



Elster Creek Catchment Flood Management Plan

2019-2024

Version 2.1 (May 2021)



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Introduction

This Flood Management Plan (the Plan) is a continuation of the Elster Creek Action Plan 2018 and looks to establish a long-term coordinated approach to flooding in the Elster Creek Catchment (the Catchment). The collaboration formed in 2017 to address flood issues with a catchment-based approach. Stormwater does not adhere to municipal boundaries, by working more closely with our catchment partners we can develop strategies to combat urban flooding together.

The collaboration functions through a Memorandum of understanding (MoU) which establishes a method for communication between the Catchment partners. The MoU defines the drainage problem of concern to communities living, working and visiting within the Elster Creek Catchment. Figure 1 contains an overview of the governance structure.

We can live safely and comfortably in a catchment prone to flooding. This means ensuring that flooding is expected, designed and planned for to avoid or minimise the flood damage. It means adapting our built form to the natural movement of water and developing communities that are resilient to extreme weather while also meeting the challenges of the future. Climate change and increasing development within our Catchment require adaptive approaches to flood risk management.

During the consultation process for this Plan, the community and key stakeholders advocated for a focus on Integrated Water Management (IWM). This Plan does not address all aspects of water management. The focus is on flood mitigation projects as a key outcome, however the multiple benefits of IWM will not be overlooked.

This Plan is a five (5) year document and will be regularly reviewed to ensure it remains relevant and reflects best practice and innovation in water management. This version of the plan is Version 2.1, reflecting changes to the detail of some deliverables endorsed by the Catchment partner CEO Forum in April 2021. The changes do not substantively change the spirit of any of the Plan deliverables, but respond to emerging flood management, new community concerns, and challenges posed in community engagement through the Covid-19 pandemic. Previous versions of the Plan can be shared on request by any of the Catchment partners, and notes on changes are at the end of this document.





FIGURE 1 – GOVERNANCE STRUCTURE

Integrated Water Management Planning

Although the principal aim of this Plan is to minimise the risk of flooding, IWM is a collaborative approach to water planning and management that brings together organisations with an interest in all aspects of the water cycle. Taking a holistic approach to water management has the potential to provide greater value to our communities by identifying and leveraging opportunities to optimise outcomes.¹ Flood planning and flood management are key dimensions to water management alongside stormwater, wastewater and drinking water.

The Victorian Government, water authorities and local government are active in collaboratively increasing IWM across the state.² The Department of Environment, Land, Water and Planning (DELWP) has led the formation of IWM forums. The Elster Creek Catchment is identified as part of the wider Dandenong Catchment and an IWM Plan is currently in development.

Significant changes to Victorian Planning Policy came into effect in October 2018 through Amendment VC154. This change and the review of the State Environment Protection Policy (Waters) bring tougher requirements to embed IWM objectives and strategies into urban land-use planning. Flood mitigation and onsite detention requirements are

¹ Dandenong Strategic Directions Statement, Dandenong IWM Forum, DELWP, September 2018

² Delivering Water for Victoria: Progress report, DELWP, 2018

increasingly part of these requirements. IWM also promotes increased permeability, greening of urban areas and utilisation of alternative water.

Our Flood Story

The Elster Creek Catchment is located in the inner South-East area of Melbourne. The catchment spans four municipal boundaries: Port Phillip, Glen Eira, Bayside and Kingston.

The Catchment has a known history of widespread flooding and given its highly developed nature, flooding is expected to continue to be part of the character of the Catchment into the future. It is also expected that climate change will add to the challenges of flood management with more severe and more frequent storm events adding a greater risk of flooding throughout the catchment.

The lower section of the Catchment used to be a swamp, where the runoff from the whole catchment would naturally flow. Over more than a hundred years, the swamp was reclaimed and the land around was developed into what is now the Elwood Canal to take the runoff from the catchment out to Port Phillip Bay.

Natural flow paths conveying runoff from the catchment to the Bay were gradually built on and replaced with constructed drainage systems. As urban development continued, more hard surfaces produced more runoff and flooded properties downstream.

In a 1% AEP³ event, 232,000 properties are estimated to be flood affected across Melbourne amounting to Annual Average Damages (AAD) of \$400 million.

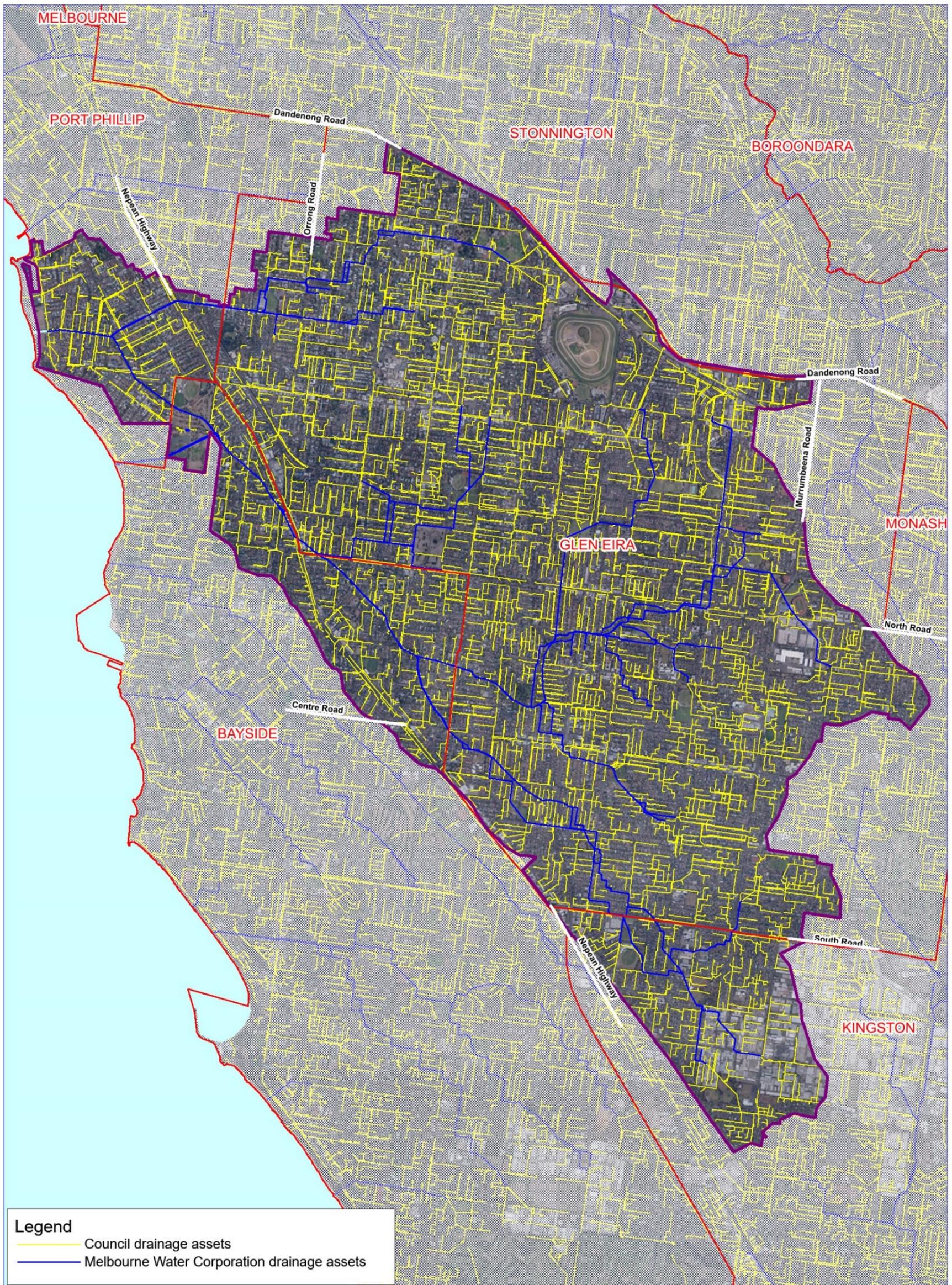
Seven percent (~17,000 properties) are within the Elster Creek Catchment these figures relate to 2017 data.

The issue is that the existing drainage infrastructure does not have the capacity to take the amount of runoff needed to eliminate flooding. The opportunity to add new infrastructure is limited due to the extent of existing development within the catchment. As future development within the catchment is expected to increase urban runoff, exposure to flooding events will remain an ongoing challenge and represents a complex problem.



³ AEP refers to the Annual Exceedance Probability and is scored as the probability of that event occurring in any given year.

Catchment Administration Map



Legend

- Council drainage assets
- Melbourne Water Corporation drainage assets

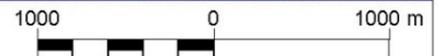
Elster Creek drainage infrastructure

21/08/2019 Map at A4 Scale 1: 50,000.

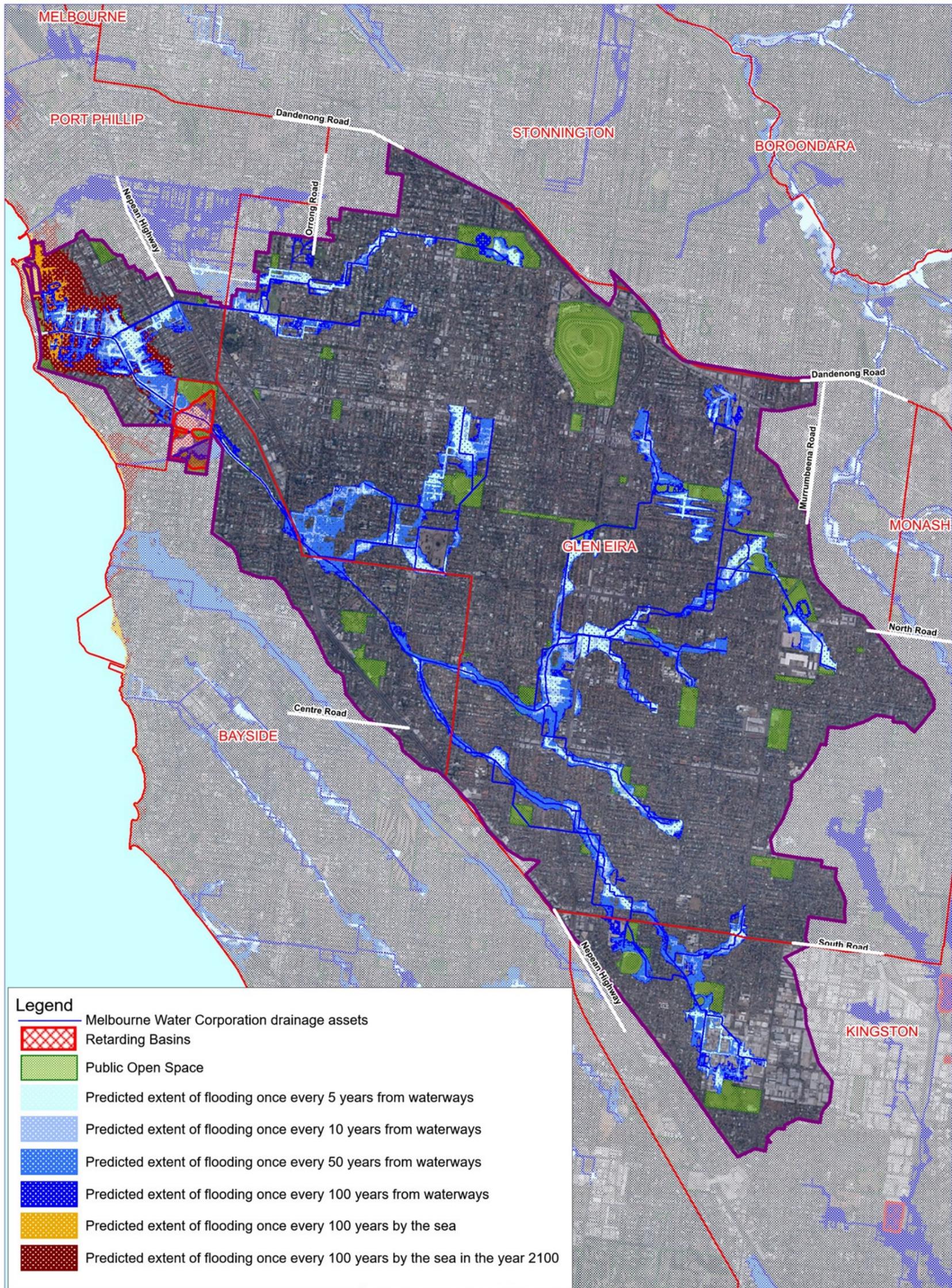
Author: Iain Scott. JobRef: 20190818



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Catchment Flooding Map



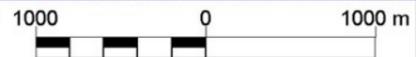
Elster Creek catchment flooding

21/08/2019 Map at A4 Scale 1: 50,000.

Author: Iain Scott. JobRef: 20190818



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One Catchment, Many Solutions

Working together to implement sustainable on-ground solutions that minimise flooding and its impact on the community.

	DELIVERABLES	DELIVERY	LEAD AGENCY	OUTCOMES
1	Plan to incorporate increased flood mitigation within Elsternwick Park precinct in conjunction with development of Elsternwick Park Nature Reserve. ⁱ	July 2019 - December 2022	Bayside City Council and Melbourne Water	Reduced flooding in Elwood and surrounds.
2	Seek opportunities to identify new or expanded physical works (including retarding basins) on public land across the catchment. Develop an implementation plan for identified projects.	July 2019 - June 2024	Melbourne Water and Glen Eira City Council	Flood mitigation assessment is consistently applied to public space projects across the catchment to contribute to the cumulative capacity of the catchment.
3	Incorporate flood mitigation into all Council and Melbourne Water capital projects within the catchment where feasible. ⁱⁱ	July 2022 - June 2024	Local Government	Reduced localised flooding is achieved through delivery of Council capital projects.
4	Undertake research on suitable permeable surfaces for the Elster Creek Catchment and develop a tool which can be used to measure and compare permeable treatments.	July 2019 - June 2020	City of Port Phillip	Tool developed which enables project partners to identify suitable permeable treatments to implement into planning capital projects.
5	Investigate incentives or funding mechanisms for landholders to reduce impacts on local catchments by reducing runoff and increasing permeability.	July 2020 - June 2022	Melbourne Water	Water intercepted across different land tenures at lot boundaries and diverted from drainage infrastructure during rainfall events.
6	Develop and implement a strategic advocacy approach to the Victorian Government and other organisations to: <ul style="list-style-type: none"> Prioritise flood mitigation in the development of strategic sites and urban renewal areas, 	July 2019 – June 2024	City of Port Phillip and Glen Eira City Council	Water is intercepted across different land tenures at lot boundaries and diverted from drainage infrastructure during rainfall events; flood reduction

- Encourage schools (public and private) to install water recycling infrastructure,
- Encourage schools (public and private) to include flood mitigation within school open space.ⁱⁱⁱ

outcomes are considered by key stakeholders in strategic sites, urban renewal areas and schools.

Land Use Planning

Development across the catchment will seek to minimise urban run-off and reduce flood risk.

	DELIVERABLE	DELIVERY	LEAD AGENCY	OUTCOMES
7	Seek authorisation from the Minister for Planning to prepare a planning scheme amendment to update the extent of the Special Building Overlay (SBO) to reflect more recent flood mapping data within Glen Eira.	July 2019 - June 2021	Melbourne Water Glen Eira City Council	The SBO is based on the best available data.
8	Establish a flood baseline and set flood risk reduction targets within the Elster Creek Catchment.	July 2020 - June 2022	Glen Eira City Council	Flood baseline established in the Catchment with clear identification of existing flooding extent and future catchment conditions.
9	Establish a catchment baseline for permeability and set targets to increase permeability in both the private and public realm. Include consideration of future development into permeability target setting.	July 2020 - June 2022 ^{iv}	Glen Eira City Council	Localised reduction in stormwater run-off and heat.
10	Consider options for implementing an offset trading scheme across the Elster Creek Catchment where funds can be collected from developers to fund drainage infrastructure works in another location.	July 2022 - June 2024	Glen Eira City Council	Options for offset trading scheme considered. If feasible, this could result in reduced impacts of flooding and improved stormwater management.
11	Investigate the development of a Catchment-wide Development Contributions Plan Overlay into the planning scheme for each of the four councils.	July 2022- June 2024	Glen Eira City Council	Feasibility of a Catchment-wide Development Contributions Plan Overlay is considered.

If feasible, this would provide additional funding for drainage infrastructure works to reduce flooding.

12	Share information and build capacity of council staff to effectively and consistently implement the Victorian Planning Provisions for Stormwater Management in Urban Development (Clause 53.18).	July 2019 – June 2024	City of Port Phillip	Development applications assessed consistently across the Catchment.
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Informed and Well-Prepared Communities

The community is informed, actively engaged and understands the challenges of managing flooding in the catchment and what is being done about it.

	DELIVERABLE	DELIVERY	LEAD AGENCY	OUTCOMES
14a	Develop a Communications and Education Plan that addresses the following: <ul style="list-style-type: none"> • Builds community awareness about the catchment and flood overlays • Builds community preparedness for flooding • Links with Emergency Management to educate the community about how to respond in times of flood • Educates the community on changes they can make to their properties to increase resilience to flooding • Demonstrates the funding commitment from project partners • Uses simple, plain English and real world relatable examples • Is delivered in a way that reaches different sections of the community (renters, owners, businesses, etc.) • Annual awareness campaign targeted at wider community about flood risk and vulnerability 	July 2019 - December 2019	City of Port Phillip	Our catchment community understands their flood risk, can easily access information about what we are doing, and has access to information on what they can do to reduce this risk.
14b	Coordinate delivery of the Communications and Education Plan. ^v	Jan 2020 - Jun 2024	City of Port Phillip	As above.

15	<p>Include collaboration on education and communications programs with key stakeholders and community champions in the Communications and Education Plan (D14), including:</p> <ul style="list-style-type: none"> • Port Phillip EcoCentre • State Emergency Service • South East Water^{vi} 	July 2019 - December 2019	City of Port Phillip	Consistent messaging is delivered by multiple organisations.
16	Review form and function of the Community Reference Group including membership, purpose and meeting frequency.	July 2019 - December 2019	Melbourne Water	Community conversations are targeted, timely and provide value for all parties.
17	Development of a pilot program that provides a tailored approach to flood awareness, education and response (with potential higher levels of services) based on sub-catchment flood risk profiles.	July 2019 - June 2020	Melbourne Water	Community awareness and understanding of flood is improved and engagement programs meet community expectations.
18	<p>Work with Emergency Management Victoria, State Emergency Services, Department of Environment, Land, Water and Planning and the Bureau of Meteorology to improve coordination and response to major flood events, including:</p> <ul style="list-style-type: none"> • Scenario planning and alignment of Municipal Emergency Management Plans • Communications after flood events • A mechanism (such as a mobile app) for impacted communities to update flood impacts during and post flood 	July 2019 - June 2024	Melbourne Water	Response to flood events is coordinated across agencies and meets community expectations.
19	Develop an online resource for residents and businesses to find information related to flood risk, how to prepare and what they can do to make their homes more flood resilient.	July 2020 - November 2021	Melbourne Water	Community has free access to the most up-to-date flood mapping and asset information and have a better understanding of the correct agency/organisation to contact.

20	Investigate and invest in partnerships with the insurance industry. Advocate to the insurance industry to share information with the community and to reduce insurance premiums for properties that are more resilient to flood impacts.	July 2019 - June 2024	Kingston City Council	Community is better informed of their flood risks and the impact flood risk has on insurance.
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Notes on update to Deliverables in this Version 2.1 (May 2021)

ⁱ Deliverable description updated from “Incorporate increased flood mitigation within Elsternwick Park Nature Reserve”; options analysis has identified that the most effective mitigation may not be within the grounds of the reserve itself; clarifying that timeframe relates to planning not delivery. Timeframe updated from “July 2020 – Nov 2021”; initial timeline did not account for timeframes involved in State Government approval for projects of this scale.

ⁱⁱ Deliverable description updated from “Incorporate flood mitigation into all Council capital projects within the catchment where feasible”; included Melbourne Water as agency with scope to contribute to deliverable.

ⁱⁱⁱ Consolidated two deliverables – Deliverable 6 (“Influencing the Department of Education and private schools to include flood mitigation within school open space”) and Deliverable 13 (“Advocate to the Victorian Government to: Prioritise flood mitigation in the development of strategic sites and urban renewal areas, Encourage schools to install water recycling infrastructure”) – to ensure a coordinated and strategic approach to advocacy with other stakeholders.

^{iv} Deliverable timeframe updated from “July 2020 – Jun 2021”; updated timeframe to be in line with *D8: Establish a flood baseline and set flood risk reduction targets within the Elster Creek Catchment* as this work will be done in parallel.

^v Added implementation of the Communications and Education Plan as specific deliverable, with timeframe as the life of this FMP.

^{vi} Deliverable detail updated from “Collaborate on education and communications programs with key stakeholders and community champions, including [...]”; reflecting that detail of collaboration with key stakeholders and community groups is included in the Communications and Education Plan, with several initiatives that cover the life of the Plan. Deliverable timeline updated from “July 2019 - Oct 2020”; align with development of Communications and Education Plan.