

# A Sustainable Future

## *The City of Port Phillip's Sustainable Environment Strategy*

2018-2028

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# Mayor's message

## A Sustainable Future: City of Port Phillip's Sustainable Environment Strategy 2018-28

On behalf of the Councillors, I am pleased to invite the community of Port Phillip to provide feedback on the draft A Sustainable Future: City of Port Phillip's Sustainable Environment Strategy 2018-28.

Council is committed to supporting a sustainable future for our city, as reflected by strategic direction three of the Council Plan - *we have smart solutions for a sustainable future*. This draft Strategy creates a framework to deliver on this commitment over the next 10 years, including key priorities such as:

- a greener, cooler more liveable city to reduce the impacts of heat and improve enjoyment of our public space.
- a City with lower carbon emissions to reduce the environmental footprint of Council and within the City.
- a City that is adapting and resilient to climate change to better manage the impacts of a changing climate.
- a water sensitive city that will enable Council to maintain our parks and sports fields while reducing pollutants entering the Bay.
- a sustained reduction in waste, adapt to changes in the industry and manage waste more efficiently.

This draft strategy details actions that will deliver on these priorities and allocates budget and a timeline indicating our long term commitment to ensuring that as a community we can adapt to the pressing challenge of climate change while enhancing the green spaces and foreshore, being financially responsible and reducing the broader impact we have on greenhouse gas emissions and waste.

All members of our community are custodians of our land, and we have a collective role to play in protecting its future and meeting the environmental challenges ahead. That is why we are:

- planting more trees
- harvesting water to make sure it isn't wasted
- helping keep our bay clean
- dealing with waste in more efficient and local ways.

We are excited to present the draft strategy, and we welcome your feedback.

- A greener, cooler more liveable city
- A City with lower carbon emissions
- A water sensitive city
- A sustained reduction in waste

*This draft strategy details actions that will deliver on these priorities and allocates budget and a timeline indicating our long term commitment to ensuring that as a community we can adapt to the pressing challenge of climate change while enhancing the green spaces and foreshore, being financially responsible and reducing the broader impact we have on greenhouse gas emissions and waste.*

*Importantly the draft also contains indicators that will measure progress on how we are delivery Direction 3. Council will report on progress and the strategy will reviewed and if necessary updated every 4 years.*

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Council respectfully acknowledges the Yalukut Weelam Clan of the Boon Wurrung. We pay our respects to their Elders, both past and present. We acknowledge and uphold their continuing relationship to this land.

# Executive Summary

## What is 'A Sustainable Future'?

'A Sustainable Future', Council's Sustainable Environment Strategy outlines the cultural change and collaborative actions required over the next ten (10) years across a range of council services including: city planning and urban design, waste and water management, community outreach and behaviour change programs. It also embeds sustainability into Council operations and projects to ensure the City of Port Phillip has a sustainable future. It has a ten (10) year, rather than a four (4) year horizon as we believe a long-term view is required to effect changes to our environment.

## Why is it important?

The City of Port Phillip has always been an attractive destination for residents, businesses and visitors. We have 11 kilometres of bay foreshore, beautiful tree lined streets and many attractive parks and open spaces. As Victoria's most densely populated municipality, and with resident growth projected to increase by a further 23% by 2027 (taking our resident population to 136,300) sustainably managing growth is a key challenge for the City of Port Phillip. Residential growth, is compounded by worker growth, which is set to increase by over 30,000 additional jobs just in the Fishermans Bend precinct alone by 2050.

We welcome this growth, but managing this sustainably to keep the City of Port Phillip beautiful, liveable, caring, inviting, bold and real has never been more important.

Our sustainable growth challenge is compounded by the effects of a changing climate. Lower than average rainfall means a reduction in our water supply (estimated to be reduced by up to 11% in 2020); more of the City of Port Phillip is only one (1) to three (3) metres above sea level, which makes us more vulnerable to rising sea levels; there is increased erosion of the foreshore due to a greater number and intensity of storm surges.

Rising temperatures are also having an impact on heat-related health stress of our environment and is also acutely felt by those who are the most vulnerable in our community.

The challenge of environmental sustainability is not just limited to the City of Port Phillip, it is a worldwide issue. This strategy not only outlines our leadership and the contribution we can make at the local level, it also underpins our commitment to the International Compact of Mayors who are creating a more sustainable future for cities world-wide.

## What will we achieve through the strategy?

We are seeking to ensure a sustainable future for the City of Port Phillip by creating a city that is greener, cooler and more liveable; a city with lower carbon emissions, a city that is adapting and resilient to climate change; a city that is water sensitive with a sustained reduction in waste.

# Why do we need this strategy?

The City of Port Phillip aspires to be an international leader in sustainability. To be a city that learns from our success and strives to do better and create a better environment for all that live, work and play here.

This is an important time globally to act on using resources wisely, reducing our carbon footprint and to prepare ourselves for the impact climate change will have on our lives. To create a sustainable future.

*A Sustainable Future* establishes a pathway that will transition the City to a greener, cooler more liveable City where we are all reducing our impact on the environment and are more resilient to the impacts of climate change.

It specifically outlines how Council will respond to Direction 3 of the Council Plan, 'We have smart solutions for a sustainable future' and is designed to help our City thrive.

To create a sustainable future, this core Strategy drives critical actions and measures progress toward:

1. A greener, cooler and more liveable City
2. A City with lower carbon emissions
3. A City that is adapting and resilient to climate change
4. A water sensitive City
5. A sustained reduction in waste

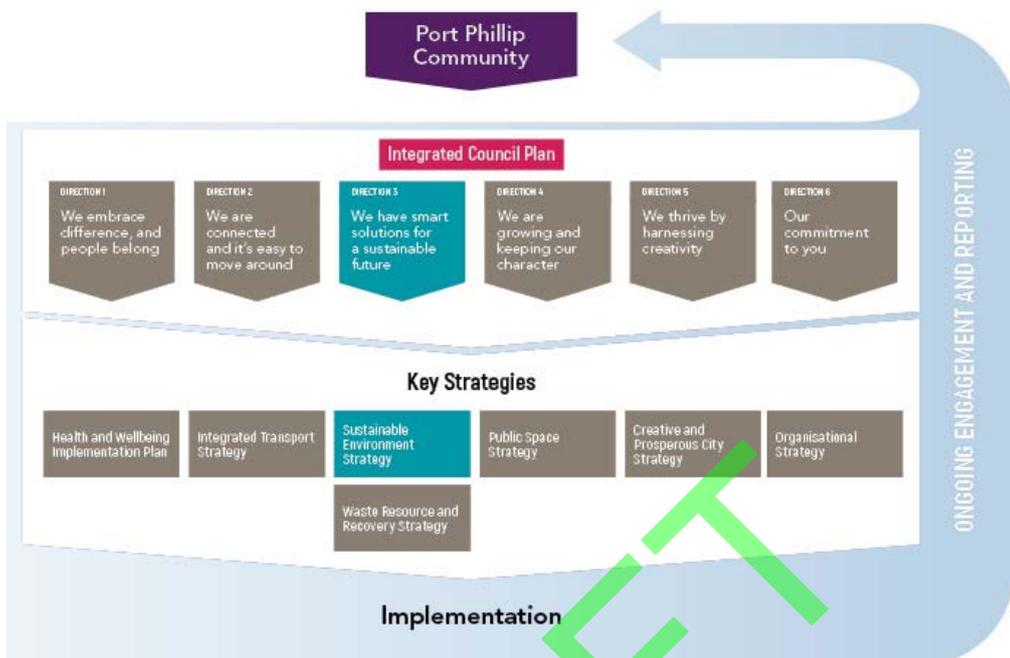
Many other plans, policies and strategies will also contribute to these outcomes:

A set of Guiding Principles were used to develop the actions in the Strategy

- We invest wisely to benefit our community now and tomorrow
- We make an impact for our community
- We prioritise fairness and equity
- We harness partnerships and collaboration
- We adapt to change by testing, learning and monitoring

For the most part, the actions in the Strategy will be applied over the whole municipality. However some actions may vary in how they are delivered depending on neighbourhoods.

Figure1: Key strategies develop or in development by Council in response to the Council Plan 2017-27



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# Challenges we face

Seven significant long-term **challenges** were identified in the City's Council Plan 2017-27. Each of these challenges provide us with opportunities to think differently about how we function as a City as we move toward a sustainable future.

As Victoria's most **densely populated** municipality, and with resident growth projected to increase by a further 23% by 2027 (taking our resident population to 136,300<sup>1</sup>) sustainably managing growth is a key challenge for the City of Port Phillip.

To accommodate this increase in population, there is significant pressure for higher density developments. This, if not planned well, has the potential to significantly impact on the environment, reducing tree canopy, trapping more heat in our streets, increasing concrete and stormwater runoff and placing more demand on our parks and foreshore.

We welcome this growth, but managing this sustainably to keep the City of Port Phillip beautiful, liveable, caring, inviting, bold and real has never been more important.

Our sustainable growth challenge, is compounded by the effects of a **changing climate**, which we have been experiencing for many years now. Lower than average rainfall means a reduction in our water supply (estimated to be reduced by up to 11% in 2020) and with the City being mainly only one (1) to three (3) metres above sea level we are more vulnerable to rising sea levels. Increased erosion of the foreshore due to a greater number and intensity of storm surges is also a significant issue. Rising temperatures are having an impact on heat-related health stress of our environment and is also acutely felt by those who are the most vulnerable in our community.

All Victorian Councils are subject to **legislation and policy**, which is constantly under review and subject to changes. With government funding being reduced and more expectation being placed on Council's to fill this gap, ensuring we can survive and thrive in a changing environment will require us to adapt and consider new ways of managing our natural environment and assets.

By **embracing technology** we can gather data that will help us do this. For example, new technology, real-time data and connectivity will help us plan our public spaces to be cooler, water our parks only when needed and let you know when an electric vehicle charging station is free.

A growing City with a road network that is at capacity and cannot be increased, requires a rethink in how more sustainable modes of **transport** can be used. Integrated transport infrastructure and services can support sustainable and healthy behaviours like safe walking, bike riding and the use of public transport. As **changing economic conditions** mean that more of our community will travel outside the municipality for work, making more sustainable travel choices will be more important than ever.

The challenge of environmental sustainability is not just limited to the City of Port Phillip, it is a worldwide issue. This strategy outlines the contribution we can make at the local level. It is also an important part of addressing our commitment to the Global Covenant of Mayors for climate and energy and the United Nations Sustainable Development Goals. Both agendas signify a global commitment to end poverty, safeguard the planet and ensure prosperity for cities world-wide.

The City of Port Phillip is not alone in facing the environmental challenges of the future. We have the opportunity to work with governments and research organisations from all over the world to develop ways of combating these challenges on a local scale. Creating a thriving community resilient to the future impacts of climate change is a major priority for the City.

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<sup>1</sup> Forecast.id projections

# Global challenges, local impacts



## Big opportunities exist

Changing environmental conditions will require us to think about how we deliver services to ensure we keep our residents and visitors safe.

As a growing municipality, our commitment to caring for our City and to not only maintain but enhance our local environment, is more important than ever.

We can only do this by:

### Doing the right things

Understanding our current and future challenges, and evaluating our impacts to focus our investment and efforts in programs and projects that have tangible benefits for our community.

### Doing things with partners

Leveraging our strong and productive relationships with state and local government, not-for-profit organisations, research organisations and community groups to maximise our collective impact.

### Doing things right

Inspiring our community through demonstrating environmental leadership in our own operations. Ensuring our assets and services are managed effectively and efficiently to facilitate our community to reduce their environmental impact.

### Doing things differently

Embracing the rapid evolution of technology and investing in our technology systems to make it easier and cheaper for Council and the community to improve environmental outcomes.

# Where are we now?

From our community to our heritage buildings, we are a City of personality and character. Covering an area of 21 square kilometres, we are one of the smallest municipalities in Victoria, we are however the most densely populated. Half of our community reside in rented accommodation. Port Phillip is also home to 19,441 businesses which employ over 87,000 people.

Our proximity to the city, the 11 kilometres of bay foreshore, beautiful tree-lined streets and the many attractive parks and open spaces, makes Port Phillip a popular destination for residents, businesses and tourists. As a City, we attract 2.8 million visitors a year, second only to the City of Melbourne as the most visited municipality in Victoria.

This is the community and the environment that we are committed to protecting and enhancing. This Strategy responds to the challenge of a growing population and changing environmental conditions, providing a pathway to remain the bold, liveable, caring and beautiful place we are today.

The changing climate we are already experiencing in our City brings many real challenges that demand a considered response:

- Lower than average rainfall means that water supply is estimated to be reduced by up to 11% by 2020.
- Rising temperatures will result in more heat-related health stress and deaths.
- Vulnerability to rising sea levels as much of Port Phillip is only one to three metres above sea level.
- Increased erosion of the foreshore due to an increase in the number and intensity of storm surges.

Already Victoria's most densely populated municipality, a growing population puts considerable strain on our environment:

- Our resident population is projected to grow by 23% by 2027.
- Our worker population will also rise dramatically with Fishermans Bend expected to bring 33,715 more jobs to Port Phillip by 2050.

As an established municipality, opportunities to influence our urban environment could be hindered by the lack of available public space and volume of established infrastructure. However, Port Phillip is home to an engaged, committed community which creates opportunities to unlock unique collaborative solutions.

Combine this with emerging technology and further opportunities will become apparent.

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Our consumption of natural resources is measured using ecological footprinting. By looking at how much energy and water we use, what type of food we eat and what we throw away, we can calculate the number of global hectares of land used to support our lifestyle. This can be then translated into the number of planets needed if everyone on earth lived the same way.

The average Australian has an ecological footprint of 6.87 global hectares. – the equivalent of a 4 planet lifestyle.\*

\*Global Footprint Network. (2018). National Footprint Accounts – Edition 2018. Available at: <http://data.footprintnetwork.org>

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Sustainability-focused technologies, like battery storage, bio digesters and electric vehicles, are rapidly developing and could support Council and the community in lowering emissions. Our continued investment in technology systems will allow us to capture and analyse large amounts of data to inform our strategic objectives and evaluate our impacts.

We have strong and productive relationships with state and local governments, not-for-profit organisations and community groups. Whether it's the Melbourne Renewable Energy Project, the South East Councils Climate Change Alliance or the Cities Power Partnership, we are able to leverage these partnerships to maximise our impact.

## Listening to our community

Most significantly, we are proud to have an engaged and committed community who are passionate about sustainability. As a Council, we know the importance of working with our community to meet these challenges head on and we need your help.

We have engaged with the community through a number of sustainability surveys, forums and focus groups, to understand your concerns.

You told us you wanted;

- More focus on reducing our City's carbon emissions
- A proactive approach in adapting to climate change
- To get people out of their cars through better public transport connections<sup>2</sup>
- Council to provide more information and education to support behaviour change
- Council to play a leadership role in supporting the community to take sustainability actions.

You also told us that you want actions that have real, measurable outcomes. We are committed to tracking and reporting Port Phillip's sustainability and adaptation progress through measurable indicators for each of the five outcomes.

We've listened to what you said and incorporated international best practice, current research and what we have already learned, to shape and inform a Strategy that will guide us all to achieve our vision together.

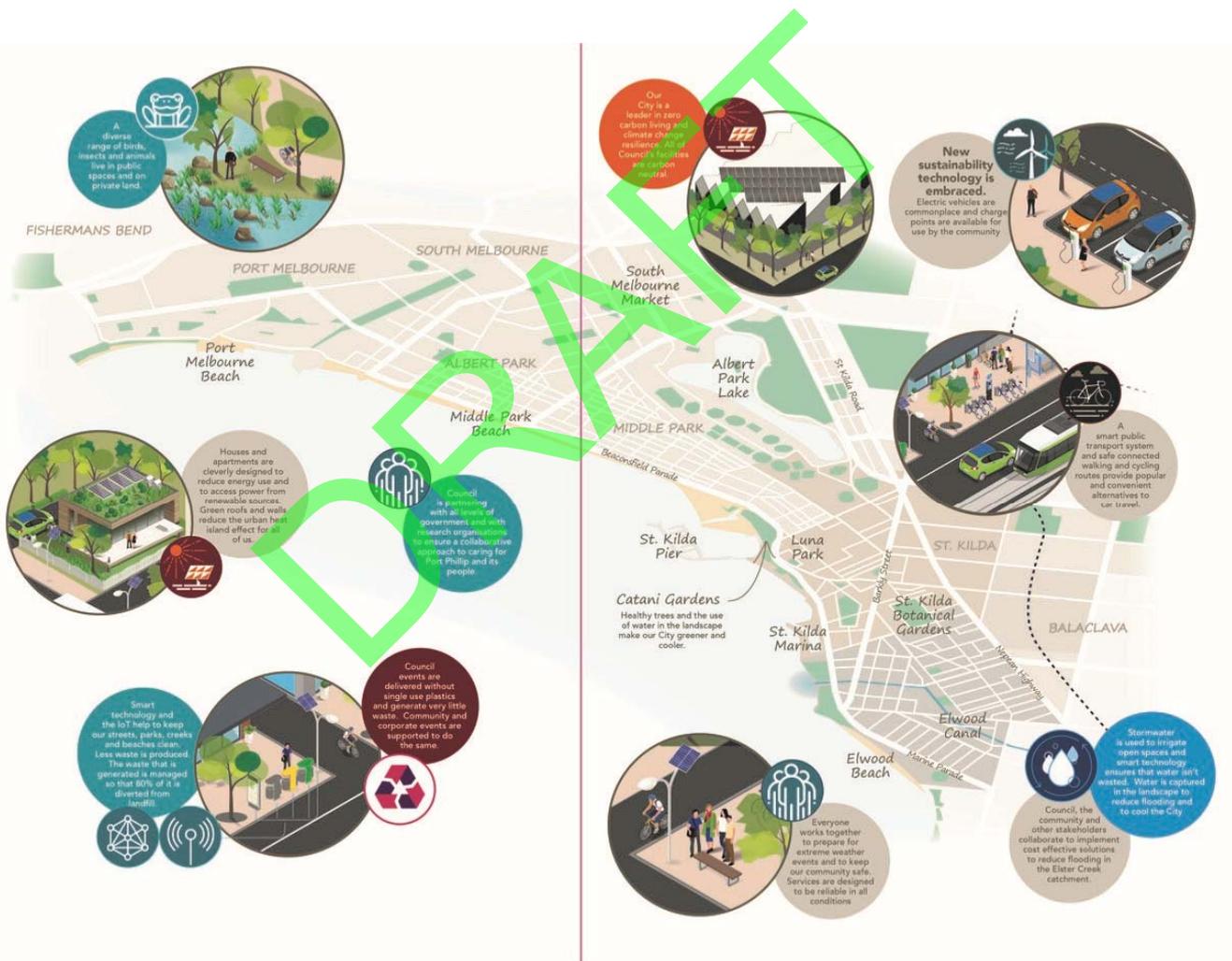
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<sup>2</sup> Future Streets, Council's Integrated Transport Strategy will be developed in 2018

# What will be different

The City of Port Phillip has a vision to be a beautiful, liveable, caring, inviting, bold and real City. This vision will be realised through delivering the six directions in the Council Plan.

Our sustainability vision is to be a City that has smart solutions for a sustainable future. This strategy embeds change and collaborative actions across a range of council services including: waste management, transport, urban design and city planning, open space planning, foreshore management, economic development and tourism and health and wellbeing to deliver on these outcomes.



# Our partners

The key to creating a sustainable Port Phillip is working with others. Our community, local and state government partners, research organisations and private industry all have a critical role to play.

Our city is affected by Federal and State legislation and policies, the actions of neighbouring councils, the businesses and organisations that operate within our boundaries and everyone that lives, works and visits here.

This context presents both opportunities and challenges for delivering the actions in the plan. In some instances, we will have direct control over specific actions, especially those relating directly to Council operations. In other cases, we will advocate to other levels of government for change and leverage opportunities to benefit our community.

Across Port Phillip there are already hundreds of organisations, businesses and individuals showing leadership, implementing solutions and making sustainability part of everyday life. Building on our history of success, we must continue to come together and scale up our activities.

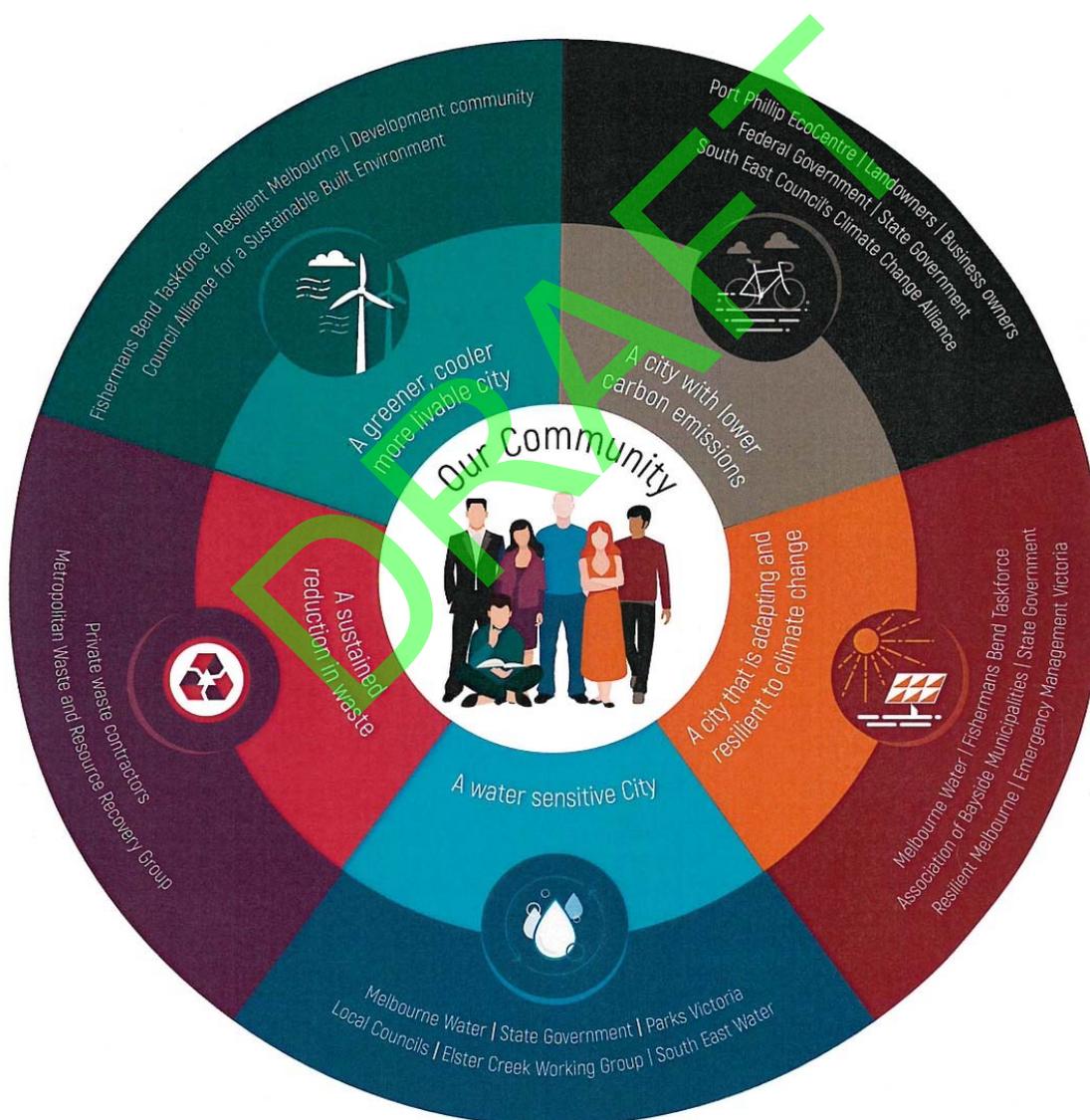
Each of us have a role in creating smart solutions for a sustainable future.

## The role of Council

1. **Trusted service provider:** Providing high quality assets and services that are managed sustainably to ensure we minimise environmental impact.
2. **Trusted partner and broker:** Advocating to and partnering with State, Federal, and other local governments and research organisations to drive systemic sustainability improvements in response to community needs.
3. **Trusted advisor and agent:** Working efficiently to achieve City vision and strategic directions through delivering programs that enable sustainability practices in homes and businesses.
4. **Trusted steward:** Showcasing best practice sustainability through our own operations and trialling new ways of working to inspire our community.
5. **Monitoring and Reporting:** Monitoring and reporting against the key sustainability indicators outlined in this Strategy to develop a shared understanding of municipal progress and identify opportunity areas.

## Key partners

The City of Port Phillip works with key partners to deliver community focused solutions, drive regional outcomes and ensure efficient use of our resources. The initiatives outlined in this strategy will require significant collaboration across the public and community sector organisations, the private sector and our communities. During the lifecycle of this strategy we expect that the way we work with our partners will vary depending on the requirements of each stage of implementation. Council values the support of our partners in helping us deliver the important initiatives in this strategy, as we recognise we could not achieve them alone.



As a local government, Council exists within the larger government system. We are directly affected by the action or inaction that occurs in other municipalities and at the State and Federal level. Through collaboration and partnerships, we play a role in moving toward a system-wide approach to sustainability.

Through the development of *A Sustainable Future* a number of priorities that Council will work with others to realise were identified.

#### Working across Government

- Planning scheme amendments that deliver stronger outcomes for sustainable design, stormwater management, management of waste and action on climate change adaptation.
- Upgrade of sustainability assessment tools available to the public.
- Minimum mandatory standards for rental properties to improve thermal performance, ensure appropriate heating and cooling devices and deliver lower energy bills.
- Minimum thermal safety standards in the planning scheme to drive improved energy efficiency and thermal safety and comfort of buildings.
- Funding that supports low-income households and the energy efficiency of public housing and community housing stock, including support to upgrade high cost, high energy-using household fixtures, such as hot water systems, heating and cooling.
- Address climate vulnerability among public housing tenants, with a particular focus on heat stress.
- Support health and wellbeing service delivery and needs in Port Phillip, with consideration to increasing climate related health concerns such as extreme heat.
- The sustainable management and health of our beaches and Port Phillip Bay.
- State run randomised onsite compliance checks for new buildings and landscapes.
- The development of a metropolitan organic waste processing facility.
- Reduced use of balloons, plastic bags and single use plastics.

#### Melbourne Water and Councils within Yarra and Elster Creek catchments

- Collaboration to ensure a whole of catchment approach to flood prevention.
- Continued infrastructure upgrades to decrease flood risks locally and downstream.
- Continued stormwater catchment and treatment.

## The role of residents and businesses

The choices you make every day have a massive impact on the sustainability of our municipality. You can choose to recycle, to reduce the energy and water you use, take public transport, plant a tree and so much more. When you do these things, you not only make a direct contribution to Port Phillip's sustainability, you also play a powerful role in influencing those around you.

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*Council is committed to supporting our community to become more sustainable. The **Sustainable City Community Action Plan** details exciting initiatives that Council will take over the coming years to support the community to reduce their greenhouse gas emissions, waste and water consumption. Get involved and keep up to date with these programs by subscribing to the Sustainable Port Phillip newsletter at [www.sustainableportphillip.com](http://www.sustainableportphillip.com)*

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## The role of landlords

More than half of our residents live in rented accommodation. This results in landlords holding significant power and influence over what infrastructure is installed in their properties, including air conditioning, hot water, lighting, and water systems. They also control the quality of the building shell and can decide to install things like insulation and draft proofing. The combination of these factors has a huge impact on occupant comfort, utility costs and environmental impacts.

We invite landlords to consider upgrading tenanted properties to improve water and energy efficiency. This will not only support liveability for your tenants, it will also contribute to the appeal of your property in a rapidly changing marketplace.

## Get involved

Join us in creating smart solutions for a sustainable future. Come along to a workshop, join a local sustainability focused community group, visit the EcoCentre ([ecocentre.com](http://ecocentre.com)) or Council's sustainability website [www.sustainableportphillip.com](http://www.sustainableportphillip.com)

### Water Sensitive City partners

Reducing the impact of flooding in the Elster Creek and particularly in Elwood, is a challenging problem. The creek runs through four Council areas and is managed by Melbourne Water. Elwood is heavily impacted by the rain that falls in Glen Eira and Bayside Council areas. Council will continue to advocate for catchment-wide solutions. We must rely on our government partners to help reduce the impact felt by the community.

### Water Sensitive City partners

Dumped rubbish, litter, oils and other pollutants can end up in our stormwater system and eventually flow into the Bay. This is where we rely on our community to help us create a safer, cleaner environment and a healthy Bay. By partnering with the Port Phillip EcoCentre, Beach Patrol and Love Our Streets volunteers, we can educate our community about the harmful impact pollution has on our Bay.

### Climate Adaptation partners

Council is committed to the Global Covenant of Mayors for climate and energy (formerly the Compact of Mayors); a global coalition of city leaders addressing climate change by pledging to cut greenhouse gas emissions and prepare for the future impacts of climate change. Our partnership with Resilient Melbourne also enables us to access and partner with researchers and other local governments to identify ways to adapt to climate change.

Cooler, greener more liveable City partners

The planning scheme offers significant potential to influence new developments and retrofitting of our built environment, but there are also limits to what it can achieve. We need to work with our government partners to advocate for housing that will better cope with our future environment.

Cooler, greener more liveable City partners

75% of the land in the city is privately owned. In order to create a cooler and greener city where heatwaves have less impact, we need the community's help. Opportunities to keep large trees in our environment while we face the challenge of densification and population growth is a complicated problem. We must look to other options like green roofs, walls and facades.

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# A greener, cooler, more liveable City



We live, work and play in a landscape of natural beauty with millions of residents and visitors enjoying our beaches and lush open spaces each year.

Good planning in the past has left a legacy of beautiful and green historic parks, public and private gardens and many tree lined streets that contribute to a mature tree canopy cover and greening across most of our neighbourhoods.

However with increased densification, more concrete and average temperatures in Melbourne increasing year on year, we are finding that the City is getting hotter not only during the day but also overnight. This is known as the urban heat island impact (UHI) and it has a large impact on our community's health and wellbeing.

**Through this strategy we will continue to deliver green and blue connections which support our local animals and an active community who enjoy a cooler, more liveable city.**

We have the audacious goal of making the whole city greener and for that we need your help. Our key challenge is that 75% of the land in the City is privately owned. All landowners in the city hold some responsibility for creating a greener, cooler city. Through the actions in this strategy, Greening Port Phillip and our partnership with the Port Phillip EcoCentre and various environmental groups we are aiming to expand our urban forest, increase porous surfaces and reduce the urban heat island impact across the whole of the City.

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Green and blue connections use both vegetation and water to enhance public open spaces, making cities more vibrant, inviting in biodiversity and cooling the surrounding area. These spaces can be natural or highly urbanised streetscapes. Also known as Blue-Green infrastructure, this school of urban planning has been proven to have a positive impact on the liveability of a City.\*

\*Making Cities Liveable - [http://issuu.com/ramboll/docs/bgi\\_\\_new?e=4162991/34845282](http://issuu.com/ramboll/docs/bgi__new?e=4162991/34845282)

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## Measuring Progress

<b>Street tree canopy cover</b>	19% (2015/16)	10% increase (2027/28)
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Council's Greening Port Phillip – An Urban Forest Approach, also contains suburb-based targets which are reported every 5 years.

<b>Canopy cover on private land</b>	11% (2015/16)	10% increase (2027/28)
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## Recent Highlights:

- Council partnered with the Boon Wurrung Foundation, the EcoCentre and Parks Victoria to establish natural resource corridors.
- Achieved a net gain of 4101 trees on public land.
- In partnership with inner Melbourne Councils, developed the Growing Green Guide – a 'how to guide' for installing green walls, roofs and facades.

• **Key partners**

- The community
- Resilient Melbourne
- Victorian Government
- Port Phillip EcoCentre

**Key linkages**

- Greening Port Phillip Strategy
- Water Sensitive City Plan<sup>3</sup>
- Climate Resilience Plan<sup>4</sup>
- Public Spaces Strategy<sup>5</sup>

**Cooler, greener, more liveable City**

		2018-2020	2021-2024	2024-2028
Action 1	Implement the Greening Port Phillip Strategy and Street Tree Planting Program, including ongoing investment in species diversification, park trees, streetscape improvements and a stronger focus on biodiversity and climate tolerant species selection.			
Action 2	Implement the foreshore and hinterland vegetation management plan			
Action 3	Maintain heat mapping and solar analysis data. Use data, along with Socio-Economic Index for Areas and flood data to guide project and service delivery. Communicate information to the community through a web based platform.			
Action 4	Deliver technical guidance and implement regulatory interventions to protect vegetation and increase canopy cover on private property, including green roofs, walls and facades.			
Action 5	Encourage and enforce sustainable, climate resilient buildings through the planning process by applying environmentally sustainable design planning policy guidelines and by providing clear, accessible information to the community.			

*Studies have shown that a well-placed shade tree can reduce energy bills associated with cooling a house, by 30%\**

*\* Peak Power and cooling energy savings of shade trees; Akbari et Al; Energy and buildings V25 Issue2 1997*

<sup>3</sup> To be developed in 2018/19

<sup>4</sup> To be developed in 2018/19

<sup>5</sup> In development

# A City with lower carbon emissions



One of the most significant challenges the world faces is transitioning away from our use of fossil fuels and reducing our carbon emissions. Council has joined with the state government and countries around the world to play our part to reduce greenhouse gas emissions in an attempt to keep the global temperature rise to under two degrees.

To do this we must work collaboratively. Council produces only 0.4% of the overall emissions in the City and as we move towards a low carbon future we need to work with our community.

We are committed to taking real action and to supporting our community to do the same. Through building houses, apartments and commercial properties with insulation and double glazing to make them more comfortable without the need for heating and cooling, through increasing the efficiency of lighting and appliances and through increasing access to renewable energy we can create an energy smart lifestyle.

In 2015 at the United Nations Framework Convention on Climate Change, the international community committed to the **Paris Agreement on Climate Change** – to keep the rise in global temperatures to below 2°C above preindustrial levels, and to work towards limiting the rise to 1.5°C. Australia ratified this agreement on 9 November 2016.

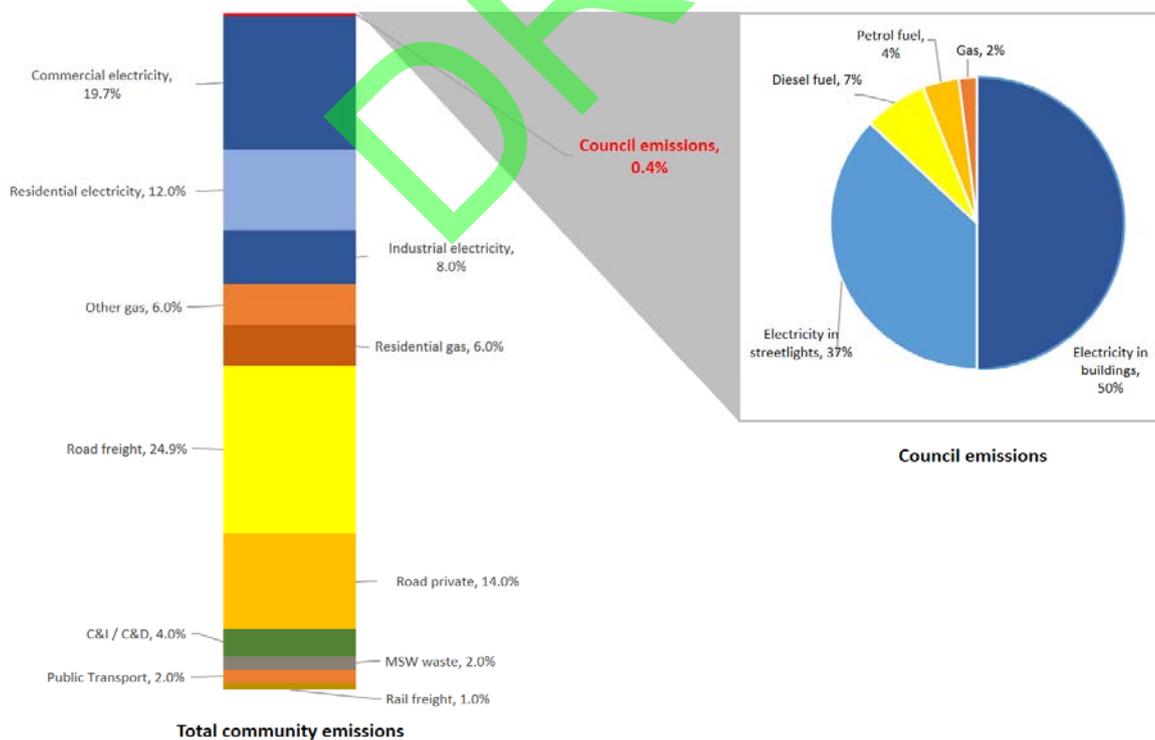


Figure 3 – Greenhouse gas emission breakdown for the whole of the City.

## Measuring Progress

### Greenhouse gas emissions

#### Council

Baseline (2016/17)	6,464tCO <sub>2</sub> e
2027/28	Zero net emissions

#### Community

Baseline (2016/17)	1,700,000tCO <sub>2</sub> e <sup>6</sup>
2027/28	Zero net emissions by 2050 <sup>7</sup> (interim emissions to 2025 to be confirmed in late 2018)

### Electricity from renewable sources

#### Council

Baseline (2016/17)	293kW
2027/28	100% (includes onsite and offsite)

#### Community

Baseline (2016/17)	5,100kW
2027/28	29,000kW - 50% penetration <sup>8</sup>

### Energy Consumption in Council buildings

Baseline (2016/17)	8,900MWh
2027/28	7,360MWh

#### Key partners

- The community
- Victorian Government
- South East Council's Climate Change Alliance
- Council Alliance for the Sustainable Built Environment

#### Key strategy linkages

- Sustainable City Community Action Plan
- Climate Resilience Plan
- Future Streets

<sup>6</sup> This figure is an estimate based on the best available data and takes into account emissions generated through energy use, transport, waste and water across the residential, commercial and industrial sectors in our municipality. It has been compiled in accordance with the Global Protocol for Community Scale Greenhouse Gas Emission Inventories. It should be noted however that due to the unavailability of publicly available data sets some of the supporting data is based on interpolation from state wide and national emissions information.

<sup>7</sup> Aligned with Victorian State Government GHG emissions target for whole of state as per Victorian Climate Change Act 2017

<sup>8</sup> Based on standalone and semi-detached homes as per 2016 ABS data

A City with lower carbon emissions		2018-2020	2021-2024	2024-2028
Action 6	Invest in renewable energy and energy efficiency in Council Buildings.			
Action 7	Increase the sustainability of South Melbourne Market by installing renewable energy.			
Action 8	Embed sustainability into Council's procurement and investment policies and practices, including minimum sustainability performance requirements for suppliers.			
Action 9	Introduce green lease provisions targeting tenant energy consumption, cleaning and waste management into new and renewed leases of Council buildings.			
Action 10	Transition the Council fleet to zero emissions, prioritising electric vehicles and charging stations, traditional and electric bikes, car share and low emissions vehicles.			
Action 11	Where viable, convert Council buildings to fully electric power through maintenance and renewal programs.			
Action 12	Deliver an energy efficient street lighting upgrade (category V lights).			
Action 13	Deliver an incentive program that supports households, particularly those on a low income, to invest in solar and pay back their investment through an alternative financing arrangement.			
Action 14	Work with partners to drive the uptake of Environmental Upgrade Agreements for commercial and (legislation pending) residential buildings.			
Action 15	Work with the community to determine the viability of a collective purchase of offsite renewable energy for a consortium of apartment buildings.			
Action 16	Seek a partnership to test and increase uptake of solar retrofit and energy sharing platforms for low and mid rise apartment buildings.			

Action 17	Enable the community to increase the sustainability of their homes during the planning and design phases.			
Action 18	Support the uptake of electric vehicles, including installation of public charging stations and investigation of planning controls to require charging infrastructure in new developments.			
Action 19	Advocate to developers for strong commitments to low energy precincts and properties above state planning policy regulations.  Advocate to the Fishermans Bend Taskforce and State Government for planning policy regulation to support their commitment to a 6 Star Greenstar Community in Fishermans Bend.			

### Recent Highlights

- Council has committed to purchase all of Council’s electricity through the Melbourne Renewable Energy Project.
- Council Installed a 172kW solar system on St Kilda Town Hall, reducing emissions by 300 tonnes and saving Council \$44,000.
- Facilitated the community to install 102 solar systems on homes.

### Melbourne Renewable Energy Project (MREP)

Council is participating in an innovative wind power project which will reduce our total emissions by 87%. Everything from street lights to Council buildings, will be powered by zero-emission electricity, starting in 2019.

We are part of an Australian first and a model for the future – partners working together for shared sustainability and prosperity, and using new, market-based approaches to transform and decarbonise Australia’s electricity system.

Led by the City of Melbourne, the MREP partners plan to purchase 88 GWh of electricity each year, the equivalent to powering more than 17,000 households in Melbourne annually, and, because the wind farm will produce more electricity than the MREP partners need, the total emission savings will be even greater.

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## Transport and Greenhouse Gas Emissions

14% of our City's greenhouse gas emissions are due to private vehicle use. As a growing municipality reducing car use is a key way to reduce our City's overall impact on carbon emissions and air pollution. Future Streets – Council's Integrated Transport Strategy (currently in development) contains actions that will help residents and visitors drive less and hop on public transport, walk or ride their bikes more.

By 2027 Council is aiming for:

- Bike riding to be 10% of all daily trips across our City
  - Walking to be 48% of all daily trips across our City
  - Public transport to be 13% of all daily trips across our City
  - Car travel to be 29% of all daily trips across our City
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# A City that is adapting and resilient to climate change



Climate change is already having an impact around the world. Preparing for a different future, one where extreme heat events, flooding, coastal storm surges and drought are more prevalent, requires commitment, innovation and collaboration.

How we respond and adapt to climate change is crucial for our community, especially the most vulnerable. Adaptation planning is based on:

- Understanding expected climatic changes
- Understanding our current services and assets and how they may cope in the future
- Predicting how vulnerable our community and environment is to climate risks
- Using this information to establish ways we can manage these risks and support our community to be resilient and our environment to thrive
- Monitoring how we respond and adjust our approach as needed.

We are getting ready for the future now, proactively preparing our assets and thinking about how we can best support our community.

**We aspire to increase our resilience, ensuring changing environmental conditions won't affect Council's ability to deliver the services that support our business community and residents to be resilient to extreme weather events.**

People are the heart of our city. Through the actions contained in this strategy and partnering with community organisations, emergency services and all levels of government, we will enhance our city, maintain our standing as Melbourne's playground and keep our community healthy and safe.

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The extreme heat experienced in Melbourne between 14-17 January 2014 is estimated to have cost business within City of Melbourne approximately \$37 million in lost revenue. 59% of businesses reported an impact on the comfort, motivation or moral of their workforce. 40% reported an impact on the reliability of their workforce. 62% experienced additional operational costs such as increased use of air conditioning.

**Source:** A Quantitative Research Report on: 2014 Heatwave Business Impacts Social Research, Sweeny Research, 24 March 2014. Commissioned by City of Melbourne. [melbourne.vic.gov.au/sitecollectiondocuments/eco-impact-of-heat-waves-on-business-2014.pdf](http://melbourne.vic.gov.au/sitecollectiondocuments/eco-impact-of-heat-waves-on-business-2014.pdf)

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## Measuring progress

Measuring the impact that the actions we are taking will have on our community's resilience to climate change is difficult as most of the benefits are dependent on an individual's perception of comfort and safety, which is different for everyone. To ensure we keep track of how the community is impacted by climate change we will monitor several indicators and use these to help us plan for better service delivery.

These indicators are;

- Actions taken to retrofit Council buildings to combat climate change,
- Number of houses impacted by extreme weather,<sup>9</sup>
- Temperature hotspots,
- Use of Council facilities in extreme weather.

## Recent highlights

- Council joined the South East Council's Climate Change Alliance in 2016, partnering to deliver climate adaptation and carbon mitigation projects regionally.
- Through our involvement in the Association of Bayside Municipalities, we joined with nine neighbouring Councils to develop the Bay Blueprint. The Blueprint is a coastal adaptation planning framework that ensures Council's use a consistent methodology to address coastal impacts of climate change.
- Council heat mapped the city to understand where the 'hotspots' are so we can concentrate our efforts to cool particular locations through trees, shading and water in the landscape.

### Key partners

- The community
- Victorian Government
- South East Council's Climate Change Alliance
- Emergency Management Organisations
- CSIRO

### Key strategy linkages

- Climate Resilience Plan<sup>10</sup>
- Sustainable City Community Action Plan
- Greening Port Phillip Strategy
- Asset Management Strategy

<sup>9</sup> Subject to data being made available by the insurance industry

<sup>10</sup> To be developed in 2018/19

A City that is adapting and resilient to climate change		2018-2020	2021-2024	2024-2028
Action 20	Deliver behaviour change and education programs through the Sustainable City Community Action Plan and support environmental education programs in schools.			
Action 21	Contribute to the EcoCentre redevelopment (subject to external funding). Continue to invest in EcoCentre programs that support an environmentally aware community.			
Action 22	Examine the effectiveness of establishing a Port Phillip energy foundation or partnering with an existing foundation to undertake, advocacy, research, advisory and community engagement initiatives.			
Action 23	Revise the Climate and Greenhouse Adaptation plans to identify which tools will help the community increase their resilience to climate change including managing the impact of heat and extreme weather			
Action 24	Conduct vulnerability assessments and financial risk modelling of Council's assets and develop minimum environmental performance standards and design guidelines for Council buildings. Embed these standards into our maintenance and construction programs.			
Action 25	Assess recommendations from the Coastal Hazard Vulnerability Assessment and develop an implementation strategy to help protect the City of Port Phillip against sea level rise and inundation.			
Action 26	Investigate and complete concept design where viable, of blue-green infrastructure that protects against flooding and enhances the natural environment.			
Action 27	Investigate alternative funding models for environmental initiatives to deliver priority projects.			

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*Council works closely with Emergency Services Victoria and the State Emergency Service to ensure the safety of our community during storms, floods and heatwaves. Council plays a supporting role during these times and a maintenance role after the event. During the emergency, the SES and Emergency Services are the people who respond and should be who our community calls. These SES also provides education and support materials to ensure you can prepare for these types of weather events. Visit <http://www.portphillip.vic.gov.au/be-alert.htm> for more information.*

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# A water sensitive City



Here in Port Phillip we have a deep connection to water. Port Phillip Bay is at our doorstep, Albert Park Lake at our core, the Yarra River to our West and Elster Creek meanders its way through the East.

Creating a water sensitive City requires collaboration with Melbourne Water and South East Water to manage all aspects of the water cycle – mains water, stormwater, wastewater and groundwater, in an integrated way. Climate change has had a significant impact on how we use urban water and in a growing City there is more demand than ever before, being placed on our parks and open spaces.

Through treating our City as a catchment, we plan to capture water for use, minimise the pollutants flowing through the stormwater system and work with our partners to reduce flooding.

**Through this strategy we will not only maintain but enhance our public spaces by using water efficiently, as well as reducing pollutants flowing into Port Phillip Bay ensuring its health into the future.**

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*The redevelopment of Fishermans Bend provides a fantastic opportunity for the municipality to work with Melbourne Water and the City of Melbourne to create integrated water management solutions for an area subject to flooding and sea level rise. We have been working with international consultants to identify opportunities to create green streets, public parks and town squares specially designed to capture and treat stormwater through landscaping.*

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But to create a truly water sensitive City we need the community's help and understanding. Through policy changes, regulation and guidance Council can for example support developers and home owners to reduce the amount of concrete and paving on private property ensuring that water has a chance to soak into the ground. This will have multiple benefits including groundwater recharge, cooling the City and reducing flooding. We may also need to, at times, disrupt parks to install water harvesting or upgrade irrigation to make them more resilient to future droughts delivering a better long-term outcome for our community.

## Measuring progress

### Mains water use

#### Council

Baseline (2016/17)	238ML/y
2027/28	203ML/y

#### Community

Baseline (2016/17)	178L/person/day
2027/28	155L/person/day

### Pollutants removed annually (% decrease on baseline)

Baseline	(2016/17)	2027/28
Total suspended solids	71,369 kg/y (10%)	27%
Total phosphorous	139 kg/y (7%)	20%
Total nitrogen	1,033 kg/y (7%)	15%

#### Key partners

- The community
- Victorian Government
- Melbourne Water
- South East Water
- Cooperative Research Centre for Water Sensitive Cities
- Neighbouring local governments

#### Key strategy linkages

- A Water Sensitive City<sup>11</sup>
- Climate Resilience Plan<sup>12</sup>
- Sustainable City Community Action Plan
- Greening Port Phillip Strategy
- Public Spaces Strategy<sup>13</sup>

### Recent highlights

- Gaining commitment from Melbourne Water and neighbouring local governments in the Elster Creek Catchment to collectively work on flooding issues.
- Council has recently installed it's 200<sup>th</sup> raingarden in our streetscape to treat stormwater and remove pollutants before they enter the Bay.
- CCTV investigation of the City's stormwater system to assess their condition and identify opportunities for improvements has commenced.

### A water sensitive City

		2018-2020	2021-2024	2024-2028
Action 28	Reduce water use by renewing irrigation infrastructure and integrating real time controls and centralised management while maintaining highly valued green spaces.			
Action 29	Investigate and implement high value opportunities for stormwater harvesting to provide alternatives to potable water use for key Council open spaces.			
Action 30	Continue to support plans for recycled water processing at Fishermans Bend, with water being			

<sup>11</sup> To be developed in 2018/19

<sup>12</sup> To be developed in 2018/19

<sup>13</sup> In development

	used by residents and for irrigation of Council reserves.			
Action 31	Investigate mechanisms to require onsite stormwater detention in new developments and technology to monitor tank levels and empty prior to storm events.			
Action 32	Implement Elster Creek Action Plan.			
Action 33	Develop and implement a Stormwater Asset Management Plan and invest in drainage improvements.			
Action 34	Plan and deliver Water Sensitive Urban Design projects to reduce the amount of pollution entering Port Phillip Bay.			
Action 35	Complete a study of permeability potential for Council land and introduce place-based permeability targets.			
Action 36	Update policy, engage and consult with the community to achieve greater permeability on private property.			
Action 37	Develop a Water Sensitive City Plan to drive an integrated approach to water conservation and management.			

**CASE STUDY - Accepting Water in the landscape - Saint Anne’s Place, Copenhagen**

Copenhagen is a leader in flood management. This low-lying city is working towards being prepared for extreme rainfall events and the city’s Cloudburst Management Plan sets out priorities and methods for dealing with extreme rainfall. It is not feasible to protect the city from flooding during extreme events, however this plan sets out an acceptable level of flooding.

Throughout the city streetscapes and open spaces have been redesigned to temporarily hold water during times of extreme rainfall. Saint Anne’s Place is one such location where effective, simple flood protection has been integrated into the landscape. By dropping the park down from the main road they have created a temporary storage for flood waters. Once flood waters have drained, the park will return to normal use; a great example of designing with the future in mind.

# A sustained reduction in waste



As a City we are experiencing significant growth and densification. This is placing increased pressure on waste services, however it also stimulates the need for service improvements. To respond to these changes a new 10-year Waste and Resource Recovery Strategy is currently being developed.

**The strategy is a roadmap detailing how we will become a leader in municipal waste management through investment in new technologies, focused education campaigns and better planning.**

In addition to our unique challenges the waste industry in Victoria is experiencing significant stress, including the closure of multiple landfills and uncertainty within the recycling industry. These combined pressures will result in the increased costs to manage waste.

Along with challenges, there are opportunities for City of Port Phillip regarding waste management. Fishermans Bend urban redevelopment within Port Phillip has caused a rethink as to where our services for waste should be located, while maintaining the high standard of services that the community expect. The option to relocate the depot and transfer station facilities has created potential opportunities to increase the use of 'Smart Solutions' for waste management, and to seek out partners to share the new facilities to ensure full effectiveness and efficiency of waste management in the area.

Despite all the technological improvements that will be implemented, minimisation of waste is the biggest challenge we face as a Council. This is where we need your help, through:

- avoiding excess and unrecyclable packaging, like using your own coffee cup and avoiding disposable single-use plastics.
- knowing what you can recycle – Most bins have a list of what can be recycled<sup>14</sup>.
- keeping our streets and beaches litter free by using public bins, and accessing the free hard waste collection service.<sup>15</sup>

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*Did you know that the average Victorian household throws out over \$2200 per year worth of food? Most of this food waste is preventable by better planning of meals and the right storage of food. You can also start a compost or worm farm for your food and garden scraps that are unavoidable. Even if you live in an apartment, with a few simple changes, you can cut what goes to landfill by half.*

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<sup>14</sup> Council can support you to learn what you can recycle by providing free stickers to put on your bin and signage for apartment block bin bays. Contact ASSIST on 9209 6777.

<sup>15</sup> Contact ASSIST on 9209 6777 to book a collection.

## Measuring progress

### Percentage of waste diverted



#### Council

Baseline (2016/17) 47%

2027/28 80%<sup>16</sup>

#### Community

Baseline (2016/17) 33% (houses)

22% (multi-unit dwellings)<sup>17</sup>

2027/28 80% (houses)

80% (multi-unit dwellings)

### Waste generated in Council Facilities



#### Council

Baseline (2016/17) 61kg/FTE/year

2027/28 4.5kg/FTE/year

### Recent highlights

- A GaiaRecycle unit installed at the South Melbourne Market means 360 tonnes of food waste converted to organic fertiliser each year.
- Solar powered, 'Big Belly' bins installed in public spaces increase the amount of rubbish that can be put in the bin before collection is needed.
- The City became a leader in recycling hard waste (collected from the kerb), with 70% of this waste being diverted from landfill. The state average is 15%

#### Key partners

- The community
- Victorian Government
- Metropolitan Waste and Resource Recovery group
- Sustainability Victoria

#### Key strategy linkages

- Sustainable City Community Action Plan
- Waste and Resource Recovery Strategy<sup>18</sup>

<sup>16</sup> Draft targets are subject to external funding partner commitments and will be confirmed in the Waste and Resource Recovery Strategy.

<sup>17</sup> Average of multi-unit dwellings from throughout Victoria – referenced from Sustainably Victoria

<sup>18</sup> To be developed in 2018

A sustained reduction in waste		2018-2020	2021-2024	2024-2028
Action 38	Develop and implement a new Waste and Resource Recovery Strategy.			
Action 39	Update waste management guidelines for apartments and implement education programs.			
Action 40	Work with partners to deliver the Inner Metro Sustainability Hub (IMSH) including land acquisition planning and refining preferred site to relocate the Depot Transfer station and potential new Advanced Waste Treatment facility.			
Action 41	Deliver a focused recycling program to increase waste diversion from landfill.			
Action 42	Pursue waste innovations in Fishermans Bend including undertaking a food diversion retrofit trial - insinkerators in existing homes in Fishermans Bend.			
Action 43	Optimise investment in litter bins and equipment.			
Action 44	Increase investment in street cleaning and review service.			
Action 45	Deliver service innovation and collaboration through the preparation of new waste service contracts.			

### Community having an impact

Beach Patrol, through the power of local residents and community spirit, is helping to clean the beaches of Melbourne.

Beach Patrol is a chain of volunteer community groups that donate an hour of their time each month to help keep the beaches cleaner and safer for the greater enjoyment of all. Starting in Port Phillip in 2009 with 3206 Beach Patrol - Middle Park, there are now more than 24 groups and 2200 people registered as volunteers helping to help keep our beaches clean.

Love Our Street, Beach Patrol's sister group, is a newer initiative where each Love Our Street group cleans a street in their area. All too often litter originates in the street then gets washed down to a beach. LOS volunteers tackle streets in their area to bring back their beauty and stop the litter from traveling downstream.

To get involved [www.beachpatrol.com.au](http://www.beachpatrol.com.au)

# Monitoring and Reporting

‘A Sustainable Future’ is a 10 year strategy. It will be reviewed every 4 years and updated if needed. We will be reporting our progress each year through Council’s annual report (unless otherwise stated).

## Measuring Council’s progress

Outcome	Indicator	Baseline	2020/21	2027-28
<b>A greener, cooler more liveable City</b>	Street tree canopy cover <sup>19</sup>	19% (2015/16)	2% increase on baseline (19.5%)	10% increase on baseline (21%)
	GHG emissions (tCo2-e)	6,464 (2016/17)	Zero net	Zero net
<b>A City with lower carbon emissions</b>	Electricity from renewable sources(%)	293 kW (2016/17)	100%	100%
	Energy consumption in Council Buildings (kWh)	8,900 MWh (2016/17)	7,190 MWh	7,360 MWh
<b>A City that is adapting and resilient to climate change</b>	Actions taken to retrofit buildings to combat climate change	Baseline & targets to be developed through Climate Adaptation and Greenhouse Action Plan		
<b>A water sensitive City</b>	Potable water use	238 ML/y (2016/17)	257ML/y <sup>20</sup>	203 ML/y
	Pollutant reduction load (kg/year)	(2016/17)		
	Total suspended solids	71,369	16%	27%
	Total phosphorous	139	12%	20%
	Total nitrogen (percentage reduction load/year)	1,033	10%	15%
<b>A sustained reduction in waste<sup>21</sup></b>	Percentage of waste diverted (%)	47%	55%	80%
	Waste generated in council facilities (t)	61Kg /FTE/y	TBC	4.5Kg /FTE/y

<sup>19</sup> Reported every 5 years

<sup>20</sup> The initial increase is to account for growth and increased watering and establishment of parks. Following this irrigation upgrades and efficiencies and more alternative water will result in an overall decrease towards 2027/28 targets

<sup>21</sup> Draft targets are subject to external funding partner commitments and will be confirmed in the Waste and Resource Recovery Strategy and

### Measuring our community's progress

Outcome	Indicator	Baseline	2021/22	2027-28
<b>A greener, cooler more liveable City</b>	Street tree canopy cover	11%	10% increase on baseline (11.2%)	10% increase on baseline (12.1%)
<b>A City with lower carbon emissions</b>	GHG emissions (tCo2-e)	1,700,000	Zero net emissions by 2050 <sup>22</sup> (interim emissions to 2025 to be confirmed in late 2018)	
	Electricity from renewable sources	5,100 kW	10,400 kW (18% penetration rate based on semi-detached homes)	29,000 kW (50% penetration rate based on semi-detached homes)
<b>A City that is adapting and resilient to climate change</b>	Indicators to be reported– number of houses impacted by extreme weather; temperature hotspots; use of council facilities during extreme weather.			
<b>A water sensitive City</b>	Potable water use	178l/p/day	155l/p/day	155l/p/day
<b>A sustained reduction in waste</b>	Percentage of waste diverted (%)	33% (houses) 22% (multi-unit dwelling)	TBC	80% (houses) 80% (multi-unit dwelling)

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<sup>22</sup> Aligned with Victorian State Government GHG emissions target for whole of state as per Victorian Climate Change Act 2017

# Appendix 1

## Actions and financial overview

<b>A greener, cooler more liveable City</b>	1. Implement the Greening Port Phillip Strategy and Street Tree Planting Program, including ongoing investment in species diversification, park trees, streetscape improvements and a stronger focus on biodiversity and climate tolerant species selection.	\$6,495,000
	2. Implement the foreshore and hinterland vegetation management plan	
	3. Maintain heat mapping and solar analysis data. Use data, along with Socio-Economic Index for Areas and flood data to guide project and service delivery. Communicate information to the community through a web based platform. Use data for reporting and to track intervention impact.	
	4. Deliver technical guidance and implement regulatory interventions to protect vegetation and increase canopy cover on private property, including green roofs, walls and facades.	
	5. Encourage and enforce sustainable, climate resilient buildings through the planning process by applying environmentally sustainable design planning policy guidelines and by providing clear, accessible information to the community.	
<b>A city with lower carbon emissions</b>	6. Invest in renewable energy and energy efficiency in Council Buildings.	\$6,458,000
	7. Increase the sustainability of South Melbourne Market by installing renewable energy.	
	8. Embed sustainability into Council's procurement and investment policies and practices, including minimum sustainability performance requirements for suppliers.	
	9. Introduce green lease provisions into lease licenses associated with tenanted Council buildings.	
	10. Transition the Council fleet to zero emissions, prioritising electric vehicles and charging stations, traditional and electric bikes, car share and low emissions vehicles.	
	11. Where viable, convert Council buildings to fully electric power through maintenance and renewal programs.	
	12. Deliver an energy efficient street lighting upgrade (category V lights).	
	13. Deliver an incentive program that supports households, particularly those on a low income, to invest in solar and pay back their investment through an alternative financing arrangement.	

	14. Work with partners to drive the uptake of Environmental Upgrade Agreements for commercial and (legislation pending) residential buildings.	
	15. Work with the community to determine the viability of a collective purchase of offsite renewable energy for a consortium of apartment buildings.	
	16. Seek a partnership to test and increase uptake of solar retrofit and energy sharing platforms for low and mid rise apartment buildings.	
	17. Enable the community to increase the sustainability of their homes during the planning and design phases.	
	18. Support the uptake of electric vehicles, including installation of public charging stations and investigation of planning controls to require charging infrastructure in new developments.	
	19. Advocate to developers for strong commitments to low energy precincts and properties above state planning policy regulations.  Advocate to the Fishermans Bend Taskforce and State Government for planning policy regulation to support their commitment to a 6 Star Greenstar Communities Rating through the Green Building Council of Australia (GBCA) in Fishermans Bend.	
<b>A City that is adapting to climate change</b>	20. Deliver behaviour change and education programs through the Sustainable City Community Action Plan and support environmental education programs in schools.	
	21. Contribute to the EcoCentre redevelopment (subject to external funding). Continue to invest in EcoCentre programs that support an environmentally aware community.	
	22. Examine the effectiveness of establishing a Port Phillip energy foundation or partnering with an existing foundation to undertake, advocacy, research, advisory and community engagement initiatives.	\$6,605,000
	23. Revise the Climate and Greenhouse Adaptation plans to identify which tools will help the community increase their resilience to climate change including managing the impact of heat and extreme weather	
	24. Conduct vulnerability assessments and financial risk modelling of Council's assets and develop minimum environmental performance standards and design guidelines for Council buildings. Embed these standards into our maintenance and construction programs.	

	25. Assess recommendations from the Coastal Hazard Vulnerability Assessment and develop an implementation strategy to help protect the City of Port Phillip against sea level rise and inundation.	
	26. Investigate and complete concept design where viability of blue-green infrastructure that protects against flooding and enhances the natural environment.	
	27. Investigate alternative funding models for environmental initiatives to deliver priority projects.	
	28. Reduce water use by renewing irrigation infrastructure and integrating real time controls and centralised management.	
	29. Investigate and implement (subject to viability) opportunities for stormwater harvesting to provide alternatives to potable water use for key Council open spaces.	
	30. Continue to support plans for recycled water processing at Fishermans Bend, with water being used by residents and for irrigation of Council reserves.	
	31. Investigate mechanisms to require onsite stormwater detention in new developments and technology to monitor tank levels.	
<b>A Water sensitive City</b>	32. Implement Elster Creek Action Plan.	\$27,695,000
	33. Develop and implement a Stormwater Asset Management Plan and invest in drainage improvements.	
	34. Plan and deliver water sensitive urban design projects to reduce the amount of pollution entering Port Phillip Bay.	
	35. Complete a study of permeability potential for Council land, introduce place-based permeability targets.	
	36. Update policy, engage and consult with the community to achieve greater permeability on private property.	
	37. Develop a Water Sensitive City Plan to drive an integrated approach to water conservation and management.	
	38. Develop and implement a new Waste and Resource Recovery Strategy.	
<b>A sustained reduction in waste</b>	39. Update waste management guidelines for apartments and implement education programs.	TBC in Waste and Resource Recovery Strategy
	40. Work with partners to deliver the Inner Metro Sustainability Hub (IMSH) including land acquisition planning and refining	

	preferred site to relocate the Depot Transfer station and potential new Advanced Waste Treatment facility.	
	41. Deliver focused recycling program to increase waste diversion from landfill.	
	42. Pursue waste innovations in Fishermans Bend including undertaking a food diversion retrofit trial - insinkerators in existing homes in Fishermans Bend.	
	43. Optimise investment in litter bins and equipment.	
	44. Increase investment in street cleaning and review service.	
	45. Deliver service innovation and collaboration though the preparation of new waste service contracts.	

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