



City of Casey

ENVIRONMENT STRATEGY

2021-25

CASEY.VIC.GOV.AU



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MESSAGE FROM THE CHAIR OF ADMINISTRATORS

As the Chair of Administrators at the City of Casey I am proud to present Council's Environment Strategy.

The future of our natural environment is of increasing importance and emerging issues related to this are now at the forefront of more people's minds.

There are several emerging conditions, challenges and opportunities that we will face, which include climate change, the natural environment, waste management, integrated water management, legislative requirements, regional partnerships and resourcing. One of the major challenges facing the local environment is the rapidly growing population, which if not managed properly can have serious implications for the future of our natural environment.

The City of Casey's *Environment Strategy 2021-25* sets out how we plan to achieve the third objective of our *Council Plan 2021-25*, which is to *foster environmentally sustainable practices and work towards being climate ready (resilient)*. The decisions made in relation to this objective pave the way towards achieving the rapid decarbonization of the municipality to mitigate climate change.

Waste management and climate change are two of the biggest challenges being faced by not only Council, but all levels of government and the broader community.

As part of this strategy, Casey has determined several objectives, which include 'Become a climate resilient city through mitigation and adaptation' and 'Contribute to a circular economy through waste management and resource recovery.'

Connected to the strategy are several ambitious targets. As you will see, we have been bold in our planning, and we hope to see the Casey community commit to these targets as well, to ensure their success and progress towards a more sustainable and resilient future.

This document will guide Council's future direction for environmental sustainability over the next four years and ensure Council is well equipped to approach the challenges, and manage our changing environment in a resilient, effective, and cohesive way.

I encourage you to take the time to read this strategy and learn more about how you can be a part of the solution to achieve a more sustainable environment, and the initiatives that need to be undertaken to achieve the goals outlined in this document.

Help better position Casey for the years to come and contribute to a better future for all.



Noelene Duff PSM
Chair of Administrators
City of Casey

ENVIRONMENT STRATEGY AT A GLANCE

The City of Casey's *Environment Strategy 2021-25* sets out how we plan to achieve Objective 3 of the *Casey Council Plan 2021-25* which is to *Foster environmentally sustainable practices and work towards being climate ready (resilient)*. The decisions made today pave the pathway to achieving the rapid decarbonisation of the municipality to mitigate climate change.

Driven and informed by community engagement and the Council Plan, the Strategy presents an analysis of immediate and emerging conditions and illustrates how Council will implement a holistic approach to environmentally sustainable management to improve outcomes across the organisation and for the community.

The Strategy sets out targets and goals across five thematic areas (Table 1).

OBJECTIVES	TARGETS	
	2025	2030
Become a climate resilient city through mitigation and adaptation	> 100 per cent of Council's corporate energy supply will be met through renewable energy sources	> Net zero corporate emissions by 2030
Contribute towards a circular economy through waste management and resource recovery	> Reduction of contamination in recycling bins to 10 per cent	> Diversion of 80 per cent waste from landfill by 2030
Conserve, enhance and restore the natural environment	> Established baseline to measure improvement to the Natural Environment by 2023	> Tree canopy cover increase from 16 per cent to 21 per cent by 2030
Create a water efficient city	> Renewal of all Council Water Sensitive Urban Design (WSUD) Assets	> 30 per cent reduction in Council's 2030 projected water use by 2031
Enhance people capability and internal processes	> Established mechanism so that all Council policies and strategies consider sustainability when they are renewed Establish a procurement target based on Casey's long participation in the Eco Buy Program	> Policy, strategy and procurement decisions improve environmental outcomes and support the provision of sustainable services by 2030

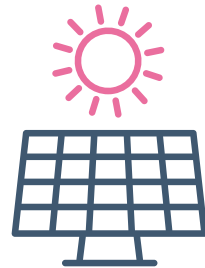
Table 1: Environment Strategy Thematic Areas and Targets

CITY OF CASEY'S ENVIRONMENT SNAPSHOT



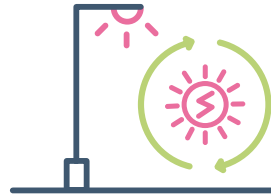
50% WASTE DIVERSION

from landfill



70 SOLAR PV SYSTEMS

installed on Council owned buildings saving 1,750 tonnes of carbon emissions each year



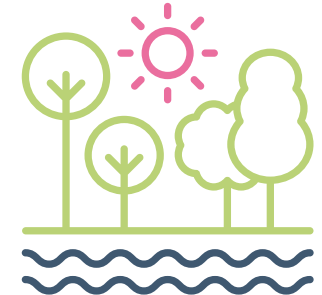
100% RENEWABLE

electricity used for all of Casey's street lighting and sourced from a windfarm in Wonthaggi saving 12,500 tonnes of carbon emissions each year



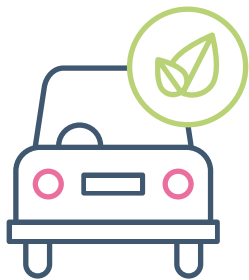
85,000 NATIVE PLANTS PLANTED

across Casey within the 2020/21 financial year



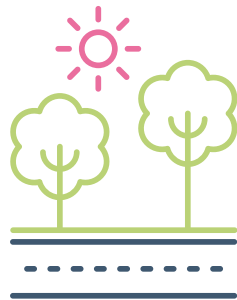
27 NATURE RESERVES

covering 157.39ha and 11 revegetation sites covering 18.57 ha are managed by the City of Casey



100% OFFSETS

of City of Casey's fleet vehicle emissions through local, certified revegetation programs



150,000* STREET TREES

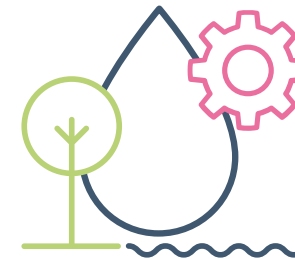
actively managed

*Approximately



64 THREATENED SPECIES

listed under the Environmental Protection and Biodiversity Conservation Act 1999 (the EPBC Act) call City of Casey home



129 WATER SENSITIVE URBAN DESIGN ASSETS

are managed and maintained by Council which contributes to meeting best practice water quality treatment



85% OF SPORTS AND RECREATION RESERVES

managed by the City of Casey are installed with warm season grass to reduce demand on drinking water supply for irrigation

INTRODUCTION

The City of Casey remains one of the fastest growing regions in Australia. Casey has the most residents of any municipality in Victoria. The population of the City of Casey in 2021 was approximately 380,531 with a projected population of over 616,200 by 2041.¹

Increasing population requires an increase in services to cater for the needs and welfare of our community, which if not managed can severely impact our natural environment.

Environmental sustainability refers to implementing innovative practices that conserve natural resources, protect human and ecological health. Making environmental sustainability a priority means interacting responsibly with our natural environment and facilitating the preservation of the resource needs of future generations.

The *Environment Strategy 2021-25* will guide Council's future directions for environmental sustainability over the next four years and will ensure Council is aware of approaching challenges and is well placed to manage our changing environment in a resilient, efficient, and cohesive manner.

The strategy aligns with the United Nations Sustainable Development Goals (SDG); in particular SDG 13 – Climate Action; SDG7 – Affordable and Clean Energy; SDG 12 – Responsible Production and Consumption; SDG14 – Life below water; SDG15 Life on land; SDG6 – Clean water and Sanitation; and SDG11 – Sustainable Cities and Communities; and SDG17 – Partnerships for the Goals.²

The Strategy is a prominent component of Council's Integrated Strategic Planning Framework, supporting the goals of the *Long-Term Community Vision 2031* and the four-year direction of the *Council Plan 2021-25* (Figure 2). Strategic Objective

3 of the *Council Plan 2021-25* seeks to 'Foster environmentally sustainable practices and work towards being climate ready'.

The implementation and progress towards meeting the strategic objectives and strategies of the *Environment Strategy 2021-25* will be reported annually, in conjunction with the progress of the Council Plan.

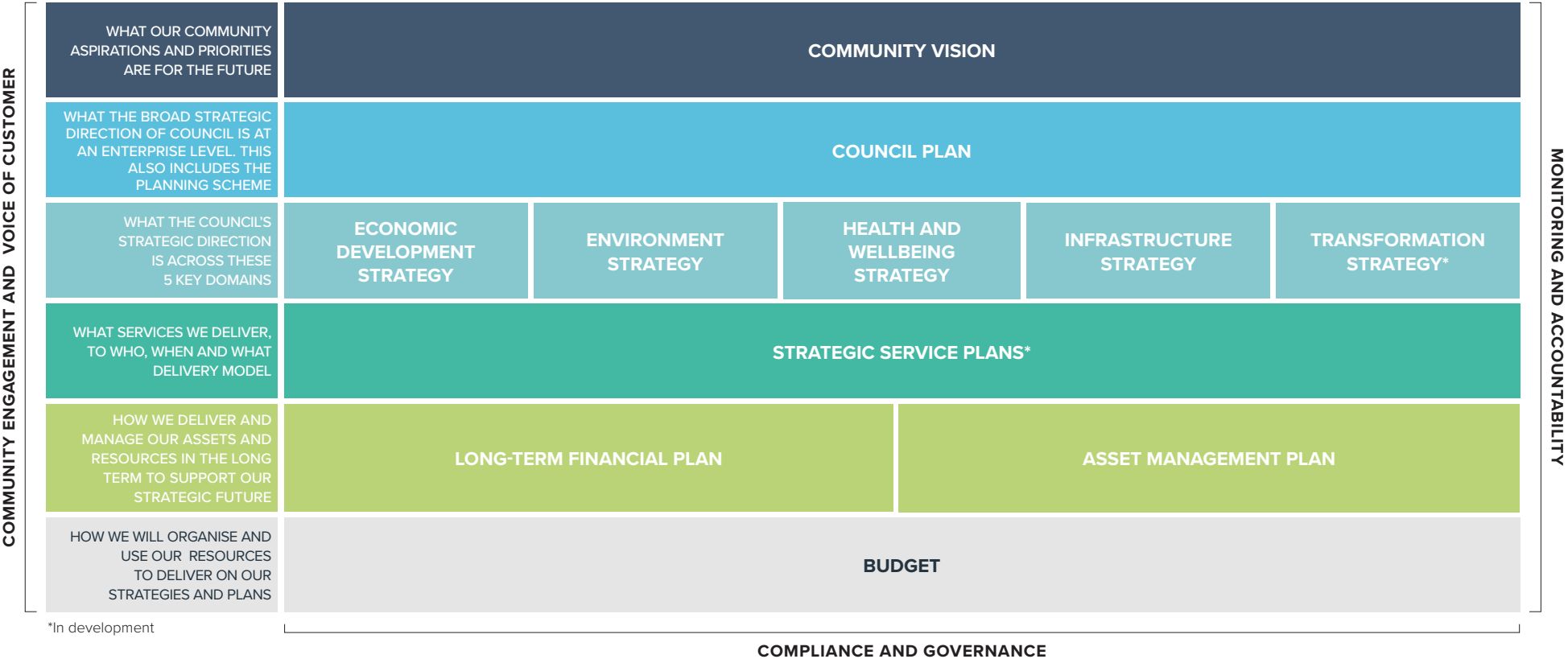
¹ ID communities Demographic Resources City of Casey Population Forecast

² <https://sdgs.un.org/goals>

MAKING ENVIRONMENTAL SUSTAINABILITY A PRIORITY MEANS INTERACTING RESPONSIBLY WITH OUR NATURAL ENVIRONMENT AND FACILITATING THE PRESERVATION OF THE RESOURCE NEEDS OF FUTURE GENERATIONS.



Figure 2: Integrated Strategic Planning Framework



OUR GUIDING PRINCIPLES

Leading by example:

Demonstrate environmental leadership in Council decision making and activities.

Accountability:

Be accountable for the environmental impacts resulting from Council’s decisions and actions.

Partner, collaborate and advocate:

Partner and collaborate to influence improved environmental outcomes whereby Council shares responsibility with other agencies.

Integration:

Advocate on behalf of the community and environment where responsibilities lie outside of Council’s control.

Technology / smart city:

Ensure the environmental impact of the business decisions we make is a priority that is competently and routinely considered by all staff and across all areas of Council business.

EMERGING CONDITIONS - CHALLENGES AND OPPORTUNITIES

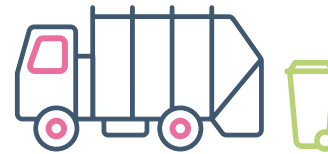
Urgency in global environmental conditions is shifting public attitudes toward the need to accelerate action. Increasing emphasis is being placed on climate change, biodiversity, the recycling crisis, population growth and growing socio-economic disparities.

These factors influence local community expectations and must inform the Environment Strategy. This is inter-connected with land use management, social and economic influences, environmental management, transportation, pollution, and other sustainability considerations.



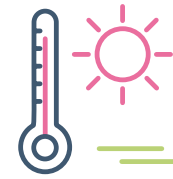
Natural environment

Casey's growth and significant agricultural past comes at a trade off with our natural environment. Biodiversity loss and a lack of ecological connectivity are evident in Casey and surrounding natural areas. As of 2008, it was estimated that only seven percent remnant vegetation remained.³ Despite this, the City of Casey's 29 nature reserves are home to an array of flora and fauna, with each reserve playing a critical role in maintaining the level of environmental connectivity that remains. The wetlands of Western Port are identified as having international significance and are protected under the Convention on Wetlands of International Importance (Ramsar). Casey will align with the Port Phillip and Western Port Regional catchment strategy. There is significant opportunity to partner with landowners to establish and restore green wedges and corridor links to enhance native biodiversity and connectivity across the landscape.



Waste management

Waste management in Victoria is at a tipping point. Increasing population and an expanding commercial sector is placing waste management systems under significant pressure. The State Government has responded with a 10-year plan to support a Circular Economy which is articulated through Recycling Victoria A New Economy Policy 2020. In Casey, there is scope to improve, with residential waste diversion from landfill at around 50 per cent and high contamination rates in residential recycling bins. The recent introduction of food waste collection and a consolidated effort in reducing contamination in recycling bins will contribute significantly to supporting a sustainable Circular Economy and diverting waste from landfill. Notably, the procurement of an Advanced Waste Processing Facility in collaboration with 15 South East Metropolitan Council's, will significantly reduce waste to landfill and recover energy from residual waste.



Climate change

The sixth report from the Intergovernmental Panel on Climate Change leaves no doubt that climate change is an inevitable and urgent global challenge with long-term implications for the sustainable development of all countries. The United Nations Development Programme has declared a climate, biodiversity loss, and pollution emergency. Worsening effects will lead to more extreme weather events in Casey, including dangerous heat waves, longer and more intense fire seasons, drought conditions from decreased rainfall, increased storm activity and flooding, sea level rises, and a transition to a more northerly climate. These effects will have social, economic, psychological, environmental, ecological, and human health consequences for Casey's community.

There is now a legislative requirement for climate change to be considered and implemented into Council processes

³ City of Casey Biodiversity Strategy



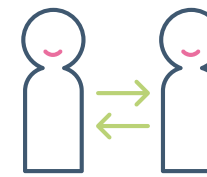
Integrated water management

It is a challenge to ensure safe, secure, and affordable water supply for all users to meet future demands. As the city grows, Council's demand on water supply is increasing significantly. Council uses large volumes of water to manage assets in line with community expectations. Approximately 40 per cent of Council's water usage is from irrigation of active open spaces, while buildings and facilities including aquatic centres are also large water users. Casey has been a local government leader in integrated water management with significant examples of Water Sensitive Urban Design, water harvesting and recycled water use. Council must continue to take this innovative and integrated approach to water management.



Legislative requirements

National, state, and other local governments will have strong influence on Council's decisions when it comes to environmental sustainability. There are increasingly complex legislative and regulatory requirements and changing policy frameworks happening at state level to respond to climate change, waste management impacts and pollution. Some of these set new obligations on Council and others require Council to respond and rethink its strategies and service delivery.



Regional partnerships

Partnerships offer the opportunity to collaborate across boundaries, share knowledge, pool resources and achieve economies of scale. Casey is an active member of several local, regional, and State partnerships. Partnerships can be complex to manage, however the mutual benefits can be amplified. Casey will continue to seek and expand on partnership opportunities including with private enterprise and developers where common goals can be recognised and achieved.

Casey is committed to maintaining its existing memberships and/or alliances with organisations such as the Bunurong Land Council Aboriginal Corporation, South East Councils Climate Change Alliance (SECCCA), the Mornington Peninsula Westernport Biosphere, Port Phillip and Westernport Catchment Management Authority, Metropolitan Waste and Resource Recovery Group, Melbourne Water, South East Water, Southern Rural Water and the Greater South East Melbourne (GSEM).

and operations, but Casey must take a proactive approach that goes beyond compliance to accelerate emissions reduction and adaptation.

Systematic replacement of natural land cover with infrastructure such as buildings, car parks, roadways, and other synthetic surfaces that absorb and retain heat, contributes significantly to the 'urban heat effect'. Casey has already been identified as vulnerable to this effect, of which the ramifications include increased energy costs, decreased air quality, and serious health effects .



Community expectation

The recent deliberative engagement process showed that the Casey community places significant value on being able to access nature close to home. We support this by maintaining healthy environments in designated open spaces, local parks, waterways, and bush / nature reserves. Casey's waterways are a focus for habitat, water quality and recreational activities. The far-reaching implications of COVID-19 on Casey residents are still being understood, but in this context, the pandemic has undeniably made Casey residents more aware of the natural environments in their own neighbourhoods and the importance of these places in maintaining happy and healthy lifestyles.



Organisation capability

Local Government is in a unique position to influence environmental outcomes through decisions and operational practices that are beyond legislative obligations. The community looks to Council to lead by example, and this is matched by a strong organisational desire to develop a culture to deliver sustainable environmental outcomes. We recognise that there is room for improvement with regards to instilling sustainability practices into the overall employee consciousness. This will involve proactive engagement, executive and shared leadership, and overall increased education.



OBJECTIVES, STRATEGIES AND TARGETS

The Environment Strategy sets objectives and strategies towards Council's short term and aspirational long-term targets (Table 2). Specifically, it aims to deliver on our sustainability commitments and embed environmental considerations in decision making across our business.

TABLE 2: ENVIRONMENT STRATEGY OBJECTIVES, STRATEGIES AND TARGETS

OBJECTIVES

Become a climate resilient city through mitigation and adaptation	Contribute towards a circular economy through waste management and resource recovery	Conserve, enhance and restore the natural environment	Create a water efficient city	Enhance people capability and internal processes
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STRATEGIES

<ul style="list-style-type: none"> Improve energy efficiency and increase the use of renewable energy sources to mitigate climate change. Engage, advocate and empower the community to reduce carbon emissions and energy consumption. Create an adaptive and resilient municipality which is responsive to a changing climate. 	<ul style="list-style-type: none"> Increase the quality of material sent to recycling facilities for processing. Facilitate establishment of an advanced waste processing facility in South East Melbourne. Facilitate roll out of Recycling Victoria's Kerbside Reform program. Reduce Council's corporate waste, improve resource recovery and increase use of recycled products. 	<ul style="list-style-type: none"> Identify, conserve, enhance and restore the ecological values of Casey's natural environment particularly habitats of native plants and animals. Increase tree canopy cover to contribute to environmental outcomes including biodiversity and urban cooling in Casey. Empower the community to partner in biodiversity conservation and restoration initiatives. Engage with traditional owner groups for management of Casey's natural environment. 	<ul style="list-style-type: none"> Improve water efficiency and increase the amount of water that is recovered for reuse and recycling. Reduce the amount and improve the quality of stormwater entering Port Phillip and Western Port Bay. Facilitate establishment of a South East regional integrated recycled water pipeline for the region. 	<ul style="list-style-type: none"> Build organisation capacity in environmental sustainability and climate change. Improve sustainable procurement of goods and services. Coordinate compliance to environmental legislation and other requirements.
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FOUR YEAR TARGET

100 per cent of Council's corporate energy supply will be met through renewable energy sources.	Reduction of contamination in recycling bins to 10 per cent .	Established baseline to measure improvement to the natural environment by 2023.	Renewal of all Council Water Sensitive Urban Design (WSUD) Assets.	Established mechanism so that all Council policies and strategies consider sustainability when they are renewed. Establish a procurement target based on Casey's long participation in the Eco Buy Program.
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LONG TERM TARGET

Net zero corporate emissions by 2030.	Diversion of 80 per cent waste from landfill by 2030.	Tree canopy cover increase from 16 per cent to 21 per cent by 2030.	30 per cent reduction in Council's 2030 projected water use by 2031.	Policy, strategy and procurement decisions improve environmental outcomes and support the provision of sustainable services by 2030.
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100%
OF COUNCIL'S CORPORATE ENERGY
SUPPLY WILL BE MET THROUGH
RENEWABLE ENERGY SOURCES.

City of Casey four year target

LONG-TERM ASPIRATIONAL GOAL

Net zero Corporate emissions by 2030.

GOALS TO 2025

All of Council's corporate electricity supply will be met through renewable energy sources.

STRATEGIES

Improve energy efficiency and increase the use of renewable energy sources to mitigate climate change.

Engage, advocate and empower the community to reduce carbon emissions and energy consumption.

Create an adaptive and resilient municipality which is responsive to a changing climate.

OBJECTIVE 1:

BECOME A CLIMATE RESILIENT CITY THROUGH MITIGATION AND ADAPTATION

The City of Casey has a long history of identifying ways to reduce greenhouse gas emissions from Council's operations. Building on Council's proactive and collaborative approach, in September 2016 we resolved to take part in Victoria's TAKE2 Pledge, helping Victoria reach its target to achieve net zero emissions by 2050. This is in-line with City of Casey's long-term goal of Council operations being carbon-neutral by 2030.

City of Casey's Climate Action Plan is a critical piece of work that will provide direction and support to reduce both corporate and community greenhouse gas emissions. As stated in the Victorian Government Climate Action Plan, reducing our emissions will help lessen the impact of climate change, but it will not prevent it and some degree of climate change will happen.

Council recognises that adapting to the impacts of climate change and managing current and future risks is critical to building resilience in our municipality and securing a healthy and prosperous future. *Support a climate-ready (resilient) city through climate change and mitigation* has been instituted as a primary strategic objective in Casey's 2021 Council Plan.



2020 WAS AUSTRALIA'S FOURTH-WARMEST YEAR ON RECORD WITH GREATER MELBOURNE EXPERIENCING WARMER THAN AVERAGE TEMPERATURES AND RAINFALL WELL ABOVE AVERAGE FOLLOWING AUSTRALIA'S DRIEST YEAR ON RECORD IN 2019.

Source Bureau of Meteorology Annual Climate Statement 2020

STRATEGIES

1.1 Improve energy efficiency and increase the use of renewable energy sources to mitigate climate change

Casey recognises that renewable energy will play a key role in achieving the 2030 net-zero corporate emissions goal. This will require a transformational shift from the use of fossil fuels to renewable energy sources such as solar and wind power. Electrifying buildings (natural gas to electric heating conversion), electrifying corporate fleet, increasing investment in energy efficiency and rooftop solar investment are all critical aspects of this energy transition.

The City of Casey can build its portfolio of renewable energy power purchase agreements by committing to a local solar farm project to source renewably generated electricity for Council buildings. A well-designed local solar farm providing cheaper renewable energy on land owned by Council presents an excellent opportunity for meeting these objectives. In this regard, Council will consider the business case to commission construction of a solar farm in Casey. All aspects of the carbon management hierarchy, (i) conservation, (ii) efficiency, (iii) onsite renewable energy, (iv) purchase renewable energy, and (v) carbon offsets, can be maximised by this endeavour.

1.2 Engage, advocate, and empower the community to reduce carbon emissions and energy consumption

Effective community engagement can strengthen climate change initiatives by contributing to informed consideration of climate change trends, strengthening public support for Council's to act on climate change, broadening and deepening input into Council's plans, and assist in developing climate change mitigation and adaptation strategies. We will continue to actively inform, educate and engage with our community about the risks and effects of climate change and support the implementation of crucial mitigation actions that can be incorporated into the day to day lives of community members.

Figure 4 on the next page presents City of Casey's municipal greenhouse gas (GHG) emissions profile for 2017/18.

The largest source of total GHG emissions is stationary energy, with sources including residential buildings; commercial and institutional facilities; and manufacturing and construction industries. Stationary energy emissions are predominantly from electricity use, which accounts for around half (48 per cent) of total emissions. Gas consumption is responsible for 11 per cent of total emissions. Transport is the next highest emissions sector, producing 35 per cent of total emissions.

In March 2020, seven member Council's from the South East Council's Climate Change Alliance (SECCCCA) including the City of Casey, agreed to collaborate with Ironbark Sustainability on an evidence-based community action planning project. This project produced a greenhouse gas emissions profile and science-derived emission reduction target for each municipality in-line with the Paris Agreement limiting temperature increases to 1.5oC.

According to this report, the remaining carbon budget for the City of Casey is 27,675 kt CO₂-e from 2018/19. The remaining carbon budget is the total amount of carbon that the municipality can emit if it is to make its fair contribution to limit the temperature increase to 1.5°C.

This baseline data will enable Council to make informed, evidence-based decisions when developing its community emissions reduction strategy, and to enable us to engage persuasively with key stakeholders to drive community-scale emissions reductions.

Casey Municipal Emissions

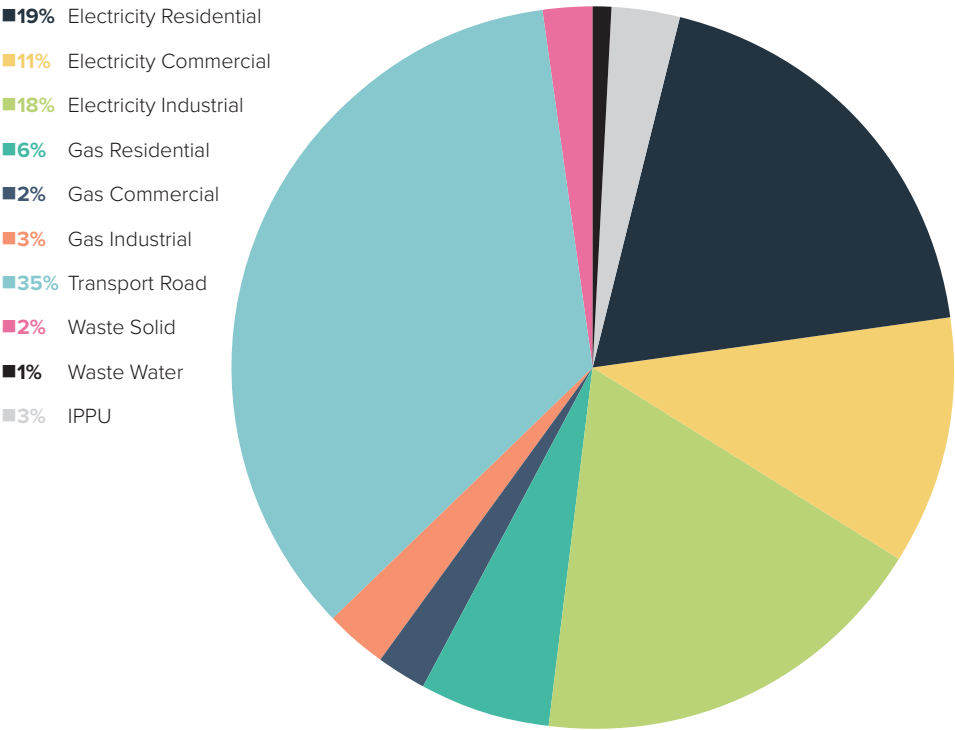


Figure 4: City of Casey's municipal emissions profile 2017/2018.

1.3 Create an adaptive and resilient municipality which is responsive to a changing climate

Local governments are on the frontline in adapting to climate change. They have an essential role to play in ensuring that climate change impacts are considered in the overall adaptation response and engaging with the local community directly in efforts to facilitate effective change. Climate change adaptation can involve gradual transformation with many small steps over time, or major transformation with rapid change. For Casey, adaptation encompasses a wide range of policies, actions, and choices, including (but not limited to):

- Strategic investment in built infrastructure such as seawalls and levees, and the protection of natural infrastructure such as sand dunes and mangroves
- Education and information that changes behaviour
- Changes in business management practices, such as shifting planting dates and introducing new plant varieties.

- Helping vulnerable communities prepare for heat waves.
- Rainfall and drought related actions such as the use of drought tolerant turfs and landscapes, efficient water systems, rainwater tanks, and recycled water.
- Storm and flood related actions such as protecting foreshore reserves, environmental, heritage and recreational values, and artificial wetlands to 'filter' stormwater / floodwater.
- Fire-risk related actions such as fire prevention inspection programs and funding, the Municipal Fire Management Plan and the Fire Management Communications Plan.

Council is committed to working with neighbouring Council's through SECCCA to further understand the major regional impacts of climate change and global warming, how to prepare for them, and inform on key actions to mitigate impacts.

LONG-TERM ASPIRATIONAL GOAL

Diversion of 80 per cent waste from landfill by 2030.

GOALS TO 2025

Reduction of contamination in recycling bins to 10 per cent by 2025.

STRATEGIES

Increase the quality of material sent to recycling facilities for processing.

Facilitate establishment of an Advanced Waste Processing facility in South East Melbourne.

Facilitate roll out of Recycling Victoria’s Kerbside Reform program.

Reduce Council’s corporate waste, improve resource recovery and increase use of recycled products.

OBJECTIVE 2:

CONTRIBUTE TOWARDS A CIRCULAR ECONOMY THROUGH WASTE MANAGEMENT AND RESOURCE RECOVERY

The City of Casey adopts the waste hierarchy as an order of preference for waste management strategies. It is an internationally recognised approach and in line with the *Recycling Victoria Policy 2020*. Council services span all areas of the waste hierarchy. For example, education programs aim to encourage waste reduction in the first place, recycling services sit in the middle of the hierarchy and disposal is the least preferable option.

We recognise our role as part of a wider stakeholder group and aim to develop a partnership to initiate and create the market conditions to help support the growth of a circular economy. Strategic thinking, industry knowledge and planning are crucial for innovation. Education will be key to support residents with new practices and behaviours that result from innovation in our services. Casey will also be changing how we use and re-use waste.

Casey has a long history of providing high quality waste services to the community, consistently achieving very high satisfaction rates. Specific waste services will be detailed in Strategic Service Plans and will not be presented or reviewed individually as part of the Environment Strategy. Instead, two high level goals, supported by four specific strategies will facilitate the transition of waste management in Casey away from the bottom of the waste hierarchy.



STRATEGIES

2.1 Increase the quality of material sent to recycling facilities for processing

Contamination rates in kerbside recycling bins in Casey are high. Clean product is vital to a sustainable recycling industry that will support a circular economy. Poor quality recyclables result in a product that is harder to market, increases product loss to landfill and increases the cost of processing. Education will set out to drastically reduce contamination rates in kerbside recycling bins, and actions will be developed to improve the efficiency and sustainability of resource recovery from recycling programs. Effective education and engagement is a powerful tool for achieving long-term behaviour change within our community. It provides an opportunity to shift attitudes, increase understanding and change behaviour. Education programs will be developed or adapted to meet new services such as the garden organics and food waste collection, and address littering and dumped waste issues.

With changing expectations from a diverse community, a more varied and modern approach to communication and education is required. Digital communication is allowing for more interactive and efficient ways of education. Waste services are one of the key opportunities that Council directly engages with the community. This strategy is consistent with and will be influenced by the roll out of Recycling Victoria’s kerbside reform program 2020.

2.2 Facilitate roll out of Recycling Victoria’s kerbside reform program

Introduced in 2020, Recycling Victoria: a new economy is the Victorian Government’s 10-year policy and action plan for waste and recycling, transitioning to a circular economy. It outlines an extensive plan of reform to establish a recycling system that all Victorians can rely upon. It transforms how our economy uses materials and how our State reuses, repairs and recycles, and is informed by the National Waste Policy Action Plan.

Recycling Victoria contains four main goals and is consistent with the Waste Hierarchy:

- MAKE Design to last. Repair and recycle.
- USE Use products to create more value.
- RECYCLE Recycle more resources.
- MANAGE Reduce harm from waste and pollution.

The Victorian Government is introducing a kerbside collection system, better suited to local recycling markets. This system will include access to four core waste and recycling services (Figure 3), a container deposit scheme, standardising

bins (including bin lid colours), and kerbside services (including items accepted) across Victoria will simplify household recycling, backed by a state-wide education program. One of four key goals of this framework, ‘Recycle more resources’, involves kerbside collection reform to generate more value from waste, improve separation of materials, develop markets for recovered materials, invest in infrastructure, imbed the waste hierarchy in homes and industry, and support waste to energy technology. Casey will look to this system to inform how the kerbside reform is to be successfully implemented.

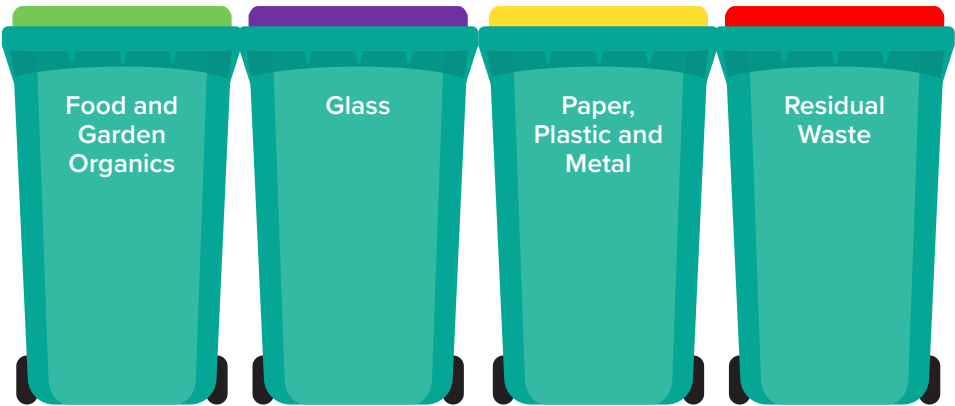


Figure 3: Four Core Waste and Recycling Services

2.3 Facilitate establishment of an Advanced Waste Processing Facility in south-east Melbourne

The City of Casey disposes approximately 65,000 tonnes of community residual waste to landfill per annum and this is projected to increase by 40 per cent over the next 25 years. Landfill disposal is the least preferable option in the waste hierarchy due to poor long term environmental and social outcomes including greenhouse gas production, leachate, loss of resources and odour.

We are taking a lead role in procurement of Advanced Waste Processing (AWP) technology to replace landfill as the default waste disposal option in the Melbourne's southeast. While a specific solution has not yet been chosen, AWP covers a wide range of technologies including mechanical sorting, anaerobic digestion, and waste to energy thermal treatments.

AWP will not replace waste minimisation and separation at the kerbside but is a solution for what is left in the garbage (residual) bin. The City of Casey is one of 16 south east Melbourne Council's working with the Metropolitan Waste and Resource Recovery Group to have AWP in place by 2025/26.

Advanced waste processing technologies are proven all over the world with safe and successful outcomes, however it is new to Australia and community engagement will be a critical factor to implementation. AWP will transform the management of residual waste in Victoria and will play a significant role in diverting up to 80 per cent of household waste from landfill by 2030.

2.4 Reduce Council's corporate waste and improve resource recovery

Council services and activities can have significant environmental impacts including waste generation. We will use established baseline data and aim for continuous improvement, incorporating improved waste management and resource recovery into all aspects of council operations. Measures will be collaborative, planned, budgeted, communicated and accountable.

Waste generation reduction and landfill diversion will be considered in all Casey facilities and events. We will explore how we can ensure internal events, community events, or events held at our facilities, can produce less waste and manage their onsite waste and litter more effectively through the early stages of the events approval process.

As per the second main goal of the 'Recycling Victoria' reform, 'Use products to create more value', Casey will ensure the procurement of recycled products, or readily recyclable products is prioritised over non-recycled or non-recyclable products wherever possible. Sustainability, longevity, environmental impact, and quality will be given higher priority in cost-benefit analyses prior to procurement activities. These initiatives are informed by the circular economy policy in Victoria, making sure we get as much use and value from a product or material as possible; procuring high quality recycled or recyclable goods, maintaining and repairing goods before replacement, repurposing goods no longer needed, and maximising recycling opportunities.

LONG-TERM ASPIRATIONAL GOAL

Tree canopy cover increase from 16 per cent to 21 per cent by 2030.

GOALS TO 2025

Established baseline to measure improvement to the Natural Environment by 2023.

STRATEGIES

Identify, conserve, enhance and restore the ecological values of Casey's natural environment particularly habitats of native plants and animals.

Increase tree canopy cover to contribute to environmental outcomes including biodiversity and urban cooling in Casey.

Empower the community to partner in biodiversity conservation and restoration initiatives.

Engage with traditional owner groups for management of Casey's natural environment.

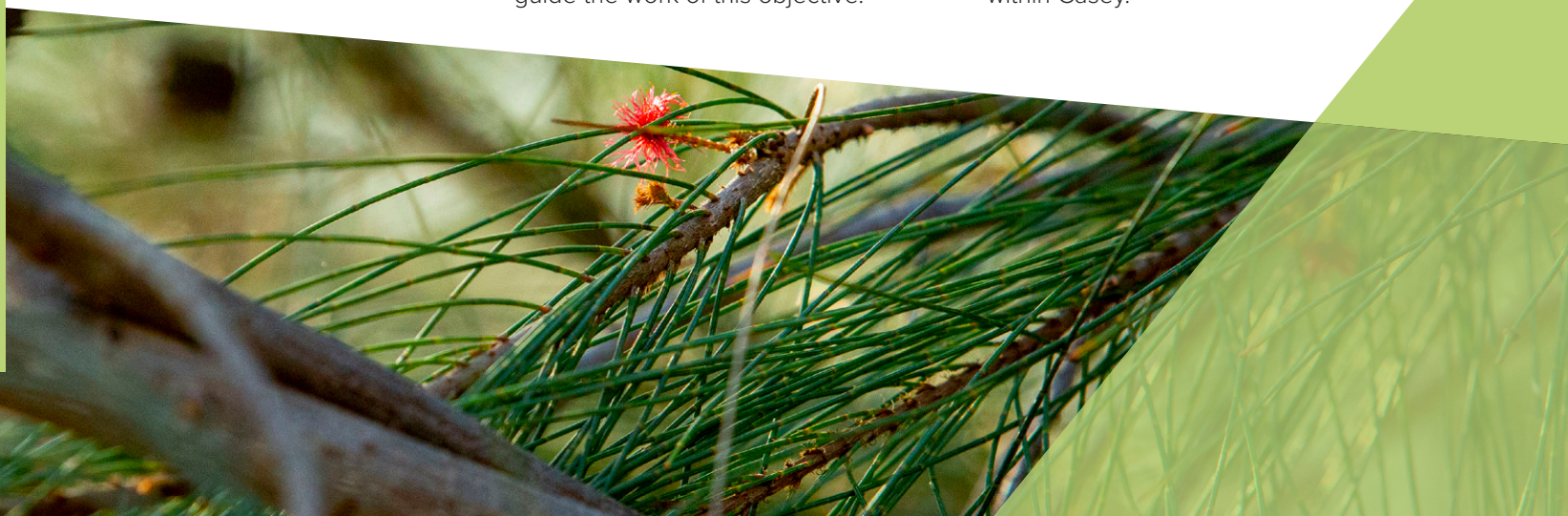
OBJECTIVE 3: CONSERVE ENHANCE AND RESTORE THE NATURAL ENVIRONMENT

A resilient, well-managed, and healthy environment provides clean air and water, productive soils, natural pest control, pollination, flood mitigation, carbon sequestration, and supports productive activities that underpin our city's liveability, wellbeing, and economic advantage. To demonstrate Casey's commitment to conserve, enhance, and restore our natural environment, Council will be focusing on two key targets as part of this strategy; an increase in tree canopy cover from 16 per cent to 21 per cent by 2030, and the establishment of a baseline to measure improvement to the natural environment by 2023.

Community consultation, engagement, advocacy, and involvement will remain at the core of Casey's sustainable future. To this end, 'Conserve, enhance and restore the natural environment' has been instituted as a primary strategic objective in our Council Plan. The key actions from this will be the development of the Urban Forest Strategy, the planting of 100,000 indigenous plants and initiatives that will support a healthy natural ecosystem.

The foundation of Caseys Biodiversity Strategy, which is based on plan, protect, engage, restore and connect biodiversity, will ultimately create and provide a sustainable and resilient natural environment. This strategy will guide the work of this objective.

The Living Melbourne: our metropolitan urban forest strategy, which Casey with 32 other Council's has endorsed, commits to protect, and restore species habitat and improve connectivity. Living Melbourne proposes a series of actions to help our rapidly changing city better protect, connect and enhance our urban forest. Actions and targets of this Strategy will be considered in Casey through the Urban Forest Strategy. In addition to the Living Melbourne document, the State Government review of Green Wedge Management Planning will influence conservation, protection and enhancement of Casey's natural environment and protection of green wedge areas within Casey.



STRATEGIES

3.1 Identify, conserve, enhance and restore the ecological values of Casey's natural environment, particularly habitats of native plants and animals

As a growth area council, Casey's natural environment is under sustained pressure where biodiversity loss has been incremental and significant. Moreover, Casey has a fragmented landscape due to past land use practices such as agriculture which impact biodiversity through habitat loss and the breaking apart of habitats. The vision and goals of Casey's Biodiversity Strategy will be referred to and are consistent with those of the state government policy Protecting Victoria's Environment – Biodiversity 2037, ensuring biodiversity conservation remains healthy and resilient to change and threats, and its value prioritised as essential to our existence.

As outlined in Casey's *Biodiversity Strategy*, we will continue to improve species habitat and diversity of natural areas. We will advocate for retention of key habitat features where possible, as Casey continues to grow.

Action 1 of the Living Melbourne Strategy is to protect and restore species habitat and improve connectivity. This action recognises that to get any maximum return from any investment in protecting and enhancing the natural environment requires completeness and accuracy of available information, including data and maps. For example, understanding where remnant of native habitat persists can help better manage, protect and connect them. In this regard, we will invest in establishing a detailed baseline of Casey's natural environment and biodiversity.

3.2 Increase tree canopy cover to contribute to environmental outcomes including biodiversity and urban cooling in Casey

Trees provide many ecosystem services, environmental and wellbeing benefits that Casey and its residents value, such as promoting biodiversity, removing pollutants from air, soil and water, cooling our city, reducing storm water runoff, energy savings, reducing greenhouse emissions, carbon sequestration, shade, aesthetics, encouraging exercise, improving mental health, and increased property value. Ideally, an urban forest is comprised of trees of varied ages, sizes, species, conditions, and densities. In an urban environment, trees face extensive challenges such as poor soils, inadequate growing space, development, climate change effects, and conflicts in landscape management and other stressors.

Most of Casey's trees are juvenile or mature, with senescent trees approaching the end of their life. Keeping a diverse species of trees, as well as diverse ages of trees, from saplings to mature trees, is important for the health of our urban forest. The 'urban heat island effect' causes increased heat in cities versus rural areas, due to lack of vegetation. Increasing vegetation in our city can reduce the urban heat island effect.

Action 2 of the Living Melbourne Strategy is to set targets and track progress. Monitoring and evaluation is essential to ensure that the vegetation protection, enhancement and expansion actions being taken are effectively improving mental and physical wellbeing, reducing heat exposure and increasing access to nature, green space and canopy cover. The strategy commits to regional target for canopy and vegetation cover which has been adopted as a target for the Environment Strategy.

3.3 Empower the community to partner in biodiversity conservation and restoration initiatives

The City of Casey is home to community groups that are passionate about their local natural environment. Casey launched the Gardens for Wildlife (G4W) program in 2021, equipping gardeners of all abilities with the support and materials they need to create a wildlife-friendly garden in Casey. G4W, run in affiliation with Gardens for Wildlife Victoria, is a program aimed at fostering the community's understanding of local biodiversity, while also serving to create connections between residents and support nearby indigenous nurseries to do their important work.

Regular workshops and webinars on sustainability, conservation, biodiversity, heritage, and how to reduce household waste, as well as the production of a Weed ID guide and Green Living in Casey newsletter are important ways to engage our community. In partnership with Greater Dandenong, Casey also run a 'Biodiversity Blitz', a competition where the community is encouraged to submit flora and fauna observations to understand what species reside in Casey.

We also help to develop children's interest in sustainability with activities, videos, and teacher resources. Continuous, informative, and engaging communication is recognised as vital to empowering our community; Casey commits to maintaining and improving these programs moving forward, as well as increasing the breadth of awareness throughout Casey's communities.

Australia's Strategy for Nature 2019-2030 summarises a set of three national priority areas. Among these, 'Connect all Australians with nature', will guide Casey's future community engagement and program participation. The Strategy asserts that we will only get measurable biodiversity results by improving and sharing knowledge, this includes to and from our ratepayers and residents. The applicable key goals from this strategy, 'Encouraging Australians to get out into nature', 'Empower Australians to be active stewards of nature', 'Increase Australian's understanding of the value of nature', and 'Respect and maintain traditional ecological knowledge and stewardship of nature', will continue to be a beacon for Casey to inspire our community to partner in biodiversity conservation and restoration initiatives.

3.4 Engage with traditional owner groups for management of Casey's natural environment

For 60,000 years before European settlement, the lands of Casey and surrounds originally formed part of the territory of the Bunurong / Boon Wurrung and Wurundjeri peoples. The City of Casey lies within the boundary of the Mayone Bulluk Bunurong clan. Today, Indigenous peoples from all over Australia live in the municipality. Casey is home to the largest Indigenous population in the south east metro region; approximately 1,940 indigenous people call Casey home. Furthermore, Casey has the third largest Indigenous youth population (aged under 25 years) in Greater Melbourne (ABS, 2016). We believe that engagement of this next generation of Indigenous leaders is of utmost important.

Today, very little of the landscape that the Mayone Bulluk Bunurong knew can be seen due to introduced land management practices and widespread, rapid development. However, through the Bunurong Land Council Aboriginal Corporation,

Bunurong people are valued for their protection, preservation and awareness of their culture, heritage, and environment. The Traditional Landowners have strong connections and values with the land, biodiversity, and natural environment in Casey. The value and importance of their traditional land and resource management practices are well recognised. Casey is committed to incorporating traditional land and resource management values and practices into our biodiversity planning and management approaches to benefit our wider environment.

Casey believes applying this holistic approach, with modern innovations and proven traditional methods from our Indigenous custodians, will provide the best of both worlds and be key to maximising our environmental outcomes for current and future generations. Casey is committed to engaging, involving, investing in, and sharing knowledge with our local Indigenous populations in both a formal and informal manner moving forward.

LONG-TERM ASPIRATIONAL GOAL

30 per cent reduction in Council's 2030 projected water use by 2031.

GOALS TO 2025

Renewal of all Council Water Sensitive Urban Design (WSUD) Assets

STRATEGIES

Improve water efficiency and increase the amount of water that is recovered for reuse and recycling.

Reduce the amount and improve the quality of stormwater entering Port Phillip and Western Port Bay.

Facilitate establishment of a South East regional integrated recycled water pipeline for the region.

OBJECTIVE 4: CREATE A WATER EFFICIENT CITY

The City of Casey seeks to 'Create a Water Efficient City'. A city where water sources are managed in a way that it stays resilient to changing land use, population growth, low drinking water availability and a changing climate. This will ensure we continue to have a sustainable water supply and protect and restore our waterways and bays. City of Casey Integrated Water Management plan commits to a 30 per cent reduction from Council's 2030 projected water use by 2031 and renewal of all Council Water Sensitive Urban Design (WSUD) assets by 2025.

Facilitating the delivery of Casey's water targets will include:

- Significant increase in water re-use,
- Maximising the use of alternative water sources
- Adequate stormwater pollution and flow treatment
- Education programs
- Specific water management requirements within the planning policy
- Effective implementation and maintenance of WSUD infrastructure

Council is committed to reducing its demand on high-quality drinking water by substituting with alternative water sources where possible or through complete elimination of the use. We currently utilise rainwater, stormwater, recycled water and groundwater as alternatives to reduce Council's demand on potable water.

30%
REDUCTION IN COUNCIL'S 2030
PROJECTED WATER USE BY 2031.

City of Casey long-term aspirational goal

STRATEGIES

4.1 Improve water efficiency and increase the amount of water that is recovered for reuse and recycling

Alternative fit-for-purpose water can replace demand for precious drinking water, especially for irrigation purposes. Casey will continue to take the following actions to conserve water:

- Harvesting stormwater to irrigate our sporting fields.
- Installing rainwater tanks for gardening and toilet use in all our recreational facilities and most kindergartens and community centres.
- Installing water recycling systems such as a backwash system, and upgrading to water efficient appliances, to reduce water consumption at Council facilities.
- Conducting water audits on high water use facilities such as our leisure centres and recreation reserves.
- Identifying alternative water use for watering recreational facilities such as Casey Fields where we are using 60ML of Class - A reclaimed water supplied by Eastern Irrigation Scheme.

- Promoting the use of drought tolerant warm season grasses in our recreational facilities.
- Trialling and investigating opportunities to use turf and synthetic covers in sporting fields to reduce moisture loss and irrigation requirements.
- Installing rainwater tanks at our recreation facilities and tennis courts. Replacing en-tou-cas (red porous) courts with synthetic grass or clay.
- Encouraging Casey residents to meet the state wide water efficiency program to limit water consumption to 155 litres per person per day.

Increasing community expectations for integrated water management has resulted in an increased interest in treating and recycling sewage or wastewater. Wastewater is treated to a 'non-drinking use' standard. This treated wastewater will become more accessible via the separate purple pipe systems. Recycled water is suitable for a wide range of uses, including irrigation and toilet flushing. Capturing rainwater is another great sustainable way to meet some water needs in homes, businesses, and facilities, and has the added benefit

of cost savings. Casey uses and encourages the use of tank water for a range of purposes including clothes washing, toilet flushing and irrigation.

4.2 Reduce the amount and improve the quality of stormwater entering Port Phillip and Western Port Bay

Urban development increases impervious surfaces, which in turn increases stormwater flow volumes. While impervious areas represent only ten percent of the total surface area in Casey, it generates a large volume of excess stormwater runoff. Most of the existing urban development in Casey currently drains into Port Phillip Bay. Stormwater runoff generated from urban development carries pollutant such as sediments, litter, nutrients, organic matter, heavy metals, and oils. These pollutants from hard paved surfaces can be detrimental to the health of waterways and the bays.

Most of Casey's Melbourne Water managed waterways are in poor condition except some sections of the Cardinia Creek and Langwarrin Creek that are in moderate condition. Some of the key sources that pose the most risks to Casey's waterways include residential, industrial, and commercial land use, sealed and unsealed roads, land development, building sites and rural agricultural activities. There is an opportunity to improve the health of waterways in Casey and Integrated Water Management (IWM) can minimise the impact of the pollutants on the bays.

4.3 Facilitate establishment of a South East regional integrated recycled water pipeline for the region

Climate change, population growth and ageing assets present potential longer-term water security problems for Casey and South East Melbourne. Climate-independent water supply sources can help address the problem. The Bureau of Meteorology forecast modelling shows that below average rainfall, warmer temperatures and lower storage inflows are more likely. In February 2021, the Greater South East Melbourne group (GSEM) Councils made representation to Infrastructure Australia for projects across the region for water recycling and water security to be considered on the Infrastructure Australia Priority List. Following which, Infrastructure Australia has classified GSEM recycled water project as a national priority, providing greater support for investment in regional recycled water initiatives.

An integrated recycled water scheme will offer access to affordable high-quality water, create and maintain jobs, enhance liveability, and improve the health of our waterways and coastal water quality. The proposed scheme can link up several water projects across the region and an integrated system of “purple pipes” to carry recycled water from treatment plants and retarding basins to supply businesses, farms, parks and golf courses the region and homes in areas such as the Casey-Cardinia growth areas of Clyde, Pakenham and Koo Wee Rup and Lang Lang. It is envisaged that a recycled water network could supply major food producers in Bunyip and other parts of Gippsland, assisting with future water and food security issues and less reliance on desalinated water.

There is an opportunity for Casey and the region to re-use more of this water to safely irrigate highvalue horticulture crops, parks, sporting fields and green open space, rather than using potable water for these purposes. This can reduce overall demand for potable water and contribute to Melbourne’s water supply security. Other potential benefits include reducing urban heat effects and increasing amenity, recreation, health, environmental and irrigated agriculture benefits to meet the changing needs and growing expectations of water users.

A key focus underpinning all the prospective recycled water projects has been to develop strong relationships with partners who are critical to the economic prosperity and liveability of the region.



LONG-TERM ASPIRATIONAL GOAL

Policy, strategy and procurement decisions improve environmental outcomes and support the provision of sustainable services by 2030.

GOALS TO 2025

Established mechanism so that all Council policies and strategies consider sustainability when they are renewed.

Establish a procurement target based on Casey’s long participation in the EcoBuy Program.

STRATEGIES

Build organisation capacity in environmental sustainability and climate change.

Improve sustainable procurement of goods and services.

Coordinate compliance to environmental legislation and other requirements.

**OBJECTIVE 5:
ENHANCE PEOPLE CAPABILITY AND INTERNAL PROCESSES**

Casey’s Organisational Strategy recognises that the world around us is constantly changing, and for us to remain relevant and resilient well into the future the strategy addresses immediate and emerging conditions. Based on these conditions, four strategic challenges have been identified i.e Increasing financial pressure; increasing social uncertainty and fragility; change outpacing our ability to keep up; and climate urgency.

The Organisational Strategy is underpinned by three strategic priorities; representing what we know to be important today, what will be important for us as the world continues to change, and the role we would like to play for our communities into the future.

Priority 3 of the Organisation Strategy is particularly relevant to the Environment Strategy. For a future ready organisation, the Strategy recognises that we need to ensure that we are equipped and able to drive resilient, sustainable, and equitable outcomes for our communities well into the future. We will need to deliberately reorganise our operations to become more innovative, sustainable, adaptable, and make balanced decisions that benefit the environment whilst being financially responsible.

Organisational Strategy Priorities



STRATEGIES

5.1 Build organisation capacity in environmental sustainability and climate change

In the context of this strategy, building organisation capacity is the process by which Council will strengthen its ability to address environmental issues, manage natural resources and mainstream environmental sustainability into policies, plans and decisions. There are three factors that have the greatest influence on organisation capacity (Table 3).

Capacity building across Council will enable a change in processes and culture to increase the organisations understanding of sustainability principles and its integration in Council’s day-to-day work. We aim to have sustainability at the forefront of everyone’s thinking; prior to starting any new project or task.

5.2 Improve sustainable procurement of goods and services

The foundation of a circular economy is a strong demand for recycled materials. Through the Victorian Government Circular Economy Policy, the Victorian Government will help drive the market demand by increasing innovation and supporting the next generation jobs. In support of this, Council will embed environmental sustainability principles in its procurement processes by developing an evaluation criterion to determine if a product or material meets Council’s needs and sustainable principles.

These may include questions on energy efficiency, the percentage of recycled materials used, the life expectancy of the product, the carbon footprint to produce and transport the product, or the recyclability at its end of life.

Council will also encourage use of sustainable goods and services for Council run events and functions. This would include the minimisation or elimination of single use plastics, supporting local business to reduce our transport carbon footprint, reduction of waste, increase in recycled / recyclable products, and contracting companies with similar sustainable values.



Table 3: Factors that influence Organisation Capacity

5.3 Coordinate compliance to environmental legislation and other requirements

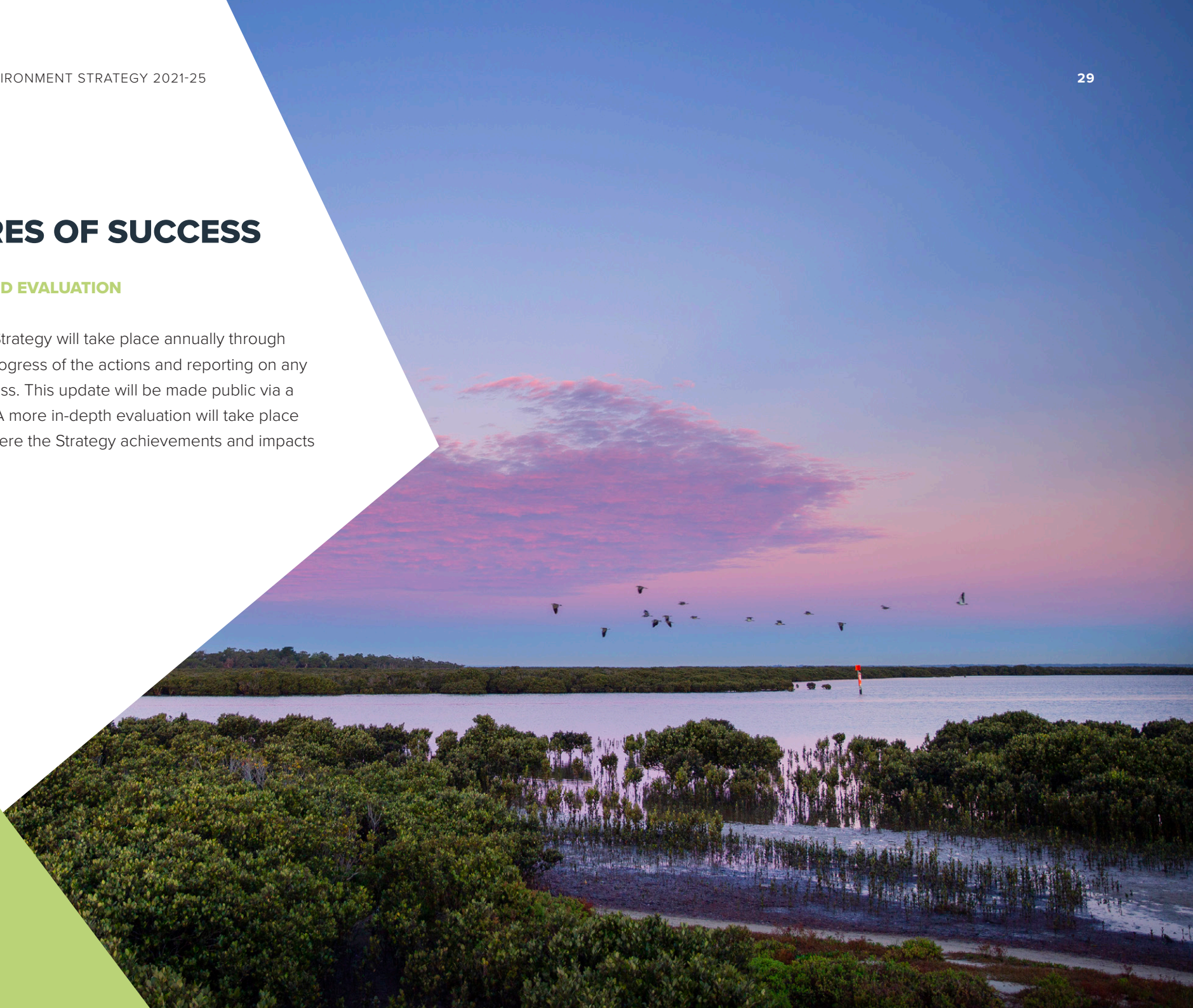
The work completed by Council is governed by several Government Acts and regulations. It is the responsibility of all Council officers to learn and understand their legal requirements and ensure they complete their work in accordance with the relevant guidelines. It is acknowledged that legislation is regularly updated and this needs to be monitored by Council officers to ensure the most up to date legislation is being referenced. The cornerstone of the new Environment Protection Act is the General Environmental Duty (GED). The GED places an obligation on Council to undertake reasonably practicable steps to eliminate or where this is not possible, minimise the risks of harm to human health and the environment from pollution and waste. Council undertakes several activities and manages contracts that cover activities that have the potential to pose a risk. Under the GED, Council is required to identify and manage risks taking into consideration the likelihood and consequence of harm occurring.



MEASURES OF SUCCESS

MONITORING AND EVALUATION

Monitoring of the Strategy will take place annually through updating on the progress of the actions and reporting on any measures of success. This update will be made public via a report to Council. A more in-depth evaluation will take place after four years where the Strategy achievements and impacts will be evaluated.





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