



Great South Coast

STRATEGIC DIRECTIONS STATEMENT

2023



Integrated Water
Management Forums



Energy,
Environment
and Climate Action

ACKNOWLEDGEMENTS

The Great South Coast Integrated Water Management Forum covers Gunditjmara, Eastern Maar, Barengi Gadjin and Wadawurrung Country. The ancestors and descendants of these peoples are the Traditional Owners of this Country.

The Victorian Government proudly acknowledges Victoria's Aboriginal communities and their rich cultures and pays its respects to their Elders past and present. The government also recognises the intrinsic connection of Traditional Owners to Country and acknowledges their contribution to the management of land, water and resources. We acknowledge Aboriginal people as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we rely. We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life and how this enriches us. We embrace the spirit of reconciliation, working towards the equality of outcomes and ensuring an equal voice.

This Strategic Directions Statement has been developed by the forum, which includes the following organisations:



This publication has been endorsed by all Great South Coast IWM Forum partners with the exception of those who have abstained. All partners listed in this publication were engaged in its development and are committed as project delivery partners. Each Forum partner also acknowledges their mutual commitment to increase the integration of Traditional Owner priorities and values into future opportunities for integrated water management in the Great South Coast region.

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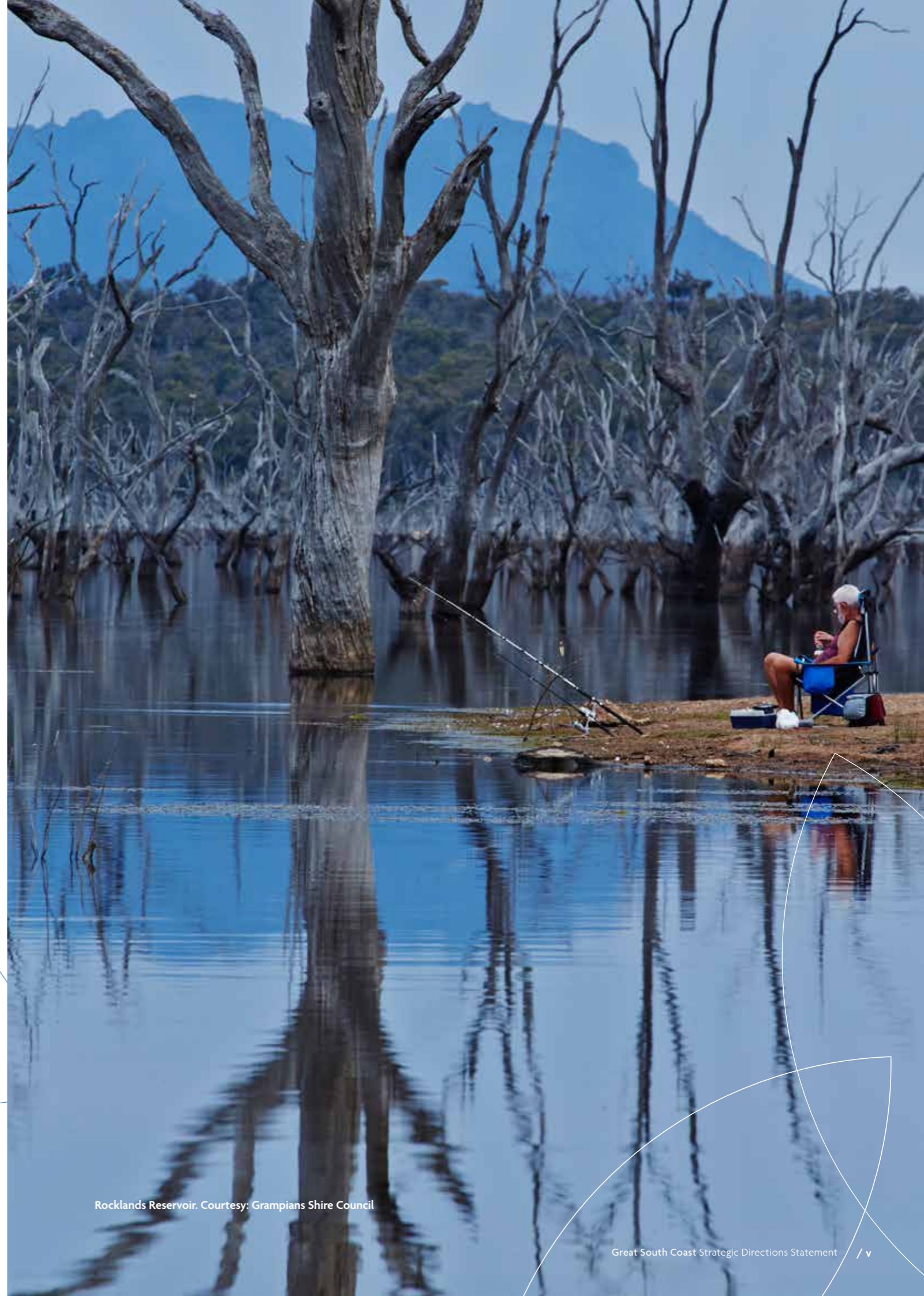
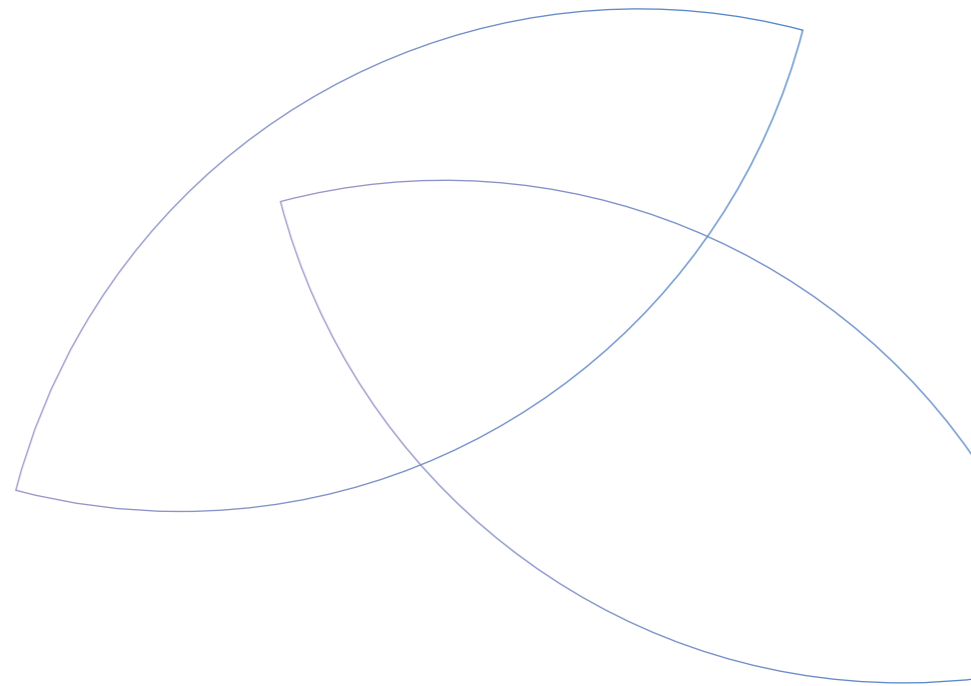
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Cover photo: Kayaking on the Merri River. Courtesy: Glenelg Hopkins Catchment Management Authority

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Rocklands Reservoir. Courtesy: Grampians Shire Council



Waterways near Hamilton. Courtesy: Southern Grampians Shire Council

FOREWORD



Kylie Gaston – Outgoing Chair of the Great South Coast IWM Forum



Bill Millard – Incoming Chair of the Great South Coast IWM Forum

This updated strategic directions statement (SDS) reflects a forum and a region that have embraced the opportunity for different organisations to work together through integrated water management (IWM) for the benefit of its people, environment and economy.

The great success of the Great South Coast IWM Forum and the parallel practitioner's network stems from the strong and supportive relationships built within and across organisations. Importantly, the forum's projects have given practitioners opportunities to work with and learn from people with different backgrounds, skills and insights. Our knowledge and expertise, as a collective involved in water management, has been significantly enhanced.

The work of the forum since its formation has brought about a noticeable cultural shift. People are more likely to reach out to someone in another organisation, seek a partnered solution, and leverage each other's efforts when confronted by a challenge or opportunity.

There is also an increasing awareness of IWM among council colleagues and other members. As a result, there are richer and more beneficial collaborative projects underway that would not have happened without the forum. IWM has matured, gradually becoming business-as-usual, and that is now reflected in council and corporate plans.

The influence and importance of Traditional Owner insights and perspectives cannot be understated. Learning from the deep knowledge and history of our region's Traditional Owners has indelibly influenced our plans going forward, bringing a richer and more profound sense of purpose.

Our region is benefiting from and contributing to the shared experiences and insights of the broader Victorian regional IWM forum chairs' network. We will continue to identify the challenges we have in common with other forums, to share what we are learning, and to pioneer approaches where our region is able to take a leadership role.

Much has been achieved since our first published SDS, despite the constraints of the coronavirus pandemic. We met virtually, and more often, and are looking forward to meeting in person as activity moves to the next phase, with implementation and construction of progressing projects and the development of new initiatives.

Climate change is a great overarching challenge for water security in our region and all of Victoria. Beyond the scope of this SDS, our forum will have a role to play in the implementation of the Western Region Sustainable Water Strategy and the Barwon South West Regional Climate Adaptation Strategy. I thank all members of the forum for their continued commitment, persistence, and perseverance towards our collective goals as we prepare our region for the future.

It is my pleasure to present the SDS for the Great South Coast IWM Forum. IWM now has strong foundations, paving the way for successful completion of many more projects as we work together across our region for our communities.

Kylie Gaston

Outgoing Chair, Great South Coast IWM Forum

I am really looking forward to working across the Great South Coast as chair of the Integrated Water Management forum and also closely with the practitioner network. Collaboration is critical to mitigate the impacts of climate change and the use of scarce water resources. Learning from each other and traditional owners will assist the region to make bold and effective steps in water management. While the Great South Coast is recognised as a rich and diverse landscape, we must each take responsibility for its future health.

Bill Millard

Incoming Chair, Great South Coast IWM Forum

EXECUTIVE SUMMARY

The *Integrated Water Management Framework for Victoria* (2017) is designed to help water managers and stakeholders work together to improve how the water cycle contributes to the liveability of towns and cities in Victoria, with communities at the centre of decision making.

The Great South Coast Integrated Water Management Forum is one of 10 regional integrated water management (IWM) forums across Victoria that are realising the local implementation of the framework.

Vision

Water is life – we will work together with our communities to deliver integrated water outcomes contributing to the wellbeing and resilience of our environment, culture, and economy. We work together to sustainably manage water for current and future generations.

The 2019 SDS articulated the collaborative intent and shared agreement of all stakeholders involved in the Great South Coast IWM Forum. This 2023 update provides a progress report on the forum's activity, its changing priorities, and future opportunities. It describes the water security challenges and opportunities of the region, sets a strategic direction for the next few years, and outlines the 'best endeavours' or ways in which IWM is and will be applied through projects proposed, in progress or completed for the region.

Fishing on Lake Hamilton. Courtesy: Southern Grampians Shire Council

Key themes

The experience our forum has built, and the significant changes happening in the region, have highlighted the need to continue investing in successful existing projects, to continue building on the opportunities they have created. In some cases, the forum recognises the need to adapt projects, or create new projects that respond to change.

The forum has identified four key themes:

- Traditional Owners are taking an increasingly active and leading role in water management
- water is needed for landscapes, for people, the environment, and for healing Country
- a growing regional population in both large and small settlements, means the Great South Coast needs to do more with the water it has
- a hotter, drier climate and strong community expectations for greater climate action, mean the region must act now to adapt to a rapidly changing climate, including long-term planning for the next drought.

The priorities and opportunities identified by the forum, and highlighted in this SDS, have been developed with these themes in mind and to meet the regions emerging challenges.

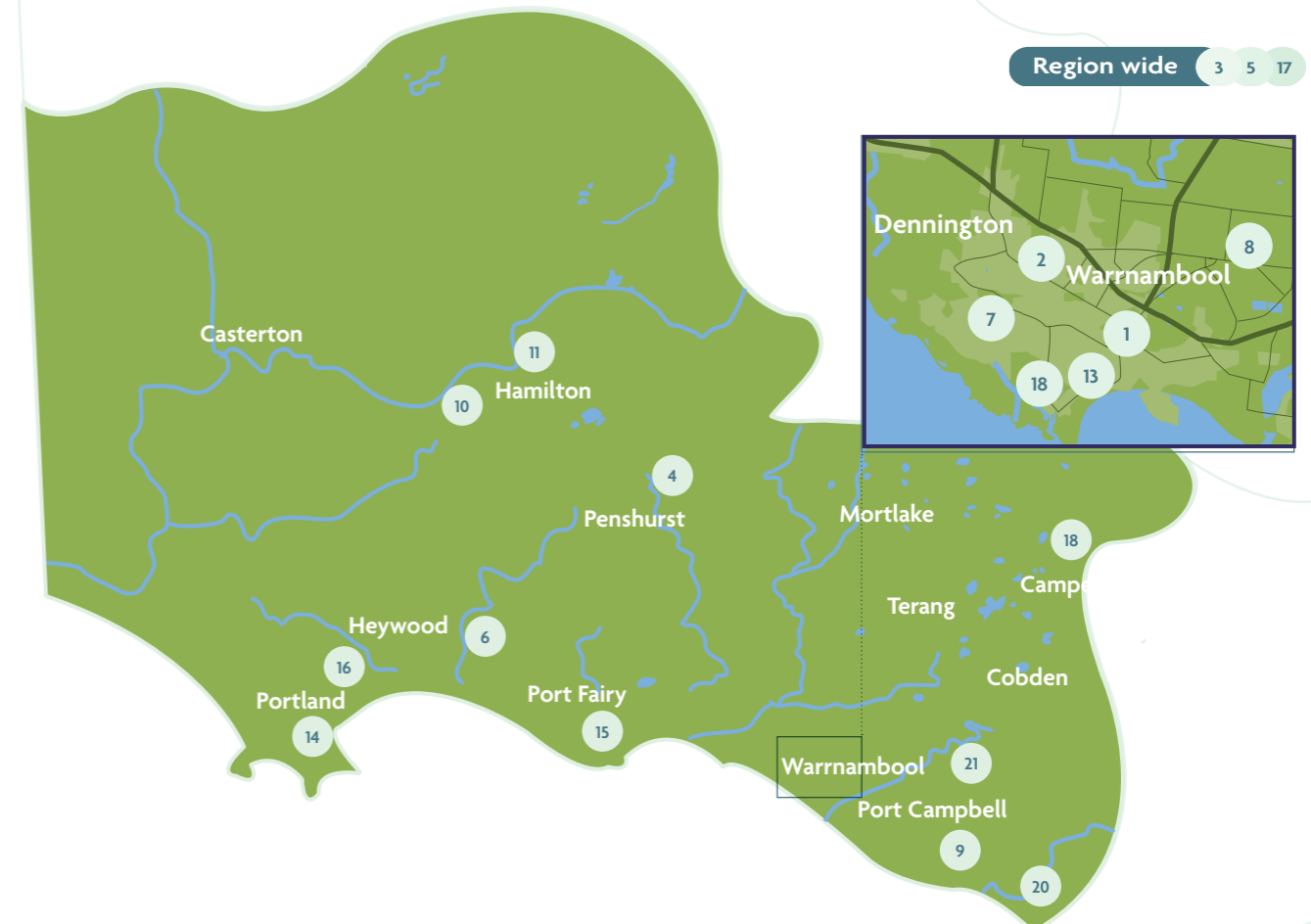


Figure 1 : Locations of IWM opportunities across the Great South Coast region. Locations are approximate.

IWM opportunities

Twenty-one opportunities have been identified in the region. They represent the continuation of opportunities first included in the 2019 SDS, those that have emerged from the IWM projects already underway, the experience of our forum members, and newly identified project opportunities.

Continuing projects

1. Albert Park IWM Plan
2. Understanding Warrnambool's Waterways
3. Great South Coast Urban Water Atlas
4. Adaptive Wastewater Solutions for Small Towns: Penshurst Pilot Project
5. Building Capacity for IWM with Urban Drainage Community of Practice
6. Supporting Water Management at Budj Bim
7. Precinct-Scale IWM Planning for Warrnambool
8. IWM in the East of Aberline Road Precinct Structure Plan
9. Gellibrand Catchment Targeted Interventions for Water Quality

Opportunities arising from existing projects

10. Hamilton Roof Water Harvesting
11. Grange Burn Catchment Masterplan
12. Coulstock Street IWM Opportunity
13. Albert Park Roof Water Harvesting
14. Portland Leisure and Aquatic Centre Roof Water Harvesting
15. Southcombe Park IWM Plan

New opportunities

16. Gunditjmarra Values at Portland Foreshore
17. Enabling IWM with Regional Developers
18. Lake Pertobe IWM Plan
19. South of Merri Precinct Wetland Restoration
20. Building IWM into Great Ocean Road Development Planning
21. Sustainable Housing for Timboon

Great South Coast Integrated Water Management Forum

Strategic Directions Statement 2023 summary

We work collaboratively with partners across the water cycle to find new ways to share resources and conserve water for multiple community and environmental benefits.

We work to meet the water needs of a changing region.

- 1. Albert Park IWM Plan**

Improving a major sporting precinct in Warrnambool by implementing the priority actions identified in the Albert Park IWM Plan.
- 2. Understanding Warrnambool's Waterways**

Identifying IWM opportunities which will enhance the environmental, social, and cultural values of waterways impacted by Warrnambool's urban environment.
- 3. Great South Coast Urban Water Atlas**

Improving and expanding the 'Great South Coast Urban Water Atlas' – a tool which helps forum members identify opportunities to diversify the region's water sources and save drinking water.
- 4. Adaptive Wastewater Solutions for Small Towns: Penshurst Pilot Project**

Testing small scale, nature-based technology as a simple and cost-effective solution to small town wastewater management.
- 5. Building Capacity for IWM with Urban Drainage Community of Practice**

Fostering peer relationships between drainage infrastructure and practitioners, to promote IWM knowledge and skills.
- 6. Supporting Water Management at Budj Bim**

Enabling Traditional Owner led water management in and around Budj Bim – a World Heritage-listed landscape with significant cultural values.
- 7. Precinct-Scale IWM Planning for Warrnambool**

Realising the value of precinct-scale IWM planning through prioritised application across Warrnambool.
- 8. IWM in the East of Aberline Road Precinct Structure Plan**

Identifying IWM opportunities and water sensitive urban design features to support an urban forest in a new residential development.
- 9. Gellibrand Catchment Targeted Interventions for Water Quality**

Investing in integrated catchment management as a cost-effective way to avoid drinking water treatment costs for downstream urban communities.

- 10. Hamilton Roof Water Harvesting**

Designing and constructing rainwater harvesting infrastructure schemes with high yield potential in Hamilton.
- 11. Grange Burn Catchment Masterplan**

Developing a plan to protect Lake Hamilton from stormwater impacts through water sensitive urban design.
- 12. Coulstock Street IWM Opportunity**

Implementing a priority project of the Albert Park IWM Plan to redirect and treat urban stormwater for irrigating Albert Park.
- 13. Albert Park Roof Water Harvesting**

Constructing rainwater harvesting infrastructure to augment Warrnambool's diverse water supplies and reduce localised flooding.
- 14. Portland Leisure and Aquatic Centre Roof Water Harvesting**

Exploring the potential of harvesting, storing and using roof water at a major sporting facility.
- 15. Southcombe Park IWM Plan**

Developing an IWM plan for a key community sporting and recreation open space precinct in Port Fairy.

- 16. Gunditjmara Values at Portland Foreshore**

Enhancing, protecting, and sharing the cultural values of a significant meeting site where a freshwater wetland meets the sea.
- 17. Enabling IWM with Regional Developers**

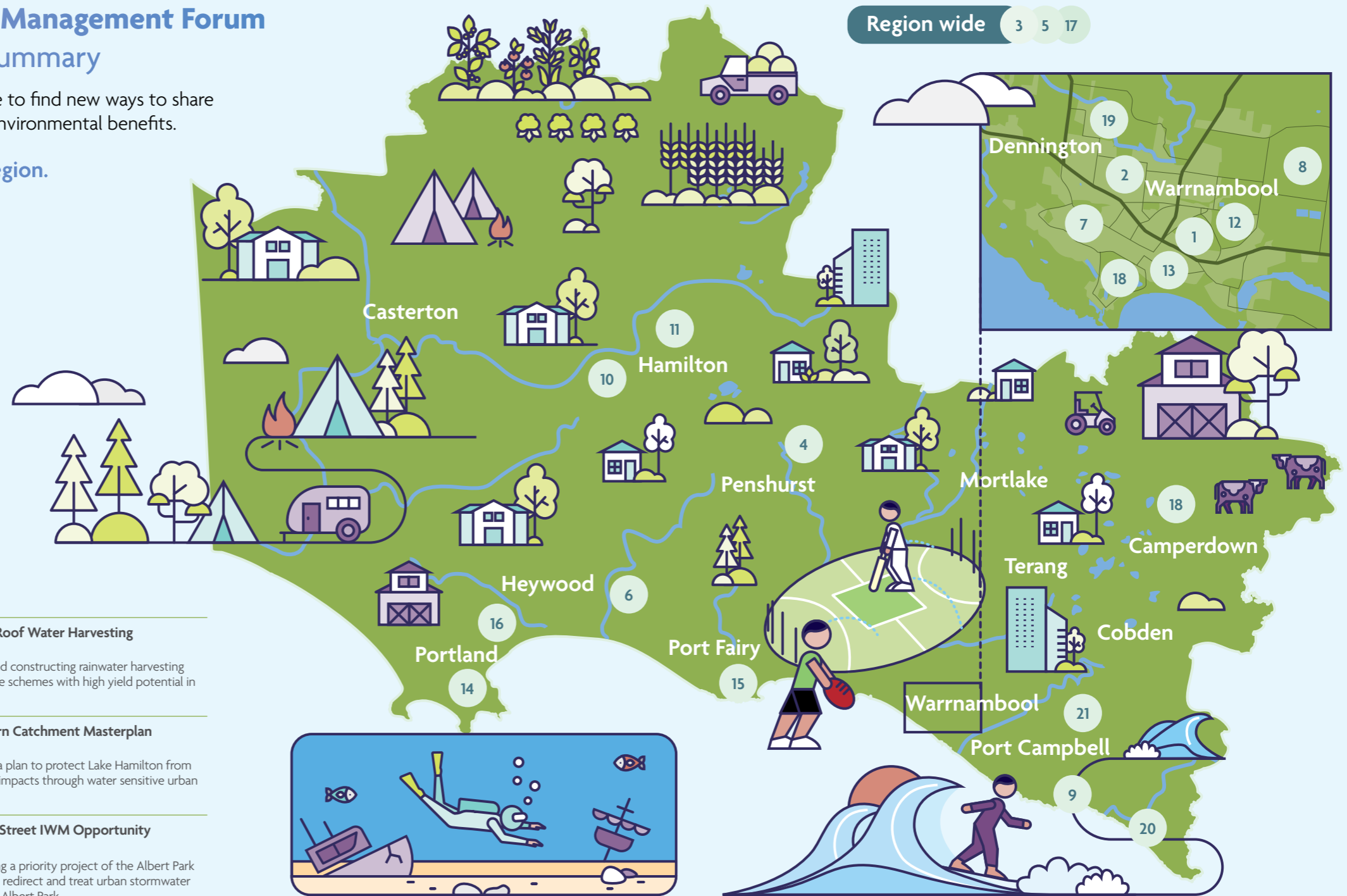
Designing and testing a framework which will make it easier for developers to implement IWM opportunities and water sensitive urban design in new housing estates.
- 18. Lake Pertobe IWM Plan**

Enhancing the Lake Pertobe Precinct, an important holiday and recreation precinct, through IWM planning.
- 19. South of Merri Precinct Wetland Restoration**

Building on an urban wetland rehabilitation project, to improve stormwater management, deliver open space and provide access to the Merri River.
- 20. Building IWM into Great Ocean Road Development Planning**

Putting water at the centre of sustainable development along the Great Ocean Road.
- 21. Sustainable Housing for Timboon**

Demonstrating the benefits of IWM and water sensitive urban design in a small-town housing development.



Region wide 3 5 17

BETTER TOGETHER: INTEGRATING WATER MANAGEMENT IN VICTORIA

First Nations clans have been living in balance with the natural environment in Victoria, practicing culture, caring for Country and waterways, and maintaining sophisticated water management systems for tens of thousands of years.

More than 6,000 years ago, the Gunditjmara worked with the waterways along the Budj Bim lava flow in south-western Victoria, engineering an extensive and sophisticated aquaculture system to trap, store and harvest kooyang – short-finned eel. That system still lives and operates, and the Budj Bim Cultural Landscape is now an UNESCO World Heritage List site.

Pressures emerge and evolve

European settlement and the gold rush of the 1850s saw thousands of people flock to Victoria to seek their fortunes. This created many towns, yet also had large and long-lasting impacts on the creeks and gullies and displaced Traditional Owners from their Country.

Victoria's regional towns and cities have thrived with the provision of urban drinking water and sanitation services. Irrigated agriculture and dryland farming have both played important roles in Victoria's history and growth. Today, Victoria is the nation's largest food and fibre exporter.¹

The complex challenges of water management continue throughout the state: we have lived through the Millennium Drought and experienced flooding, bushfires and extreme weather. We have seen the consequences of the overuse and overallocation of water in one area affecting the availability and/or quality of water in another. Significant investment and interventions have been required to start returning water to our rivers and floodplains, yet more remains to be done.

Water managers are now operating in an increasingly complex and uncertain environment. The drivers of change are both social and environmental, including climate change, population growth, shifting migration patterns associated with the coronavirus pandemic, economic challenges, and policy changes. But our beautiful state remains a wonderful place to live, and we continue to see the population increase. Regional Victoria is expected to grow from 1.5 million people in 2015 to 2.2 million over the next 30 years to 2051.²

The liveability of our regional towns and cities and the health of our environment and economy depend on the availability of water. Access to water is also important for social wellbeing and holds intrinsic cultural value for Traditional Owners. Therefore, we need an integrated and collaborative approach to adapt to change and maximise value across the whole water cycle.

What is IWM? How can it help address challenges?

The current water supplies and liveability of towns and cities owe much to the collaborative work done to date by water corporations, local and state government, planning and development authorities, communities and, in recent decades, catchment management authorities. While we face the challenges of population growth, climate change and natural disasters, we can also build on the benefits of past experiences and established relationships while we increasingly seek to learn from Traditional Owners. Together, we can make decisions today that we will celebrate in the future.

Integrated water management considers all parts of the water cycle as an integrated system to optimise the environmental, cultural, social and economic outcomes for our communities.

While everyone has a responsibility to conserve and protect water, there are a number of key groups charged with making decisions about water within each region. These include:

- Traditional Owner groups, who have a deep knowledge of and connection to the region's waterways, other water resources and Country
- water corporations, which manage the water storage, water supply, and wastewater services
- local governments, which manage surface water drainage, protect local waters from degradation and pollution, oversee onsite domestic wastewater planning, regulate local development, and undertake strategic planning for future growth

- catchment management authorities, which plan for flood management and work with landholders to consider the interactions of land, water and biodiversity.

The decisions these groups make individually, can have significant impacts on the quality and availability of the water for others in the catchment and further downstream. So, it makes sense they collaborate towards common goals to maximise water saving and reuse and share the benefits (Figure 2).

IWM is an approach that can be applied at multiple scales from water planning at the local park, right up to the whole of catchment. IWM can connect climate-change adaptation, planning and open space, water security and other strategies, so that collaborators can add value to each other's projects.

What is integrated water management?

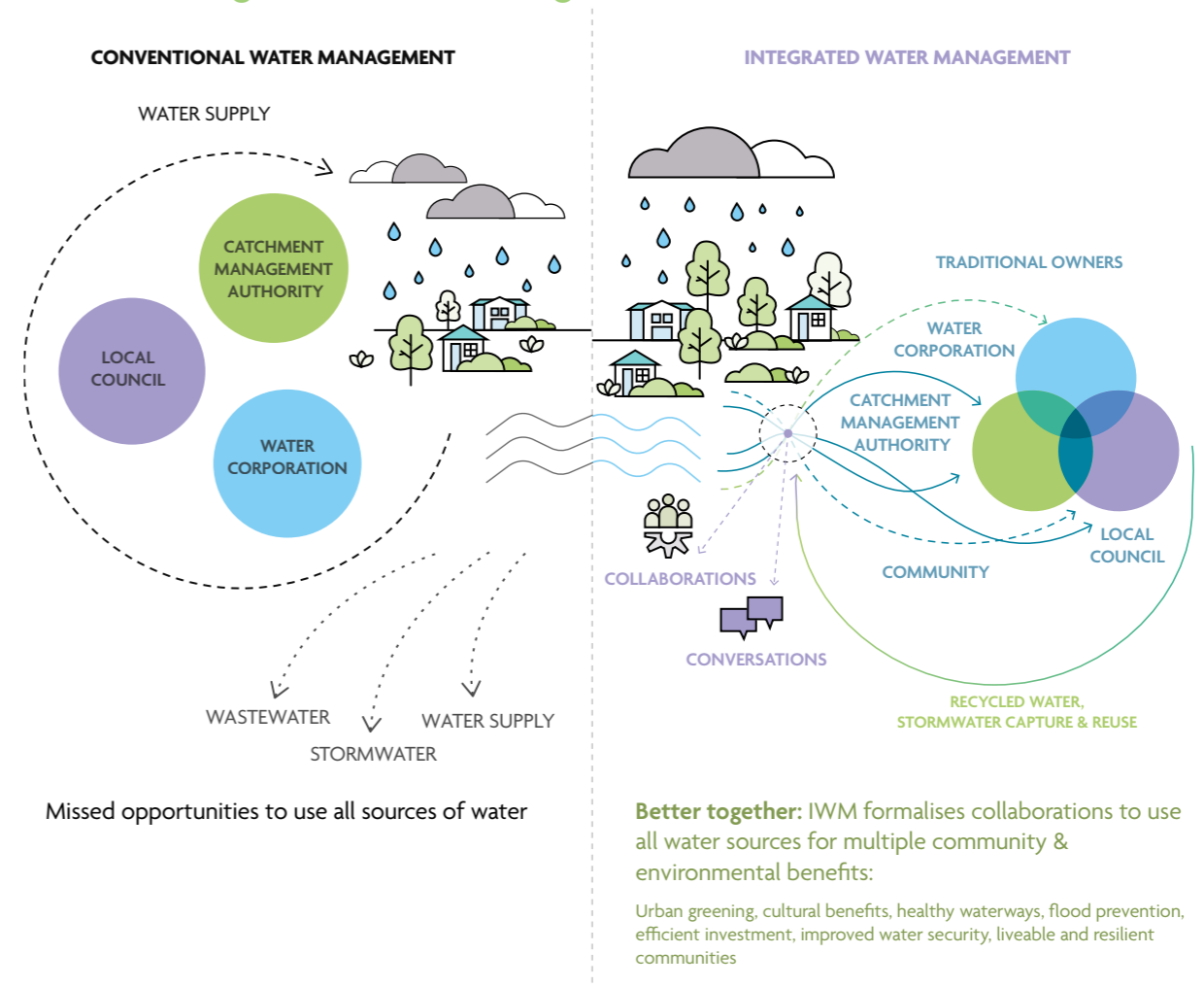


Figure 2: How does IWM work? Conventional water management saw a more siloed approach to water management, with a single supply source and two discharge systems to move stormwater and wastewater away as quickly as possible, resulting in missed opportunities to use all sources of water. The IWM approach brings water managers together to plan and deliver new opportunities to provide broader benefits to the community. Listening to and consulting with Victorian communities about how they want water managed is critical to informing IWM decision making. Communities are directly consulted on IWM plans and through existing catchment management authority, water corporation and local government strategies.

1 Victorian Food and Fibre Export Performance Report 2019-20
2 Victoria in Future 2019

How are we delivering IWM state-wide?

To facilitate IWM across Victoria, the Victorian Government's former Department of Environment Land Water and Planning (DELWP) supported the establishment of 10 IWM forums in regional Victoria (Figure 3), in addition to five metropolitan IWM forums in Greater Melbourne. The forums bring together leaders of local water sector organisations to explore, prioritise and oversee the development of local IWM opportunities. Prioritised opportunities are managed and implemented by dedicated Working Groups and are captured within individual IWM plans. Where appropriate, forums involve other organisations and groups that are not part of the water sector but have direct or indirect interests in water management and land use planning, such as community and indigenous groups, planning authorities, other government departments, developers, educational institutions, or large landholders.

Hopkins Falls. Courtesy: Moyné Shire Council

Being collaborative, IWM builds on existing partnerships and planning processes, and aims to break down silos between independently operating, water decision-makers – encouraging forum members to consider the water cycle of their own service delivery, and its interdependencies or overlaps with other members (Figure 2). Forum members consider waters in rivers, streams and bays, wastewater, drinking water, stormwater, and water treatment processes.

While collaboration can take more time and effort than planning for just one water service in isolation, working together achieves better outcomes for the environment, society, and economy by finding mutually beneficial ways to share water, assets, and costs.



Figure 3 : IWM forum regions of regional Victoria, which are based around water corporation boundaries.

Strategic outcomes

The *Integrated Water Management Framework for Victoria* (2017) proposed several strategic water-related outcomes that will deliver on the vision in the state water plan, *Water for Victoria* (2016), to 'build resilient and liveable cities and towns'. These strategic outcomes provide a way to identify the multiple economic, social, and environmental benefits that can come from a single initiative. The original framework included five such strategic outcomes that have since been expanded to seven. The identification of strategic outcomes will continue to evolve as the water management context changes and the sector innovates.

Proposed project opportunities are assessed and prioritised against how well and how many of these strategic outcomes they meet.

To find out more about how Victoria is applying IWM in *Integrated Water Management Framework for Victoria* (2017), visit www.water.vic.gov.au

The strategic outcomes are:

-  **safe, secure and affordable water supplies in a changing future** – indicated by the amount of water conserved or alternative water volume supplied to meet an identified demand.
-  **effective and affordable wastewater systems** – ensuring environmental and public health standards are met, while maximising resource recovery.
-  **managed flood risks** – resilience to existing and future flood risks.
-  **healthy and valued waterways and waterbodies** – indicated by the ecological health of riparian areas, hydrology and water quality.
-  **healthy and valued landscapes** – maximising the connectivity, accessibility, greening and vegetation, cooling, aesthetic and recreational values of landscapes.
-  **community values reflected in place-based** – ensuring that different communities are considered and included in planning and design, and provided with water-systems literacy to enable their involvement.
-  **jobs, economic opportunity and innovation** – recognising that water management is an integral part of economic growth.

Strategic Directions Statement – how IWM is happening in the region

This SDS articulates the collaborative intent and shared agreement of all stakeholders involved in the forum. It describes the water security challenges and opportunities in the region, sets the strategic direction for the next few years, and outlines the 'best endeavours' or ways in which IWM is and will be applied through opportunities that are proposed, in-progress or completed in the region.

This is the first update to the Great South Coast SDS produced in 2019, and includes:

- an update on progress to date
- case studies illustrating IWM in the region
- details of planned and potential opportunities designed to meet the key themes and challenges over the next three to five years.

This SDS has been developed to complement them and other water, climate change, First Nations' rights, and catchment management (Figure 4).

Figure 4 : The SDS and related water policies, strategies and plans of the region.



WATER IN THE GREAT SOUTH COAST REGION

The Great South Coast IWM Forum region stretches from the South Australian border in the west to the Otway Ranges in the east and extends south from the Great Dividing Range to the coast. The landscape and climate of the region varies significantly between the forests of the Gariwerd (Grampians) to the western volcanic plains to the dry hinterland forests and heathlands running along the coastline.

Average rainfall ranges from 1,800 millimetres per year in the Otway Ranges to 900 millimetres per year west of Heywood. The Great South Coast has substantial renewable energy resources, including wind, wave, solar and geothermal potential. Major rivers – including the Glenelg, Hopkins, Gellibrand, and Merri Rivers – provide water supplies, habitat for wildlife, and recreational opportunities for people, and have intrinsic spiritual and cultural value for Traditional Owners.

The region is home to more than 100,000 people and encompasses the traditional lands and waters of Gunditjmara, Eastern Maar, Barengi Gadjin and Wadawurrung people. There are culturally significant sites throughout the region from middens and scar trees to Worn Gundidj at Tower Hill, where Indigenous people continue to meet, and visitors can experience guided Indigenous culture and nature tours.

The region includes iconic tourism destinations that showcase the natural environment, such as the Great Ocean Road, Port Campbell National Park (featuring the Twelve Apostles and Loch Ard Gorge), the Grampians National Park (Gariwerd), the Kanawinka Geotrail, the Ramsar listed wetlands of the Lower Glenelg National Park and Discovery Bay Coastal Park, and the recently awarded UNESCO World Heritage Site, Budj Bim. The Great Ocean Road region alone attracts around 5 million visitors annually.

Water for agriculture, including access to groundwater, is a major economic driver. The rich, volcanic soils with high productivity potential are suitable for wide range of crops, pastures and

horticulture. Covering only one-tenth of the state, the region supports 28 per cent of Victoria's beef cattle and supplies one-third of the state's fresh fish.³ The region's dairy sector produces a quarter of the nation's milk. Agriculture and farming, however, comes at a cost to the environment and waterway health, through land clearing, created drainage issues, soil disturbance by livestock, and nutrient-loaded runoff. By embracing change to land and water management, and learning from Traditional Owners deep understanding of natural systems, these impacts can all be minimised.

The region's heathlands, forests, volcanic plains and coasts are rich in wildlife. Local flora and fauna include yam daisies, pigface, rare spider orchids, broilgas, freckled ducks, bandicoots and other marsupials, Glenelg spiny crayfish, river blackfish, eels, Corangamite skinks, and the rare carnivorous Otway black snail.

The health and liveability of this thriving region is underpinned by water. From providing safe drinking water to best practice management of stormwater and wastewater, to the natural values of our waters, and the varied ecosystems, landscapes, and wildlife that they support. Across the region there is also growing recognition of the importance of connecting people to green spaces and the natural environment for their physical and mental health. The collaborative wetland restoration projects already happening in the region illustrate this understanding, as well as the teamwork and community spirit of the people and organisations of the Great South Coast.

³ Great South Coast Food + Fibre E-PROSPECTUS February 2020

Lake Yambuk. Courtesy: Moyne Shire Council





A CHANGING REGION

The Great South Coast IWM Forum works together to create a liveable community, which coexists with healthy waterways – a place to live, work and play well.

The forum has been operating since 2018. It has created experience to draw on and projects to build upon. There have also been major disruptions, such as extreme weather events and the global coronavirus pandemic, which have highlighted the need for the forum to sharpen its focus, rescope projects when needed, and to prioritise effort. This SDS outlines projects that are the continuation of opportunities first included in the 2019 SDS, projects that have emerged from the work already underway or completed by forum members, and newly identified projects. All of these prioritised opportunities respond to one or more of the forum's four themes.

There is growing recognition of Traditional Owners' and First Nations' right to self-determination, and their inherent obligations to continually speak for and look after the Country of their ancestors for current and future generations. Traditional Owners in the Great South Coast are increasingly taking a leadership role.

Victoria is the first state to progress treaty discussions, the First Peoples' Assembly of Victoria has formed, and there is an increasing understanding among Victorians about Indigenous rights, connection to Country, and the need for inclusion, consultation, and reconciliation. IWM is increasingly being considered in this context.

While other opportunities include Traditional Owner involvement, the following projects are primarily focused on Traditional Owner water values:

- Supporting Water Management at Budj Bim
- Gunditjmara Values at Portland Foreshore

Traditional Owners are taking an increasingly active and leading role in water management

The region covers Gunditjmara, Eastern Maar, Barengi Gadjin and Wadawurrung Country, the ancestors and descendants of these peoples have a spiritual connection to its land and waters and are the Traditional Owners of this Country.

Black swans at Budj Bim Cultural Landscape. Courtesy: Visit Victoria

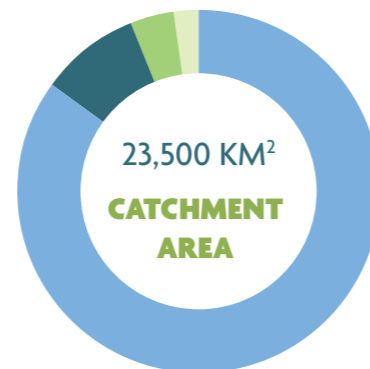
POPULATION GROWTH

104,400 NOW (2021)
107,600 BY 2040



THE REGION

- AGRICULTURAL LAND AND PLANTATIONS 85%
- NATIONAL PARKS AND CONSERVATION 9%
- URBAN LAND 4%
- WATER BODIES 2%



CHANGE IN RAINFALL BY 2040

DECREASE BY 15%
WITH MORE INTENSE RAINFALL IN SOME YEARS



TEMPERATURE

AN INCREASE OF
0.6-1.4°C
IN GREAT SOUTH COAST BY 2040*

WATERWAY CONDITION

| | |
|------------|-----|
| EXCELLENT: | 0% |
| GOOD: | 4% |
| MODERATE: | 44% |
| POOR: | 26% |
| VERY POOR: | 26% |



Sources:

*Population data: Victoria In Future 2019
*The region' land use data: Victorian Land Use Information System 2016 Dataset
*Waterway condition: Third Index of Stream Condition report – ISC Glenelg Hopkins Region
*Temperature and rainfall are the highest and lowest predictions across the Portland, Glenelg and Hopkins Catchments. Predictions represent the annual average at 2040 relative to the year 1995. Source: Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria, November 2020.



Water is needed for landscapes, for people, the environment, and for healing Country

Water and land use practices of the past have left many waterways degraded and in need of rehabilitation. The region is also expecting more extreme weather events, which without intervention, will lead to further damage. Waterways in our urban environments are particularly at risk, as hard surfaces in built environments prevent rain from soaking into the soil, instead quickly flowing directly into waterways, creating damage, and carrying pollutants. IWM promotes innovative revegetation and wetland restoration projects, that filter and retain water for longer, reducing flooding, water quality issues, and improving the amenity of the landscape.

The following projects address water quality, stormwater management and environmental health:

- Albert Park IWM Plan
- Understanding Warrnambool's Waterways
- Supporting Water Management at Budj Bim
- Gellibrand Catchment Targeted Interventions for Water Quality
- Grange Burn Catchment Masterplan
- Coulstock Street IWM Opportunity
- Albert Park Roof Water Harvesting
- South of Merri Precinct Wetland Restoration
- Building IWM into Great Ocean Road Development Planning
- Sustainable Housing for Timboon
- Adaptive Wastewater Solutions for Small Towns; Peshurst Pilot Project

A growing population means the Great South Coast needs to do more with the water it has

Victoria in Future (2016) predicted an average regional population growth of one and a half per cent annually from 2018 to 2036. The first two years of this period saw growth exceed expectations. More recently, the global coronavirus pandemic saw a substantial increase in the number of people migrating from Melbourne to Victoria's regional areas, and closed international borders have resulted in a domestic tourism boom. Our small towns with limited water services are especially feeling the pressure.

These population trends increase the pressure on and use of water resources. There is a greater demand for drinking water and wastewater services, and an increased expectation to reliably supply water for irrigating our parks and gardens and for maintaining waterbodies used for sport and recreation. The relationship between public health and wellbeing and the environment is becoming increasingly recognised as an area of importance. Delivering 'blue and green infrastructure' in urban areas (such as raingardens and wetlands) can help support community wellbeing through access to nature, reduce the impact of urban heat island effects and the impact of excess stormwater on the environment.

Balancing the water and landscaping needs of new housing developments with the needs of the environment is both a challenge and an opportunity. The forum is extending its existing relationships to include and support developers, businesses, and industry that will help achieve the aspiration that water sensitive growth will become business-as-usual.

The following projects support a growing population:

- Great South Coast Urban Water Atlas
- Adaptive Wastewater Solutions for Small Towns: Peshurst Pilot Project
- Supporting Water Management at Budj Bim
- IWM in the East of Aberline Road Precinct Structure Plan
- Enabling IWM with Regional Developers
- Building IWM into Great Ocean Road Development Planning
- Sustainable Housing for Timboon

Climate change and strong community expectations mean the region must act now to adapt

Long term annual rainfall is projected to decrease over the coming years, leading to a reduction in the rainfall runoff that recharges water storages. The lived experience of drought in the Great South Coast is limited compared to northern regions of the state, and aside from the Rocklands to Hamilton pipeline, there is minimal drought mitigation infrastructure. Recent *La Niña* years have provided a relatively wet reprieve and an opportunity for long-term planning to prepare for the inevitable next drought.

The Corangamite and Glenelg Hopkins Regional Catchment Strategies, the Western Region Sustainable Water Strategy, and the Barwon South West Regional Climate Adaptation Strategy are all part of addressing these challenges. IWM will assist in monitoring and adapting to climate change, building upon the positive change driven by these strategies, and by recognising our shared responsibility to make liveable and resilient communities and environments.

There is also an opportunity to make better use of our water resources, considering both water quality and quantity, and directing fit-for-purpose water from diverse sources to where

it is most needed. This involves exploring opportunities to substitute potable water with treated stormwater, recycled water, or other sources, where high quality drinking water isn't needed. It also involves seeing our diverse water sources as a multitude of IWM opportunities, rather than a waste problem.

The following projects will support climate change adaptation and water security in the region:

- Albert Park IWM Plan
- Great South Coast Urban Water Atlas
- Adaptive Wastewater Solutions for Small Towns: Peshurst Pilot Project
- Precinct-Scale IWM Planning for Warrnambool
- IWM in the East of Aberline Road Precinct Structure Plan
- Hamilton Roof Water Harvesting
- Albert Park Roof Water Harvesting
- Portland Leisure and Aquatic Centre Roof Water Harvesting
- Enabling IWM with Regional Developers
- Building IWM into Great Ocean Road Development Planning
- Sustainable Housing for Timboon
- Southcombe Park IWM Plan

The 'Choose Tap' campaign to reduce bottled water consumption. Courtesy: Wannon Water



PROGRESS TO DATE

The first Great South Coast IWM Forum SDS was published in October 2019. It articulated the regional context, the shared vision, and the strategic water-related objectives for the region. It also listed IWM opportunities as ‘ready to advance’ projects, developed collaboratively by the forum partners. It can be viewed online at www.water.vic.gov.au



Many forum members have IWM at the forefront of their thinking and several are regularly implementing IWM as their principal approach to water management. The projects – past, current, and future – listed in this document and endorsed by the forum members are those that will create shared benefits from a collaborative, multi-party approach.

The first SDS identified 15 projects that reflected the Great South Coast IWM Forum’s initial priorities and opportunities. Most of these projects are now underway or completed. Six, including the IWM plans for Hamilton and Albert Park in Warrnambool, have now been completed. The forum continues to build on those completed; for example, the options analysis for the ‘Adaptive Wastewater Solutions for Small Towns’ project (see case study on page 20) is ready to be implemented and will serve as a pilot for other small towns. This initiative has the potential to demonstrate a cost-effective wastewater management solution for other small towns in the region and beyond.

More projects are well underway, with some of the completed and progressing projects leading to the development of the new opportunities included in this SDS.

The forum is flexible and responsive to the changing needs and priorities of local governments and other members. Some projects were delayed as forum members dealt with greater than expected population growth and the impacts of the coronavirus pandemic. Two projects have been rescoped and are included in this SDS.

Progress made on the opportunities identified in the 2019 SDS is summarised in Table 1.

Table 1: A summary of the status of IWM opportunities listed in the forums 2019 SDS.

| IWM opportunity | Status | Notes |
|---|----------------------|--|
| IWM Plan for Hamilton | Complete | The IWM plan is complete. To learn more, see the case study on page 18. Implementation projects arising from the plan include ‘Hamilton Roof Water Harvesting’ and ‘Grange Burn Catchment Masterplan’. See page 34 and page 35. |
| Albert Park IWM Plan | Complete | The IWM plan is complete. It identified a suite of projects, some of which are already underway, with detailed designs finished and construction commenced. To learn more, see the case study on page 24. |
| Understanding the Merri River | Rescoped | This project has evolved to include other waterways important to Warrnambool and will be staged. This rescoped project is included in this SDS as ‘Understanding Warrnambool’s Waterways’ on page 25. |
| Great South Coast Urban Water Atlas | Complete and ongoing | This project has identified water data, available to all forum members, which helps to identify potential IWM opportunities. This information has helped embed IWM as the business-as-usual approach in the region. The next stage, which aims to add to the available data, is included in this SDS on page 26. Major opportunities identified with this project’s data are also included in this SDS, such as the ‘Portland Leisure and Aquatic Centre Roof Water Harvesting’ project and the ‘Southcombe Park IWM Plan’. |
| Adaptive Wastewater Solutions for Small Towns – Peshurst and Cudgee Case Studies | Complete | Read about the completed options analysis, in a case study on page 20. A pilot project to implement the preferred option is in this SDS on page 27. |
| Aquifers Available for Recreation, Industry and Tourism | Complete and ongoing | This engagement and education project focused on the region’s local shallow groundwater aquifers. Efforts to promote sustainable use and protection of economic development continue. |
| Building Capacity for IWM through an Urban Drainage Community of Practice | Complete and ongoing | The community of practice engaged five councils and two catchment management authorities; organisations that had previously not been greatly engaged. New challenges, priority issues and opportunities to address them were identified and captured in an action list that is being implemented. |
| Supporting Water Management at Budj Bim | Ongoing | This project continues to focus on the management of Pareeyt (water) flows in and around Budj Bim and is included in this SDS. |
| IWM Plan for Warrnambool | Rescoped | This project was rescoped after the success of the precinct scale Albert Park IWM Plan. Council will now pursue precinct-scale planning in priority locations in ‘Precinct-Scale IWM Planning for Warrnambool’. See page 31. |
| IWM East of Aberline Road Structure Plan | In progress | An IWM plan is currently being developed so that it can be embedded into the Precinct Structure Plan. See page 32. |
| Alternative Water for Major Industry | Not started | An opportunity for the forum to work closely with current and future major water users in the region. |
| Collaborate on Planning Infrastructure Capacity | Not started | An opportunity to better understand growth areas, improve communication and link with local strategies. The recent speed of land development could see this project commencing soon. |
| Gellibrand Catchment Targeted Interventions for Water Quality | In progress | A data synthesis has been completed and an investment framework for environmental resources (INFFERs) is underway. The next stage of this project is outlined in this SDS. See page 33. |
| Safe Water for Small Towns – Collaborative Solutions | Not started | Currently exploring potential options, stakeholders, and implementation partners. |
| Recycled Water to Orford Power | Cancelled | This specific development is no longer going ahead, but future opportunities like it could be identified by the forum. |

Case study

From a city park to a whole township – the value of IWM planning at different scales

IWM plans for Albert Park in Warrnambool and the township of Hamilton

Two different projects show how the collaborative approach of integrated water management (IWM) can be applied at any scale, where multiple parties have an interest in the water cycle and a desire to work together to maximise outcomes. IWM planning at different scales can connect regional, landscape and catchment scale goals with the places that we live, creating informed opportunities for local action.

Albert Park IWM Plan

Albert Park is a 60-hectare open space in the centre of Warrnambool. This open space precinct is a hub for community activities, including four ovals, sporting clubs, the Warrnambool Community Garden, Warrnambool College, and Warrnambool City Memorial Bowls Club. Additionally, the Wannon Water treatment plant for the town's water supply is located within the park.

Warrnambool City Council and other forum members saw a need for an IWM plan for the park – a plan tailored to the park's unique situation at the top of a catchment feeding Russells Creek, and to secure the park's future in a warmer, drier climate. They proposed the development of the plan as part of the forum's 2019 Strategic Directions Statement (SDS), with a vision to create, 'a leading recreation reserve, demonstrating a water sensitive approach that supports facilities, enhances the natural environment and the communities understanding of the value of water'.

The Albert Park IWM Plan was developed in consultation with stakeholders. A range of IWM opportunities were proposed to increase infiltration through infrastructure and treated-rainwater reuse, as well as education and increased vegetation. When implemented, these measures will reduce demand on high quality drinking water, reduce pollution, increase urban biodiversity, enhance, and improve the resilience of green space, incorporate Traditional Owner values, and help manage flooding.

The plan was collaboratively delivered by Warrnambool City Council, Wannon Water, Eastern Maar Aboriginal Corporation, the former Department of Environment, Land, Water and Planning (DELWP), and Albert Park users.

IWM Plan for Hamilton

Southern Grampians Shire Council knows climate change will affect the future of the town of Hamilton. More heat waves, less rainfall, and more evaporation will lead to less water to recharge our water storages. This knowledge drove the identification of an IWM plan for Hamilton, which was included as a collaborative opportunity outlined in the forum's 2019 SDS.

Council, including a wide range of departments, worked with fellow forum members Wannon Water, the Glenelg Hopkins Catchment Management Authority, Southern Rural Water, the former DELWP and the community to set IWM priorities in the region, which improve the resilience of the region's environment, culture, and economy. This diverse group brought a wide range of local specialist knowledge, skills, and ideas to the table, and are committed to delivering the plan.

Together, they identified diverse water sources available within Hamilton's local water cycle in addition to existing drinking water sources. These diverse water sources include raw water stored in the Old Res (the old reservoir), multiple sources of stormwater (including stormwater captured and treated by the Grange Burn Wetland), recycled water from the Hamilton Sewage Treatment Plant, and opportunities for rainwater capture from large roofs.

The resulting IWM plan identified twelve key opportunities for Hamilton, with four of these opportunities prioritised for implementation. These priority opportunities include:

- Roof Water Harvesting for Hamilton Indoor Leisure and Aquatic Centre
- Recycled Water for Horticulture
- Getting More Out of the Old Res Raw Water
- Protecting Lake Hamilton from Stormwater Through Water Sensitive Urban Design.



View over Hamilton. Courtesy: Southern Grampians Shire Council

Case study

Adaptive wastewater solutions for small towns – a demonstration project in Penshurst

Finding cost effective, nature-based technology to improve the management of small towns sewage

A common challenge for small towns is managing the significant human and environmental health risks of wastewater, particularly where private septic systems are inadequate or poorly maintained. Reticulated sewerage systems, like those used in more heavily populated urban areas, are often prohibitively expensive.

Through the forum, Wannon Water, Southern Grampians Shire Council, Moyne Shire Council and the former Department of Environment, Land, Water and Planning engaged an independent consultant to investigate a range of adaptive wastewater management solutions for the towns of Penshurst (population of 622) and Cudjee (population of 238).

Four potential options were presented to the community and stakeholders and analysed based on their cost-benefit ratio, which included the whole of community benefits provided by protection of the environment and public health.

For Penshurst, a functional design report was then developed for the preferred option – the Penshurst Recycled Water Scheme by Decentralised Water Australia. This neighbourhood-scale solution divides approximately 270 properties across Penshurst into twelve precincts based on topography, wastewater load and the geology.

The proposed scheme decommissions existing onsite systems and installs separate gravity all-waste sewers. These sewers would direct raw sewage from properties to one of twelve local precinct scale water recycling systems, which would conduct primary treatment of wastewater, then disposal through evapotranspiration 'pods'.

- ●
- These natural pod systems provide further treatment in the soil and allow water to be taken up by plants and evaporated. The system also allows water to be stored within recycled water tanks during cooler, wetter periods, ready for irrigation when seasonal conditions permit.
- ● ●

The Penshurst Recycled Water Scheme concept uses small-scale, nature-based technology to treat and manage recycled water locally, simply, and cost-effectively. This precinct-based modular approach to wastewater management can be scaled to allow for future population growth and is likely to suit many other townships across Victoria. It's also expected that the systems can be adapted to residential, commercial, or industrial settings, with most infrastructure located underground and offsite on public land.

Anticipated benefits include enabling economic development, preventing environmental pollution, and providing opportunities for improved community engagement around wastewater management issues.



Community and stakeholder consultation for the Penshurst Adaptive Wastewater Solution Project. Courtesy: Southern Grampians Shire Council



View over Penshurst from Mount Rouse. Courtesy: Southern Grampians Shire Council

IWM OPPORTUNITIES

Opportunities that link to and address IWM challenges for the region were identified and developed by nominated practitioners of organisations participating in the forum.

A summary of the priority IWM opportunities is shown in Table 2, with more detail in the following section. This list is dynamic and will continue to be updated to reflect the forum's priorities and opportunities as they arise.

Partners are committing their 'best endeavours' to ensure priority projects and strategies are moved forward, in line with the shared vision and strategic outcomes of the forum.

Shade scale

| | | | | | |
|--|------------------|--|---|--|--|
| | High impact | | Safe, secure and affordable supplies in a changing future | | Healthy and valued landscapes |
| | Medium impact | | Effective and affordable wastewater systems | | Traditional Owner and community values reflected in place-based planning |
| | Low impact | | Manage flood risks | | Jobs, economic opportunity and innovation |
| | To be determined | | Healthy and valued waterways and waterbodies | | |

Marina on Moyne River, Port Fairy. Courtesy: Visit Victoria



Table 2: IWM opportunities 'ready to advance' in the Great South Coast region.

| IWM opportunity | Strategic outcomes | | | | | | Location | Scale |
|---|--------------------|--|--|--|--|--|---|-------------|
| Albert Park IWM Plan | | | | | | | Warrnambool | Precinct |
| Understanding Warrnambool's Waterways | | | | | | | Warrnambool | City |
| Great South Coast Urban Water Atlas | | | | | | | Region-wide | Forum area |
| Adaptive Wastewater Solutions for Small Towns: Peshurst Pilot Project | | | | | | | Peshurst | Town |
| Building Capacity for IWM within the Urban Drainage Community of Practice | | | | | | | Great South Coast | Forum area |
| Supporting Water Management at Budj Bim | | | | | | | Budj Bim | Precinct |
| Precinct-Scale IWM Planning for Warrnambool | | | | | | | Warrnambool | City |
| IWM in the East of Aberline Road Precinct Structure Plan | | | | | | | Warrnambool | Precinct |
| Gellibrand Catchment Targeted Interventions for Water Quality | | | | | | | Gellibrand Catchment | Catchment |
| Hamilton Roof Water Harvesting | | | | | | | Hamilton | Town |
| Grange Burn Catchment Masterplan | | | | | | | Grange Burn Catchment | Catchment |
| Coulstock Street IWM Opportunity | | | | | | | Albert Park | Precinct |
| Albert Park Roof Water Harvesting | | | | | | | Albert Park | Precinct |
| Portland Leisure and Aquatic Centre Roof Water Harvesting | | | | | | | Henty Park | Precinct |
| Southcombe Park IWM Plan | | | | | | | Southcombe Park | Precinct |
| Gunditjmara Values at Portland Foreshore | | | | | | | Portland | Precinct |
| Enabling IWM with Regional Developers | | | | | | | Great South Coast and Goulburn Broken regions | Inter-forum |
| Lake Pertobe IWM Plan | | | | | | | Lake Pertobe | Precinct |
| South of Merri Precinct Wetland Restoration | | | | | | | Merri Growth Area | Precinct |
| Building IWM into Great Ocean Road Development Planning | | | | | | | Great Ocean Road | Region |
| Sustainable Housing for Timboon | | | | | | | Timboon | Precinct |

CONTINUING PROJECTS

The following projects were initially identified in the 2019 SDS, but remain within the forum's strategic priorities, and will continue to progress over the coming years.


Albert Park IWM Plan

Albert Park is located within the city centre of Warrnambool. This 60-hectare park is highly valued by the local community. The Albert Park Precinct is a hub for community activities, including several sporting clubs, the Warrnambool Community Garden, Warrnambool College, and Warrnambool City Memorial Bowls Club. The Wannon Water Treatment Plant, which supplies the town's water, is also located within the park.

In 2019, a collaborative IWM planning process was initiated for Albert Park. This process began with the creation of a shared vision and objectives for the precinct, which was collectively formed by the various organisations and user groups connected to the precinct. The resulting IWM plan provides a holistic analysis of the precincts water cycle, including various water demands and supply sources that were previously managed in isolation. The plan also identified IWM opportunities, many of these are already underway.

The following IWM opportunities were identified:

- the redirection of stormwater and installation of raingardens at Cramer Street
- urban greening for people and nature
- building rainwater tanks and stormwater swales
- the redirection of stormwater and installation of rain gardens at Coulstock Street (see 'Coulstock Street IWM Opportunity' on page 36)
- a centralised roof water harvesting system (see 'Albert Park Roof Water Harvesting' on page 37).

|  | |
|--|---|
| Status | Implementation |
| Lead agency | Warrnambool City Council |
| Implementation partners | Wannon Water, Southern Rural Water, Glenelg Hopkins Catchment Management Authority, Warrnambool Community Garden, Warrnambool College |
| Location | Warrnambool |
| Scale | Precinct |

Understanding Warrnambool's Waterways

Warrnambool's highly valued waterways are under stress, from both urbanisation of lower reaches and by agricultural impacts in the rural, up-stream reaches. This project aims to better understand these stressors, to inform decision-making and the identification of interventions that can protect and enhance the cultural, ecological, recreational and amenity values of Warrnambool's waterways. The project builds on the scope of the 'Understanding the Merri' project, identified in the forum's 2019 SDS, to include the Merri River, Hopkins River and Russells Creek. This project will consider current conditions, as well as future residential development.

Phase 1 – Water quality improvement strategy

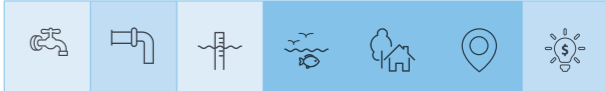
This phase will use a robust assessment of current conditions, to understand how stormwater is impacting waterway health in Warrnambool. A strategy will then be developed with actions to better manage current interventions, such as gross pollutant and litter traps within the drainage system, and actions to improve any identified nutrient and contaminant issues with water sensitive urban design assets. The strategy will include:

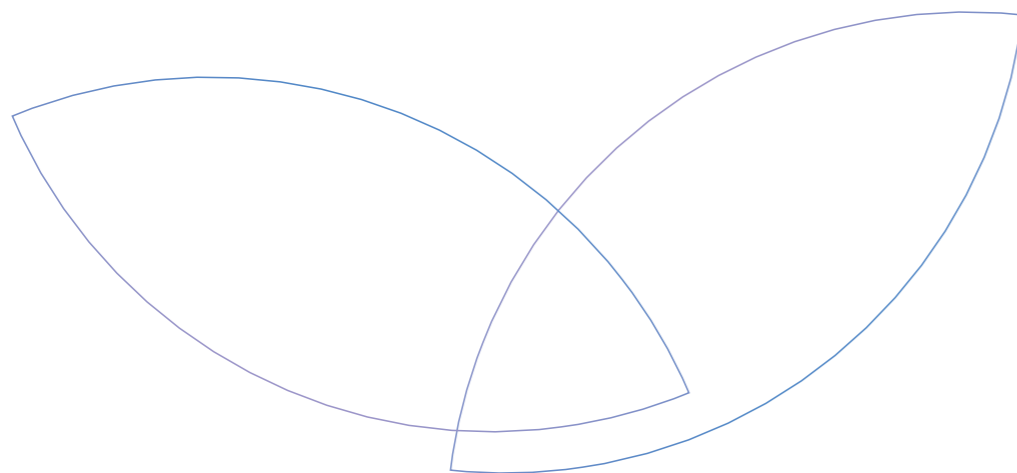
- robust baseline data to which to compare future interventions
- actions to improve water quality management and waterway health
- reflection on the values of the community
- application of best practice asset, stormwater, and environmental management.

Phase 2 – Ecological modelling of the waterways

This phase proposes the development of an ecological model for Warrnambool's waterways. This model will be used to inform future interventions and guide investment over the coming decades, including the rehabilitation of Merri River's flood plain. The ecological model will be informed by the water quality assessment, as well as the waterway's cultural values.

This project will use strategic planning to get the greatest benefit from investment in waterway rehabilitation and to enhance the values of the Merri River, Hopkins River, and Russells Creek.

|  | |
|---|--|
| Status | Concept |
| Lead agency | Warrnambool City Council, Glenelg Hopkins Catchment Management Authority |
| Implementation partners | Wannon Water, Eastern Maar Aboriginal Corporation, Deakin University |
| Location | Warrnambool |
| Scale | Catchment |



Kayaking on the Merri River.
Courtesy: Glenelg Hopkins Catchment Management Authority

Great South Coast Urban Water Atlas

The Great South Coast Urban Water Atlas project was identified in the forum's 2019 SDS and has since been successfully delivered by the project's collaborative partners. This project identified council-owned community assets in priority towns, that were dependant on potable water consumption, and created a new geographic information system (GIS) layer, which also included water use volumes. Through this work the region's councils could now easily identify opportunities for substituting potable water use with other fit-for-purpose, diverse sources of water. Project partners also prioritised the identified water-dependant assets and completed an options analysis for one priority asset within each council area. Each options analysis recommended non-potable water supply alternatives and included a high-level analysis of cost and risks.

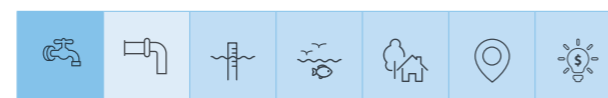
This project identified the following opportunities for further investigation:

- an IWM plan for Southcombe Park, Port Fairy, which is detailed as a separate project 'Southcombe Park IWM Plan' on page 38
- roof water harvesting at Henty Park, Portland
- an IWM plan for the AquaZone recreation and aquatic centre in Warrnambool
- future opportunities to consider that are currently not viable, such as stormwater or recycled water for the elms forming the Avenue of Honour at Camperdown.

Building on Success

The project's partners aim to continue building on its success. The next stage of the project involves expanding the GIS layer to include quantified diverse sources of water and non-council owned, potable water dependant community assets. This expanded database will provide greater utility for its users.

The project's partners are also committed to progressing the viable non-potable water supply opportunities identified through the project, where funding is secured. In addition, there will be ongoing engagement with current and potential water users in the region, so that the use of this valuable GIS resource becomes business-as-usual for water and local infrastructure planning.



| | |
|--------------------------------|--|
| Status | Implementation |
| Lead agency | Wannon Water |
| Implementation partners | Warrnambool City Council, Corangamite Shire Council, Moyne Shire Council, Glenelg Shire Council and Southern Rural Water |
| Location | Great South Coast |
| Scale | Forum area |

Adaptive Wastewater Solutions for Small Towns: Penshurst Pilot Project

This is a regional project with state relevance. All local governments in the forum area have identified managing the impacts associated with small-town sewage as a key challenge. The cost of reticulated sewerage is prohibitive in many small towns and private septic systems are often not adequate or able to be managed effectively.

The Penshurst Recycled Water Scheme concept uses small scale, nature-based technology to treat and manage recycled water locally, simply, and cost-effectively. This precinct-based modular approach to wastewater management can be scaled to allow for future population growth and is likely to suit many other townships across Victoria.

After successfully identifying an adaptive solution to sewerage Penshurst, the project is moving to a pilot phase where a precinct-scale unit will be trialled. Extensive monitoring and reporting on the outcomes, as well as capturing community attitudes to the system, will be key parts of this next pilot phase. The preferred options for a governance model will be implemented in the pilot project, and this will have the potential to be adopted elsewhere across the state.

It is envisaged such a solution will be scalable and deliver greater equity of service levels for regional communities. Anticipated benefits will include enabling economic development in smaller towns, prevention of pollution entering receiving environments (such as waterways and groundwater systems), and opportunities for improved community engagement around wastewater management issues.



| | |
|--------------------------------|---|
| Status | Implementation |
| Lead agency | Southern Grampians Shire |
| Implementation partners | Wannon Water, Glenelg Hopkins Catchment Management Authority, property owners |
| Location | Penshurst |
| Scale | Town |



Griffiths Island, Port Fairy. Courtesy: Moyne Shire Council



Penshurst Wetland Gardens. Courtesy: Visit Victoria

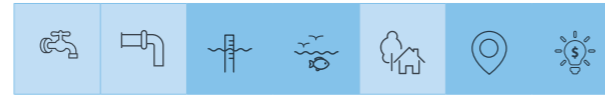
Building Capacity for IWM within the Urban Drainage Community of Practice

This project supported the formation and functioning of a new community of practice for drainage infrastructure managers across the Great South Coast region, with the purpose of building the region's capacity in IWM. All five of the region's councils and two catchment management authorities partnered to deliver the initiative.

The project partners engaged a specialist consultant to work with the newly formed community of practice, to identify regional challenges, priority issues, opportunities to collaborate and opportunities to adopt a more integrated approach to planning urban drainage. A plan was then developed to guide the community of practice, including identified actions across five themes:

- development and strategic planning
- policies, standards and best practice
- modelling, data and asset management
- funding and resources
- knowledge-sharing, education and engagement.

This project is now in an ongoing implementation phase, with an active community of practice established in the region. The community of practice's progress on planned actions will be recorded and supported through the forum's IWM practitioner network.



| | |
|--------------------------------|---|
| Status | Implementation |
| Lead agency | Warrnambool City Council |
| Implementation partners | Corangamite Shire Council, Glenelg Shire Council, Moyne Shire Council, Southern Grampians Shire Council, Wannon Water, Glenelg Hopkins Catchment Management Authority, Corangamite Catchment Management Authority |
| Location | Great South Coast |
| Scale | Forum area |



Donald's Hill Reservoir. Courtesy: Wannon Water

'Information sharing, skills development and seeing what we can leverage from other projects, seeing other things that are happening around the state – you've suddenly got access to a whole network of programs and projects and how people got them up.'

Lyll Bond – Manager Environment and Emergency, Corangamite Shire Council

Dunkeld Water Storage. Courtesy: Wannon Water





Aerial view of Warrnambool foreshore. Courtesy: Visit Victoria

Supporting Water Management at Budj Bim

The Budj Bim Cultural Landscape is UNESCO World Heritage listed, containing one of the world's most extensive and oldest aquaculture systems. The Budj Bim lava flow provides the basis for the complex system of channels, weirs and dams developed by Gunditjmara. All of the Budj Bim Cultural Landscape is Aboriginal-owned and/or managed and is managed to respect the customary and legal rights and obligations of Gunditjmara Traditional Owners.

This project continues to focus on the management of Pareeyt (water) flows in and around Budj Bim, with the aim of looking after Country. This project will be consistent with the directions outlined in the Budj Bim Indigenous Protected Area Plan of Management (2022) and the Budj Bim Cultural Landscape Strategic Management Framework (2022).

Specific activities include:

- supporting cultural flows and the related tourism, jobs and growth impacts across the region
- understanding impacts of rural drainage and groundwater usage
- supporting on-ground works for enhanced management
- implementing the World Heritage Key Indicator Action Plan.

| | | | | | | |
|--------------------------------|---|--|--|--|--|--|
| | | | | | | |
| Status | Implementation | | | | | |
| Lead agency | Gunditj Mirring Traditional Owner Aboriginal Corporation | | | | | |
| Implementation partners | Southern Rural Water, Glenelg Hopkins Catchment Management Authority, Glenelg Shire Council, Moyne Shire Council, DEECA, Regional Development Victoria, Great Ocean Road Regional Tourism | | | | | |
| Location | Budj Bim | | | | | |
| Scale | Sub-catchment | | | | | |

Guided Tour at Budj Bim. Courtesy: Visit Victoria



Precinct-Scale IWM Planning for Warrnambool

A city-wide IWM plan for Warrnambool was identified as a regional priority and in the forum's 2019 SDS. The IWM planning process was identified as a way to better understand the city's water and pollutant balance, support community needs for amenity and wellbeing and provide a strategic direction for future investment in IWM and water sensitive urban design. The process could also explore specific issues such as strategies to reduce the cost of lake dredging and build on existing place-based plans.

Now, the forum's partners have delivered on many of the region's identified priorities. This experience has built the region's IWM skills and strengthened the forum's collaborative partnerships. The successful delivery of the precinct-scale IWM plan for the Albert Park area, highlighted to project partners the strength of IWM planning at different scales. From this experience, Warrnambool City Council, in collaboration with Wannon Water, Glenelg Hopkins Catchment Management Authority, and other stakeholders has identified the benefit of taking a prioritised, precinct-scale approach to IWM planning. This project will now focus on identifying and prioritising precinct-scale IWM planning opportunities in Warrnambool.

The project's partners have identified the next priority precinct-scale IWM plan as the Lake Pertobe IWM Plan, which is highlighted as a separate project later in this SDS. The other

priority precincts identified by project partners to undergo IWM planning, include the Allansford, Botanic, Brierly, Brodies Lane, East Aberline, and South Dennington precincts.

An annual check-in with partners and key stakeholders will be conducted to update a city-wide perspective, as well as the issues and opportunities for each identified precinct in Warrnambool. This process will be used to regularly revise and prioritise where IWM planning resources should be allocated next.

| | | | | | | |
|--------------------------------|--|--|--|--|--|--|
| | | | | | | |
| Status | Implementation | | | | | |
| Lead agency | Warrnambool City Council | | | | | |
| Implementation partners | Wannon Water, Glenelg Hopkins Catchment Management Authority | | | | | |
| Location | Warrnambool | | | | | |
| Scale | City | | | | | |

IWM in the East of Aberline Road Precinct Structure Plan

There is an opportunity to create a new water sensitive community in Warrnambool, where residents embrace all forms of water in the hydrological cycle as valuable resources. The East of Aberline growth corridor is a priority residential development area of state-wide significance, approximately 4 kilometres north east of the centre of Warrnambool. The development, in the upper catchment of Russells Creek, will potentially provide up to 4,000 homes as well as community facilities and local parks.

At the request of Warrnambool City Council, the Victorian Planning Authority is leading the development of a Precinct Structure Plan. The resulting 'East of Aberline Precinct Structure Plan' will guide future development and land use outcomes in the growth area. To inform the planning process, background studies are currently being finalised, including an IWM options assessment which was developed collaboratively by forum project partners.

This assessment highlighted the potential to build upon an existing icon of holistic water management in Warrnambool – the centralised roof water harvesting system. The combination of a centralised roof water harvesting system with additional constructed wetlands to capture remaining excess stormwater was identified as the preferred IWM option.

Benefits include protecting water quality in Russells Creek, providing fit-for-purpose, diverse sources of water for local reuse and urban amenity, and a reduction in water extraction from the Gellibrand River. Stormwater reuse could provide a source of water for public open space irrigation, including supporting an extensive urban tree canopy for the new community in line with Warrnambool City Council's 'Green Warrnambool Plan', which sets a target of 30 per cent tree canopy cover across the city.



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| Status | Implementation |
| Lead agency | Warrnambool City Council |
| Implementation partners | Wannon Water, Glenelg Hopkins Catchment Management Authority, Eastern Maar Aboriginal Corporation |
| Location | Warrnambool |
| Scale | Precinct |

Merri River estuary, Warrnambool. Courtesy: Visit Victoria



Gellibrand Catchment Targeted Interventions for Water Quality

The Gellibrand River is one of the few unregulated Victorian rivers in an ecologically healthy state, despite significant water extractions and land use changes in the catchment. The catchment supplies drinking water for Colac, Warrnambool, Camperdown, Simpson, Cobden, Lismore, Derrinallum, Terang, Noorat, Glenormiston and Allansford through surface water and groundwater extraction. Groundwater-surface water interaction is important in the Gellibrand River catchment, with groundwater contributing significantly to river flow in summer months.

Population growth is driving both urbanisation within the Gellibrand catchment and increasing urban water demand from outside of the catchment. These land use changes and water extraction demands are contributing to impacts on water quantity and quality in the Gellibrand River, as well as the catchment's ecological health.

This project will enhance collaborative approaches to improving the management of the Gellibrand catchment, to mitigate the risk that poor source water can have on potable water treatment processes. In the long term, improved raw water quality for potable supply may reduce treatment requirements and lower the incidence of blue-green algae blooms. Through fostering collaboration, this project aims to protect the Gellibrand catchment's ecological state and improve the resilience of the cities and towns that depend on it.

Project partners have worked to collate data and have produced a state of knowledge review. This 'baseline' state for the catchment can be used to compare and select management actions which will improve water quality and waterway health. The project will use an Investment Framework for Environmental Resources (INFFER) method to compare the cost-benefit ratio of a variety of management options, including riparian fencing and revegetation, addressing nutrient discharge from septic tanks, stormwater management options, and improved dairy effluent and fertiliser management. The Cost Allocation Framework for IWM Projects (2017) can also be used to further define the benefits that are expected from the project for urban communities and allocated costs between project partners accordingly.

The project will provide the basis for an integrated catchment plan for the region. It will also inform future IWM plans, urban water strategies, and drought preparedness plans.



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| Status | Implementation |
| Lead agency | Corangamite Catchment Management Authority |
| Implementation partners | Wannon Water, Eastern Maar Aboriginal Corporation, Corangamite Shire Council, Colac Otway Shire Council, Landcare groups |
| Location | Gellibrand Catchment |
| Scale | Catchment |



OPPORTUNITIES ARISING FROM EXISTING PROJECTS

The following projects are opportunities that have arisen as a result of the work done for 2019 SDS projects.

Hamilton Roof Water Harvesting

This project will progress roof water harvesting opportunities which were identified in the Hamilton IWM Plan, as well as new opportunities identified by project partners since the plan's completion. Priority precincts in Hamilton include:

- Hamilton Indoor Leisure and Aquatic Centre and Showgrounds – roof water harvesting at this site was identified as one of the top four priorities in the Hamilton IWM Plan, with a total roof area of 10,284 square metres.
- Hamilton Regional Livestock Exchange – while not included in the Hamilton IWM plan this new opportunity has potential worth investigating. The Hamilton Regional Livestock Exchange rooftop was expanded to include cattle stockyards, and an additional 4,627 square metres of roof area which could be added to the existing harvesting scheme.

The first phase of this project involves developing concept designs and conducting a feasibility study for each precinct. Feasibility studies will include an analysis of retrofit costs, expected water yields, potential demands for roof water reuse, and expected potable water savings. These studies will identify the best project scale and scope to maximise the cost-benefit ratio. Later phases involve the construction of tanks, pipes, and pumps identified as needed for both schemes.



Hamilton Regional Livestock Exchange. Courtesy: Southern Grampians Shire Council

| Status | Implementation |
|--------------------------------|----------------------------------|
| Lead agency | Southern Grampians Shire Council |
| Implementation partners | Wannon Water |
| Location | Hamilton |
| Scale | Town |

Grange Burn Catchment Masterplan

The Grange Burn is a highly valued waterway, which runs through the town centre of Hamilton before meeting the Wannon River. To the east of the city centre, a man-made clay embankment on the Grange Burn forms the regionally significant Lake Hamilton. The Grange Burn and surrounding area is important for agriculture, recreational pursuits and contributes significantly to the social well-being of the Hamilton community.

The waterway also holds high environmental values supporting threatened native fish including the endangered variegated pygmy perch, little galaxias and Glenelg spiny crayfish. The Grange Burn is also home to one of the district's healthiest populations of platypus, which are spotted regularly from the walking trails along its banks.

The Hamilton IWM Plan identified that managing the impact of urban stormwater impacts on the Grange Burn and Lake Hamilton is a priority. This project aims to assess current baseline conditions and identify water sensitive urban design features which will protect and enhance water quality. These designs will also be selected to support the use of diverse water supplies for urban greening, biodiversity, recreation, and other community uses of the space. Assessments will also identify assets that can facilitate future developments in Hamilton and accommodate a changing climate.

This work will be used to inform a new Masterplan for the Grange Burn catchment, which will include an action plan to improve water quality management and waterway health as well as support community values and use of waterways. The identification of diverse water sources for urban greening will also underpin Hamilton's future water security.

| Status | Committed |
|--------------------------------|--|
| Lead agency | Southern Grampians Shire Council |
| Implementation partners | Glenelg Hopkins Catchment Management Authority, Wannon Water |
| Location | Grange Burn Catchment |
| Scale | Catchment |

Wannon Falls. Courtesy: Southern Grampians Shire Council





Port Fairy Lighthouse. Courtesy: Visit Victoria

Coulstock Street IWM Opportunity

The Albert Park IWM Plan identified the Coulstock Street area precinct as a key zone for IWM planning. This was due to the surrounding residential areas discharging significant stormwater volumes into Albert Park, and the opportunity to upgrade existing stormwater infiltration areas within Albert Park.

The resulting Coulstock Street IWM Opportunity includes plans for a raingarden, stormwater treatment wetland and upgrades to swales and other urban drainage infrastructure which will redirect stormwater to Albert Park for reuse. These water sensitive design urban design assets will also act as a community education and demonstration site, reducing the need for irrigating surrounding vegetation through increased infiltration.

The second phase of this project proposes the use of pipes and pumps to divert stormwater along Japan Street, north of Raglan Parade, back to the stormwater treatment wetland in Albert Park to reduce flooding in a known hotspot.

Warrnambool City Council has recently completed the detailed designs needed for construction, which this project focuses on. While council has earmarked substantial funds to deliver this project, further funding will need to be secured before construction can commence as scaling back the project will reduce its effectiveness.



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| Status | Implementation |
| Lead agency | Warrnambool City Council |
| Implementation partners | Wannon Water, DEECA, Birdlife Australia |
| Location | Warrnambool |
| Scale | Precinct |

Albert Park Roof Water Harvesting

Around 90 per cent of Warrnambool and districts drinking water supply comes from the Otway Ranges. This requires carbon intensive pumping of the water from the Gellibrand River around 100 kilometres away.

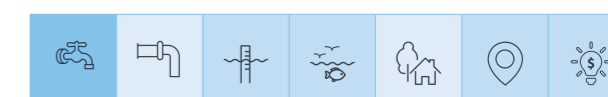
Since 2011, the Wannon Water 'Warrnambool Roof Water Harvesting Initiative' has piloted and established precinct-scale roof water harvesting systems in new residential or industrial subdivisions. These harvesting systems collect and transport rainwater from rooftops to existing raw water storages, where the water is then treated before becoming part of the drinking water supply.

The Albert Park IWM planning process explored the opportunity presented by the large surface area of building roofs in the precinct, to increase the city's potable water supply. A cost-benefit analysis revealed the viability of retrofitting roof water harvesting infrastructure, including a gravity-fed connection to the Brierly Basin raw water storage. Being gravity-fed, the operation of the new harvesting infrastructure will be carbon neutral and avoids the need for an additional water treatment plant by connecting to the existing potable water supply system off-sets potable water harvested from the Gellibrand River. In addition to the water security benefits provided by this project, it will also help to alleviate flooding by diverting water from the stormwater system, which contributes to flooding issues within the Russells Creek catchment.

The new roof water harvesting scheme will include:

- a pipe network to collect and transfer roof water separately from stormwater
- rainwater detention tanks, with flow restrictions into the system
- a gravity-trunk water main to Brierly Basin.

This project is in a high-profile precinct that contains some of Warrnambool's most visited sporting venues and the largest school. Project partners will also collaborate with Warrnambool College to engage students in the design and demonstrate sustainable urban water management.



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| Status | Implementation |
| Lead agency | Wannon Water |
| Implementation partners | Warrnambool City Council, Warrnambool College |
| Location | Warrnambool |
| Scale | Precinct |

Childers Cove. Courtesy: Moyne Shire Council



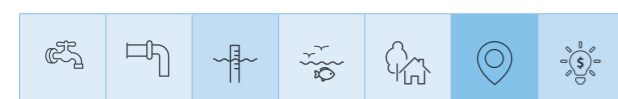
Portland Leisure and Aquatic Centre Roof Water Harvesting

The Portland Leisure and Aquatic Centre Roof Water Harvesting project was identified through the Great South Coast Urban Water Atlas.

This project will investigate the potential to repurpose an old concrete water storage tank to store rainwater which will be captured from the Portland Leisure and Aquatic Centre's roof. This fit-for-purpose water source will then be used to top up the centre's swimming pools, saving on potable water use. The tank was once used to balance the supply from the groundwater source before entering the town water supply, but it has not been used for some time.

A feasibility study has confirmed the condition of the old concrete tank is useable, but the location and condition of other infrastructure still need to be assessed. These assessments will then inform the development of a business case for implementation.

If feasible this project would reduce the consumption of potable water from the town water supply, by substituting it with a fit-for-purpose water source which may allow for cheaper forms of chlorine to be used in water treatment.



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| Status | Committed |
| Lead agency | Glenelg Shire Council |
| Implementation partners | Wannon Water |
| Location | Portland |
| Scale | Precinct |

Southcombe Park IWM Plan

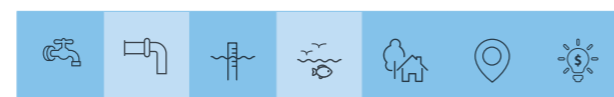
Southcombe Park is considered a key open space in the township of Port Fairy. The park is a focal point for community sport and recreation, providing facilities such as an indoor cricket training centre, a sports stadium, swimming centre and outdoor ovals. The precinct also supports regional tourism, being the location of the Southcombe Caravan Park.

Southcombe Park was identified by forum members as a priority precinct for IWM planning due to its significance to the community, stormwater management issues, and natural values. This project proposes the development of an IWM plan, beginning with a baseline assessment of the precinct's water balance, including the different water demands and supply sources, which are currently managed in isolation.

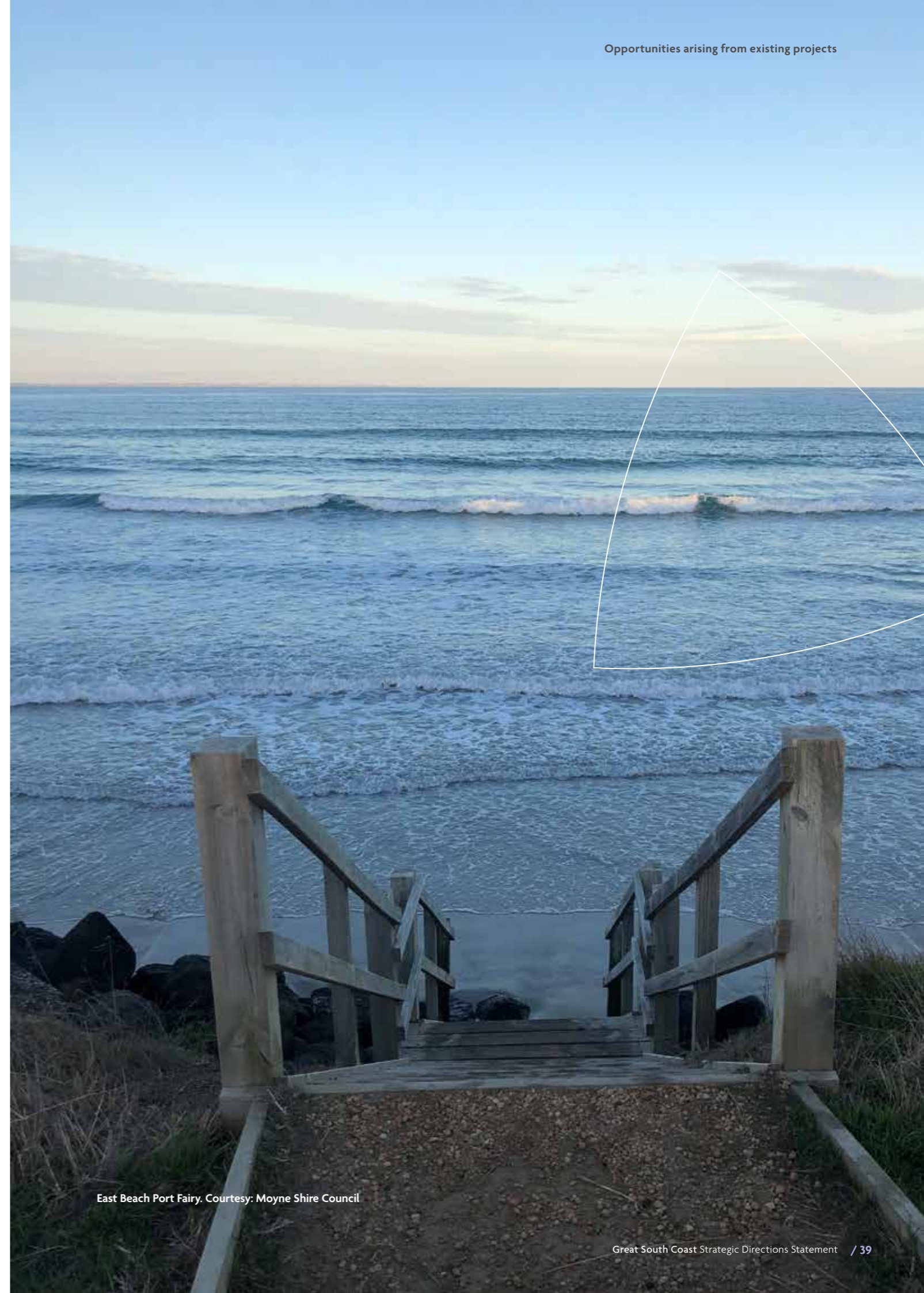
The development of an IWM plan for the precinct will bring together stakeholders to develop a shared vision for the site. This vision will be used to identify, investigate and evaluate opportunities to improve water management. The project will address current drainage issues which cause localised stormwater flooding and will provide an educational opportunity for the broader community.

The project will investigate opportunities to:

- harvest, treat, and reuse diverse water sources, such as roof water and stormwater
- install water sensitive urban design features
- improve urban greening and amenities
- reduce issues with stormwater flooding and discharge to Russell Clark Reserve
- improve water efficiency, including the use of smart automated irrigation systems on outdoor ovals
- improve the quality of open space and other community amenities in the precinct
- reduce operating costs of facilities, particularly through reducing potable water use.



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| Status | Concept |
| Lead agency | Moyne Shire |
| Implementation partners | Wannon Water, park user groups |
| Location | Port Fairy |
| Scale | Precinct |



East Beach Port Fairy. Courtesy: Moyne Shire Council

NEW OPPORTUNITIES

Forum and practitioner meetings, workshops and relationships have brought together people with different backgrounds, skills, and insights. This has fostered a spirit of innovation and collaboration that has led to the development of several new projects to further the strategic aims of the forum.

Gunditjmara Values at Portland Foreshore

Gunditjmara have a strong cultural association with marine and coastal environments across the region. This includes the Portland foreshore, which is a highly visited open space, hosting markets and large community events, and has popular playgrounds and barbecue facilities.

Adjacent to the foreshore is the Fawthrop Lagoon inlet, where a freshwater wetland meets the sea. This is a significant area to Gunditjmara for its resources and cultural values. Currently, there is limited public information about Gunditjmara, their culture and values at the foreshore. There is also limited information on the significance of the intersection of the freshwater and marine environment, and challenges to sustainable urban water management in the area.

This is a cultural awareness and education project that will be led by Gunditj Mirring Traditional Owner Corporation. The project will involve a cultural values assessment to be undertaken, followed by landscaping design and the development of interpretation materials to enhance the awareness of Gunditjmara culture and values, the impacts of urban and maritime development on the area, and the need for sustainable water management.

| Status | Identified |
|--------------------------------|---|
| Lead agency | Gunditj Mirring Traditional Owner Aboriginal Corporation |
| Implementation partners | Glenelg Shire Council, Glenelg Hopkins Catchment Management Authority, Wannon Water |
| Location | Portland |
| Scale | Precinct |

Portland. Courtesy: Visit Victoria



Enabling IWM with Regional Developers

Victoria's regional population boom is increasing the pace of urban growth in regional areas. This project aims to deliver a framework which will enable early and genuine engagement with regional urban developer partners with IWM. Initially, the project will be progressed by collaborative partners from two IWM forum areas – the Great South Coast and Goulburn Broken regions. Based on preliminary scoping interviews with five developers in the Great South Coast IWM region, there is a high level of interest and willingness to participate in the development sector.

This project will work to identify and de-mystify issues with the practical implementation of IWM and water sensitive urban design at the small-to-medium scale. The framework will work to forge closer ties between the development industry, water sector organisations, and government, to facilitate a greater opportunity for IWM approaches within regional areas. It will build upon existing relationships and create new ones.

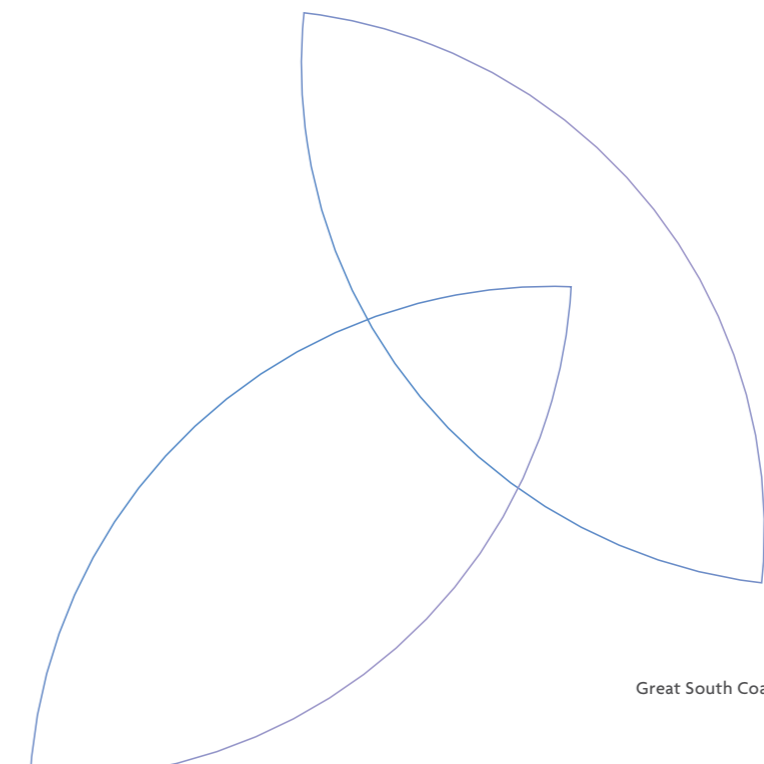
To begin, this project will involve the engagement of a consultant to co-design the framework with key stakeholders. This work will also identify future developments that the framework's approach could potentially be tested.

The framework will be tested against different development models, including where development is led by a Council. Initial scoping conversations have already identified the Sustainable Housing for Timboon Project, where Corangamite Shire Council will be the developer.

The Sustainable Housing for Timboon Project is described in further detail later in this SDS on page 45.

Project partners aim to test the framework on one or more current development from each of the two initial forum areas. The framework will be modified based on the test results and feedback and a final report will be produced. There is potential that the resulting framework could be considered for state-wide application across regional Victoria.

| Status | Implementation |
|--------------------------------|---|
| Lead agency | Wannon Water |
| Implementation partners | Goulburn Valley Water, Corangamite Catchment Management Authority, Glenelg Hopkins Catchment Management Authority, Goulburn Broken Catchment Management Authority, Colac Otway Shire Council, Corangamite Shire Council, Glenelg Shire Council, Moyne Shire Council, Southern Grampians Shire Council, Warrnambool City Council, Mitchell Shire Council, Mansfield Shire Council, DEECA |
| Location | Great South Coast and Goulburn Broken regions |
| Scale | Inter-forum |



Lake Pertobe IWM Plan

The 'Precinct-Scale IWM Planning for Warrnambool' project identified the development of an IWM plan for Lake Pertobe as a priority for Warrnambool city. Lake Pertobe is recognised as one of Warrnambool's most valuable recreational assets. This multi-purpose area is the main 'holiday' precinct for visitors to Warrnambool and is subject to increasing development pressure.

In 2018, Warrnambool City Council partnered with the community to develop a masterplan for the precinct, which focused largely on recreation and community use of the space. However, the masterplan identified actions relating to drainage issues, water quality, and water needs, which could all be addressed through the development of a complimentary IWM plan. As Lake Pertobe plays a critical role in the capture and filtration of stormwater from Warrnambool's CBD before it flows into the Merri River, there is also potential to improve the health of this important urban waterway.

The IWM plan will include an opportunity identification and options analysis process, development of technical and budget requirements for future maintenance schedules, and design of priority capital works opportunities.

It is expected this IWM plan will identify:

- diverse water supplies for greening open spaces and achieving biodiversity objectives
- improved stormwater filtration and reduced stormwater discharges to the Merri River
- improving the quality of water discharging to the Merri River
- more resilient open space and other community amenities, in line with the masterplan

In addition, the project will leverage the regional adventure playground to provide community education about water sources, waterway health, and other related topics.

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| Status | Implementation |
| Lead agency | Warrnambool City Council |
| Implementation partners | DEECA, Wannon Water |
| Location | Warrnambool |
| Scale | Precinct |

Lake Pertobe, Warrnambool. Courtesy: Visit Victoria



South of Merri Precinct Wetland Restoration

Warrnambool has the largest and fastest growing population of the Great South Coast region. One third of Warrnambool residents live within a ten-minute walk of the Merri River, which flows through Eastern Maar Country. But historic clearing, wetland drainage, and stormwater diversion have all impacted the waterway, and access to the river is currently limited.

In 2019, Warrnambool City Council adopted the South of Merri Precinct Plan to improve the riverside environment and public access to the river. The plan included consultation with key partners and had strong community support.

One of the priorities identified was the restoration of the drained wetlands at Woodend Road on the Merri River floodplains. The restoration and return of Woodend Road Reserve to public open space will greatly improve environmental outcomes and community access for shared benefits. The site also provides habitat for threatened species such as Latham's snipe.

Glenelg Hopkins Catchment Management Authority and partners are undertaking phase one of the wetland restoration through the Rivers of Warrnambool project. This project can be leveraged to support the next phase, which was identified by IWM forum partners.

The IWM project proposes a second stage of restoration works, which will include an assessment of stormwater drainage to the site and identify improvements to the physical restoration of the wetland to improve the filtration of stormwater. Multiple stormwater drains currently discharge to the Merri River at Woodend Road Reserve, including through the currently drained wetland. Pedestrian access improvements – such as dedicated paths, boardwalks, and viewing areas – can also be incorporated if identified as appropriate. This will ensure that access to the river and restored wetland is maintained and formalised, to protect environmental values and support appropriate access for shared benefits.

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| Status | Committed |
| Lead agency | Glenelg Hopkins Catchment Management Authority |
| Implementation partners | Warrnambool City Council, Eastern Maar Aboriginal Corporation |
| Location | Warrnambool |
| Scale | Precinct |

Building IWM into Great Ocean Road Development Planning

There is an urgent need for more holistic, collaborative, and integrated development planning for the world-renowned locations along the Great Ocean Road. Putting water at the centre of development planning will contribute to creating healthier environments. There is an opportunity to link current broad regional strategies and create a holistic strategy for the region.

In particular, the areas around Princetown, Gellibrand Estuary, and the 12 Apostles have important and fragile ecosystems that are threatened by large numbers of tourists and other development-related impacts. Planning for appropriate sewerage and drainage services, that add value to the landscape and protect the environment is critical to the sustainability of these popular areas.

This project will firstly create a working group, which brings all stakeholders and agencies together to understand the impacts of current and planned development in the area and then work to identify potential solutions which can be explored and developed. The working group will aim to prevent impacts on these environments while supplying water, wastewater, and drainage services. Ideas such as a protocol for communicating between stakeholders for future developments will be explored. This project will support regional growth while ensuring that these unique areas can be enjoyed by generations into the future.

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| Status | Concept |
| Lead agency | Wannon Water, Corangamite Shire Council |
| Implementation partners | Parks Victoria, Victorian Planning Authority, Great Ocean Road Coast and Parks Authority |
| Location | Great Ocean Road |
| Scale | Region |



Timboon Trestle Bridge. Courtesy: Visit Victoria

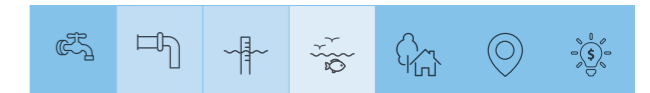
Sustainable Housing for Timboon

This council-led housing supply project has been developed to meet multiple community needs in Timboon while also providing the broader benefit of being a regional demonstration site for IWM.

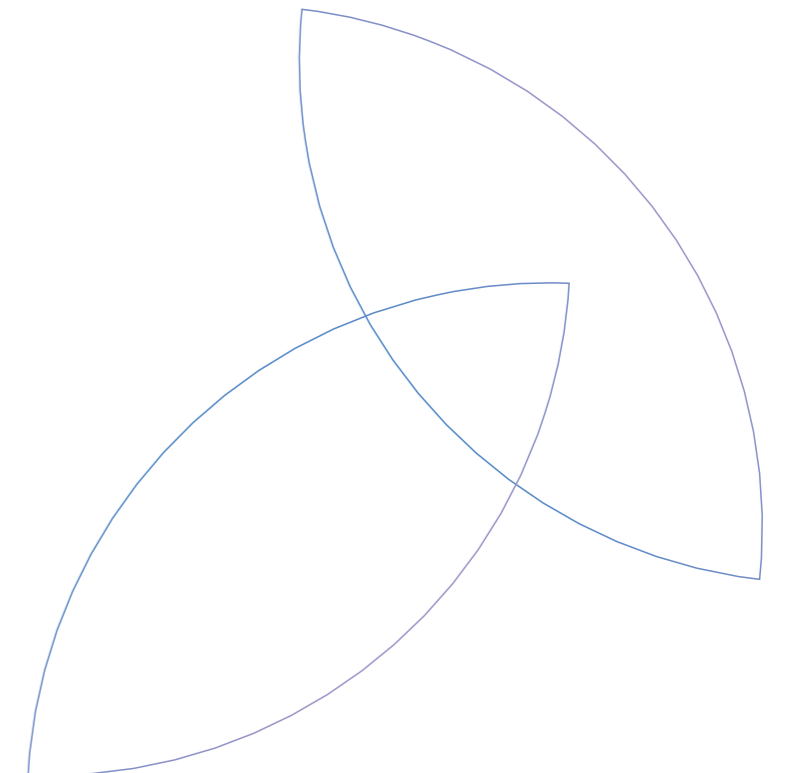
Corangamite Shire Council has identified a parcel of land in Timboon which can be strategically redeveloped to meet the growing residential and rental housing needs of the township. Important local industries, such as agriculture and tourism, have been struggling to find local accommodation for workers. At the same time, the township is becoming popular with 'tree changers', seeking a move to regional Victoria.

Council plans to develop the parcel of land in a way that provides additional housing to the area, while also implementing a full suite of sustainability and IWM features. The intent of this initiative is to show developers what can be achieved in new housing projects in regional Victoria and demonstrate the marketing appeal of sustainable and water sensitive developments. The project will also provide an opportunity for the surrounding communities to see and understand how IWM can improve liveability in a new residential estate. This project will also provide an opportunity to test the developer engagement framework which will be developed through the 'Enabling IWM with Regional Developers' project, which is detailed earlier in this SDS.

Council will continue to investigate which IWM opportunities provide for effective water cycle management and sustainability at the development site. This project will also help to progress the intention to establish a community which is working towards a circular economy approach to how it operates. This project will commence with the engineering design phase of the development and be completed with the final installation of IWM features.



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| Status | Implementation |
| Lead agency | Corangamite Shire Council |
| Implementation partners | Wannon Water, Southern Rural Water, Victorian Planning Authority |
| Location | Timboon |
| Scale | Precinct |





Port Campbell. Courtesy: Wannon Water



Integrated Water
Management Forums



Energy,
Environment
and Climate Action