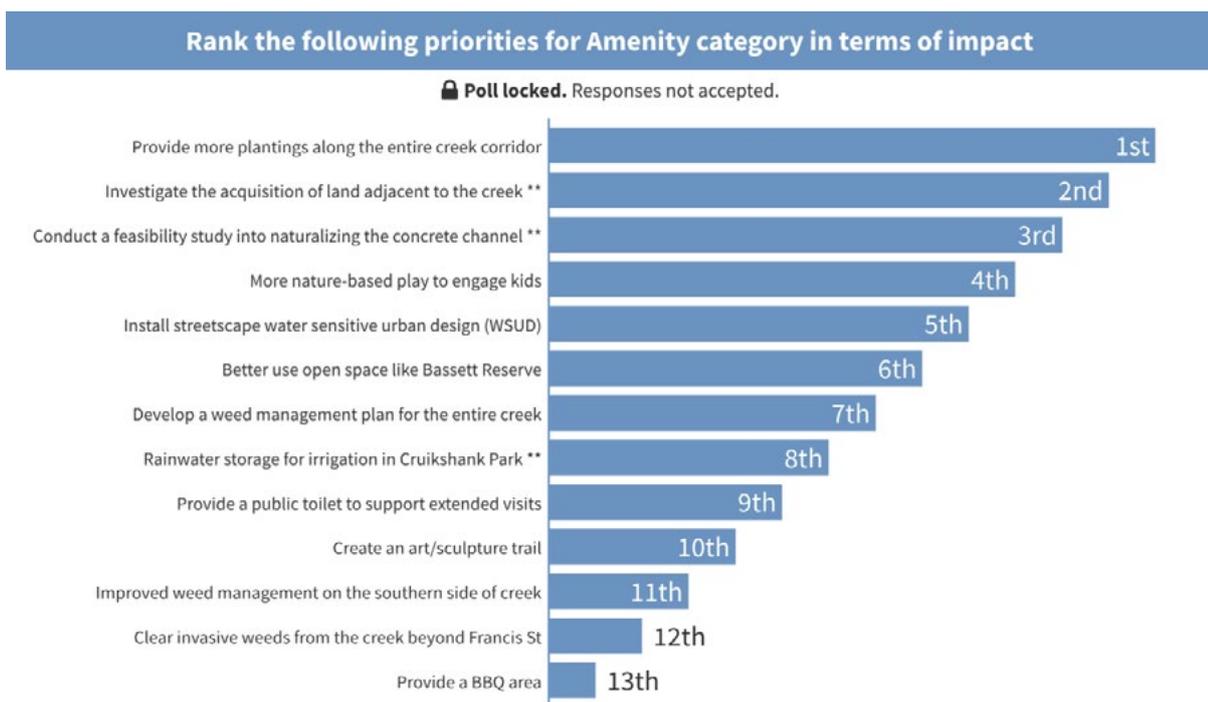


Figure 2 – Poll results for prioritising Amenity recommendations

4.2.2 Additional comments

There were additional comments that were raised during the workshop about Amenity that should be noted. These comments are provided below:

- Seeing visible improvements in the creek through community participation activities, e.g. on-ground planting and weed control through community working bees
- Removal of weeds – specific to type and location, each must be assessed individually appropriate to situation
- Not all people are in favour of clearing weeds that are the only vegetation that have established. Seems like a small element with not a huge impact. Inappropriate to manage weeds without something to replace it
- Toilets are really an access issue rather than amenity. Toilets in combination with BBQs in Access
- Art/sculpture would follow other Amenity improvements – not a priority anymore but worth doing
- Creek is a public asset – it needs to be accessible and amenable to the community along the whole creek corridor
- Removal of concrete channel to Hyde Street is very important for amenity particularly for the people living in the area
- Under-utilisation of Basset Reserve could be a good area for water play areas or off-lead dog park area – additional recommendation

4.3 Education and Community Participation

Education and Community Participation recommendations include all recommendations relating to features that can increase public awareness, education, and engagement with the creek, the surrounding environment and learning/understanding creek values. The overarching vision statement that workshop participants developed was:

“Educating community (residents and industry) to care for Stony Creek through partnerships with Indigenous People and by focusing education on practices that support the health of waterways and use Indigenous knowledge and wisdom. Overall diverse learning opportunities and sustained, responsive, proactive and accessible communication are vital to the overall strategy and ongoing collaboration between all major parties”

The shortlisted recommendations for Education and Community Participation included:

1. In partnership with traditional owners; returning Aboriginal ways of knowing, being and doing to waterways and the land
2. Develop regulations holding industrial groups accountable for damage, continue to inform and support these groups to make better choices in their industrial practices

3. Routine publishing of test results on publicly available websites (Council, EPA, Melbourne Water). By routine I mean ongoing, not just after an incident/ issue
4. Creating a creek wide map of actions currently underway and planned
5. Community education around rainwater harvesting on residential sites – support for residents to invest in hardware
6. Employ the Community Garden Centre as a hub for communication, education about supporting native flora and fauna, stewardship programs , encouraging folks to use more sustainable practices in their own gardens, etc.
7. Education and art pieces along the trail linking to the Maribyrnong River to create a unifying element
8. Have more frequent community ‘pop up’ information events and/or noticeboards in Cruickshank Park for residents to find out about the creek
9. More signage and continue to update signage along the creek, especially parks, about littering, impacts on stormwater, and directional signage to the community garden and other assets
10. Facebook page for the community to identify fish in the creek – even just size, location, number of fish, colour etc.
11. Play-based learning and participation community assets
12. Engage and educate industry about better practices

A prioritisation activity was undertaken where participants were required to rank all recommendations in terms of their impact on Education and Community Participation. The top five priorities were:

1. Engage and educate industry about better practices
2. Play-based learning and participation community assets
3. More signage and continue to update signage along the creek – especially park areas – about littering, impacts on stormwater, and directional signage to the community garden and other assets
4. More nature-based play assets to engage kids with their local flora and fauna
5. Community education around rainwater harvesting on residential sites – support for residents to invest in hardware
6. Employ the Community Garden Centre as a hub for communication, education about supporting native flora and fauna, stewardship programs, encouraging people to use more sustainable practices in their own gardens, etc.

The results of this prioritisation activity are provided in Figure 5.

Rank the following priorities for Education and Community Involvement category in terms of impact

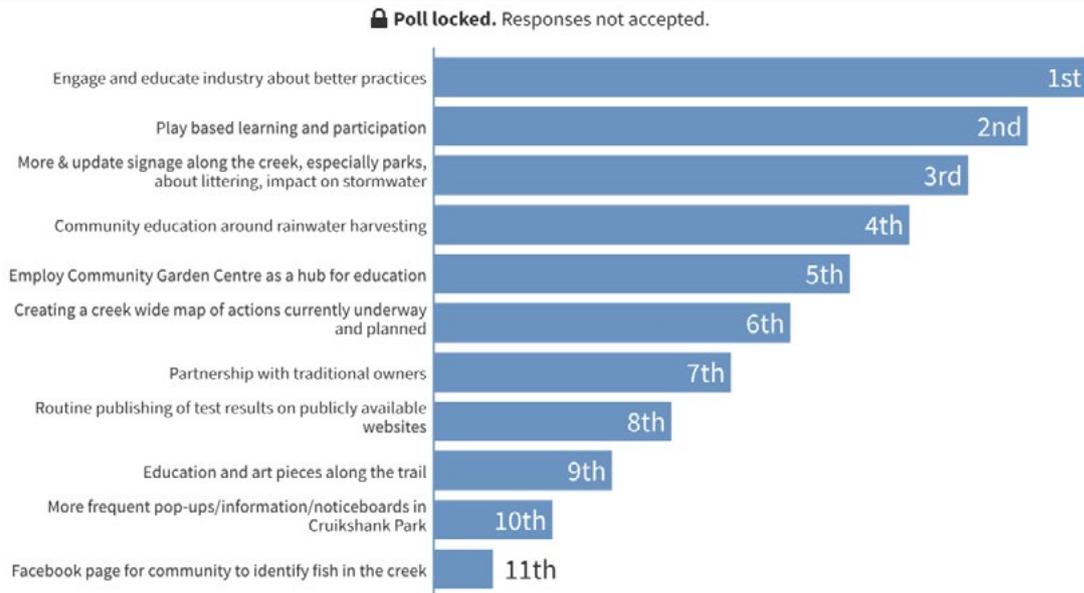


Figure 3 – Poll results for prioritising Education and Community Participation recommendations

4.3.1 Additional notes

There were some additional notes and recommendations that were provided during the second session. These recommendations are provided as follows:

- Art and signage as community engagement e.g. along concrete creek wall
 - Aboriginal narrative
 - Narratives of flora/fauna
 - Narratives of sustainability
- Future playgrounds to be nature-based play, e.g. Botanical Gardens Children's Gardens – not climbing frames, children movement in design
- Education around the disposal of unwanted chemicals/ waste products, enhancing the role of Council to ensure that noxious waste products can be appropriately removed/disposed of
- Community participation not a one-off but a partnership for ongoing work
- Some of these recommendations (1 and 7) are already in progress

5.0 Next steps and future aspirations

This is the community's report and the aspiration is that the community will continue to work with Melbourne Water, Maribyrnong City Council and EPA towards realising their long-term vision for Stony Creek.

5.1 Future aspirations

Participants were asked to individually complete the statement: *"It is the year 2030 and Stony Creek"*

A selection of personal responses are provided below:

"It's 2030 and I am swimming in Stony Creek" – Rhiannon

"It's 2030 and Stony Creek is alive. Creek continues to teach us how to care for country. Stony Creek's Nature Play Space is an exemplar of water conservation and environmental education and community connections" – Clare Court Team

"It's 2030 and Stony Creek and the surrounding open space is an important place for Spotswood people to connect to nature/history, relax and to walk and ride"

"It's 2030 and Stony Creek will clean and lined with red gums and grasses. The concrete drain gone and the bridge from over Mimi the Dinosaur in McNish Reserve to Cruickshank Park BMX Track and Tennis Courts"

"Its 2030 and Stony Creek is a beautiful ecosystem where all my friends and family live" – Elena as a fish

"It's 2030 and Stony Creek is a tranquil and idyllic bike ride home from the Spotswood punt jetty to Sunshine" – Elena, as a human

"It's 2030 and Stony Creek is host to a happy, active and engaged community, who cycle and walk along the creek corridor admiring all the nature, birds, fish and critters"

"It's 2030 and Stony Creek is hosting my dog and kid and a water-skiing platypus"

"It's 2030 and Stony Creek is a continuous corridor of nature where the community gravitate to relax, exercise, interact with nature, walk dogs, learn about the environment, observe the native flora and fauna and is visited by communities across the country as an example of successful urban waterway renewal between community, indigenous groups and government agencies" – Darren Bennetts

"It's 2030 at Stony Creek and I am working at the stormwater retention wetland leading a weeding and planting day and educating local families about the flora and fauna we see" – Clare Sheppard

"It's 2030 and I'm at Stony Creek and I see a platypus"

It's 2030 and the Stony Creek and some native vegetation is beginning to regrow. Some native fish and bird species are beginning to return to the area; however the water quality still needs to improve a lot to consider it 'healthy' – Jake

"It's 2030 and Stony Creek is a living green wonder nature land that inspires me" – Steve

5.2 Additional overarching comments

There were also some overarching comments that were made that should be considered with all future planning for the rehabilitation of Stony Creek. These additional comments have been provided below:

- Unprecedented event so requires unprecedented action, not just feasible and in line with existing policies
- Community need information on how their passion and care can be best harnessed, including how they can mobilise for greater action. For example, who to contact for additional funding, how to participate in ways other than the community workshop.
- Aspirational ideas shouldn't be dismissed based on current funding regimes
- Why can't this project be used as an opportunity to be an exemplar project
- Positive interface with industry and the creek to rectify years of industry using the creek as a dump
- Land use and creek health have a strong relationship
- We want substance to underpin any planned works... This is not just about creating a beautiful place... we want it to be supported by fundamentally sustainable processes. Waterways need to be more resilient.
- Need time frames and other elements to help with an implementation plan and prioritising
- Ensure we have a focused, ongoing community education program (including interactive wetland, natural playground) and aboriginal perspectives

6.0 Conclusions

Community workshop participants expressed their appreciation for the opportunity to work together, and to convey their priorities to relevant organisations.

Melbourne Water, Maribyrnong City Council and the EPA thanked participants for giving up two days to provide such thoughtful advice and feedback.

Melbourne Water, EPA and Maribyrnong City Council confirmed that they will carefully consider the recommendations from the workshop participants and incorporate them into the draft rehabilitation plan as much as possible.

7.0 Appendix A – Workshop agenda



Stony Creek Rehabilitation Community Workshop

Agenda for Day 1 – Sunday 17 March

9.00 *Arrive*

9.30 *Welcome and acknowledgment of Country*

9.40 *Introductions*

9.55 *Overview of the day*

10.05 *Description of the incident and impacts to Stony Creek – Presentation by Melbourne Water*

10.30 *Post-fire water and sediment quality monitoring – Presentation by EPA, including Q&A*

11.00 *Morning tea*

11.15 *Melbourne Water panel session*

- *Healthy Waterways Strategy*
- *Stony Creek biodiversity*
- *Future sediment management*

12.45 *Lunch*

1.15 *Deliberation*

1.30 *Maribyrnong City Council panel session*

- *Cruickshank Park Masterplan*
- *Other open space planning*
- *Current programs*

3.00 *Afternoon tea*

3.15 *Deliberation and reflections*

4.00 *Close*



Stony Creek Rehabilitation Community Workshop

Agenda for Day 2 – Sunday 24 March

9.00 *Arrive*

9.30 *Welcome back, reflections from last week*

10.00 *Responses to last week's questions*

10.15 *Deliberation and recommendations – Waterway health*

11.00 *Morning tea*

11.15 *Deliberation and recommendations – Water quality*

12.05 *Deliberation and recommendations*

- *Access and connectivity*
- *Education*
- *Amenity*

1.00 *Lunch*

1.30 *Recommendations*

- *Access and connectivity*
- *Education*
- *Amenity*

2.20 *Report preparation*

2.50 *Afternoon tea*

3.00 *Reflections on process*

3.30 *Evaluation*

3.50 *Thanks and formal close*



Stony Creek Rehabilitation Community Workshop

Responses to questions from Day 1

1. What is the commitment and accountability to enact the plan identified by these workshops?

Melbourne Water commits to incorporating recommendations provided by workshop participants into the final Stony Creek Rehabilitation Plan, where possible. Recommendations will be examined, in co-operation with EPA, Maribyrnong City Council and other relevant agencies, to ensure that they are feasible, affordable, and align with each other's relevant plans, policies and programs. Accountability for the implementation of actions will be clearly indicated in the plan by the assignment of a lead role and support role (if required) to each action. Actions can be assigned to government agencies, organisations, community groups or businesses.

Melbourne Water, EPA and Maribyrnong City Council also commit to working together beyond the life of the rehabilitation planning process. This is important given that clear accountability for some issues can be sometimes difficult to differentiate between agencies and/or more than one agency holds some responsibility for resolving an issue.

2. Waterways of the West Ministerial Advisory Committee?

In late August 2018 the Victorian Government announced a new community-led approach – Waterways of the West (WoW) – to ensure iconic waterways in Melbourne's west are protected for generations to come.

Over the coming year, a Ministerial Advisory Committee (MAC) will work with community members, community groups and Traditional Owners to identify a range of recommendations that will be presented to government for consideration. This work will build on the strong community advocacy work already occurring across the region along with other opportunities raised by community during MAC's deliberations. The WoW MAC is the next step in delivering on the Yarra River Action Plan, which recognised the need to reconsider the planning and policy context for other urban waterways including the Maribyrnong and Werribee rivers.

The WoW MAC will consider the network of waterways within the Maribyrnong and Werribee catchments, including Stony Creek. The WoW project will build on recent community collaborations to develop Melbourne Water's Healthy Waterways Strategy, and look at broader issues such as landscape amenity, and land use planning and development controls and standards that are suited to the unique features of the west.

The scope and focus of the MAC will be refined in collaboration with communities, agencies and Traditional Owners. It is anticipated that the MAC will call for submissions on the key issues and focus areas and hold participatory workshops with community and Traditional Owners, prior to releasing a discussion paper in mid-2019.

For more information, visit the Department of Environment, Land, Water and Planning (DELWP) website at <https://www.water.vic.gov.au/waterways-and-catchments/wow>.

3. Groundwater?

Melbourne Water has undertaken a desktop assessment and found that widespread contamination of groundwater is not deemed likely. This is because groundwater tends to flow towards waterways and given the close proximity of the fire to Stony Creek, groundwater contamination is likely to be localised.

A local groundwater investigation will be addressed as part of the 53x environmental audit the fire site is required to conduct as part of an EPA notice.

4. City of Brimbank?

The City of Brimbank is currently out of scope for the Stony Creek Rehabilitation Plan. However, due to its location higher in the catchment of Stony Creek, pollution and stormwater sourced from the Brimbank Council area may reach the receiving waters in the rehabilitation planning project area. This whole-of-catchment view will remain a key focus during the broader implementation of the 2018 Healthy Waterways Strategy over the next 10 years.

Brimbank City Council have focused on building their stormwater treatment capacity over the last five years. Council have invested in assets which cleanse stormwater and enhance alternative water capacity, and worked on building Council's related operational capabilities. To reduce the amount of stormwater pollutants reaching waterways, including Stony Creek, Council has installed a growing number of water sensitive urban design (WSUD) assets including raingardens, swales, tree pits and wetlands. The ambition of these WSUD projects now extends to the collaborative restoration of the upper Stony Creek from a concreted drain to a quality urban waterway. Over the next five years, Council will look at a wider set of projects to deliver 'smarter' water management for the future.

5. Where are the Indigenous voices in this process?

Melbourne Water recognises the unique cultural heritage values of all waterways, and the indigenous population is an important part of the local community. We are engaging with traditional owner groups to seek their involvement in helping to shape the Stony Creek rehabilitation plan to ensure that indigenous values are incorporated in the plan.

Due to their limited resourcing capabilities and competing demands for their time with other projects and issues that may take a higher priority, it is challenging to determine their level of interest and involvement in the process. While we would like them to provide their contributions for desired outcomes, ideas for rehabilitation and actions for the plan, they may only be able to review and provide feedback on the draft plan once it is complete. We will offer them the opportunity for potential involvement in the delivery of on-ground activities and other actions identified in the final rehabilitation plan (eg. planting, interpretive signage, artwork).

6. What changes will be made to mitigate future pollution events?

There will always be some level of risk of future pollution events in Stony Creek and any other urban catchments where communities and industry are co-located.

The good news is that a new Environment Protection Act commences 1 July 2020. The focus of the new Act is preventative rather than the former reactionary approach after a pollution event has occurred. The cornerstone of the new Act is the general environmental duty (GED) which is a new concept for Victoria's environmental protection laws. The general environmental duty will apply to any person or company conducting an activity which poses risk to human health or the environment from pollution or waste. General duty regulation is well understood – a general duty sits at the heart of Occupational Health and Safety laws throughout Australia.

There will be a big need initially to educate industry about the new legislation and how they can fulfil their general environmental duty. EPA has developed a new Industry Guidance Unit to help fulfil that need. Industry guidance can be developed by sector (eg. concrete batching or auto parts recycling) or could relate to a specific site practice or activities that are common across industry sectors (eg. liquid storage and handling) or could focus on a particular impact of an activity (eg. dust across a number of industries and activities).

7. What can our community continue to learn from this major contaminating incident – what can we do differently?

Hopefully greater accessibility along Stony Creek will mean the community can be extra eyes and ears for EPA and help monitor any suspicious activities. EPA can't be everywhere and rely on the community to assist in reporting pollution via their 24-hour call centre number 1300 372 842 (1300 EPA VIC). The EPA science team is considering a citizen science chemical stockpile program which may be something to pilot with the local community around Stony Creek.

While upstream of the Stony Creek fire site is out of scope for the rehabilitation plan, perhaps there needs to be a whole of Stony Creek catchment approach in future making sure all industrial and residential sites know they are a part of the Stony Creek catchment. Possibly a drain stenciling awareness program?

8. Stony Creek between Paramount Road and Waratah Street (at Park Ave/Cala Street) floods 30m overbank with every heavy rain, mobilising and depositing contaminants over a very large area. How will this specific area be monitored over next 1 – 2 years? Will the contaminated sediment be removed?

EPA has a portable RemScan device - a hand-held electronic device for the rapid measurement of total petroleum hydrocarbons (TPH) in soil. Using this device initially in the Park Ave and Cruickshank Park areas will help to inform future floodplain soil sampling and monitoring programs. Initial trials suggested the need for laboratory preparation to dry samples prior to analysis. However, given the absence of rain and dry conditions, we will work towards doing this as soon as practicable.

We would need to also determine soil moisture levels as this is important for the accuracy of the RemScan measurements. Our RemScan instrument is being used in Northern Victoria next week so there may be a delay in making this happen. Additionally, soil samples will be collected and tested in at an analytical laboratory – this would be completed for several representative samples for analytical comparison and quality control checks, but it involves higher costs and results take at least two weeks to complete. Thus, for any further ongoing monitoring, the use of the RemScan is preferred as we can analyse numerous sites while on site.

9. In view of what has happened to Stony Creek (again!) What is going to change in terms of policy and practice around regulating and prohibiting? Inspecting industry/ warehouses/ container parks along Stony Creek? And other waterways.....

Refer to the answer of question 6.

Multi-agency inspection blitzes of warehouses in the West Footscray area were conducted by EPA, Maribyrnong City Council and Worksafe soon after the fire. Targeted blitzes across multiple councils have also been conducted for illegal chemical dumping and stockpiling of recycling materials. EPA also conducts regular inspections of EPA licensed sites and investigates pollution reports received from the Victorian community.

EPA's new preventative approach post 1 July 2020 will see that duty holders will be held to account. Firstly, the duty holder needs to understand the risks that pollution or waste from their activities might present to human health or the environment. Secondly, the ways those risks can be controlled need to be identified and understood. Step three is that duty holders are required to put in place any reasonably

practicable methods to eliminate an identified risk. Finally, when not all risks can be reasonably eliminated, the final requirement is to put in place any reasonably practicable risk mitigations to reduce the likelihood of the possible harm arising. The general environmental duty will apply to any person or company conducting an activity which poses risks to human health or the environment from pollution or waste.

10. Rehabilitating the creek from this latest pollution incident is one major element. Protecting the creek from all future pollution is just as important.

Preventing pollution is an obvious goal we would all sign up to, but making it reality is difficult. In practice, we should be able to reduce the incidence and impacts of these events by better management of stormwater but elimination is not realistic.

11. Can we insist on community accountability from households as polluters?

Education programs across the government environment portfolio – getting it right on bin night, household chemical collection programs, only rain down the drain, where do your car washing suds go?

12. Can we determine where run off is having the greatest impact? Where would better controls be useful? Whose role?

Maribyrnong Council's WSUD feasibility investigation will identify all council stormwater drains and prioritise the larger drains and catchments to maximise the treatment benefits.

13. What would need to happen to bring Stony Creek up to good-high values? Ecologically? Recreationally?

To achieve good-high ecological values would require complete removal of any human impacts, as well as historical/legacy impacts in the catchment. To see even moderate improvements in similar urban areas would need 40 metre forest buffers along the waterway or removal of stormwater impacts. This would require a big shift in land use, residential design, huge stormwater treatment systems and unlimited funds. Getting fauna back to pre-fire levels or any increase in diversity or abundance will be cause for celebration.

Recreational and amenity values are an easier task for this area. The amount of indigenous vegetation, absence of litter, access and facilities that don't detract from 'naturalness' are factors that influence the social value of a waterway. Visual aspects and odours are also big factors in the enjoyment of waterways. There can be a lot of crossover in actions designed for ecological and social health, and recreational values are well supported through the Healthy Waterways Strategy and Cruickshank Park Master Plan.

In light of these issues and opportunities outlined above, the 2018 Healthy Waterways Strategy has identified many viable waterways for effort and investment. It has also identified that some waterways cannot be maintained for one or all values without an unreasonable and inequitable investment, due to the pressures predominately from past or future urban development, along with climate change. For these reasons, some key values are expected to remain in very low condition within the Stony Creek catchment over a longer term timeframe.

14. When are we going to treat stormwater into natural waterways in the same way as roads and rail level crossings and separate them? Invest in this.

Natural waterways require stormwater for environmental flows and will need these more so in a drying climate. We suggest that interception (e.g. raingardens, litter traps etc.) and treatment of stormwater is likely the solution, not separation.

Maribyrnong Council's goal is to treat stormwater in key locations to improve stormwater quality flowing to the waterways and bay. There are no plans to develop a separate stormwater system as it's not considered feasible within our existing public realm network of streets and open space.

15. How can we insist on some community accountability from pollutants (industrial sites)?

- a. **This is an opportunity to build relationships of respect and responsibility**
- b. **Consider: Make industrial tenancy include obligations to community – work with us on this clean up!**

Refer to answer in question 6. Maribyrnong Council is investigating potential planning changes for greater control over stormwater management and discharge from industrial sites.

16. Public acquisition overlays?

Maribyrnong Council would consider investigating the acquisition of land along the creek, public acquisition overlays being one option.

17. Access to information on underground drainage configuration

Can be provided by Melbourne Water and Council on request. Maribyrnong City Council's stormwater drainage data can be requested via: email@maribyrnong.vic.gov.au.

Stormwater assets are in an online AURIN system – access can be provided if associated with education /research sector. Melbourne Water is investigating online GIS systems (such as <http://data-melbournewater.opendata.arcgis.com/>) to make stormwater and other datasets more publically visible – there is a large amount of work to get this happening.

18. Hobsons Bay side of the Hyde Street reserve (and bike link across). What are the plans? How is the community being involved?? WGTA funded?

The West Gate Tunnel Project proposes to establish the shared user trail (extension of the existing Federation Trail) to the south of the Stony Creek Reserve, north of the Freeway as an elevated structure coming to ground level at Hyde Street connecting to the Coastal Trail. Within the Hobsons Bay area, the Project proposes to establish a link to the Federation Trail from Hall Street, Newport. Hobsons Bay Council are currently working through the design of Hall Street (not just on the shared user pathway but on road parking, access etc.) there is no intention of Council contributing to this financially, that the expectation is that the project would fund this connection and the associated works.

The following links provide you with information on the Open Space Improvements and Cycling Facilities to be constructed through the project.

Open Space Improvements (including artist impression of the shared user pathway in relation to the Stony Creek Reserve): <http://westgatetunnelproject.vic.gov.au/about/keytopics/open-space>.

Cycling Benefits (including the same artist impression of the shared user pathway in relation to the Stony Creek Reserve): <http://westgatetunnelproject.vic.gov.au/about/keytopics/cycling-benefits>.

If you haven't seen the video via this link, we encourage you to view it – specifically the reference to the Hall Street connection.

While there is no artist impression of the Hall Street connection, the project webpage does refer to:

Key benefits:

- A completed Federation Trail and missing links in the Kororoit Creek Trail
- A new 2.5 km elevated veloway which will give cyclists a safe and express route to and from the city
- Better links to popular trails across Greater Melbourne
- Connecting Spotswood and Yarraville with a new pedestrian and cycling path from Hyde Street Reserve to Spotswood Station
- A new connection along Hyde Street and Harris Street in Yarraville which will redirect cyclists from the dangerous intersection of Somerville Road and Whitehall Street
- A new cycling and pedestrian bridge connecting Yarraville Gardens and the Maribyrnong River
- Connecting communities with new paths across the West Gate Freeway improving safety and access

- New, safer cycling and pedestrian bridge across Moonee Ponds Creek at Dynon Road
- A new bridge crossing over Footscray Road at Moonee Ponds Creek Trail, avoiding the busy signalised intersection

The clearest representation of the proposed Hall Street/Federation Trail alignment and connection on the project website is: <http://wgtmap.u-c.com.au/imap06/index.html>. Noting the design phase is live now for this element.

In terms of the opportunity for the community to be involved in the design, the project will engage with key stakeholders including Hobsons Bay Council. Council provide monthly reports through Council reporting on items of current design consideration, construction or engagement etc. Hobsons Bay Council is aware of a number of issues or challenges with this section of Hall Street given its close proximity to the station, increasing commuter parking, local activity centre parking and poor (to nil) safe pedestrian or cyclist access. From a Hobsons Bay Council perspective, we want to achieve safe shared access, retain the existing parking capacity and effective traffic flows through the current design phase of the Hall Street element.

Hobsons Bay Council is keen to hear any specific community comments to this specific element of the project as we can feed this into the design development. Contact Marg Scanlon or Ian Butterworth on ph: 9932 1000.

19. How do we work with the owners of industrial land?

See answer to question 6.

20. Community access (walk/bike tracks) behind industry for citizen monitoring, passive surveillance

Yes, this is the long term objective for the length of the creek and is in progress.

21. Can the industrial leases on the creek be acquired to approve them?

Refer to response to question 16.

22. Improve rock formation at dog pond to stop erosion south side of creek where we will barak(?) to replace trees and grasses. Also erosion at the store crossing at the kinder.

Thank you for your suggestion. We are happy to look at specific issues raised by the community and determine action if required.

23. Remove level crossing.

Unfortunately removal of level crossings is beyond the scope of the Stony Creek Rehabilitation Plan but we are happy to help you to find an avenue for your suggestion.

24. How can the process ensure that not just the “cheapest” options will get up? What needs to happen get a big investment? To enact community ideas....

When prioritising recommendations, workshop participants will be asked to provide a list of ‘most urgent’ as well as ‘most important’.

Whilst Melbourne Water, EPA and Maribyrnong City Council are constrained by their own budgets and competing priorities across their service offerings and obligations, the rehabilitation plan should provide an effective mechanism to leverage funding from other sources.

9.0 Appendix C – Shortlisted ideas/recommendations for Day 2

Shortlisted ideas / recommendations for Day 2

* The yellow highlighted actions would entail significant further investigation and/or be very costly

Waterway Health

1. Plant aquatic vegetation to promote oxygenation of the water and provide habitat for aquatic animals
2. Ensure that planning controls are appropriate for long-term protection of Stony Creek and take action where these controls have been contravened e.g. encroachment, filling etc.
3. Acquire areas of floodplain that are in private ownership so that the creek's health and public access to it can be managed in a connected way
4. Plant native vegetation to establish a continuous corridor along Stony Creek. Design revegetation to retain important sightlines in public areas.
5. Control weeds throughout Stony Creek to maintain and improve habitat and contribute to overall amenity.
6. Create off-stream habitats for frogs and birds
7. Improve environmental flows in Stony Creek by removing upstream diversions to Kororoit Creek and Maribyrnong River
8. Investigate reasons for low oxygen levels in Stony Creek and develop strategies to improve them
9. Reintroduce native animals including fish
10. Adjust/widen channel form to allow for high catchment flows, slow flows to promote pollution capture, connection to floodplain for habitat purposes and introduce deeper pools to allow habitat diversity and accessible areas for desilting.

Water Quality

1. Place litter traps in appropriate places throughout the Stony Creek catchment
2. Aim to ensure that Stony Creek is safe for dogs to swim in and for people to interact with
3. Ensure that industry are aware of what their obligations are in regards to stormwater management and pollution prevention and work with them to ensure compliance
4. Provide incentives for private and public landholders to implement stormwater quality improvement measure on their land
5. Regular reporting by council and EPA on compliance with stormwater management regulations across the catchment
6. Harvest stormwater where possible to reduce direct stormwater flows from drains into the creek and to irrigate parks and sports fields
7. Install water quality sensors throughout catchment to investigate sources of pollution and litter and enable targeted response
8. Implement water sensitive urban design (WSUD) features in appropriate locations e.g. raingardens, permeable pavements, road run-off diversion to median strips, swales, streetscape features etc.
9. Undertake catchment-wide stormwater quality and quantity planning to avoid implementation of solutions in an isolated fashion

10. Appoint a full-time WSUD officer to coordinate new stormwater quality assets, inspect new assets and ensure appropriate maintenance
11. Construct a wetland or similar water quality treatment asset to capture pollutants and litter from upstream tributaries and drains

Access

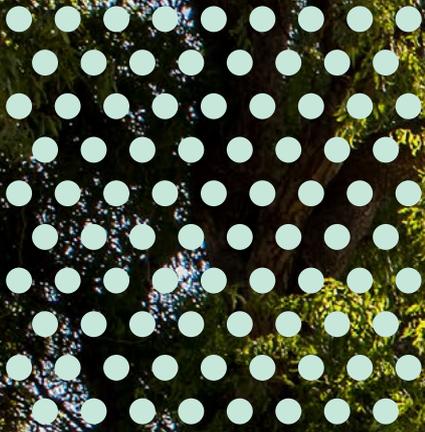
1. Construct a shared path from Paramount Rd to Cruickshank Park
2. Investigate improvements and possible pedestrian bridge at the Geelong and Somerville Rd intersection to improve pedestrian connectivity and safety.
3. Construct a shared path along the creek from Paramount Rd to Mathews Hill in Sunshine, investigating connectivity beneath rail embankments.
4. Activation of underutilised parts of the creek by constructing pathways/boardwalk along the creek.
5. Open up access and views over the waterway through coordinated removal of fencing onto the creek
6. Construct a footbridge connecting Park Ave and Cala St.
7. Provide lighting to extend accessibility times especially during winter, make people feel safer and being able to see each other, e.g. bike riders, kids, people and dogs
8. Install more rocks (stepping stones) to walk across the creek
9. More walking access to creek from Spotswood (west side) and South Kingsville

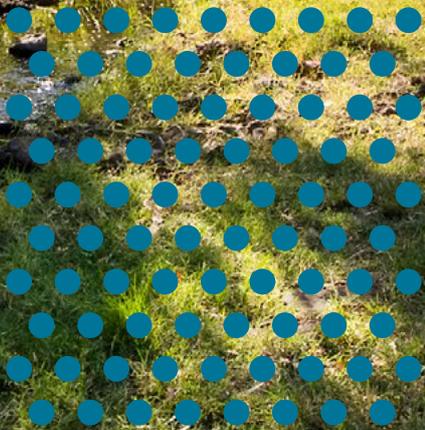
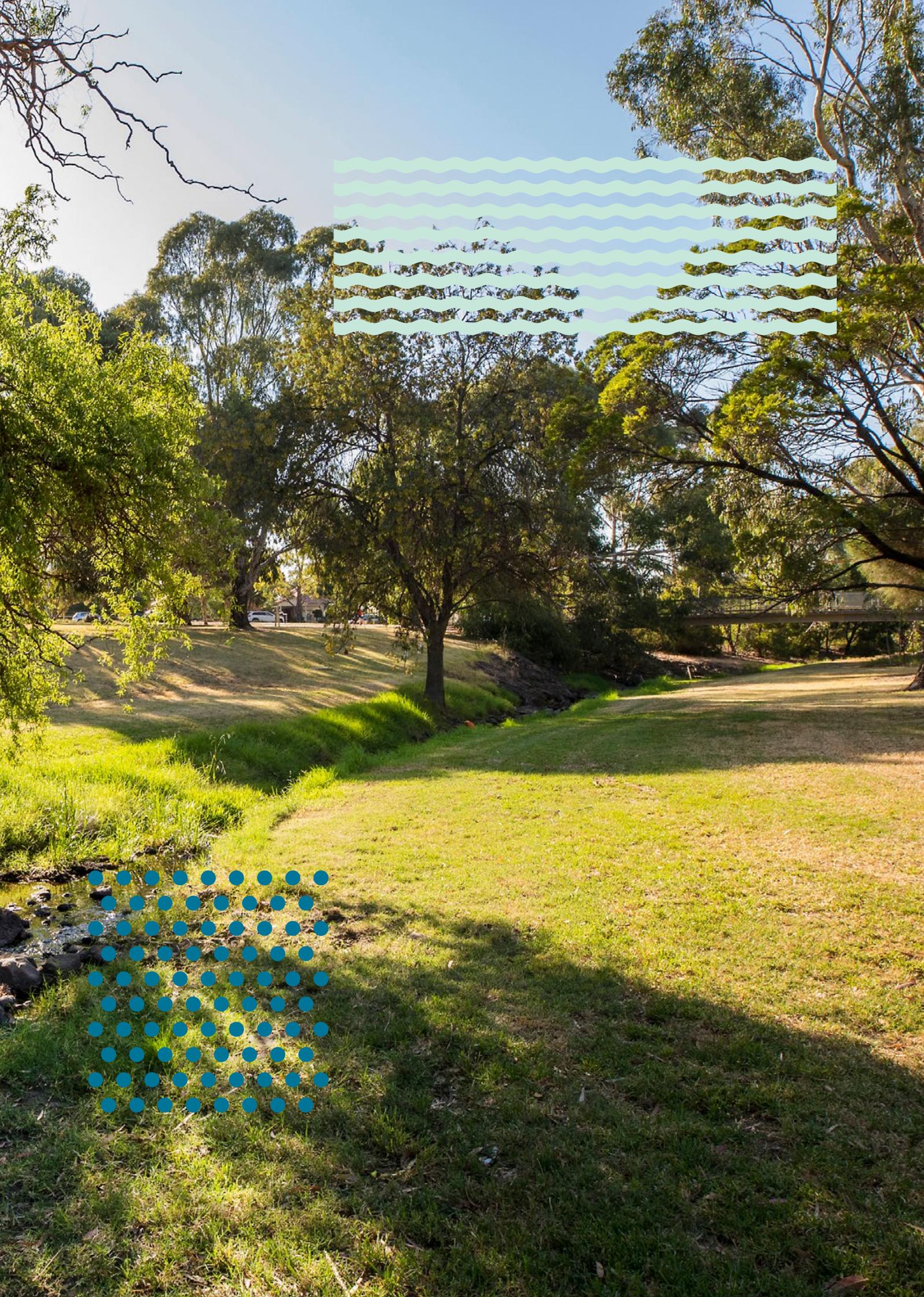
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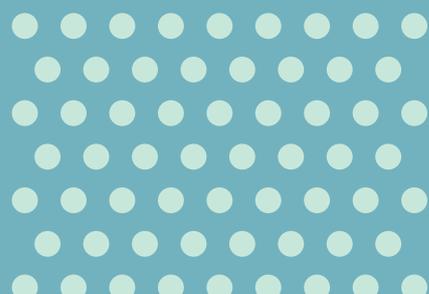
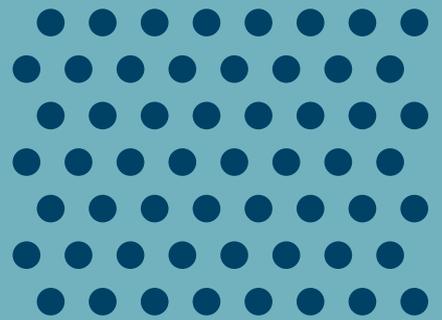
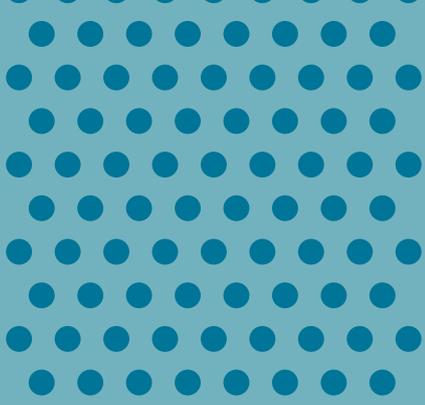
1. Improved weed management on the southern side of creek, especially near Hyde St Reserve
2. Clear weeds from the drain beyond Francis St
3. Provide a public toilet to support extended visits to the park.
4. Investigate the acquisition of land adjacent to the creek through sections of private ownership and widen the corridor
5. Provide a BBQ area - this will be conducive to the childrens play equipment and the basketball area. Bringing more families in to enjoy the facilities.
6. Create an art/sculpture trail along through the park
7. More nature-based play to engage kids with their local flora and fauna.
8. Conduct a feasibility study into naturalizing the concrete channel from Cruickshank Park to Hyde St starting with Cruickshank Park section
9. Rainwater storage for irrigation in Cruickshank Park so we can have green spaces even over summer, and prevent barren sections during dry periods.
10. Install streetscape water sensitive urban design (WSUD) including raingardens and passively irrigated trees when doing streetscape works.

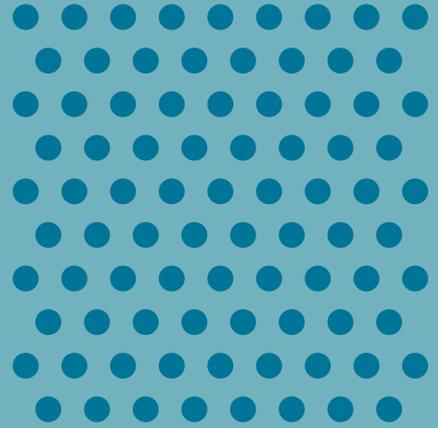
Education and Community Participation

1. In partnership with traditional owners; returning Aboriginal ways of knowing, being and doing to waterways and the land
2. Develop regulations holding industrial groups accountable for damage, continue to inform and support these groups to make better choices in their industrial practices
3. Routine publishing of test results on publicly available websites (Council, EPA, Melbourne Water). By routine I mean ongoing, not just after an incident/ issue
4. Creating a creek wide map of actions currently underway and planned
5. Community education around rainwater harvesting on residential sites – support for residents to invest in hardware
6. Employ Community Garden Centre as a hub for education about supporting native flora and fauna, stewardship programs , encouraging folks to use more sustainable practices in their own gardens, etc.
7. Education and art pieces along the trail linking to the Maribyrnong to create a unifying element
8. Have more frequent pop-ups/information/noticeboards in Cruikshank Park for residents to find out about the creek
9. More signage along the creek, especially parks, about littering, impact on stormwater, and directional signage to community garden/other features.
10. Facebook page for community to identify fish in the creek - even just size, location, number of fish, colour









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