

# ACTION PLAN

The following Action Plan has been developed to guide Council toward achieving its four IWM objectives. Implementation of the plan will be subject to annual budget cycles and available resources. Actions are categorised according to the IWM objectives and outcomes, demonstrating a clear link between the objectives and the actions required to meet them.

For the purposes of the Plan, the following timeframes are described: Short term: 0-3 years / Medium term: 4-6 years / Long term: 7-10 years.

*Rowers on the Maribyrnong River*



## Objective 1: Efficient and fit for purpose use of all water

Outcome: All water is used efficiently

Category	Ref	Action	Timing
Open space irrigation	1.01	<p><b>Review the status of irrigation actions under the Water Action Plan (2018):</b></p> <p>Review the status of the Water Action Plan actions. Outstanding actions to be scheduled for completion in the period of this IWM Plan.</p> <p>Introduce a transparent process (e.g. 'decision tree') for the introduction of and/or upgrade of irrigation infrastructure across open spaces. Decision making will take into account water saved as well as social factors including amenity (e.g., the reduction of urban heat), and value to local community.</p>	Short/Medium term
	1.02	<p><b>Low water demand grasses:</b> New open spaces to be sown with warm season &amp; low water demand grasses. This requirement should be reflected in open space, public realm and redevelopment guidelines.</p>	Short/Medium term
Building water use	1.03	<p><b>Maribyrnong Aquatic Centre (MAC) Improvement Plan:</b> Assess current water use at MAC. Undertake an audit of current water use within MAC as well as a review of recently completed water efficiency improvement works. Develop a list of further required improvements to optimise water use efficiency within MAC.</p>	Short term
	1.04	<p><b>Council buildings:</b> Apply the Maribyrnong City Council <i>Environmentally Sustainability Design (ESD) Council Buildings and Infrastructure Policy</i> to council building projects to ensure water efficient design and operation (including rainwater for toilet flushing, stormwater management plan, efficient appliances etc.).</p>	
	1.05	<p>Undertake regular Building Performance Reviews for water use in Council buildings. Document all water related works that has been undertaken to date. Include the results of these audits (including water savings) within an asset registry.</p>	
Data and smart technologies	1.06	<p><b>Information and data:</b> Continue roll out and use of smart irrigation controls for open spaces and consider integration of the system with the Smart Cities program. Include specific requirements for smart controls within irrigation related design briefs, contracts and guidelines.</p>	Medium/Long term  (with ongoing maintenance of the 'water data hub')
	1.07	<p>Longer term action to develop a 'water data hub' that collects and presents all of Council's water use data. This can be used to inform future decision making around water use, efficiency and the use of non-potable water supplies (see also reference to Smart Controls under 1A above).</p> <p>Ensure data collection is occurring for relevant parameters that the Council need to report on under the Catchment Scale Maribyrnong IWM MERI Plan.</p>	

## Outcome: Identify and implement alternative water source opportunities

Category	Ref	Action	Timing
Alternative water use opportunities	1.08	<b>Greater Western Water's alternative water sources project:</b> Use preliminary findings from Greater Western Water's <i>Investigation of alternative water for open space irrigation in the Western Metropolitan Region</i> project to inform potential projects. This project identified priority open spaces for alternative water supply and opportunities for stormwater and rainwater harvesting and recycled water use. Include opportunities identified within the <i>Stony Creek Stormwater Treatment and Harvesting Opportunities</i> report (2019) and new opportunities as they arise, in this project's database.	Short term and use ongoing
	1.09	<b>Leverage major projects:</b> Identify stormwater harvesting and treatment opportunities within State Government led major strategic projects and precinct redevelopments e.g. the Westgate Tunnel Project, Defence Site Maribyrnong, existing Footscray Hospital site and new Footscray Hospital. Advocate and engage with State Government early in the process to identify IWM and water focussed initiatives.	Ongoing
	1.10	<b>Leverage developments:</b> Ensure stormwater retention, treatment and rainwater harvesting opportunities are incorporated in precinct scale developments such as the Emu Road, Braybrook Regeneration and Bradmill sites.	Ongoing
	1.11	The <b>Stony Creek Future Directions Plan</b> identified a number of raingarden/harvesting projects. Further investigate the feasibility of these projects to progress as funding becomes available. Prioritise projects that include partnership opportunities with Greater Western Water and Melbourne Water.	Short/Medium term
Building non-potable water use opportunities	1.12	<b>New and upgraded Council and community buildings:</b> Implement the <i>Maribyrnong City Council Environmentally Sustainability Design (ESD) Council Buildings and Infrastructure Policy</i> so all new and upgraded Council buildings meet outlined Green Star water demand requirements or equivalent. Note that all new and upgraded Council and community buildings are required to have rainwater harvesting to a) flush toilets and/or b) irrigate gardens.	Short/Medium term
		<b>Large private redevelopments:</b>	
	1.13	<ul style="list-style-type: none"> <li>Require IWM Plans from all larger private redevelopments that do not already require them through existing Development Plan Overlays. The mechanism for this requirement could be considered as part of the WSUD Guidelines (Action 2D) and would outline requirements for the development itself and how those requirements align with the objectives of the Maribyrnong IWM Plan.</li> </ul>	
	1.14	<ul style="list-style-type: none"> <li>Create capacity within Council to advise on IWM requirements in new developments and to assess developer plans.</li> </ul>	





*Raingarden, Stony Creek*



*Raised raingardens, Yarrville*





*Carpark cutouts and swales, West Footscray*



*Carpark cutouts and swales, West Footscray*



## Objective 2: Healthy and valued waterways and wetlands

Outcome: Litter from urban catchments does not enter Maribyrnong's waterways

Category	Ref	Action	Timing
Gross pollutant trap (GPT)	2.01	Develop a gross pollutant management and maintenance plan: <ul style="list-style-type: none"> <li>Continue and complete work to confirm location, and map Council GPTs</li> <li>Review GPT maintenance regime. Ensure existing GPTs are functioning and maintained before new GPTs are added</li> <li>Identify locations for the installation of new GPTs should funding become available (based on litter hot spots, treatment train locations and consideration of waterway impacts in consultation with Melbourne Water).</li> <li>Develop and document a policy position, including criteria, for when and where GPTs are considered a suitable form of treatment.</li> </ul>	Short/Medium term
Community awareness	2.02 2.03 2.04	Waterway and wetland awareness: <ul style="list-style-type: none"> <li>Continue to participate in and implement actions assigned to Council within the Waterways of the West Program</li> <li>When renewing Council's grey and green infrastructure, consider incorporating signage to improve community awareness of the link between litter, stormwater and waterway condition. For example:               <ul style="list-style-type: none"> <li>Labelling on street sweeping vehicles and public bins</li> <li>Stencils (e.g. of fish, frogs etc.) on stormwater drain lids</li> <li>Signage around litter hot spots.</li> </ul> </li> <li>Utilise data to inform targeted campaigns and litter reduction activities e.g. audits of litter traps.</li> </ul>	Medium term

Outcome: Stormwater treatment wetlands and WSUD function as per their design and deliver multiple benefits

Protecting natural assets	2.05	Protect and increase Council's wetlands and natural spaces:	Short/Medium term
		<ul style="list-style-type: none"> <li>Clarify maintenance and ownership responsibilities for all wetlands within the LGA between Council, DEECA, Melbourne Water and Parks Victoria and continue with a collaborative management approach to waterways and wetlands.</li> </ul>	
	2.06	<ul style="list-style-type: none"> <li>Advocate for further investigation into the desilting, rectification and enhancement of Newell's Paddock Wetland (as per the Alluvium 2015 Design Report) in discussion with DEECA, Parks Victoria and Melbourne Water. As part of this project add community awareness signage.</li> </ul>	
	2.07	<ul style="list-style-type: none"> <li>Investigate issues associated with lack of flow to Pipemakers Park wetland and suitable rectification measures including the function of pre-treatment in Thompson Reserve.</li> </ul>	
	2.08	Investigate options for creation of new stormwater treatment wetlands in alignment with existing plans and strategies.	Medium/Long term
	2.09	Develop a Council policy that protects Council's wetlands from the impacts of land development and construction upstream (including Frog Hollow and Newell's Paddock). For example, incorporating stormwater flow and quality requirements within planning permits of upstream developments within the City of Maribyrnong.	Medium term
WSUD policy and practice	2.10	<b>WSUD Capacity 1</b> WSUD Officer: Employ a WSUD Officer to support the planning team in applying relevant IWM Planning Provisions. WSUD Officer to support IWM capacity building within all Council departments, provide technical advice on IWM matters, develop IWM works for capital works consideration and undertake compliance audits.	Short/Medium term
	2.11	<b>WSUD Capacity 2</b> Establish a cross-organisational working group to build internal capacity, collaboration and advocacy for IWM/WSUD. The group should have a clear purpose, regular meetings and broad representation across Council (including officers and senior managers) and support implementation and evaluation of the IWM strategy.	Short term
	2.12	<b>WSUD Guidelines</b> Develop Maribyrnong City Council specific internal and external facing guidelines that outline expectations regarding the design and construction of IWM assets. Consideration must be given to alignment with draft Sustainable Building Design Guidelines prepared by CASBE for the Elevating ESD Targets Amendment and State government reforms through the ESD Roadmap. This document would provide support to the relevant teams within Council, including but not limited to the strategic and statutory planning teams, to ensure consistency across the municipality and to provide greater clarity to developers. The guideline will be incorporated into the City Design Manual and considered as part of the review of Council engineering standards and specifications.	Short term

	2.13	Ensure Council led projects consider design and construction solutions to increase permeable surfaces e.g. design renewals to create greater open space/greening or use of permeable products such as permeable paving rather than traditional materials.	Short term
		<b>WSUD Design standards</b>	Short/Medium term
	2.14	Develop standard design templates for common / conventional WSUD capital works (e.g. street and car park biofilters and passive street tree irrigation) to guide developers and support standardisation of assets within Council. <ul style="list-style-type: none"> <li>Identify opportunities for implementation of standard designs as part of Council's capital works (e.g. road works, open space renewal and car park construction). These design standards will be incorporated into the City Design Manual and considered as part of the review of Council engineering standards and specifications.</li> </ul>	
		<b>Asset Management</b>	Short term (audit and register)
	2.15	<ul style="list-style-type: none"> <li>Ensure that existing WSUD assets are operating as designed. <ul style="list-style-type: none"> <li>Undertake an audit of existing WSUD assets.</li> <li>Prioritise identified rectification requirements.</li> <li>Commence rectification program.</li> </ul> </li> </ul>	Medium term (rectification and monitoring)
	2.16	<ul style="list-style-type: none"> <li>Add all existing Water Sensitive Urban Design (WSUD) assets into Council's Asset Register and create corresponding spatial information for each asset in Council's GIS system (Ringtail).</li> </ul>	
	2.17	<ul style="list-style-type: none"> <li>Identify monitoring requirements for reporting, as part of the Catchment Scale IWM MERI Plan and commence monitoring for inclusion in water data hub (Action 1C).</li> </ul>	
	2.18	<ul style="list-style-type: none"> <li>Create a regular maintenance program, undertaken by appropriately experienced contractors for WSUD assets.</li> </ul>	

Outcome: Waterway corridors are accessible, protected and enhanced

Improve stormwater quality – Stony Creek	2.19	<ul style="list-style-type: none"> <li>Prioritise and implement actions from the <i>Stony Creek Future Direction's Plan</i> that will improve water management within industrial areas that impact Stony Creek. Examples might include: <ul style="list-style-type: none"> <li>Investigate additional evidence and policy needed to create a 'Riparian zone buffer' that requires a wider waterway corridor when industrial sites are sold or redeveloped along Stony Creek.</li> <li>Advocate for bunding / physical containment infrastructure within industrial sites adjacent to waterways to contain spills.</li> <li>Information and signage within industrial areas that illustrates the link between land use to waterway health.</li> <li>Develop and implement the <i>Stony Creek Industrial Guidelines</i> for adjacent properties, that have been prepared and included in the draft Tottenham and West Footscray Employment Precinct Framework Plans 2020, to be implemented into the Maribyrnong Planning Scheme via Amendment C166.</li> </ul> </li> </ul>	Long term
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## Objective 3: An urban landscape that is resilient to the impacts of climate change

Outcome: Mitigate urban heat/Retain water in the urban landscape through wetlands & water sensitive urban design

Category	Ref	Action	Timing
Tree canopy cover and passive stormwater irrigation	3.01	<b>Feasibility study into passive stormwater irrigation of street trees</b> <ul style="list-style-type: none"> <li>Undertake a feasibility study into the use of stormwater for passive irrigation of street trees within the City. With a goal of increased shading and urban cooling. Use findings to inform targets in the next iteration of the Urban Forest Strategy.</li> </ul>	Medium term
	3.02	<ul style="list-style-type: none"> <li>Develop a position on when and where it is best to introduce passive irrigation: <ul style="list-style-type: none"> <li>Literature review including, but not limited to asset designs, scientific trial results and tolerance of various tree species (to fluctuations in frequency of wetting/drying and water quality).</li> <li>Identification of priority areas and contexts for passively irrigated street trees. For example, should retrofitting or redevelopments be the priority? What will deliver better outcomes?</li> <li>In principle, prioritise shading of hard surfaces over other spaces (e.g. green spaces).</li> </ul> </li> </ul>	
Processes and designs		<b>Making passive irrigation business as usual</b>	Medium term
	3.03	<ul style="list-style-type: none"> <li>Collaborate with civil and maintenance teams to review and further develop: <ul style="list-style-type: none"> <li>designs for passive tree irrigation assets and WSUD associated with supporting tree growth.</li> <li>designs that respond to different typologies across Maribyrnong e.g. industrial precinct, dense urban environments (e.g. Footscray)</li> </ul> </li> </ul>	
	3.04	<ul style="list-style-type: none"> <li>Review civil design processes (including road and drainage renewals) to consider opportunities to incorporate passive irrigation.</li> </ul>	
	3.05	<ul style="list-style-type: none"> <li>Undertake internal capacity building (led by WSUD / IWM Officer) to grow organisation support for canopy and passive irrigation investment e.g. through information sharing, workshops and the co-design of passive irrigation assets.</li> </ul>	
	3.06	<ul style="list-style-type: none"> <li>Monitor and assess passive irrigation technologies, porous pavements and other innovations to incorporate into future trials and projects.</li> </ul>	
Industry engagement		<b>Water Industry Projects and Programs</b>	Ongoing
	3.07	<ul style="list-style-type: none"> <li>Continue to participate in water related industry programs including Greening the West, Waterways of the West, IWM Forums and CASBE. Also participate in stakeholder led projects that further the aims of this IWM Plan.</li> </ul>	



Planning	3.08	<b>Protecting trees on private land</b>  Encourage protection of existing significant or larger trees on private property (e.g. this may be defined as having a diameter at breast height (DBH) of 300mm or greater). This may include resident education or incentives for tree retention (e.g. plants giveaways, reduction in green waste levy or council plantings on private land, such as industry buffers). Refer to the Significant Tree Register.	Medium
Planning	3.09	<b>State Government advocacy</b>  Continue to advocate for an amendment to the Victorian Planning Provisions to elevate sustainability requirements, including better management of water quality, use and collection, in addition to a greater resilience to changing climate impacts.	Short
Greening Strategic Redevelopments	<b>Major public and private redevelopments</b>  3.10 <ul style="list-style-type: none"><li>• Incorporate canopy cover and passive irrigation requirements for major redevelopment sites where Council is the planning and responsible authority. Implement with Action 1E.</li></ul> 3.11 <ul style="list-style-type: none"><li>• Develop a guidance/policy that outlines agreed targets in relation to the number or density of trees required for new developments and ensure compliance. Relates to Action 2D WSUD Guidelines.</li></ul>	Long term	



## Objective 4: An informed, engaged and active community

Category	Ref	Action	Timing
Traditional Owner Engagement	4.01	<b>Traditional Owner Engagement:</b> Undertake meaningful engagement with the Traditional Owners, Wurundjeri and Bunurong people, and active First Nations people within the City of Maribyrnong, in relation to Integrated Water Management. Seek guidance and input regarding First Nations priorities	Ongoing
Public space	4.02	<b>Community information:</b> <ul style="list-style-type: none"> <li>Work with Melbourne Water and the EPA Victoria to align waterway and wetland health education activities. <ul style="list-style-type: none"> <li>Integrate water literacy, with themes including the water cycle and waterways health elements such as litter, into existing education offerings for schools.</li> <li>Increase the visibility of Maribyrnong's natural assets (including wetlands and waterways) on the Maribyrnong website and ways in which the community can responsibly enjoy them e.g. bike paths to get there, facilities available once there etc.</li> <li>Promotion at community events like the Stony Creek festival.</li> <li>Invite citizen scientists and 'Friends of' groups to build data on local species e.g. via an app or online form</li> </ul> </li> </ul>	Medium Term
	4.03	<ul style="list-style-type: none"> <li>Engage friends' groups to undertake maintenance and planting days along priority reaches of Stony Creek and the Maribyrnong River.</li> </ul>	
	4.04	<b>Educational signage:</b> <ul style="list-style-type: none"> <li>Install interpretive signage adjacent to WSUD assets that are located within public spaces e.g. Cruickshank Park and Birmingham Street Raingardens.</li> </ul>	
	4.05	<ul style="list-style-type: none"> <li>Collaborate with Melbourne Water to install educational signage at high priority sites highlighting litter issues, species present, unique vegetation or ecosystems.</li> </ul>	
Private space	4.06	<b>Private greening</b> <ul style="list-style-type: none"> <li>Review the connection between the Urban Forest Strategy and lot scale greening to encourage protection of Significant Trees on private space e.g. plant giveaways and working with commercial and industry.</li> </ul>	Medium term
	4.07	<ul style="list-style-type: none"> <li>Encourage planting in private space by preparing educational materials that illustrate the value of trees &amp; greening, cooling &amp; property value and consider suggested designs or suitable species.</li> </ul>	
Industrial land	4.08	<b>Industrial land WSUD:</b> Develop and communicate materials in relation to WSUD approaches and outcomes for the redevelopment of industrial land (particularly within creek corridors). <ul style="list-style-type: none"> <li>Prepare fact sheets that set out the social and economic benefits of greening industrial precincts</li> </ul>	Medium Term
	4.09	<ul style="list-style-type: none"> <li>Begin to build relationships with land owners and industrial developers</li> <li>Work with Council and IWM Forum partners to develop and learn from their experiences</li> </ul>	