City of Melville

COMMUNITY CLIMATE ACTION PLAN

2024 – 2030

Acknowledgement of Country

We acknowledge the Bibbulmun people as the Traditional Owners of the land on which our City stands today and pay our respects to the Whadjuk people and Elders both past and present.

Nyungar Statement

City of Melville nagolik Bibbulmen Nyungar ally-maga milgebar gardukung naga boordjar-il narnga allidja yugow yeye wer ali kaanya Whadjack Nyungar wer netingar quadja wer burdik.

Marie Taylor
Whaduck Balardong Nyungar Birdiyia

Acknowledgement of the Climate Emergency

The City of Melville acknowledges the climate emergency and is committed to achieving carbon neutrality as an organisation by 2030 and net zero across our City by 2050 to combat climate change.

Contents

Executive Summary

The City of Melville acknowledges the profound impact climate change is having on its community and is dedicated to addressing the current and future impacts it will have on public health, economic stability, and environmental integrity. With a population surpassing 110,000 in 2023 and expected to grow by 15% by 2036, the City of Melville anticipates the need for expanding housing, amenities, services, and infrastructure.

This stance is reinforced by the Council's declaration of a climate emergency in June 2021, along with a commitment to achieving carbon neutrality as an organisation by 2030 and net zero across our City by 2050 to combat climate change. The declaration was in response to community calls for further action. Based on city-wide surveys, climate change is a prominent concern to the community and key priorities for taking action were identified through consultation with the Climate Action Reference Group (CARG).

In response, this Community Climate Action Plan 2024 – 2030 (Community CAP) has been developed to guide the City's services and programs over the next six years, emphasising emissions reduction and climate resilience. The actions outlined in the Community CAP will be pivotal in advancing the City of Melville's shared objective of achieving net zero emissions by 2050. The Plan works alongside the City of Melville's Corporate Climate Action Plan (2023), which drives the organisation's activities to reach carbon neutral by 2030.

Addressing the climate emergency requires concerted effort from all parts of society. In recognition of this, the Community CAP has been developed collaboratively with input from the City's residents, businesses, and community leaders. Through this collaborative approach, the City of Melville aims to cultivate a resilient community capable of meeting its net zero emissions target while confronting the challenges posed by climate change.

A community emissions profile outlines the emissions produced within the local government boundary including from the City's operations, residential, commercial and industrial activities. Electricity (50%), transport (23%) and waste (12%) comprise the majority of emissions sources.

The Community CAP identifies the climate-related risks and challenges facing the City, while also presenting opportunities for the City of Melville to assist its residents in overcoming them. It also highlights where residents, businesses and community groups can take action now to live in a sustainable, resilient and biodiverse community.

The actions outlined in this plan are designed to enable both the City of Melville and the community to achieve the following objectives and vision.

Vision

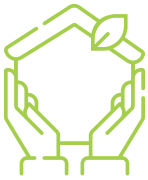
We are a climate resilient community living in harmony with biodiversity and creating a positive future for all

THEME 1

Climate Leadership

Demonstrating climate change leadership through initiatives and strategic partnerships

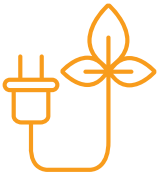
THEME 2



Resilience

Building a resilient community and infrastructure capable of withstanding the impacts of climate change

THEME 3



Energy

Transitioning to more sustainable energy sources to reduce greenhouse gas emissions

THEME 4

Transport

Promoting sustainable forms of transport, including low-carbon solutions and infrastructure to reduce the environmental impact of mobility

THEME 5

Food

Promoting climate sensitive food choices to enhance environmental, social and economic resilience

THEME 6

Waste

Implementing comprehensive waste strategies to reduce landfill waste, and participating in the circular economy

THEME 7

Greening

Collaborating with the community to increase biodiversity within both natural and urban 'green spaces'

These objectives encompass a total of 57 actions the City of Melville will undertake to support the community in their efforts to combat climate change.

A Community Climate Action Framework is underpinned by high-level theoretical behaviour change approaches based on practice theory and it establishes a template for projects that the City of Melville will use to campaign and educate the community on climate change action. This framework will be leveraged to drive a suite of programs and initiatives that will educate, activate, and provide practical support to the community on our collective journey to net zero.

Progress on the Community CAP will be reported annually, and the Plan will undergo a full review in 2030 to ensure its continued relevance and effectiveness in addressing the evolving challenges and opportunities.

Contributions

The City of Melville would like to thank and acknowledge all those who played a part in developing this Community CAP. This includes community members who took part in the Community Climate Action Plan Survey in February 2024, as well as the CARG, which was instrumental in shaping ideas and advocating for climate action, including the development of this Plan. Furthermore, appreciation goes out to all City staff, CARG members, community groups, businesses and stakeholders, and First Nations peoples who contributed to the workshops aimed at formulating the climate Vulnerability, Risks, and Opportunities Assessment Report (VRO) in 2023.

ABOUT CARG

The CARG consisted of 24 community members who were appointed from 2022 - 2024 to focus on ways to reduce CO_2 emissions and build resilience to climate change-induced risks. CARG members are very representative of our community, covering all suburbs and a variety of demographics.

The CARG's role was to develop ideas and voice community priorities for the City of Melville and community to mitigate and adapt to climate change. As part of the CARG engagement process, members heard from subject matter experts monthly from November 2022 to May 2024 to assist in education and development of key themes and actions to be explored as part the Community CAP. These themes included water, transport, energy use, waste and recycling, and the built and natural environment.

City of Melville Climate Action Reference Group members October 2023

Purpose of the Plan

The City of Melville has developed this Community CAP to collaborate with the community in responding to the climate emergency. By leveraging available resources, the City of Melville will accelerate action within the City to reduce emissions, adapt and build resilience in the face of climate change. To achieve this, the City of Melville has identified programs, strategies and initiatives to encourage and enable collective action within the community. Implementing this Plan will steer the community towards a healthier, more vibrant and sustainable environment. The City's Corporate Climate Action Plan (2023 - 2028) outlines how the operational emissions of the City of Melville will reach carbon neutral by 2030. This Plan outlines the actions the City of Melville will take to support and accelerate progress in the community to reach net zero by 2050.

This Plan builds on the existing work the City of Melville has completed in the Vulnerability, Risks and Opportunity assessment in 2023. This report identified hazards the City faces, such as flooding, sea level rise and bushfires, and undertakes a vulnerability risk assessment providing a number of maps showing the spatial distribution of different aspects of vulnerability. It recommends how to mitigate the risks and makes recommendations for First Nations engagement, advocacy, built environment, education and awareness, emissions reduction, financing, habitat protection, planning and transport.

Introduction

The City of Melville is a metropolitan Local Government Authority located within 20km south of the Perth CBD. Covering an area of 53km², the City has a current population of approximately 110,087 and is forecast to grow to 125,507 by 2036. The City is located on Whadjuk territory, home to the Bibbulmun people along the banks of the Swan and Canning Rivers.

The City consists primarily of residential housing, with a substantial amount of institutional land uses and some employment districts. Key activity centres across the region include the Murdoch Health and Knowledge Precinct, Canning Bridge, Melville City Centre, Melville District Centre, the Riseley Centre, Melville Business Area and the Archibald Hub in Willagee.

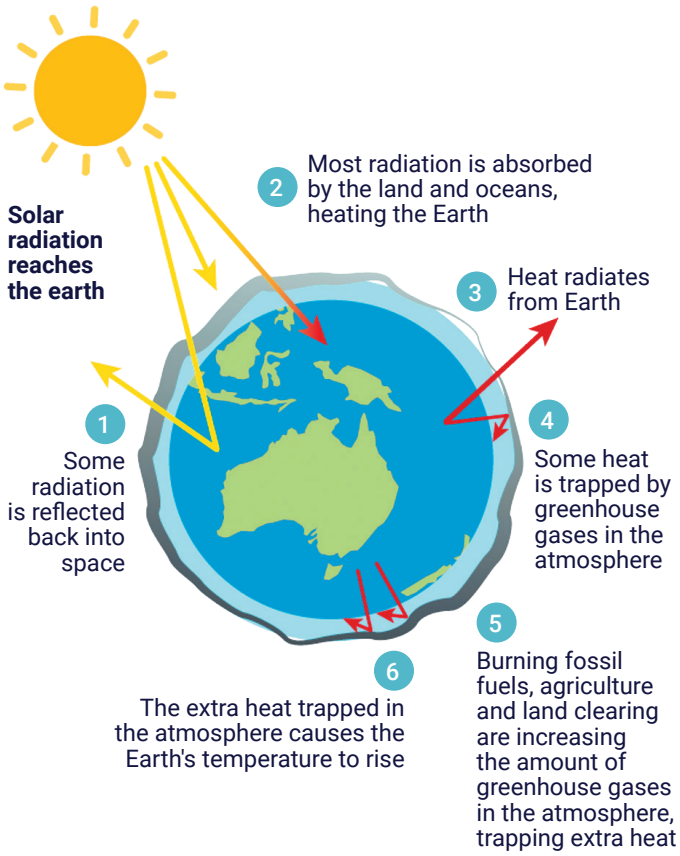
The City has more than 200 parks and reserves, 861 hectares of public open space and 295 hectares of bushland and 18km of foreshore. This includes regionally significant bushland reserves, threatened ecological communities, significant wetlands and heritage sites supporting native flora and fauna species.

CLIMATE SCIENCE

Climate change refers to long-term changes in the average temperature, precipitation, and other weather patterns that occur across the Earth's surface. These changes are primarily driven by human activities such as burning fossil fuels, deforestation, and industrial processes that release large amounts of greenhouse gases into the atmosphere.

The increased levels of greenhouse gases, such as carbon dioxide and methane, trap heat in the Earth's atmosphere and cause the planet's average temperature to rise. This leads to a variety of impacts, such as sea level rise, changes in rainfall patterns, more frequent and severe weather events like heatwaves, droughts, floods, storms and altered ecosystems.

Climate change is a significant challenge facing the planet, as it has the potential to cause significant economic, social and environmental damage if left unchecked. Addressing climate change requires a coordinated effort at the international, national, state and local level to mitigate through emissions reduction, adapt and build resilience in response to the impacts of climate change.



Department of Environment and Energy, 2019

CLIMATE CHANGE IMPACTS IN THE REGION

The City and the broader Perth Region are already experiencing the effects of a changing climate. In Western Australia, average temperatures have already increased by 1.3°C since 1910. Rainfall has declined significantly, the most of any region in Australia since 1970, and days over 35°C are becoming more frequent.[1]

By 2030, average temperatures compared to the 1981–2010 baseline are projected to have increased by 0.9°C and by 2090 could increase by 3.8°C.[2] For Melville, this will mean hotter days leading to longer and more intense heatwaves and harsher fire weather. Future rainfall is forecast to reduce as climate change impacts the region, but the intensity of heavy rainfall events will likely increase. The City's location along the Swan and Canning Rivers mean sea-level rise and storm surges are expected to increase flooding risks.

Some of the more recent effects of climate change experienced in the City and the Perth region include:

The driest seven-month period on record between October 2023 – May 2024[3]

Fires between 2005 and 2018 destroyed approximately 32 hectares of bushland and wetlands across the City.[4]

In 2020, several severe thunderstorm events in Perth caused power outages, property damage and uprooted trees with strong winds, heavy rainfall, and hail.

A record-breaking heatwave in January 2022 resulted in Perth sweltering through six consecutive days over 40°C, with 2021/22 being the hottest summer on record.[5]

A marine heatwave in 2011 destroyed seagrass meadow and kelp ecosystems and caused fisheries to close along the WA coast.[6]

The impact of these more extreme weather events on the City means:

Community health, particularly for people experiencing vulnerability, will be at greater threat from bushfire smoke.

Increased flooding of buildings, roads and public spaces along the Swan and Canning Rivers.

More frequent and longer lasting heatwaves will be the deadliest threat to the City.

Cyclonic winds and intense rainfall causing damage to property.

Higher risk of bushfire disaster events.

Sea level rise and flooding risks to the Swan-Canning Estuary Foreshore, Attadale Alfred Cove Foreshore, Point Heathcote Reserve and Bicton's Blackwall Reach Parade.

Biodiversity losses and drought impacts on bushland, wetlands and urban forest within the City.

Property owners will face the prospect of insurance premiums increasing to unaffordable rates by 2030.

These events will affect and interrupt community services and systems such as transport, city precincts, land use, major industries, water supply, waste and wastewater management, energy supply and communications infrastructure.

[1]Government of Western Australia, Western Australian climate projections, wa.gov.au/system/files/2022-01/Western_Australian_Climate_Projections_Summary.pdf
[2]City of Melville, Climate Vulnerability, Risks and Opportunity Assessment Report, melvillecity.com.au/CityOfMelville/media/Documents-and-PDF-s/CoM-Climate-Vulnerability,-Risks-and-Opportunity-Assessment-Report.pdf
[3]https://www.weatherzone.com.au/news/rain-arrives-in-perth-after-driest-seven-months-on-record/1889362
[4]City of Melville, Natural Areas Asset Management Plan 2019, melvillecity.com.au/CityOfMelville/media/Documents-and-PDF-s/Natural-Areas-Asset-Management-Plan.pdf
[5]Retrieved from The Conversation, theconversation.com/what-drove-perths-record-smashing-heatwave-and-why-its-a-taste-of-things-to-come-175516
[6]Retrieved from CSIROscope, blog.csiro.au/how-much-do-marine-heatwaves-cost-the-economic-losses-amount-to-billions-and-billions-of-dollars

Responses to Climate Change

Fuelled by mounting concerns about climate change and its community-wide effects, the City of Melville officially declared a Climate Emergency in 2021. The Council's declaration of a climate emergency in June 2021, along with a commitment to achieving carbon neutrality as an organisation by 2030 and net zero across our City by 2050 to combat climate change. This declaration acknowledges the far-reaching global impact and profound consequences of climate change, emphasising it as a primary concern for the City. Immediate action on climate change is imperative, as failure to do so will lead to increasingly severe consequences that will impact the world for generations.

The Australian Federal and State governments are introducing policies to influence emissions reduction and adaptation to climate change across the country. This includes climate risk assessments, biodiversity evaluations, mandatory emissions disclosure by businesses, and sector-level interventions. A review of these policies is in Appendix A.

Internationally, regular United Nations conferences bring policymakers across the world together to make decisions regarding global action on climate change and biodiversity.[7] International standards and reporting frameworks such as the UN's Sustainable Development Goals, the Global Biodiversity Framework, and the Climate Disclosure Project aim to hold governments, organisations and institutions across the world accountable for their climate change commitments.

CLIMATE EMERGENCY

The term "Climate Emergency" reflects our global situation, where urgent action is required to reduce the root causes of climate change and avoid the potentially irreversible environmental damage resulting from climate change. The responsibility to respond to the emergency falls across society, including all governments, businesses, organisations and individuals.

CARBON NEUTRAL

Achieving a balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks. It means that any carbon dioxide released into the atmosphere is balanced by an equivalent amount being removed. This can be achieved by a combination of reducing existing emissions and offsetting the rest, often through carbon offset projects like reforestation.

NET ZERO EMISSIONS

The balance between the amount of greenhouse gases produced and the amount removed from the atmosphere. When a company, government or community is net zero, it means that its total greenhouse gas emissions are equal to the GHGs that are being removed. The focus is on reducing all emissions as much as possible through efficiencies, then balancing out any remaining through offsets.

UNITED NATION'S SUSTAINABLE DEVELOPMENT GOALS

In 2015, the UN set 17 Sustainable Development Goals (SDGs) as a comprehensive framework providing peace and prosperity for people and the planet, both now and into the future (Figure 1). The target to achieve these goals was set for 2030. The 193 countries that pledged commitment to this target recognise that ending poverty is intertwined with efforts to enhance health and education, reduce inequality and stimulate economic growth, all while addressing climate change and working to preserve our oceans and forests.[8]

Figure 1: United Nation's Sustainable Development Goals (SDGs)

CITY OF MELVILLE'S RESPONSE

In June 2021, the City of Melville declared a climate emergency, pledging to achieve carbon neutrality within its operations by 2030 and net zero emissions with the community by 2050. To address this, the City developed a Corporate Climate Action Plan in 2023 and this Community CAP 2024 - 2030 to support corporate and community-led climate action. These Plans highlight the City's commitment to taking action and embed its response to climate change alongside other Council plans and policies. Other relevant Council plans and policies are shown in Appendix B.

The City has a target to be carbon neutral as an organisation by December 2030.

The City's Corporate Climate Action Plan implementation will contribute to reducing greenhouse gas emissions associated with our services and operations whilst seeking to avoid the future impacts of climate change beyond what is already projected. Achieving carbon neutrality by 2030 will demonstrate the City's leadership in climate action, environmental responsibility, and contribute to meeting global and national goals.

While the City of Melville's corporate emissions represent a fraction of the total emissions within the community (i.e. 1.6%), achieving carbon neutrality remains significant in the City's overall emissions reduction journey. Implementing measures to reduce the City's organisational emissions demonstrates leadership to the broader community, illustrating the positive financial, environmental and social outcomes of action.

The City of Melville has a target to achieve net zero emissions city-wide by 2050, paralleling the approach taken with the City's corporate emissions by setting a baseline year from FY2021/22 for emissions reduction efforts. Achieving this target will require collective efforts from all facets of the community, with the City of Melville committed to supporting relevant actions and initiatives. This Community CAP identifies identifies actions the City of Melville will take to support direct and indirect emissions reduction within Melville. Importantly, all actions will yield co-benefits, showcasing their broad impact in mitigating the effects of climate change.

Melville is aiming to have net zero emissions city-wide by 2050.

Net Zero Emissions Target

Achieving net zero emissions is imperative for councils to combat climate change and protect the environment. By reducing greenhouse gas emissions, councils and the community can mitigate the effects of climate change, enhance community well-being, and support global initiatives like the Paris Agreement.

Setting a clear target with achievable goals to reach net zero emissions offers assurance to investors and business, while stimulating job growth in various sectors including the sustainable built environment, renewable energy, land restoration, low emissions transport, and circular economy initiatives. By promoting investment in energy efficiency, renewable resources, and other low-carbon technologies, councils can foster a resilient and sustainable economy.

Lowering greenhouse gas emissions also yields positive returns on public health by improving air quality, thereby reducing the prevalence of respiratory illnesses and chronic diseases. Given climate change disproportionately affects marginalised communities, factors such as access to limited resources and socioeconomic disparities can exacerbate vulnerabilities people are facing at the time to climate-related impacts. Implementing net zero and carbon neutral targets alongside effective policies and plans can address these inequalities, guaranteeing that the benefits of a low carbon economy are distributed equitably.

Plan Development

The Plan was developed based on a series of engagement activities undertaken by the City of Melville.

The City conducted in-depth consultation with the CARG. The members of the CARG met 12 times over 2022 - 2024 to discuss and provide feedback on key issues that have formed part of this plan (e.g. climate science, energy systems, climate risk, circular economy, and food choices).

Further consultation the City of Melville completed included five workshops conducted as part of a Vulnerability, Risk and Opportunities assessment.

Workshops included both key internal and external stakeholders and covered City staff, the CARG, First Nations, community, environment, and business stakeholders.

These workshops were attended by 91 representatives from relevant organisations.

City of Melville Climate Action Reference Group workshop

City of Melville Vulnerability, Risk and Opportunities First Nations workshop

City of Melville Vulnerability, Risk and Opportunities workshop

The City of Melville also ran a community-wide survey during January and February 2024. The survey was distributed through City communications channels, including the Melville Talks website, direct emails and e-newsletters and through Facebook. It received 425 responses, 95% of which were from local residents.

The survey asked which climate impacts people were most concerned about (e.g. impact on parks and reserves, access to affordable energy, being able to have an active lifestyle) as well as which actions the community and/or the City of Melville should take.

Finally, a round of interviews was undertaken with staff from the City of Melville including from the Sustainability, Environmental Education, First Nations, Libraries, Arts, Youth, Business, Transport, Planning and Urban Forest service areas.

The outcomes of this engagement process formed the basis of the Community CAP, ensuring the community's priorities remain core to the City of Melville's services and initiatives. The actions identified in this Community CAP are in response to these priorities and reflect the current context in relation to the climate emergency. As both the community and the City of Melville evolve and grow their capacity to take action, this Community CAP will be reviewed and updated to achieve even greater emissions reduction and levels of adaptation.

The actions that emerged for the City of Melville to focus on were:

- Increase renewable energy in local businesses, homes and schools
- Increase urban greenery in our community
- New buildings or retrofits to existing buildings achieving a high level of energy and water efficiency (incl. appliances)
- Increase promotion and use of public and active transport routes
- Reduce waste produced in homes, businesses and schools, including at events
- Increase local food initiatives such as community gardens
- Support residents, businesses and groups to work on environmental and sustainability projects including but not limited to mitigating against climate change

Community responses from consultations and workshops:

Establish an information and advisory service that the community can access free of charge to support electrification of homes and businesses.

A green City with space for nature and wildlife.

To be an innovative and resilient green community where we value all our native vegetation and wildlife.

Encourage more home and community vegetable and fruit gardens. Provide information and resources on how to grow vegetables at home, even in limited spaces.

Increase recycling opportunities and reduce landfill and water waste.

A community that delivers positive climate impact for future generations.

Providing opportunities to every community member to engage in sustainable practices and help the environment even in small ways.

Community Emissions Profile

The City of Melville's community emissions profile is derived from the Snapshot Climate tool developed by Ironbark Consulting and supplemented by more granular data sources where available (Table 1). The tool has been developed in accordance with the Global Protocol for Community-scale Greenhouse Gas Inventories (GPC) and encompasses a wide array of top down or state level data on emissions and its sources. Community emissions comprise of emissions produced within the local government boundary including from the City's operations, residential, commercial and industrial activities.

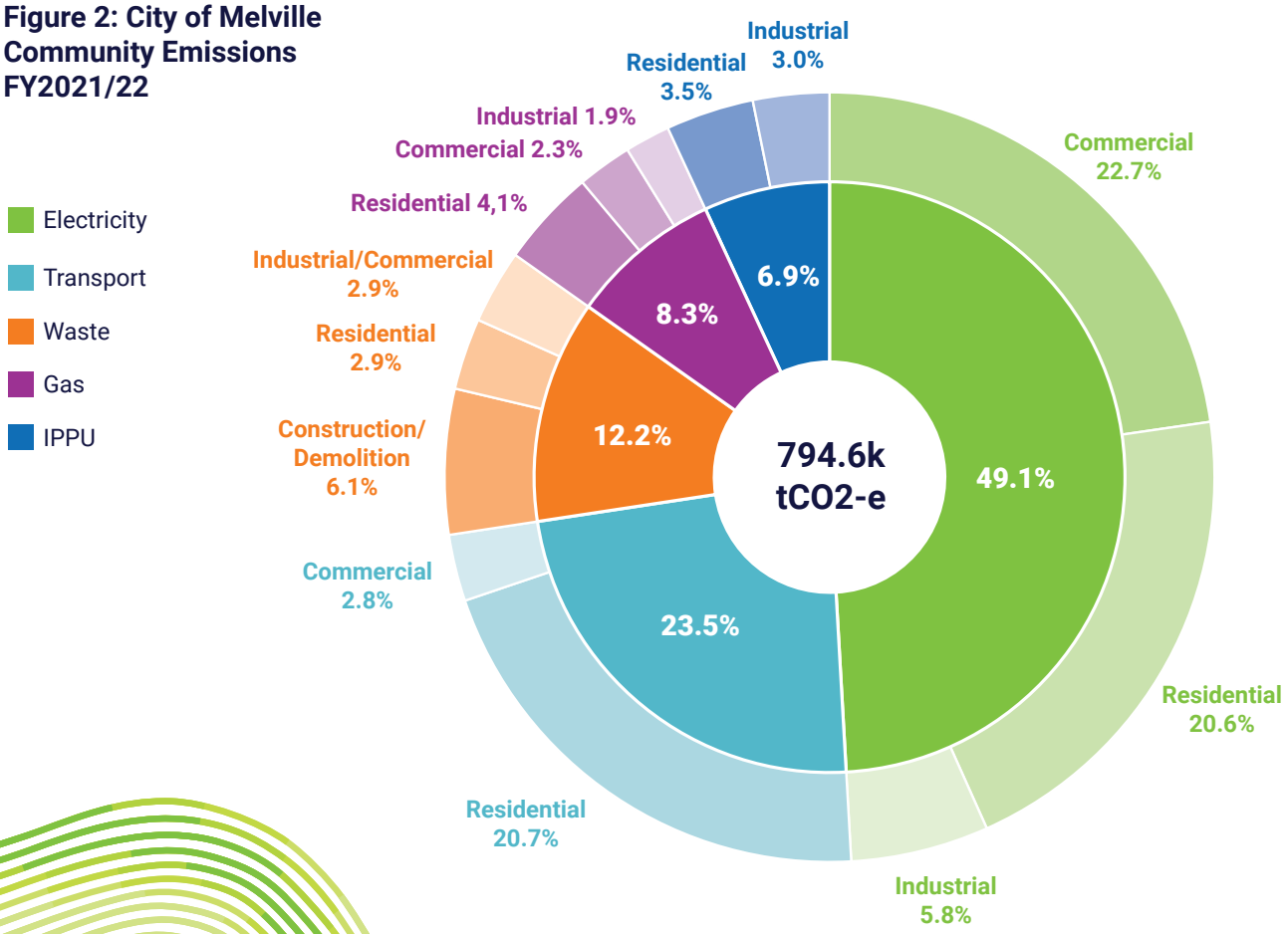
The emissions profile in Figure 2 illustrates that the community's emissions in FY2021/22 amounted to 794,600 tCO_2-e. This breakdown delineates emissions by sectors and sources.

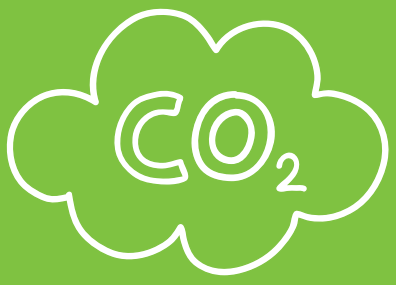
The top three emissions sources are:

ELECTRICITY (50%) **TRANSPORT (23%)** **WASTE (12%)**

The highest sub-sector of the community contributing to these emissions is electricity from commercial uses (23%), followed by transport for residential use (21%). Emissions from construction/demolition waste (6%) and residential gas use (4%) are other high emitting sub-sectors.

Figure 2: City of Melville Community Emissions FY2021/22





In addition to the community level emissions, every individual has a unique carbon footprint. Your carbon footprint is how much carbon - in the form of greenhouse gases like carbon dioxide and methane - is released into the atmosphere as a result of your everyday activities. This could include the emissions created to make the electricity you use at home, the direct emissions created when you burn fossil fuels, such as natural gas in the home, or the petrol or diesel in your vehicle. It also includes the emissions from organic waste and from the production and transportation of the food we eat.

Based on 2021/2022 data, the City of Melville's corporate emissions comprise 1.6% of the total community emissions, predominantly coming from electricity and gas usage from Council-owned and operated assets (Figure 3).

Data sources

The community emissions profile is based on the Snapshot Climate tool and has been collated from a range of publicly available datasets including the National Greenhouse and Energy Reporting Scheme (NGERs), the Safeguard Registry and the Snapshot Climate Profile. In addition, more accurate local-level electricity and gas data supplied by the City of Melville was included on residential, commercial and industrial consumption from FY2022/23.

Figure 3: Total emissions showing the fraction of the City of Melville's Corporate Emissions FY2021/22

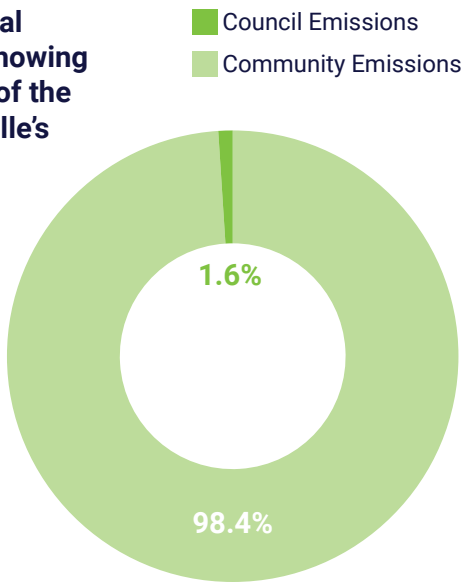


Table 1 describes examples of emissions estimate methods used and the typical organisations that the relevant methods would apply to. Safeguard mechanism data was not used in this emissions modelling.

Table 1: Emissions estimation method description

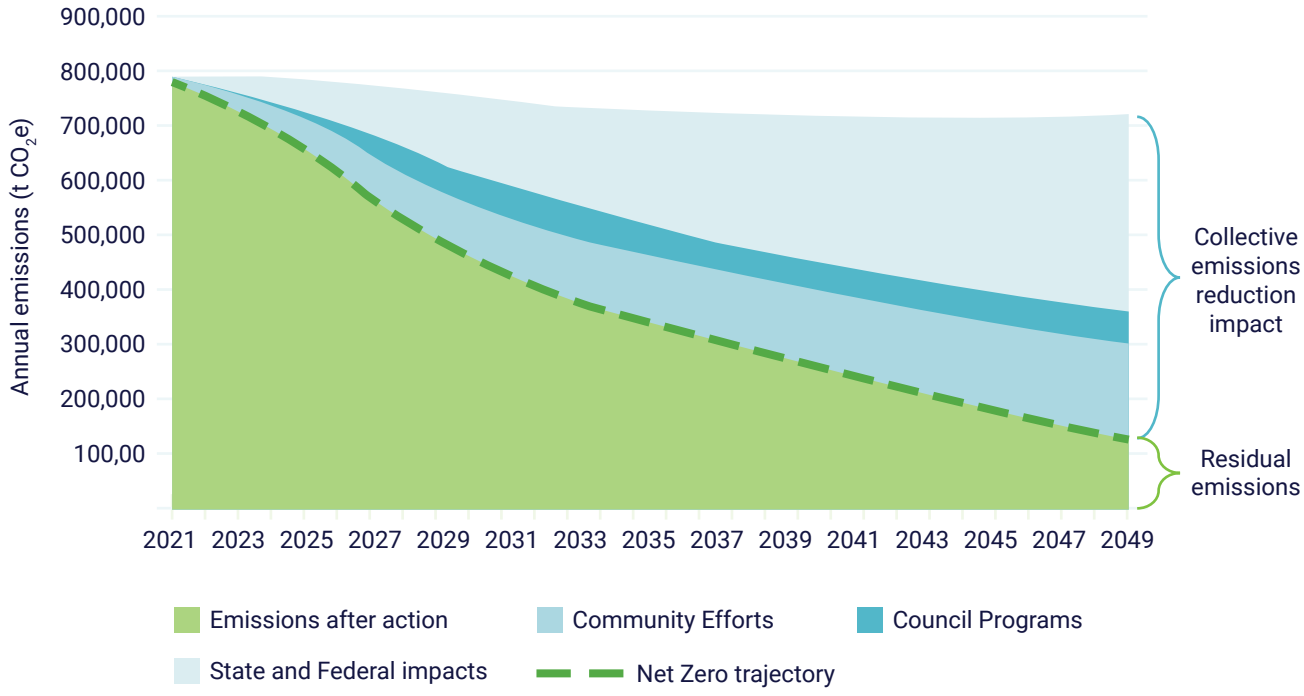
Emissions estimate method	Description	Typical organisation	Quality of data
Safeguard Mechanism	The facility is a reporting facility for the National Safeguard Mechanism Registry, and has its Scope 1 emissions reported annually by the operation	An aluminium smelter	This data is regulated and audited and applies to a specific facility, so is as high a quality as can be obtained
National Greenhouse and Energy Reporting Scheme (NGERs)	The organisation is a registered organisation with the National Greenhouse and Energy Reporting Scheme (NGERs), providing organisation wide Scope 1 and 2 emissions	A chemical company with a handful of industrial sites across the country	This data is high quality but is typically not a single facility, so an attribution process is needed to scale it down to the community level
Company	The organisation has published somewhere (such as through a press release or annual report) information about the operations of their facilities or emissions	A supermarket chain with many outlets	The data is relevant to the company, and can often apply to the specific facility, but is not verified and generally not time stamped
Snapshot	The data is sourced using scaling methods employed by Snapshot to establish an estimate of their operations	A private school	The data should be broadly correct, however will not reflect the specific activities or mitigation actions adopted by the emitter

Emissions Reduction Pathway

The City of Melville's role in reducing community emissions is to support the community, establish strategic planning and advocate for the State and Federal governments to take action. Through these efforts, the City of Melville has the potential to accelerate community emissions reduction by 10% more compared to making no intervention. From now till 2050, this translates to an estimated total of around 1.8 million tonnes of avoided carbon dioxide equivalent emissions into the atmosphere. The City of Melville has and will continue to use financial decision-making tools including but not limited to marginal abatement curves to prioritise the implementation of the activities in the plan to ensure that they are effective and cost competitive, including consideration of life cycle emissions.

The results of the high-level modelling of relevant actions described in this plan are presented in Figure 4.

Figure 4: Emissions reduction pathway for City of Melville as a geographic region by 2050



The overall projection for the graph is based on the current adoption rate of emissions reducing activities in WA, factoring in population growth. Trends such as the increasing proportion of renewable energy in the grid and the future transition to EVs are expected to gradually decrease emissions in the City if no action is taken by the City of Melville or the community. This trajectory alone is not sufficient to address the climate emergency, necessitating robust action from all levels of government and the community.

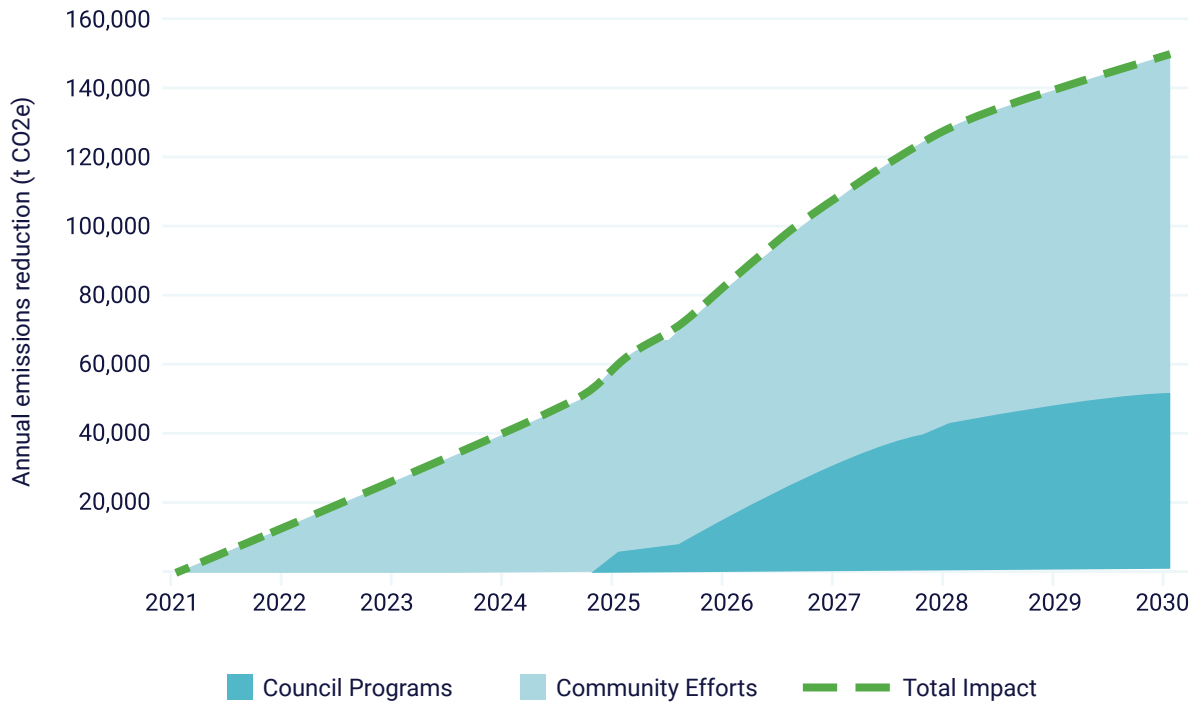
The projected impact of State and Federal policy to 2050 is anticipated to expedite the transition to net zero emissions, bolstering the City of Melville and community endeavours. Whilst the projects, programs and advocacy the City of Melville will undertake to implement this plan are poised to further accelerate emissions reduction, significant community action remains vital in mitigating the most severe impacts of climate change. The Net Zero Trajectory line charts the City's projected journey towards zero emissions in 2050.

Figure 5 emphasises the relative capacity of the City of Melville and the community to reduce emissions, showcasing the potential impact of aspirational community-driven action beyond those facilitated by the City's programs. It underscores the collective impact residents and businesses can wield on emissions if they commit to impactful actions recommended in this Community CAP.

The actions described in this Plan will largely be implemented over the next five years, with their impact ramping up by the end of the decade. Beyond 2030, the emissions abatement impact of this current plan plateaus, as projects and programs reach their maximum potential. Regular review and update of the Community CAP will identify further opportunities for both the City of Melville and the community to take action between 2030 and 2050, progressing the City towards net zero.

This graph illustrates that community action is already having an effect on Melville's emissions, by doing things like using electric vehicles, improving efficiency and installing solar PV. It also shows that the uptake of interventions needs to significantly increase and, while the actions outlined in this plan by the City of Melville will notably leverage community emissions reduction, the majority of the work to achieve net zero emissions for Melville lies beyond the City of Melville's control and necessitates leadership from businesses and residents themselves.

Figure 5: Projected cumulative impact of emissions reduction actions for City of Melville from now to 2030

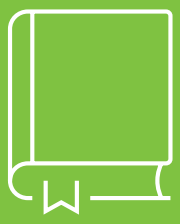


How Do We Get to Net Zero?

This Plan requires collaborative efforts from all stakeholders within the community.

As a local government we play a key role in achieving our community's aspirations and our vision of an inclusive, vibrant and sustainable future. Although we are ideally placed to understand and respond to the changing needs of our community, we understand that some areas are outside our direct control or expertise and we need to work with and have the commitment and actions of others, such as state and federal governments, business, community organisations and residents.

Different roles we play:



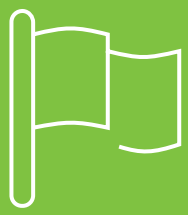
REGULATOR
we have a statutory obligation to regulate a specific area of activity.

MONITOR
we gather information and check progress over time.

FACILITATOR
we bring together and encourage others to achieve goals.

PROVIDER
we are responsible for service and facility delivery.

FUNDER
we provide funding to others to provide services and facilities.



ADVOCATE
we promote the interests of our community to other decision-making organisations, such as state and federal governments.

PARTNER
we work collaboratively with others to deliver services and facilities.

The extent of involvement required from individuals, households, businesses, industries, and government entities varies based on their decision-making authority and influence within the community.

For instance, households and businesses can opt to install rooftop solar on their properties but may have limited authority over the proportion of renewable energy supplying the grid. Local governments possess direct oversight over their own operations and assets, yet they lack authority over the choices made by residents and businesses within their communityity or actions taken at the State or Federal levels.

Achieving net zero emissions will only be possible if everyone contributes by undertaking action across their spheres of control, influence and concern (Table 2).

Table 2: Roles and Responsibilities

	Community	The City of Melville	State/Federal Government
Sphere of Concern	Advocate to Council and State and Federal members of parliament	Advocate on behalf of the community	Advocate on federal or international level
Sphere of Influence	Share opportunities with friends, family, and colleagues Participate in community groups Vote in elections	Education Facilitation Incentives, grants, and loan schemes	Sector-level engagement Incentives, grants, and loan schemes Participate in national or international agreements
Sphere of Control	Behaviour changes Purchasing decisions	Strategic planning Policies and procedures Asset management Procurement	Legislation Research

For the City of Melville this means...

As the closest level of government to the community, the City of Melville holds a crucial role in educating, campaigning, influencing and supporting the local community in making climate-related decisions and taking action. Additionally, it has the capacity to advocate to both State and Federal governments on behalf of its residents and business leaders. The City of Melville can serve as the platform through which the community can enact and implement tangible change.

By fostering collaboration and collective action, the City of Melville can exemplify climate leadership within the region. The City of Melville has already taken proactive steps to showcase its commitment by establishing its own corporate emissions carbon neutral target and initiating climate-related action within its own buildings. These efforts include the adoption of LED lighting, installation of rooftop solar PV, and implementation of various energy efficiency measures.

The City of Melville can further undertake the following types of interventions to support action on climate change within the community:

- Develop and implement strategic plans, policies and regulations
- Provide loans, incentives or grants
- Install or facilitate the installation of community infrastructure (eg. EV charging stations)
- Facilitate and support community buying power for key stakeholders (eg. support business procuring 100% renewable energy PPAs, community batteries)
- Provide community education and information
- Advocate for greater climate action by State and Federal Governments

For the Community this means...
Members of the community play a vital role in reducing emissions and enhancing adaptability to a changing climate. The design of this Plan, which incorporates input from the community, underscores the significant influence the community has on shaping actions aimed at achieving the community's net zero target. Groups such as Town Team Movement or "Friends of" volunteer groups can empower individuals, foster connected communities, and enhance the local environment. The City of Melville can further support these community initiatives by providing grant opportunities.

In order to achieve net zero emissions and a climate resilient Melville, everyone must play their part. Below are some recommended actions that can easily and cost-effectively be undertaken by sectors of the community: residents, businesses, community groups and schools. These groups can also advocate to State and Federal Government for changes within their sphere of control.

Business

- ✓ Take the lead in climate friendly low emissions products and sell this to your consumers or incorporate them into your business practices
- ✓ Drive change through supply chains
- ✓ Host low impact events for your staff
- ✓ Encourage flexible working
- ✓ Support local enterprises and suppliers
- ✓ Speak up! Practice advocacy at all levels

- ✓ Install EV charging at your business or place of work
- ✓ Offer novated leases for e-bikes or EVs
- ✓ Participate in National Ride2Work Day
- ✓ Incentivise staff to commute to work other than by car and provide ways for them to store or charge bikes or scooters if needed

- ✓ Cater climate friendly food at events (less meat, more seasonal produce, and partner with local suppliers)

- ✓ Partner with containers for change and host a drop off point
- ✓ Support and develop a circular economy with goods or services your business supplies
- ✓ Participate in recycle programs for blister packs, medications, make up and toiletries (Pharmaceutical businesses)

Residents

- ✓ Start or join a community group in your area, like the Town Teams, climate action groups or volunteer with “Friends of” local groups
- ✓ Speak up! Practice advocacy at all levels

- ✓ Ask your landlord for improvements in energy efficiency or to install solar panels
- ✓ Review your home for preparedness to natural disasters predicted for your area (e.g. flooding, bushfire, extreme heat)

- ✓ Install solar panels on your roof
- ✓ Choose an electricity plan that includes renewable energy (e.g. GreenPower)
- ✓ Replace old lightbulbs with LED lights
- ✓ Buy appliances with high energy efficiency ratings
- ✓ Electrify everything! Replace gas hot water tanks, heaters, ovens and stovetops with electric ones when possible and buy an electric vehicle for your next car
- ✓ Conduct a home energy audit to see where most of your energy is used or lost (e.g. poor insulation). Knowing which appliances are high energy users and which areas of your home have low thermal performance will allow targeted changes that see immediate savings

- ✓ Lead healthier, more active lives
- ✓ Walk, cycle or catch public transport where possible

- ✓ Grow your own food and share this with your community if you have excess or join a local community garden
- ✓ Support local farmers and farmers markets and purchase oddly shaped food so it doesn’t go to waste

- ✓ Practice conscious consumerism and drive change through consumer spending
- ✓ Donate to charity, swapping or selling unwanted items to reduce waste
- ✓ Prioritise reusable materials, such as cups or water bottles, grocery and produce bags, and reusable cutlery over single use
- ✓ Buy quality products or shop second hand
- ✓ Separate rubbish, recyclables and food compost correctly
- ✓ Request paperless invoices and stop other paper bills in the mail
- ✓ Say ‘No’ to receiving Junk-mail in your letter box
- ✓ Bring along your hard to recycle items to Bottle Top Hill or items that need fixing to Repair Lab and give them a second life

- ✓ Request free trees for your verge from the City of Melville
- ✓ Participate in the free plant giveaway run each autumn by the City of Melville
- ✓ Plant and retain canopy trees and shrubs in your garden and verge and partner with your neighbours to help look after their verges if they need assistance
- ✓ On hot days, water your plants in the coolest parts of the day – before sunrise or after sunset
- ✓ Reuse grey water in your garden and consider installing a rainwater tank on your property
- ✓ Support biodiversity in your gardens, plant natives, install frog ponds, bird baths, insect hotels and practice responsible pet ownership

Schools

- ✓ Create a student environment club or green club to assist in sustainability and environmental initiatives
- ✓ Advocate to the City of Melville and community leaders to create more pedestrian and bike friendly routes to school
- ✓ Encourage school administrators to investigate energy efficiency or renewable energy options for your school's energy needs
- ✓ Advocate to your school to offer a three-bin system

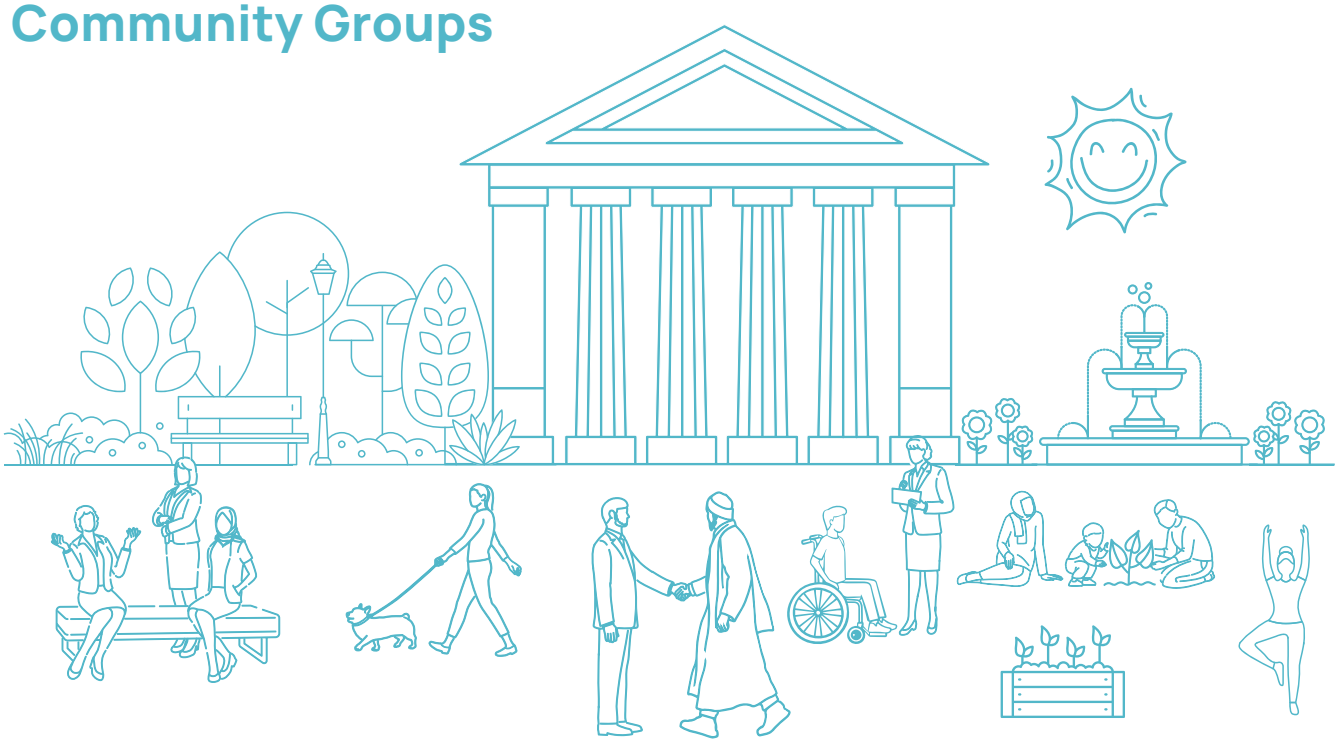
- ✓ Organise bike buses and walking buses to get to and from school

- ✓ Start a school produce or native garden
- ✓ Create a school recipe book filled with climate friendly recipes from students
- ✓ Divert organic food waste into a school wide composting program to be used in the school garden

- ✓ Consider the circular economy and implement recycling or upcycling programs for writing equipment, ink cartridges, library books and sports equipment
- ✓ Hold clothes swap events at your school or with friends and say no to fast fashion
- ✓ Implement a uniform recycling program

- ✓ Support biodiversity with frog bogs, nest boxes, insect hotels and pollinator friendly plants
- ✓ Organise tree planting days with your school or local sports club

Community Groups



- ✓ Educate the broader community through workshops, expert guest speaker events, sustainable open homes
- ✓ Take part in citizen science programs
- ✓ Apply for grant programs to fund projects or events

- ✓ Participate in City programs to reduce emissions and adapt to climate change
- ✓ Support other community members who are particularly at risk from hot weather
- ✓ Get to know your local neighbours and make connections to build resilience to extreme events
- ✓ Model and encourage connectedness and inclusion to build resilience

- ✓ Partner with local suppliers of solar PV systems, electric appliances and trades to promote benefits and savings

- ✓ Host events to encourage people to walk, cycle or catch public transport and education on taking care of bikes

- ✓ Join or start a community garden
- ✓ Share climate friendly recipes and hold community cooking classes to promote climate friendly food choices and cooking with electric appliances

- ✓ Engage with your local clubs and help them to be more sustainable
- ✓ Hold a clothes/produce/plant/seed swap event

- ✓ Partner with Council and state government to protect nature reserves and biodiversity corridors

Community Climate Action Plan

This Community CAP presents priority actions for The City of Melville to implement by 2030 to both reduce emissions and adapt to a changing climate at the community level.

This Community CAP aims to guide the City of Melville towards a more sustainable, resilient economy capable of adapting to environmental changes. At its core, the Community CAP emphasises collaboration among the City, residents, businesses, schools, and community groups to effectively tackle the climate crisis. The selection of specific actions within each theme reflects extensive engagement with council staff and the broader community. By actively identifying the community's priorities, the City of Melville has proposed practical initiatives that are both attainable and conducive to strengthening the City's resilience and reducing emissions. Some actions focus on enhancing community capacity and knowledge to implement them, while others will require short to medium-term pilot programs and feasibility studies.

For each action there is an estimated indication of the amount of investment, timeframe and scale of impact for implementation as outlined in Tables 3, 4 and 5 below. These costings are in addition to existing planned operational or capital works budgets associated with the City's Corporate Climate Action Plan and other initiatives being delivered through existing programs.

Table 3: Cost estimates per action theme (2024 – 2030)

THEME	Unrealised Grants*	Total Cost
Climate Leadership	$0	$180,000
Resilience	$150,000	$400,000
Energy	$25,000	$235,000
Transport	$200,000	$110,000
Food	$0	$45,000
Waste	$0	$0
Greening	$0	$0
TOTAL	**$375,000**	**$970,000**

** Unrealised grants are funds the City will be seeking via grants to support the implementation of the Community Climate Action Plan and if successful would reduce City funded-costs proportionately.*

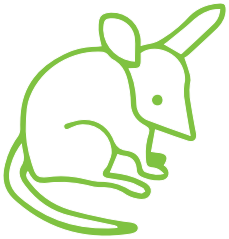


Table 4: Cost Estimates Per action theme per year (Financial year 2024/2025 to financial year 2029 to 2030)

THEME	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Climate Leadership	$0	$40,000	$35,000	$35,000	$35,000	$35,000
Resilience	$0	$150,000	$35,000	$140,000	$50,000	$25,000
Energy	$0	$0	$10,000	$50,000	$95,000	$80,000
Transport	$0	$10,000	$0	$100,000	$0	$0
Food	$0	$0	$0	$25,000	$10,000	$10,000
Waste	$0	$0	$0	$0	$0	$0
Greening	$0	$0	$0	$0	$0	$0
TOTAL	**$0**	**$200,000**	**$80,000**	**$350,000**	**$190,000**	**$150,000**

Table 5: Key

Scale of Impact	Low	Addressing small section of the community and/or minor emission sources and/or expected emissions reductions small
	Medium	Community wide impact and/or addressing multiple emission sources and/or expected emissions reductions medium
	High	Systematic long-term change and/or impact beyond community scale and/or expected emissions reductions high
Timeframe	Short term	Action will be implemented over the next 1-2 years
	Medium term	Action will be implemented over the next 3-5 years
	Long term	Action will be implemented over the next 6-10 years
	Ongoing	Actions that will be implemented on an ongoing basis

THEME 1

Climate Leadership

Demonstrating climate change leadership through initiatives and strategic partnerships

Australian councils and communities have historically taken the lead on climate-related initiatives when State and Federal governments have been slow to act. As the closest level of government to the community, councils possess the capability to advocate, influence and enact change on behalf of their constituents at the national and state levels.

In its Climate Action Policy 2024, the City of Melville recognises that an effective response to climate change demands flexibility and a commitment to innovation, behaviour change and new ways of thinking. The City of Melville is committed to innovation and will encourage, and support community led initiatives aiming to work towards carbon neutrality through shared learning and its leadership.

This theme entails implementing actions and initiatives that go beyond what is currently underway or proposed in short-term planning. The City of Melville has the potential to collaborate closely with its community to spearhead climate actions comparable with the scale and urgency of the challenge. Through effective coordination the City of Melville can leverage collective efforts to address climate change. This community-wide approach enables the city to harness diverse perspectives, resources and expertise leading to more impactful, equitable and sustainable solutions.

The City of Melville recognises the importance of collaborating with local businesses, universities and community groups to actively combat climate change and achieve meaningful results. Existing partnerships with Murdoch University, Cities Power Partnership and Switch Your Thinking exemplify the City of Melville's commitment to engaging with the wider community on climate action. The City of Melville will continue to explore further opportunities for collaboration, including on regional projects with other councils through the Perth South West Metropolitan Alliance.

By demonstrating leadership, the City of Melville can further establish change within the other themes identified in this plan. Actions identified within this theme are shown in Table 6.

Programs already leading the way...

- **Community Environmental Groups (CARG, "Friends of", Town Team Movement)**
- **Eco Hub (formerly Piney Lakes Environmental Education Centre)**
- **Annual Eco Action Expo**
- **Sustainable Melville Grants**
- **Corporate Climate Action Plan**

Key Projects

- **Advocate for climate leadership and collaborative responses**
- **Identify ongoing roles and responsibilities for community collaboration**
- **Continue the Sustainable Melville Grants program**
- **Support net positive community events**
- **Annual reporting on community emissions and progress of the Community CAP implementation**

Action Name	Description	Scale of Impact	Timeframe	Cost
1.1 Collaborate on best practice for tackling climate change	Engage with the WA State Government and other key partners to undertake innovative projects and identify best practice climate responses in the community	High	Ongoing	$0
1.2 Advocate to the State Government for climate leadership	Advocate for the State Government to implement its Climate Adaptation Strategy and provide tools and support to address the impacts of climate change	High	Short	$0
1.3 Establish framework for community collaboration	Identify how the City can best support the community in implementing the Community CAP	High	Short	$5,000
1.4 Create a community hub for climate change action	Refresh Piney Lakes Environmental Education Centre into a fit-for-purpose innovation & education Eco Hub to support community connection and climate and environmental action	Medium	Medium	$0
1.5 Community climate change collaboration	Support community-led action on climate change through community environmental groups, grassroots action, First Nations consultation, fostering stewardship and advocacy and amplifying existing community groups' work	Medium	Medium	$50,000
1.6 Collaboratively fund community led climate solutions	Continue the Sustainable Melville Grants Program and explore further options to collaborate with community groups via funding opportunities for community adaptation or mitigation projects	Medium	Short	$125,000
1.7 Support climate resilience in young people	Continue to embed climate change in the implementation of the Directions for Young People Strategy	Low	Short	$0
1.8 Research community sentiment on climate change	Regularly engage with the community to understand their priorities, concerns and directions regarding climate change action	Low	Short	$0
1.9 Monitor and report progress on the transition to net zero emissions	Monitor and report community emissions and the transition to net zero emissions	Medium	Ongoing	$0
1.10 Supporting positive experiences in nature during early childhood	Partner with early education providers to provide targeted education, events and provision of resources to local businesses, groups, and families to increase opportunities for creating positive experiences in nature during early childhood	Low	Short	$0
1.11 Net positive community events	Support the community to partner with local stakeholders to deliver net positive community events	Low	Short	$0

THEME 2

Resilience

Building a resilient community and infrastructure capable of withstanding the impacts of climate change

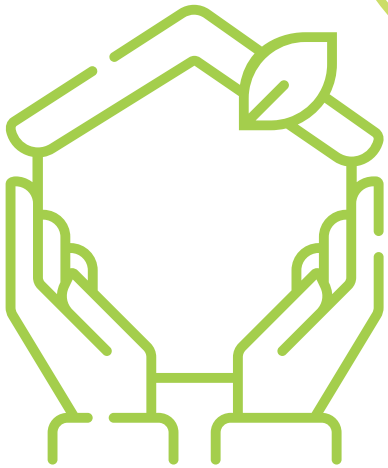
The impacts of climate change are significant, with hotter and drier conditions and increased frequency of extreme weather events like bushfires and flooding projected to affect Melville in the coming decades. These extreme weather events are already exacerbating existing challenges which threaten the local flora and fauna species, leaving the community vulnerable and unable to adapt and prepare for these changing environments. It also harms the health of the community in unequitable ways.

Building a resilient community capable of preparing for and adapting to the risks associated with climate-related disasters is paramount for safeguarding the health and wellbeing of its residents. The City of Melville can play a crucial role in supporting the community by enhancing emergency response capabilities and infrastructure, updating existing policies and plans, and advocating for better resources and tools necessary to effectively combat climate change.

Investing in resilience not only helps the community adapt to changing environmental conditions but also minimises economic losses and creates opportunities for growth in sustainable industries. Moreover, prioritising resilience efforts can protect and restore natural habitats, ensuring the sustainability of local ecosystems and the invaluable services they provide.

Adaptation measures such as the development of more green spaces, water sensitive urban design, and resilient building design, not only mitigate climate risks but also offer additional health and social benefits, contributing to the overall wellbeing of the community.

Actions identified in this theme are shown in Table 7.



Programs already leading the way...

- **Community Safety Service**
- **Evacuation Centres**
- **Free Public Wi Fi and computers available in City libraries**
- **Safer Melville Plan**
- **Public Spaces Strategy**
- **Bushfire Risk Management Plan and communications**
- **Emergency Management Plan**
- **Water Sensitive Urban Design in projects**
- **Playground renewal program**

Key Projects

- **Reduce urban heat impact**
- **Minimise flood risk areas**
- **Community education on building climate resilience and living sustainably**
- **Identify key businesses within the City to work with on climate change actions**
- **Pilot libraries as cool spaces during heatwaves**
- **Partner with Governments to respond during extreme events**

Action Name	Description	Scale of Impact	Timeframe	Cost
2.1 Update Water and Asset Management Plans	Update Water and Asset Management Plans in response to climate change risks, and continue to augment water management infrastructure to reduce flood risk	Medium	Short	$0
2.2 Educate at risk communities on climate change and associated risks	Identify First Nations communities and at risk residents to provide targeted education resources on preparing for climate events such as storms, floods, and heatwaves	Medium	Short	$100,000
2.3 Accessible and inclusive hazard awareness resources made available to community	Draw on the relevant authorities' Disability Access and Inclusion Plans to deploy climate change hazard awareness resources	Low	Short	$0
2.4 Educate the community on climate change risk	Share resources from relevant sources to improve the community's understanding of climate change risks and how to respond	Medium	Short	$0
2.5 Investigate financial support for community retrofits	Investigate grants and subsidies for the provision of financial support to the community to retrofit buildings to improve overall design quality and ability to withstand extreme weather events or build resilience	Low	Medium	$25,000
2.6 Reduce urban heat impact	Enhance open spaces to provide further protection and relief from sun and extreme heat	Medium	Short	$75,000
2.7 Improve climate adaptation response though planning mechanisms	Explore opportunities to work with State and Federal governments and developers to improve climate adaptation response in planning	High	Medium	$0
2.8 Improve emergency response capabilities and infrastructure	Review and update the communication process for evacuation centre access information in the event of emergency	Low	Short	$0
2.9 Identify areas with high future flood risk	Undertake more detailed flood modelling to manage flood risk from rivers, surface water and future sea level rise to homes and businesses based on the latest climate projections, and investigate initiatives to adapt to these risks	Medium	Medium	$80,000
2.10 Advocate for businesses in the City to improve their climate resilience	Identify and work with businesses in the City to understand where climate change will impact them and how they can mitigate and adapt to it, with a focus on businesses working with at risk populations	Medium	Medium	$0

Action Name	Description	Scale of Impact	Timeframe	Cost
2.11 Modify road and infrastructure procurement guidelines	Trial expanded road surface enrichment program to ensure use of cost effective and lower emissions pavement treatment that extends the life of road surfaces	Low	Short	$0
2.12 Provide disaster recovery assistance	Partner with State and Federal Governments to provide grants to low income or renting households to assist in post disaster recovery	Low	Medium	$0
2.13 Support local businesses to act on climate opportunities and risks	Explore opportunities to work with businesses on identifying climate opportunities and risks and developing management plans	Low	Medium	$30,000
2.14 Update Council's policies in response to increased heat risk	Review and update policies and procedures to ensure heat-related risks at community facilities are appropriately considered, drawing on State Government heat management policies	Medium	Short	$0
2.15 Explore establishing cool spaces for extreme events	Explore the potential for City run community buildings to be used as cool spaces during extreme events	Low	Medium	$0
2.16 Educate the community on sustainable living and climate resilience	Continue and review community education and behaviour change programs on sustainable living activities to foster resilience, including but not limited to energy, food, water, transport, biodiversity, urban forest and circular economy	Medium	Short	$40,000
2.17 Community rainwater and greywater systems	Explore options for the City to support the community to install rainwater or greywater systems	Low	Medium	$25,000

THEME 3

Energy

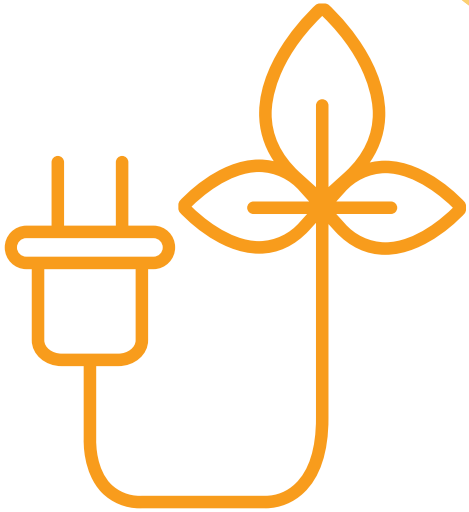
Transitioning to more sustainable energy sources to reduce greenhouse gas emissions

With over 50% of the City of Melville's emissions stemming from electricity and gas use, both residential and commercial sectors hold significant influence in achieving net zero emissions. Residents and businesses can make substantial contributions by implementing measures that reduce emissions from these sources.

Transitioning away from traditional energy sources towards sustainable alternatives stands out as a cost-effective and economically beneficial action the community can take. Practices like using energy efficient appliances and adopting renewable energy solutions not only mitigate emissions, but also lead to reduced energy bills and operational costs for businesses and households alike. This shift towards low emissions energy sources not only benefits the environment, but also fosters economic growth by creating job opportunities with the sector. Gas stoves and unflued gas heaters are also two of the largest contributors to indoor air pollution, with recent research finding that, that gas stoves cause 12% of childhood asthma in Australia[9].

As this sector continues to advance, the community has an array of options to champion its widespread adoption, thereby amplifying its collective consumer and purchasing power. By advocating for sustainable energy sources as mainstream, the community demonstrates its commitment to responsible stewardship of the planet and sets an influential example for future generations.

A key component to reducing energy emissions is through ecologically sustainable design (ESD). ESD involves the use of building design and construction principles that improve thermal comfort and reduce a building's energy demand. The City of Melville is exploring how to best support the community to improve ESD in Melville's built environment. This will build on the City's of Melville's existing Energy Efficiency in Building Design policy and include education and championing examples of best practice sustainable building design. Actions identified in this theme are shown in Table 8.



Programs already leading the way...

- **Education programs**
- **Switch Your Thinking Program**
- **Melville Cockburn Chamber of Commerce**

Key Projects

- **Establish programs to deliver free or subsidised home or business energy assessments**
- **Encourage ESD and green building design through education, communication and planning**
- **Education programs on the opportunities and benefits of electrifying gas systems and appliances**
- **Assess the City's role in community renewable energy and storage programs**

[9] *Knibbs, L. et al. Damp housing, gas stoves, and the burden of childhood asthma in Australia. Medical Journal of Australia. 2018 (7): 299-302.*

Action Name	Description	Scale of Impact	Timeframe	Cost
3.1 Advocate for a Building Upgrade Finance mechanism	Advocate to the State Government for a Building Upgrade Finance mechanism under the Local Government Act to enable owners and occupiers of buildings to overcome financial barriers to implement energy efficient building upgrade activities	High	Medium	$0
3.2 Encourage green building design	Develop and distribute energy efficient guidelines for new home builds, for inclusion into the development approval process, including support of building smaller homes	High	Short	$50,000
3.3 Community renewable energy and storage	Explore options for the City to support the community to install renewable energy and storage	Low	Medium	$80,000
3.4 Assess feasibility of new community energy solutions	Undertake feasibility assessments for community energy solutions including but not limited to VPPs, VENs, PPAs[10], and community batteries in partnership with Western Power	High	Medium	$25,000
3.5 Feasibility assessment for community electrification program	Explore education and incentive schemes for households to replace gas with electricity, including for at risk households	Medium	Short	$25,000
3.6 Feasibility assessment for incentivised home energy assessments	Explore partnerships with local companies to deliver subsidised or free home energy assessments for at risk households	Medium	Short	$10,000
3.7 Explore opportunities for energy efficiency in rental properties	Explore education and schemes to encourage property owners to help tenants with emissions reduction.	Low	Medium	$45,000
3.8 ESD in planning	Investigate opportunities to deliver thermal improvements, rooftop solar and water and energy efficiency via suitable planning provisions	Medium	Short	$0
3.9 Engage with business on sustainability	Engage with local businesses to reduce carbon emissions and celebrate leadership	Medium	Medium	$0

[10] *VVP = Virtual Power Plants; VEN = Virtual Energy Network; PPA = Power Purchase Agreement*

THEME 4

Transport

Promoting sustainable forms of transport, including low-carbon solutions and infrastructure to reduce the environmental impact of mobility

Transportation accounts for nearly a quarter of total emissions within the community, making it the second largest contributor. Among these emissions, over 20% originate from residential use, primarily attributed to commuting to work.[11] Council's role in the transport space is to support residents to reduce emissions from local trips to the shops, schools, community events to name a few. In addition, approximately 60% of households in the City have 2 or more vehicles, slightly more than the WA average.[12] This indicates an opportunity to promote more active and public transport options to reduce emissions. The City of Melville will work with the State Government on developing and promoting actions to reduce transport emissions.

By curbing these emissions, it is possible to alleviate the impacts of climate change. Transitioning towards cleaner and more sustainable transportation modes, such as public transit, more active options like walking and cycling, and electric vehicles (EVs), helps reduce the overall carbon footprint of the transportation sector. Furthermore, pollutants emitted by vehicles exacerbate air pollution, posing risks to human health and causing respiratory problems and other health issues. By lowering transportation emissions, the City of Melville can improve air quality, mitigate health risks, and enhance the community's wellbeing.

Given that the City primarily resides in urban areas, situated within 20km south from Perth CBD, promoting walking and cycling through the implementation of existing TravelSmart initiatives, enhancing path network connectivity within suburbs, and educating residents about the benefits of public transit may encourage a shift in transportation modes. As this strategy plays a crucial role in this plan, having an Integrated Transport Plan will ensure effective action tailored to the local context within each part of the City of Melville's response. By promoting these initiatives, both the City of Melville and the community can significantly diminish transportation emissions and foster a more sustainable and resilient future. Actions identified in this theme are shown in Table 9.

Programs already leading the way...

- **TravelSmart Program**
- **Walk and Ride Plan**
- **Infrastructure Strategy**
- **Healthy Melville**
- **Melville Cares Community Bus**
- **Cycling Without Age events**

Key Projects

- **Advocate to State Government for active and public transport initatives**
- **Community education on active and public transport options**
- **Embed climate change impacts into road and pathway service delivery**
- **Support electric mobility uptake in the community**

[11] *Retrieved from https://www.abs.gov.au/statistics/industry/tourism-and-transport/transport-census/latest-release#*

[12] *Retrieved from https://profile.id.com.au/melville/car-ownership?WebID=10&BMID=40*

Action Name	Description	Scale of Impact	Timeframe	Cost
4.1 Develop a Comprehensive Transport Strategy	Develop a Comprehensive Transport Strategy that encourages and enables mode shifting to more sustainable transport options, for example walking, cycling and catching public transport	High	Medium	$100,000
4.2 Advocate to State Government for better access to sustainable transport	Advocate to State Government to remove barriers to active and public transport	Low	Medium	$0
4.3 Embed climate change adaptation considerations into infrastructure works	Embed climate change adaptation considerations into road and pathway infrastructure planning and construction	Medium	Long	$0
4.4 Education program for residents close to public transport hubs	Work with landlords and real estate agents to provide information on Journey Plans for townhouse and apartment building residents	Low	Short	$10,000
4.5 Facilitate e-bike/e-scooter share scheme	Investigate options to partner with e-bike/e-scooter share companies to launch program in the City	Low	Short	$0
4.6 Support installation of EV infrastructure	Explore opportunities to remove boundaries and support accelerated installation of EV infrastructure in the community by charging station providers and private businesses/ land owners	High	Medium	$0

THEME 5

Food

Promoting climate sensitive food choices to enhance environmental, social and economic resilience

One-fifth of the global food-related emissions, constituting 6% of all global greenhouse gas emissions, is attributed to transportation, while food production and land use collectively account for 24% of GHG emissions.[13] These figures underscore the importance of enhancing local food production and educating the community about the benefits of supporting local food sources. Local food sources not only help in emissions reduction, but also contribute to less food waste, supporting the local economy and fostering community connections.

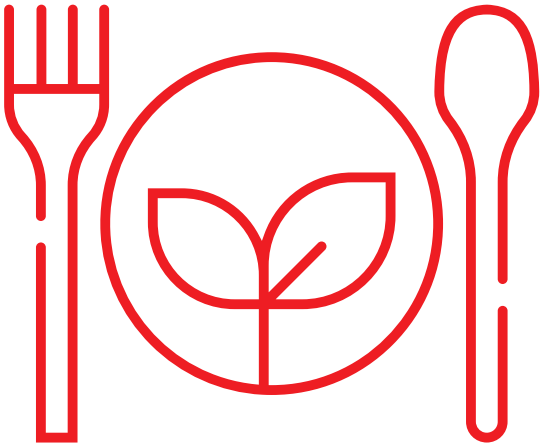
The City of Melville already undertakes community based education and awareness raising activities related to healthy food choices through its Health Melville programs and initiatives. The main focus of this education program is to support the community in making food choices aimed at healthy lifestyles.

Increasingly, people around the world are seeking to reduce emissions by adopting climate friendly food choices. By learning more about what goes into producing food, from energy and water consumption, to methane emitted by animals, people can prioritise food choices that are lower impact. For example, chicken and fish produce fewer emissions than lamb and beef. Cooking and meal traditions form a significant part of many cultures, and change can be gradual. Small changes over time to your grocery shopping and eating habits will reduce the production of foods that are energy and emissions intensive, whilst supporting healthy lifestyles.

As climate change continues, shifting weather patterns are likely to affect food production, quality, viability, and yield in certain areas, as well as the cost and availability of some food items. By continuing to support local food production efforts, the community can explore avenues to diminish reliance on imported food sources, building resilience in the local economy and against potential disruptions to supply chains.

[13] *Retrieved from https://www.sydney.edu.au/news-opinion news/2022/06/21/fifth-of-global-food-related-emissions-due -to-transport.html*

The City of Melville's Seeds to Seedling to Schools initiative aims to raise awareness about healthy and sustainable living, combating climate change by promoting local food production, and strengthen community ties through educational workshops on growing food locally and advocating for healthy eating habits. Actions identified in this theme are shown in Table 10.



Programs already leading the way...

- **LiveLighter Program**
- **My Way Program**
- **Education Programs**
- **Seeds to Seedlings to Schools**
- **Piney Lakes Community Garden**

Key Projects

- **Food education programs for climate sensitive food choices and waste reduction**
- **Support options for community to grow their own food**
- **Promote local food options**

Action Name	Description	Scale of Impact	Timeframe	Cost
5.1 Education programs and initiatives for climate sensitive food choices	Develop and implement a food education program, covering climate, environmental and social impacts of food choices including best practice waste avoidance and reduction	Low	Short	$0
5.2 Support localised food production	Explore expanding programs and initiatives to support the community to grow their own food in collaboration with relevant partners and stakeholders	Low	Medium	$45,000

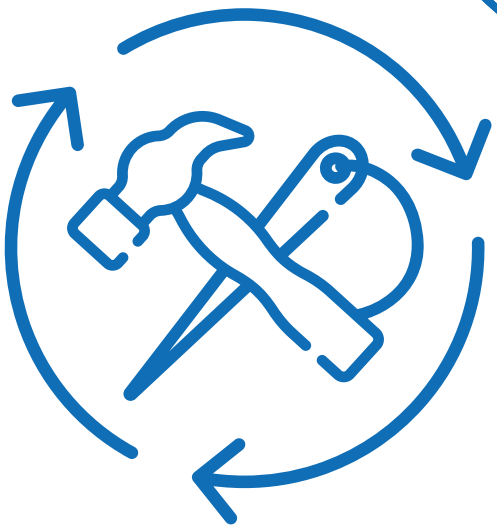
THEME 6

Waste

Implementing comprehensive waste strategies to reduce landfill waste, and participating in the circular economy

Waste constitutes 12% of the community's emissions, predominantly stemming from construction and demolition activities. Methane from landfills pose environmental and health risks to the community, persisting for years as legacy emissions. The City of Melville has initiated measures to tackle this issue by prioritising waste reduction, adopting circular economy principles in material usage and responsibly managing waste to protect the environment.

Aligned with the WA Government's directive to provide FOGO bins across all local governments in the Perth and Peel region, the City of Melville introduced these bins to residents in 2019 and plans to extend the program to commercial businesses in the near future. The objective is to collaborate closely with the community to educate and promote best practices for waste reduction, reuse and recycling. By considering the expansion of FOGO bin collection at City-run events, the community can actively contribute to waste reduction efforts. Education will play a pivotal role in achieving the goal of zero waste to landfill, thereby aiding in meeting the net zero emissions target by 2050. Actions identified in this theme are shown in Table 11.



Programs already leading the way...

- **Rebates for worm farms, compost bins, reuseable nappies and menstrual products**
- **Waste Strategy**
- **Repair Lab Program**
- **FOGO bins for dog waste**
- **Bin signage to reduce contamination**
- **Pre-Booked verge collection system**
- **E-waste & Recycling Drop Off Days**
- **Waste Services Guide**
- **Waste services at large events**
- **Recycle Hubs**

Key Projects

- **Establish a library of things for residents to borrow tools, appliances and toys**
- **Community education for waste reduction and avoidance**
- **Establish a resource recovery and reuse facility**
- **Advocate for waste reduction leadership from State and Federal Government**

Action Name	Description	Scale of Impact	Timeframe	Cost
6.1 Advocate to the State and Federal governments for waste reduction leadership	Collaborate with WALGA to advocate to the State and Federal governments for waste reduction leadership, including right to repair legislation and standardisation of reusable containers	Medium	Long	$0
6.2 Community education for waste reduction and avoidance	Update and continue community education programs on following the waste hierarchy and explore a targeted approach for maximised efficiency	Medium	Short	$0
6.3 Implement programs and initiatives to support the circular economy	Expand community programs and initiatives that encourage a circular economy, including repair labs, tool and toy libraries, rebates and subsidies	Medium	Short	$0
6.4 Explore long term programs and facilities to build the circular economy	Explore establishing a community resource recovery and reuse facility	Medium	Medium	$0
6.5 Provision of FOGO collection for businesses	Continue to provide FOGO bins for businesses along with education and/or incentives to encourage take up	Medium	Short	$0

THEME 7

Greening

Collaborating with the community to increase biodiversity within both natural and urban 'green spaces'

Trees, green spaces and other vegetation are important components of the urban landscape within the City, providing a diverse array of economic, environmental and social benefits to the community. These natural elements are the foundation of vital ecosystems that play a key role in both mitigating and adapting to climate change. Urban green spaces and natural areas such as bushlands and wetlands within the City act as carbon sinks, capturing and storing substantial amounts of carbon dioxide from the atmosphere. Protecting these areas not only reduces carbon in the atmosphere, it also supports biodiversity conservation, maintains critical ecosystem services and enhances ecosystem resilience, leading to various positive outcomes such as soil preservation and water regulation.

The City of Melville's Urban Forest Strategy, Natural Areas Asset Management Plans and Foreshore Strategy are designed to ensure that natural areas and urban forests remain integral to the City's identity and character, even amidst urban transformation. Through collaboration and advocacy efforts aimed at preserving and safeguarding the City's green spaces the community can effectively address challenges posed by climate change and strive towards a more sustainable and resilient future. Actions identified in this theme are shown in Table 12.

Programs already leading the way...

- WA Tree Festival
- Tree Canopy Project
- Urban Forest and Green Spaces Policy
- Adopt-a-Spot Program
- Community planting days
- Tree Expansion Program
- Tree Succession Program
- Aboriginal Ranger Program (WA State Program)
- Waterwise Council Program
- Environmental education programs
- Foreshore Restoration Program
- Natural Areas Asset Management Plan
- Weed Management
- Local Heritage List

Key Projects

- Via the Urban Forest Strategy, continue to roll out the tree planting program and prioritise the number of trees planted in areas with the lowest canopy cover
- Community education to promote urban greening and biodiversity preservation
- Investigate carbon sequestration potential
- Support community led re-vegetation efforts
- Maintain and enhance biodiversity corridors for the preservation of the City's flora and fauna

Action Name	Description	Scale of Impact	Timeframe	Cost
7.1 Update and implement Urban Forest Strategy	In line with the Urban Forest Strategy, continue to roll out tree planting program across the City, prioritising locations with the lowest canopy cover and expanding and maintaining data collection and monitoring processes.	High	Short	$0
7.2 Advocate to State Government to improve greening	Advocate for protection of green areas on private land in relevant State legislation	Medium	Medium	$0
7.3 Encourage and promote urban greening and preservation of biodiversity	Targeted education and communication campaigns and collaborative community projects that focus on increasing biodiversity and connectivity across the City and region such as: - Increasing canopy cover and tree retention - Urban greening and gardening for biodiversity - Waterwise and future-proofing verges and gardens	Medium	Short	$0
7.4 Feasibility assessments on carbon sequestration	Investigate the measurement of carbon sequestration potential on City and community land	Low	Long	$0
7.5 Nature based solutions for climate change mitigation and adaptation	Explore and improve consideration of nature-based solutions as protective measures against climate change and disasters, particularly in areas of flooding and riverine erosion	Medium	Short	$0
7.6 Monitor the natural environment across Melville	Continue to monitor key environmental health metrics across the City of Melville and update as required, for example street tree data collection, flora and fauna surveys, emerging pest and disease monitoring, and canopy cover in parks and reserves	Medium	Short	$0
7.7 Community led re-vegetation activities	Review community led re-vegetation activities within natural areas to ensure best practices in a changing climate	Low	Short	$0

Community Climate Action Framework

As part of the Community CAP, a Community Climate Action Framework has been developed to guide the City of Melville's implementation of the actions identified in the plan. It is an education framework designed to encourage effective community-based climate action within the City. The framework is underpinned by high-level theoretical behaviour change approaches rooted in practice theory and it establishes a template for projects that the City of Melville will use to campaign and educate the community on climate change action. This framework will be leveraged to drive a suite of programs and initiatives that will educate, activate, and provide practical support to the community on our collective journey to net zero.

The Eco Hub (formerly Piney Lakes Environmental Education Centre - PLEEC) currently delivers a range of educational and experiential programs focussed on biodiversity, sustainable living and circular economy. Programs are typically well attended, and the centre provides a valuable resource to those already activated within the climate action space. There is however, a recognised need for engaging with a broader cross-section of the community. The Community Climate Action Framework will provide the strategic direction required to assist with more targeted community outreach efforts and more tailored educational program and initiative development, ensuring the Eco Hub and libraries can provide practical and impactful support, serving all members of our community.

Eco Hub (formerly Piney Lakes Environmental Education Centre) inspires people to experience and connect with the natural environment and to encourage positive behaviour change towards its protection. It offers unique, authentic and engaging experiential learning opportunities, focused on environmental protection, sustainable living and respect for Noongar Boodja.

Monitoring & Review

The City of Melville will start implementing the Community CAP in partnership with the community in 2024-25. Key achievements, challenges and insights on its progress will be shared with the community via the City of Melville's annual reporting process.

Through ongoing monitoring, the City of Melville will review the uptake and effectiveness of each action and update key indicators as progress is made. This will allow the City of Melville and the community to ensure that resources are used effectively to achieve the best outcome, and remain in step with the broader regional, state and national context. This process will align with the monitoring and reporting of the Corporate Climate Action Plan.

The City of Melville is a signatory to the Global Covenant of Mayors for Climate and Energy (GCoM). Reporting to the GCoM is undertaken through a Common Reporting Framework via the international Carbon Disclosure Project (CDP), a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.

Reporting through the CDP identifies ways to help manage environmental risks and opportunities against international benchmarks. The City of Melville has reported in 2022 and 2023 with demonstrated progress made and identified areas for improvement, increasing from a D in 2022 to an A- in 2023. The City of Melville has committed to this annual reporting framework as a way of continuously improving its sustainability performance.

The City of Melville will continue to manage and minimise the environmental impacts associated with its activities, while conserving and enhancing its biodiversity and creating healthy surroundings for the community. The City of Melville will monitor its progress within this space in alignment with relevant strategic plans and policies.

The actions outlined in this Plan and Community Climate Action Framework will be reviewed and updated annually to incorporate progress made and emerging opportunities.

The Community CAP will be reviewed in 2029 - 2030 and updated based on the success of programs implemented over the next five years. This update will also take into account Federal and State Government policy, funding opportunities, technology accessibility and advancement and other collaborative opportunities. It is intended to have successive 5-year plans to progress the City of Melville and community actions in this space to reach net zero by 2050.

Glossary

ACTIVE TRANSPORT

Physical activity undertaken as a means of transport. It includes travel by foot, bicycle, scooters and other non-motorised vehicles.

ADAPTATION

Adapting to climate change is adjusting to current or expected climate change and its effects. Adaptation helps individuals, communities, organisations, and natural systems to manage the impacts of climate change. It involves taking practical actions to adjust to the changing climate which protect and build our resilience whilst also offering additional health and social benefits, contributing to the overall wellbeing of the community.

BIODIVERSITY

The variety of living things in a specified area.

BUSINESS-AS-USUAL (BAU)

In the context of climate change mitigation, BaU refers to the actions that we expect will occur without additional directed action to reduce emissions or respond to climate change.

CARBON ACCOUNTING

The process by which organisations quantify their greenhouse gas emissions, so that they may understand their climate impact and set goals to limit their emissions. The outputs are generally measured as carbon dioxide equivalents or CO_2-e.

CARBON NEUTRAL

Achieving a balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks. It means that any carbon dioxide released into the atmosphere is balanced by an equivalent amount being removed. This can be achieved by a combination of reducing existing emissions and offsetting the rest, often through carbon offset projects like reforestation.

CARBON SEQUESTRATION

The long-term storage of carbon in plants, soils, geologic formations, and the ocean.

CIRCULAR ECONOMY

A model of production and consumption where resources and products are carefully and endlessly recycled and reused, removing the "end-of-life" concept and minimising waste.

CLIMATE

The composite of surface weather conditions such as temperature, rainfall, atmospheric pressure, humidity, sunshine and winds, averaged over a period of time ranging from months to thousands of years.

CLIMATE CHANGE

Any change in climate over time, whether due to natural variability or as a result of human activity.

CLIMATE CHANGE ADAPTATION

Adjusting to current or expected climate change and its effects. Adaptation helps individuals, communities, organisations, and natural systems to manage the impacts of climate change and also offers additional health and social benefits, contributing to the overall wellbeing of the community.

CLIMATE CHANGE MITIGATION

Climate change mitigation consists of actions to limit the magnitude or rate of long-term climate change. Climate change mitigation generally involves reductions in human emissions of greenhouse gases.

Reducing greenhouse gas emissions to prevent the planet from warming to more extreme temperatures. This involves transitioning away from fossil fuels to the use of renewable energy and restoring our natural habitats to create “sinks” that absorb and store GHG.

CLIMATE EMERGENCY DECLARATION

Is a response by governments, companies and individuals world-wide to the catastrophic changes to the climate brought about by human activity that poses a dangerous threat to all life on the planet. This declaration is an admission that humanity is in a Climate Emergency and is a way to set priorities to mitigate and adapt to climate change.

CLIMATE PROJECTION

A projection of the response of the climate system to scenarios of greenhouse gas emissions or atmospheric concentrations of greenhouse gases. Climate projections are often based upon simulations of the climate system by computer based mathematical models. Climate projections depend on assumptions about emission rates and concentrations and response of the climate system to changes in these variables and can therefore be distinguished from climate predictions.

CLIMATE RISK

The potential for climate change to create negative consequences for human or ecological systems. This includes impacts on lives, livelihoods, health and wellbeing, economic, social and cultural assets and investments, infrastructure, services provision, ecosystems and species.

CLIMATE SCENARIO

A coherent, plausible but often simplified description of a possible future state of the climate. A climate scenario should not be viewed as a prediction of the future climate. Rather, it provides a means of understanding the potential impacts of climate change, and identifying the potential risks and opportunities created by an uncertain
future climate.

COMMUNITY EMISSIONS

Community emissions are the total sum of emissions that a city, region or communityity produces. This includes emissions associated with all sectors present within a community such as transport, industry, commercial and residential.

CO_2-E

Also known as 'carbon dioxide equivalent', this is a measure used to quantify the emissions associated with various greenhouse gases on the basis of their global warming potential. CO_2e is a measure that was created by the United Nations' Intergovernmental Panel on Climate Change (IPCC) in order to make the effects of different greenhouse gases comparable because every gas has a different global warming potential.

DECARBONISATION

Reducing or eliminating greenhouse gas emissions from our activities. This includes shifting to renewable energy and phasing out traditional fleet vehicles in favour of electric ones.

ECOSYSTEM

A geographic area where a community of living things interact with the non-living environmen as an ecological unit.

EMISSIONS REDUCTION FUND (ERF)

The Emissions Reduction Fund (ERF) is a voluntary scheme that aims to provide incentives for a range of organisations and individuals to adopt new practices and technologies to reduce their emissions. It works by allowing participants to earn carbon credit units off these practices, which can then be sold to create income.

EMISSIONS REDUCTION

Reducing the amount of greenhouse gases emitted into the atmosphere from human activities.

ENERGY EFFICIENCY

Energy efficiency essentially means using less energy to perform the same task. For example, energy efficient appliances such as refrigerators or air conditioners can perform the exact same function while using less electricity, which means CO_2e emissions and money can be saved.

EXTREME EVENT

Weather conditions that are rare for a particular place and/or time such as an intense storm or heat wave.

GLOBAL PROTOCOL FOR COMMUNITY-SCALE GREENHOUSE GAS EMISSIONS INVENTORIES (GPC)

Created by a partnership of leading sustainability organisations, the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC) provides a robust framework for accounting and reporting community greenhouse gas emissions. It is a city's tool to calculate city-wide greenhouse gas emissions and use this inventory to support climate action planning.

GLOBAL WARMING

An increase in the global average surface temperature due to natural or human caused factors.

GREENHOUSE GASES

Greenhouse gases exist in the atmosphere and trap heat, making Earth liveable. These gases include carbon dioxide, methane, nitrous oxide, ozone and some artificial chemicals such as chlorofluorocarbons (CFCs). The process of trapping and emitting heat is the fundamental cause of the greenhouse effect.

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. As a branch of the United Nations, it was created to provide policymakers with regular scientific assessments on climate change and its implications and future risks. As an authoritative global body, it also suggests various adaptation and mitigation options to reduce the impacts of climate change.

LIFE CYCLE EMISSIONS

All the emissions associated with the production and use of a specific product, from cradle to grave, including emissions from raw materials, manufacture, transport, storage, sale, use and disposal. A life cycle assessment is a methodology used for calculating these emissions. Also called embodied emissions.

LIVEABILITY

Factors that add up to a community's quality of life including their environment (built and natural), economic prosperity, social stability and equity, educational opportunity, and cultural and recreational possibilities.

LOW-CARBON TRANSPORT

Low-carbon transport refer to modes of transportation that produce lower levels of greenhouse gas emissions compared to conventional internal combustion engine vehicle. They use cleaner energy sources and more efficient technologies to reduce or eliminate the carbon footprint associated with transportation activities. Examples include, electric vehicles (EVs), bicycles, public transportation and walking.

MICROGRID

A microgrid can be defined as an independent power network that uses local, distributed energy resources to provide grid backup or off-grid power to meet local electricity needs. At the most basic level, microgrids are “micro” (small) and offer a “grid” (an interconnecting system of links).

NATURE POSITIVE

A global and societal goal to halt and reverse nature loss, enhancing the resilience of our species and ecosystems.

NET ZERO EMISSIONS

The balance between the amount of greenhouse gases produced and the amount removed from the atmosphere. When a company, government or community is net zero, it means that its total greenhouse gas emissions are equal to the GHGs that are being removed. The focus is on reducing all emissions as much as possible through efficiencies, then balancing out any remaining through offsets.

OFFSETS

An offset (or credit) is used by a company to compensate for what they are emitting and decrease their net (overall) emissions. Offsets are generated from an activity that reduces, removes or captures greenhouse gas emissions from the atmosphere such as reforestation, renewable energy or energy efficiency measures. Offsetting involves purchasing carbon credits via offset markets the Australian Government certifies, similar to a stock market. One credit is issued for each tonne of carbon dioxide equivalent emissions either stored or avoided.

Companies who undertake activities that reduce emissions register their activities on this market for other companies to purchase units of to support that activity, such as revegetating areas, installing renewable energy, managing cattle to reduce their methane production, capturing emissions from landfill or energy generation and replacing gas technology.

THE PARIS CLIMATE CONFERENCE AND THE PARIS AGREEMENT

Approved by 196 parties, including the European Union, at COP21 in Paris in 2015, the Paris Agreement refers to a set of goals to reduce emissions with the ultimate goal of preferably limiting global warming to 1.5 degrees Celsius compared to pre-industrial levels, and ultimately limit global warming to 2 degrees.

POWER PURCHASE AGREEMENT (PPA)

A PPA is an agreement between an independent power generator and a purchaser for the supply and sale of energy. Normally, this will be between a large organisation, such as a city council or company and a renewable energy electricity supplier such as a local wind farm. PPAs ensure that all the electricity purchased comes from a specific source at an agreed price.

REGENERATION

Actions that aim to do no harm and lead to benefits or a reversal of harm for the environment and communities.

RENEWABLE ENERGY

Renewable energy is energy that is collected from renewable resources that are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat.

RESILIENCE

The capacity of individuals, institutions, businesses and systems to adapt to chronic stresses and acute shocks.

URBAN HEAT ISLAND EFFECT

This occurs when natural land cover, such as vegetation is removed and replaced with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat. This reduction in canopy cover makes urban areas significantly warmer than surrounding rural areas which reduces liveability, increases energy costs (e.g., for air conditioning), air pollution levels, and heat-related illness and mortality.

VULNERABILITY

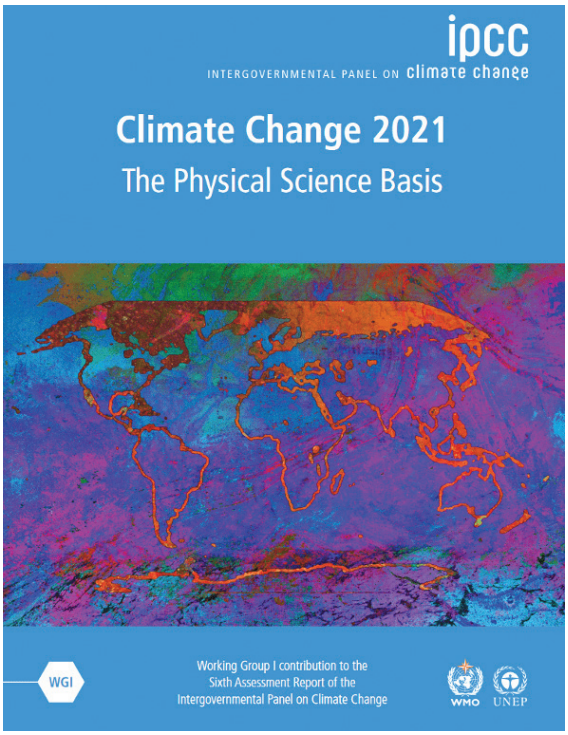
This occurs when natural land cover, such as vegetation is removed and replaced with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat. This reduction in canopy cover makes urban areas significantly warmer than surrounding rural areas which reduces liveability, increases energy costs (e.g., for air conditioning), air pollution levels, and heat-related illness and mortality.

WATERWISE

Being aware of water use and taking a water conservation approach in your actions.

Appendix A: International, Federal and State Policies and Plans

INTERNATIONAL AGREEMENTS



The Paris Agreement is a legally binding international treaty on climate change, adopted by 196 countries at the United Nations Climate Change Conference (COP21) in Paris in 2015. The primary goal of the Agreement is to limit global warming to well below 2°C, and to pursue efforts to limit the temperature increase to 1.5°C, above pre-industrial levels. It's a significant step forward as it represents a strong political commitment to work together to tackle the challenge.

The Intergovernmental Panel on Climate Change (IPCC) is a scientific organisation established by the United Nations to assess scientific knowledge related to climate change. It's responsible for assessing scientific knowledge and produces assessment reports based on the latest scientific literature used by policymakers around the world. Its latest assessment report concluded that greenhouse gas emissions due to human activities have already caused around 1.1°C of warming and, without taking urgent action now, the average global temperature rise is likely to exceed 1.5°C.

The UN also established a landmark agreement at the Biodiversity Conference in Canada in 2022, to guide global action on nature through to 2030. The Global Biodiversity Framework (GBF) aims to address biodiversity loss, restore ecosystems and protect indigenous rights, including concrete measures to halt and reverse nature loss by 2030. The GBF will be guided by the GRI 101: Biodiversity 2024 standard[14], to help organisations to better understand decisions and practices that lead to biodiversity loss, and where in their value chain impacts occur and how they can be managed.

[14] *Retrieved from https://www.globalreporting.org/standards/standards-development/topic-standard-project-for-biodiversity/*

FEDERAL AND STATE POLICY

As a signatory to the Paris Agreement, Australia must set targets and develop a plan for reducing greenhouse gas emissions. In 2022, the Australian Government recommitted to achieving net-zero emissions by 2050 and increased its 2030 target to 43% per cent below 2005 emissions levels. The Australian Government has established the Emissions Reduction Fund (ERF), which provides financial incentives for businesses and organisations to reduce their greenhouse gas emissions. In addition, the government has invested in renewable energy, such as wind and solar power, and is supporting research into new low-emissions technologies.

In addition, the Federal Government has developed its first National Climate Risk Assessment and National Adaptation Plan to better understand the risks and impact to Australia from climate change, and to invest in a plan to adapt to those risks. Local governments will have a role to play developing their own risk assessment and adaptation plans, managing these risks and impacts to its community and ensuring policies and plans are adhered to better prepare for climate change.

The WA Government has indicated its commitment to achieving net zero emission by 2050. In November 2023, the State Government introduced the Climate Change Bill 2023. This legislation will establish a framework for the state to take action on climate change, ensuring accountability on its net zero target. It will also provide requirements to set interim emissions reduction targets and develop policies to reduce emissions, enhance climate resilience and develop sector adaptation plans.

Appendix B: Council Policies and Plans

Table 1: City of Melville Strategies, Policies and Plans that informed this Plan

Council Plan for the Future 2024 - 2034	Our Council Plan for the Future 2024-2034 (the Council Plan) has been informed by the aspirations and future priorities of our diverse community. The Council Plan provides a community informed and Council led vision and strategic direction for the next ten years, and has been developed in line with a strategic Integrated Planning and Reporting Framework meeting the legislative requirements of all local governments to develop a plan for the future. Both our Strategic Community Plan 2020-2030 and Corporate Business Plan 2020-2024 were reviewed following extensive community engagement, and have been brought together to create one cohesive, coordinated and integrated Council Plan for the Future 2024-2034. 1. Healthy, Safe and Inclusive - Healthy, safe and inclusive communities with a sense of belonging and wellbeing. 2. Clean and Green - A clean, green and sustainable City for current and future generations. 3. Sustainable and Connected Development - Sustainable, connected development and transport infrastructure across our City. 4. Vibrant and Prosperous - Economic prosperity and vibrant resilient communities and businesses. 5. Good Governance and Leadership - Leadership and good governance for the benefit of the whole community
Environmental Policy 2022	The Environmental Policy aims to prevent, manage and minimise environmental impacts associated with the City's activities, while conserving and enhancing the City's biodiversity and environmental quality. It recognises climate change as a substantial operating risk and the City's role in reducing emissions from its own operations as well as promoting mitigation of greenhouse gas emissions for the community.
Sustainability Policy 2018	The Sustainability Policy recognises the City's responsibility to demonstrate leadership and work with community towards an integrated environmentally, socially and economically sustainable future.
Climate Action Policy 2024	The Climate Action Policy aims to: • Demonstrate the City's leadership on climate action including climate change mitigation and adaptation • Provide guidance on prioritising climate change consideration • Prioritise carbon neutral considerations in all aspects of the City's business practices • Focus on appropriately achieving carbon neutrality targets • Promote a proactive approach on greenhouse gas emissions reduction across the City's supply chain
Climate Vulnerability, Risks and Opportunity Assessment Report (VRO)	The Climate Vulnerability, Risks and Opportunity (VRO) Assessment was conducted in 2022 – 2023 to identify localised hazards and opportunities for the City as an organisation and geographical community. This included mapping and workshop exercises. **Staff Workshops** with the following service areas: • Environment and Infrastructure • Urban Planning • Corporate Services and Community Development The first activity explored physical and transitional risks impacting the City. The second examined possible opportunities. Community Workshops were undertaking with the following groups • Climate Action Reference Group (CARG) • Community Groups • Business and Stakeholders • First Nations peoples The report identifies hazards the City faces, such as flooding, sea level rise and bushfires and undertakes a vulnerability risk assessment providing a number of maps showing the spatial distribution of different aspects of vulnerability. It recommends how to mitigate the risks and recommendations for First Nations engagement, advocacy, built environment, education and awareness, emissions reduction, financing, habitat protection, planning and transport.
Corporate Climate Action Plan 2023 - 2028	The Corporate Climate Action Plan 2023 - 2028 outlines the 110 actions across 10 themes the City will undertake to tackle climate change, build resilience and minimise the vulnerability of our organisation. It is our roadmap to transitioning to carbon neutral by 2030.

Corporate Environmental Strategic Plan 2016-2025	The Plan provides guidance and direction with respect to the City's corporate environmental sustainability priorities over the period 2016-2025 in collaboration with the Corporate Business Plan. In setting these priorities the document presents strategic goals, objectives, targets and the actions that the City will undertake to achieve them.
Local Planning Scheme No. 6	The Local Planning Scheme No. 6 (LPS6) is the primary statutory document that sets out development controls, including the zoning of land, permissible land uses, the scale of development and other important information on how development is intended to occur within the City of Melville. The review is currently underway across 6 key themes: • Climate Response and Sustainability • Residential Density • Land Uses and Zoning • Community Growth • Place and Economic Development • Administrative Responses
Small Business Friendly Approvals Program Action Plan 2021	The Small Business Friendly Approvals Program aims to streamline the process of obtaining business licences and trading permits from local government authorities and is part of a package of State Government initiatives to accelerate regulatory reform to support economic recovery from the impact of COVID-19. The recommended reforms are the result of an intense human centred design thinking process, in which City officers from across a number of speciality area looked deeply at our approvals processes through the customer lens with a view of reducing red tape. The City's aim is to create real change for our small business community and make it easy for them to do business with us.
Urban Forest Strategic Plan	The Urban Forest and Green Spaces Policy and supporting Urban Forest Strategic Plan aims to: • To protect, preserve and enhance the aesthetic character of the City of Melville • To realise the social, environmental and economic benefits of trees and other vegetation as an integral element of the urban environment • To contribute to community wellbeing by integrating and aligning the efficient provision of physical, social and green infrastructure and management of natural areas to achieve community wellbeing today and tomorrow • To encourage a sense of shared responsibility and balance individual and community rights to equitably distribute the costs and the benefits of a greener City • To ensure that the urban forest and green spaces that are integral to the City's sense of place are not compromised in areas of increased residential density Community members can request a free verge tree and Council manages a tree expansion and succession planning program. The City is also exploring options for trees on private property, including a flexible approach that would enable property owners to continue developing their land while planting and maintaining replacement trees.
Waste Plan 2021-2025	Establishes the City's waste profile and baseline information in relation to the objectives and targets set out in the Waste Strategy: • Avoid- Western Australians generate less waste • Recover- Western Australians recover more value and resources from waste • Protect- Western Australians protect the environment by managing waste responsibly
Natural Areas Asset Management Plan 2019	The City of Melville's Natural Areas Asset Management Strategy Plan (NAAMP) provides the context, and technical and policy framework, for the management of natural area reserves.
Active Reserve Infrastructure Strategy 2020	The Active Reserve Infrastructure Strategy (ARIS) has been developed to guide the provision of infrastructure on Active Reserves for the next 20 years.
Public Spaces Strategy 2017	To provide a clear direction and inform future decision-making on the best ways to improve public spaces in the City of Melville.
Walk and Ride Plan 2024	The goal of this plan is to comprehensively evaluate facilities for walking and riding, provide a vision for walking and riding in the City, and suggest actions to achieve this goal.

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National Relay Service
(hearing/speech impaired)

Phone 133 677 (TTY)
1300 555 727 (speech relay)

Website www.relay service.com.au

Copies of this document are available in alternative formats upon request.