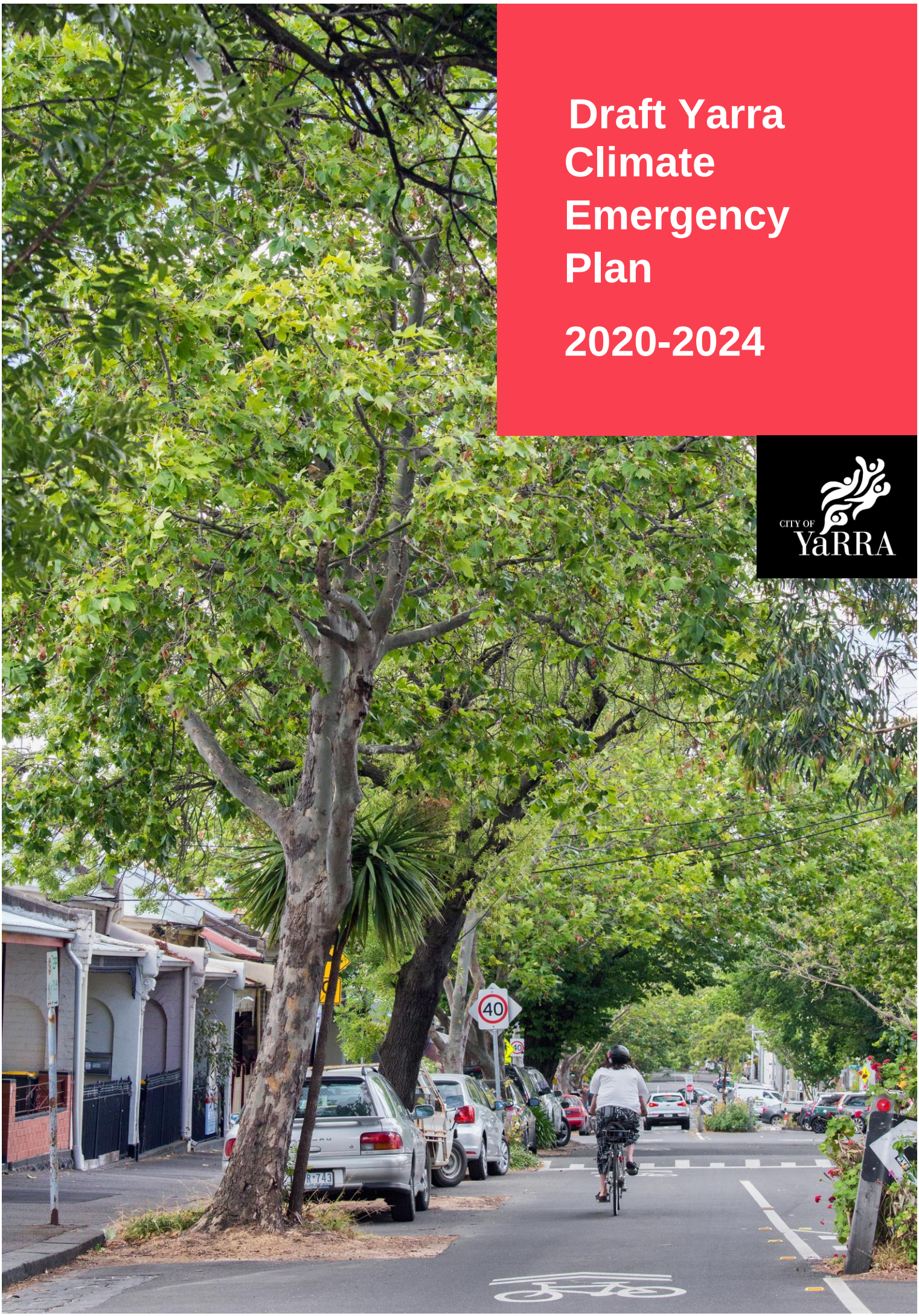
Draft Yarra Climate Emergency Plan

2020-2024



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Acknowledgement of country

Yarra City Council acknowledges the Wurundjeri Woi Wurrung people as the Traditional Owners and true sovereigns of the land now known as Yarra. We acknowledge their creator spirit Bunjil, their ancestors and their Elders. We acknowledge the strength and resilience of the Wurundjeri Woi Wurrung, who have survived European invasion and never ceded sovereignty. We also acknowledge the significant contribution made by the many other Aboriginal and Torres Strait Islander people to life in Yarra.

We acknowledge that Fitzroy and Collingwood are areas of special significance to Aboriginal and Torres Strait Islander people—as the cradle of Aboriginal and Torres Strait Islander affairs in Victoria, the birthplace of important Aboriginal and Torres Strait Islander organisations, the centre of political activism and a meeting place for Aboriginal and Torres Strait Islander people to link in with family, community and services. We acknowledge the role played by past federal and state government policies in the social and cultural dispossession of Aboriginal and Torres Strait Islander people—and the dispossession of land—which has caused the current disadvantages faced by many Wurundjeri Woi Wurrung Aboriginal and Torres Strait Islander people. And we believe that having an awareness of, and taking steps towards, mending this disadvantage is the shared responsibility of all residents in the City of Yarra.

Council pays its respects to all in the Wurundjeri Woi Wurrung, Aboriginal and Torres Strait Islander community and Elders from all nations here today—and to their Elders past, present and future.

Executive summary

Yarra City Council recognises that the climate emergency presents an unprecedented challenge – both globally and locally. Our planet's climate is already too hot, with dangerous heatwaves, droughts, storms and flooding becoming more intense and destructive. Climate change is now considered by the world's leading climate scientists and many others to be a 'climate emergency'.

The impacts of the climate emergency are being felt here and now and will continue to worsen if we do not act with emergency speed and scale. Transformational change is needed across our society and economy to rapidly reduce carbon emissions and drawdown[1] emissions from the atmosphere in order to restore a safe climate. The magnitude of the climate emergency means that incremental change or a business-as-usual response is no longer adequate. The climate emergency requires rapidly changing our resource intensive ways of life, as well as adapting to living on a hotter planet.

This major transition needs to occur in a fair and equitable way. The most vulnerable people have typically made the least contribution to the problem and often have less capacity to respond and cope with the impacts. Everyone should have the opportunity to benefit from climate solutions, such as clean energy and healthier homes, while not taking on an unfair burden of climate impacts.

Responding effectively to the climate emergency requires sustained, collective and large-scale action across all levels of government, businesses and the community. Yarra Council will play a strong role in bringing people together and building the community's capacity to effect change.

Within our own operations, we will accelerate emission reductions, ensure our infrastructure, assets and community are resilient to climate impacts, and embed climate emergency considerations across Council's strategies, policies and decision-making processes.

Our climate emergency response

Yarra Council's first Climate Emergency Plan sets longer term objectives for our response to the climate emergency and identifies strategic priorities and actions to focus our work over the next four years. We will take an adaptive approach to implementation, to learn as we act and be flexible to respond to new opportunities and changes over the period.

Through our climate emergency response we aim to:

- Achieve zero-net emissions across the entire Yarra community as soon as possible, and accelerate the removal of excess carbon;
- Ensure our community is engaged, healthy and resilient — especially those most vulnerable to severe climate impacts;
- Create a city that is adapted to a changing climate and ecologically healthy for all species, and
- Lead by example with a best-practice climate emergency response that inspires other local governments, businesses and communities to take strong climate action.

[1] The removal of excess greenhouse gases from the atmosphere with the aim of restoring a safe climate.

Our strategic priorities and key commitments in the plan are to:

1. Mobilise and engage the community to respond to the climate emergency

- Deliver a significantly expanded suite of community mobilisation and engagement programs to enable widespread community-led climate action
- Enable and support key sectors, including businesses, households, neighbourhood houses, community groups, schools and young people to take effective, sustained and collective climate action
- Dedicate a pool of community grant funds to accelerate community-led climate action
- Provide additional support to the most vulnerable in our community to prepare and cope with climate related impacts
- Collaborate with others in the climate emergency movement, including other local governments, to advocate for urgent climate action at other levels of government

2. Accelerate renewable energy, zero carbon buildings and efficient operations

- Assist Yarra residents and businesses to transition to renewable energy, moving the municipality towards 100% renewable electricity by 2030
- Use planning processes to transition towards zero-carbon buildings and precincts
- Facilitate energy efficient home upgrades for vulnerable community members
- Transition all Council buildings away from gas
- Accelerate the conversion of public lighting to the most energy efficient technologies

3. Create a climate adapted city

- Accelerate street tree planting and enhance our urban forest to increase canopy cover, diversity and climate resilience
- Plan and design streetscapes, open spaces and precincts considering increasing climate vulnerability, such as urban heat, flood risk and vulnerable communities
- Adapt land management practices to ensure our parks, reserves and green spaces are climate resilient and ecologically healthy, and provide food growing spaces
- Improve the climate resilience of our assets, such as buildings, roads and drainage to climate related impacts
- Develop an Integrated Water Management Plan to manage water as a valuable resource, support healthy green spaces and waterways, and mitigate drought, heat and flood
- Embed climate resilience into Council's strategies, policies and decision-making processes

4. Transition to zero emissions transport

- Develop an Integrated Transport Plan to prioritise evidence-based actions that facilitate greater sustainable transport use and reduce car use
- Deliver additional sustainable transport infrastructure, including safe cycling infrastructure, traffic calming solutions, reduced speed zones and additional green areas
- Trial infrastructure improvements, including reallocation of car spaces, car free zones and curfews
- Develop a Parking Management Plan to reduce parking as necessary, and enable improvements to sustainable transport infrastructure and public spaces
- Transition Council's fleet pool and non-commuter vehicles to zero emissions by 2030
- Facilitate and support electric vehicle charge points in new developments and across the municipality

5. Move towards zero waste and conscious consumption

- Promote and support alternative consumption models through a range of high profile, engaging campaigns
- Seek to implement a municipal wide food and organic waste collection service, informed by the results of the Waste Revolution trial
- Work with other councils and state government to enhance waste management systems and infrastructure
- Engage the community to practice food waste avoidance and improve recycling behaviours

Introduction

The climate emergency

Our planet's climate is already too hot, with dangerous heatwaves, droughts, storms and flooding becoming more intense and destructive. It is not a problem only for the future - impacts are being felt here and now. It is widely understood by the world's leading climate scientists that the unprecedented rate of global heating is destroying ecosystems, raising sea levels and undermining food and water security for many of the world's people[2]. These impacts will dramatically worsen as global temperatures continue to increase.

An emergency situation is a threat to life, health, property or the environment which has the potential to overwhelm and requires urgent intervention. The current level of planetary heating has reached this emergency condition.[3] The use of the term 'emergency' signals both the gravity of the climate crisis and the need for urgent interventions that go well beyond business-as-usual.

Global heating is primarily due to burning fossil fuels, such as coal, gas and other fuels that are used to power our buildings and vehicles and create the products and services we consume. Burning fuels releases carbon emissions into the air, trapping heat in the atmosphere. Generating waste and clearing vegetation further worsens the problem.

To date, action to reduce greenhouse gas emissions and mitigate the resulting climate impacts has been too slow. The planet has already warmed by more than 1°C over the last century with 13 of the 14 hottest years on record occurring this century. Global heating of 1.5°C or higher further increases the risk associated with long-lasting or irreversible changes. The UN Intergovernmental Panel on Climate Change warns that unless global emissions are halved within 10 years and virtually eliminated by 2050, the risk of mass-extinction, ecosystem loss, drought, floods, extreme heat and poverty of hundreds of millions of people is high[4]. Further, our collective consumption of natural resources is greatly exceeding the earth's ecological limits.

The climate emergency will disproportionately impact the most vulnerable people in our communities, both globally and locally, who often have far less capacity to respond and cope with the impacts. The people who are unfairly impacted are typically those living on low incomes, the aged and very young, people who are chronically ill, Indigenous, people experiencing homelessness, and those from culturally and linguistically diverse backgrounds.

The places that Australians identify with and the wildlife we cherish are suffering because of intensifying climate impacts[5]. The natural ecosystems that underpin human life, wildlife and biodiversity are at risk due to the speed and scale of the climate changing, the consequent extreme weather events including catastrophic bushfires, as well as land clearing and habitat loss. Devastation to the natural environment is exacerbated by the inability of many species to adapt at the same pace as the climatic change and the changing risk of pests and disease.

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[2] United Nations Intergovernmental Panel on Climate Change, 'Global Warming of 1.5°C', 2018, https://www.ipcc.ch/sr15/

[3] Breakthrough National Centre for Climate Restoration, https://www.breakthroughonline.org.au/

[4] United Nations Intergovernmental Panel on Climate Change, 'Global Warming of 1.5°C', 2018, https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/

[5] Climate Council, 'This is What Climate Change Looks Like', 2019, https://www.climatecouncil.org.au/resources/new-report-unique-aussie-wildlife-threatened-by-climate-change/

Local climate impacts

In Melbourne, we are seeing an increase in the frequency of extreme heat events, with January 2019 being the hottest-ever month on record. As global heating continues, periods of extreme heat will also increase. In Melbourne, between 1981 and 2010, we experienced an average of 8 days per year when the temperature exceeded 35°C. By the 2050's with increased emissions and heating, this is expected to rise to between 13 and 21 days on average[6]. Correspondingly, it is estimated that the number of days where there is a high fire risk in Melbourne will increase by 42 per cent by the 2050's.

These trends will significantly impact our natural environment, ecosystems, agriculture, the built environment, and importantly, the health and wellbeing of our community[7] (Refer to Figure 1). It will also place increased pressure on the economy with the expected annual cost to Victoria from heatwave events predicted to reach $179 million by 2030[8].

A hotter climate is expected to bring more heavy rainfall events, which will increase the potential for infrastructure, waterway and property damage and associated mental and physical health risks.

While future rainfall is difficult to predict, on average rainfall in Melbourne has declined by 100-200mm per year with 1°C of global heating already experienced. It is likely that as the planet continues to heat and our population grows, Melbourne's water resources will be placed under increased pressure, with greater incidence of drought and water shortages. Ensuring a continuous and secure water supply will no doubt be a significant challenge in the future.

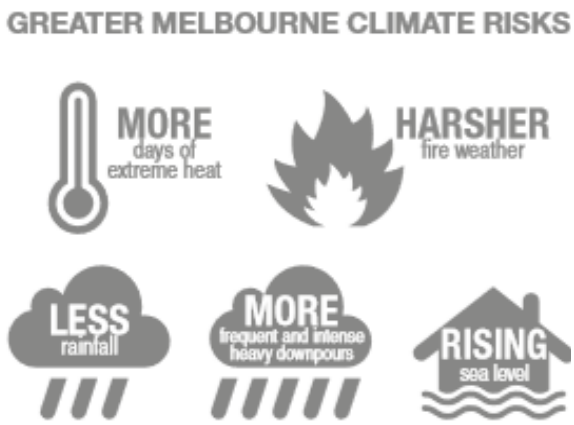

Figure 1 – Climate emergency risks for Melbourne[7]

As a highly-urbanised, high to medium density municipality, Yarra experiences higher urban heat and reduced surface permeability, which in turn increases vulnerability as the planet heats up (Refer to Figure 2). People who are most vulnerable during extreme heat (especially if coupled with power outages) are those living in intense urban heat islands, older people, the very young, people who are chronically ill, those experiencing homelessness, socio-economic disadvantage and Indigenous and culturally and linguistically diverse communities[9]. Those living on low incomes are often concerned about the energy cost of air-conditioning and have less access to cool spaces. This is substantiated by data which shows a close correlation between vulnerability and ambulance call-outs in Melbourne on hot summer days.

[6] Department Environment, Land, Water and Planning, 'Greater Melbourne Climate Projections', 2019, https://www.climatechange.vic.gov.au/__data/assets/pdf_file/0019/60742/Greater-Melbourne.pdf
[7] Australian Bureau of Meteorology, 'State of the Climate report', 2018, http://www.bom.gov.au/state-of-the-climate/future-climate.shtml
[8] Department Environment, Land, Water and Planning, 'Greater Melbourne Climate Projections', 2019, https://www.climatechange.vic.gov.au/__data/assets/pdf_file/0019/60742/Greater-Melbourne.pdf
[9] National Climate Change Adaptation Research Facility 'A spatial vulnerability analysis of urban populations during extreme heat events in Australian capital cities', 2013. https://www.nccarf.edu.au/sites/default/files/attached_files_publications/Loughnan_2013_Spatial_vulnerability_analysis.pdf

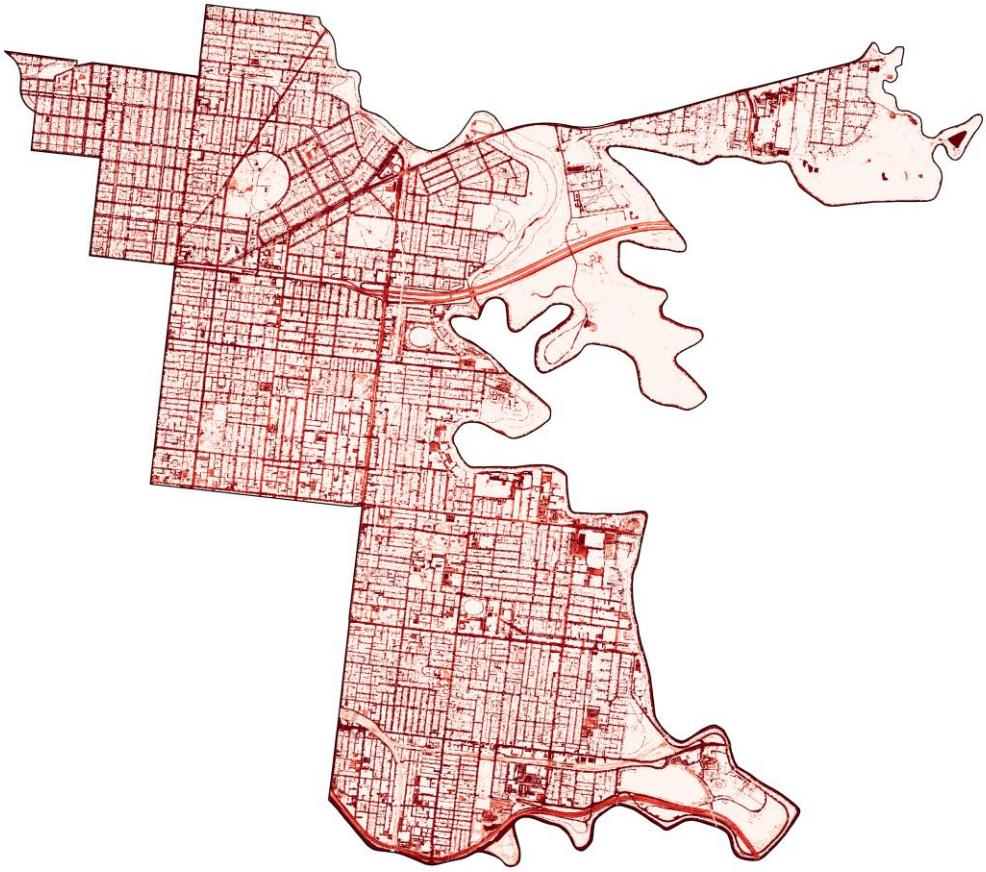

Figure 2: Aerial thermal imaging of the City of Yarra showing thermal hotspots (in dark red) Source: *Yarra Urban Forest Strategy*.

The climate emergency has serious consequences for food production and supply in Australia. The food supply chain is highly exposed to disruption from increasingly extreme weather, with farmers already dealing with more frequent and intense droughts, fires and changing weather patterns[10]. In these circumstances crop yields and quality will be compromised, and food prices impacted. This has the potential to increase food insecurity for the most vulnerable in our community.

Yarra's emissions profile

In 2017/2018 the total annual carbon emissions for the Yarra community was approximately 1,900kt CO2-e. The majority of these emissions (approximately 69 per cent) come from stationary electricity, that is, coal-fired electricity used in residential and commercial buildings and industrial processes. The other main source of carbon emissions is gas usage (approximately 14 per cent), transport (approximately 15 per cent) and waste (approximately 2 per cent, including wastewater).

[10] Climate Council, 'Feeding a Hungry Nation: Climate Change, Food and Farming in Australia', 2015, https://www.climatecouncil.org.au/resources/foodsecurityreport2015/

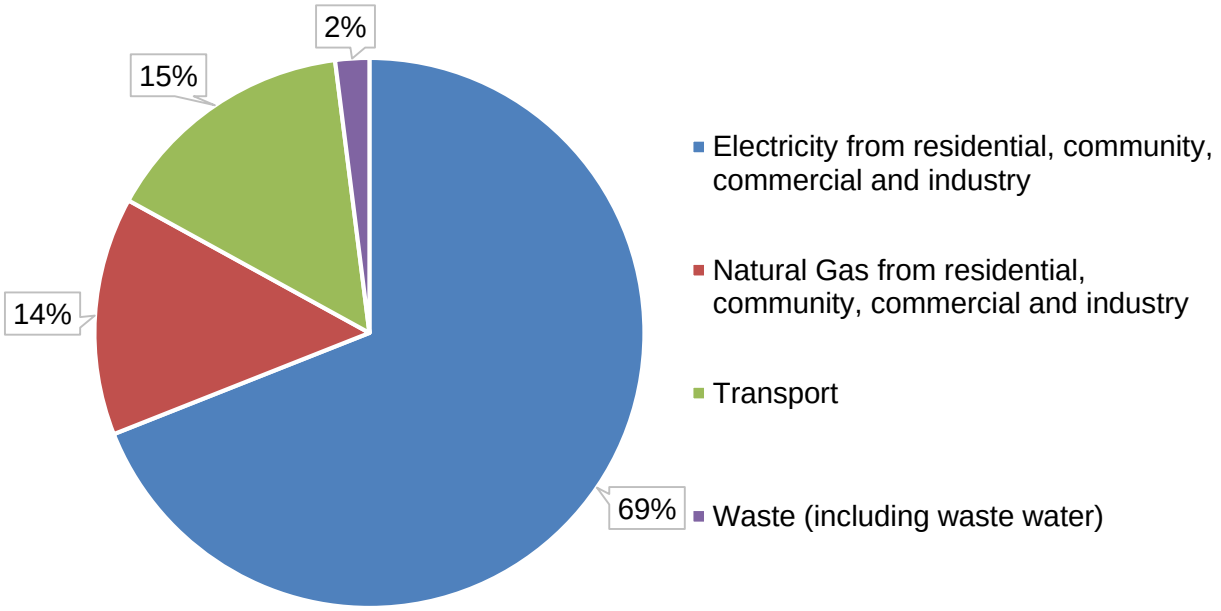

Figure 3: Yarra community carbon emissions profile 2017/18

There are also significant embodied emissions produced from goods, services and activities, that are not accounted for in the emissions profile. These include emissions produced from extracting or growing raw materials, processing and manufacturing, transport, use and disposal. Air travel and the food we consume — especially meat and dairy —are particularly carbon and resource-intensive. While the exact quantity of emissions attributable to our lifestyles is complex to properly calculate and attribute, it is widely accepted that the planet cannot sustain this level of consumption, associated carbon emissions and waste generation.

Since January 2019, all of Yarra Council's organisational electricity needs have been met by 100 per cent renewable electricity, through rooftop solar generation across 38 council sites, and the remainder from wind power supplied by the Melbourne Renewable Energy Project. This means the main opportunities to reduce our organisation's emissions are now transitioning away from natural gas (making up around 45 percent of emissions) and reducing emissions from transport (currently around 42 percent) (see Figure 4). Over ten years, the total emissions from Yarra Council as an organisation have reduced substantially from 16,194 tCO2e in 2008/09 and projected to be approximately 4,500 tCO2e for the 2019 calendar year.[11]

[11] Note slight changes in Council carbon emissions inventory boundary have occurred over time.

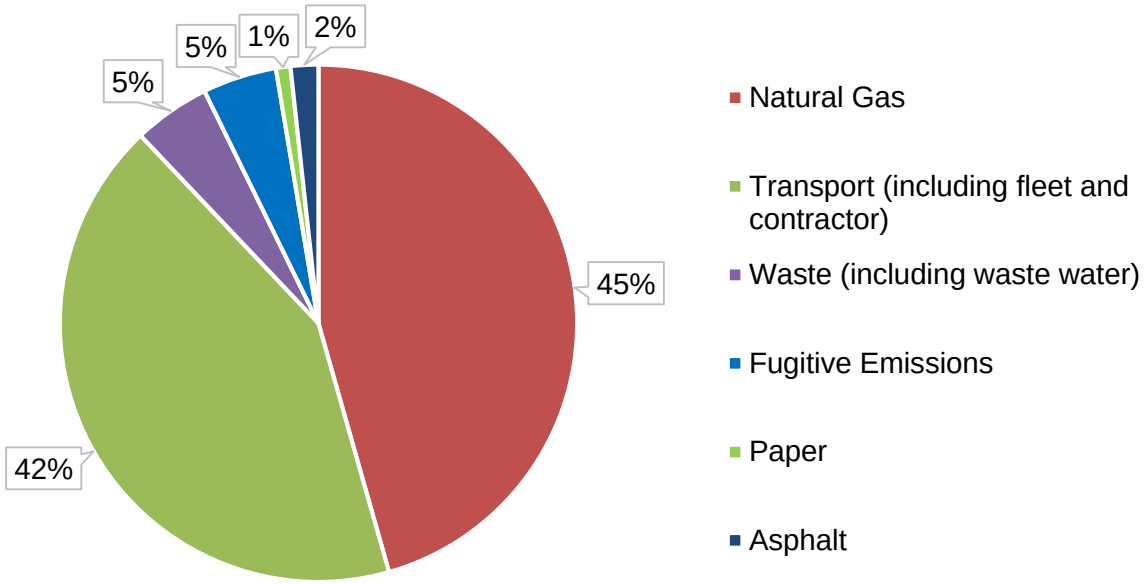

Figure 4 - Organisational carbon emissions profile July 2019

Since 2012 Yarra Council has been operating as a certified carbon neutral organisation (under the National Carbon Offsetting Standard), meaning certified carbon offsets have been purchased to cover the residual emissions, bringing overall emissions to net zero. Yarra Council was just the second local government in Australia to achieve this accreditation.

Responding to the climate emergency

Yarra was one of the first local governments in the world to declare a climate emergency, acknowledging both the scale and urgency of action needed to avoid the catastrophic impacts of climate change.

Effectively responding to the climate emergency requires transformational societal and economic change. Both globally and locally, we must rapidly reduce carbon emissions and drawdown excess carbon dioxide from the atmosphere to restore a safe climate (refer to 'Drawdown' in box below). It will require changing our resource intensive ways of life, as well as adapting to living on a hotter planet.

Drawdown
Carbon (or greenhouse gas) emissions from past human activity continues to have a destructive impact on our planet by trapping heat in the atmosphere and creating climate conditions that are unsafe for humans, other species and ecological systems. In order to restore a safe climate, excess emissions need to be removed (or drawn down) from the atmosphere, such as through storing carbon in soils, vegetation, trees, oceans and via other biological processes.

Many carbon removal techniques are not currently deployable at the scale needed, may be unproven and have other implications for land and natural resource use[12]. There is a need to focus on reducing emissions to achieve zero net emissions while also supporting action that contributes to carbon storage, such as tree planting and vegetation management.

Yarra Council acknowledges that effective drawdown of emissions globally will require large-scale actions, such as the creation of vast carbon sinks and changes in land management practices that are well beyond the direct control of local governments. We will stay up to date with emerging thinking and approaches to drawdown, and partner with others to advocate for further investigation into effective and scalable drawdown methods.

Across the world, millions of people are calling for urgent and significant action to address the climate emergency. While there may be various interpretations of a 'climate emergency response' depending on context, it can be considered to mean:

- Mobilising the community to take collective action on the climate emergency and advocate for urgent and meaningful change[12]
- Taking action to reduce emissions at a scale and speed commensurate with the magnitude of the climate emergency. It does not mean taking action which is considered business-as-usual or making incremental change
- Climate action being greatly accelerated across our society — by all levels of government, businesses and the wider community
- Acknowledging we are in uncharted territory and it requires experimentation and new ways of operating

Responding proportionately to the climate emergency will at times involve uncomfortable change and the need to make hard choices. Relatively affluent countries like Australia, have greater capacity to respond, and arguably a moral obligation to take on a considerable share of the work to be done and to assist others to transition.

[12] Climate Reality Cost – After Paris, counting the cost, https://www.breakthroughonline.org.au/

Both Yarra Council and the Yarra community have a long history of environmental action and advocacy. The community advocated to Council to declare a climate emergency, taking the view that we need stronger policies and programs to reduce carbon emissions and to protect the community, particularly its most vulnerable members, from the impacts already present.

Responding effectively to the climate emergency requires a collective effort across all levels of government, businesses and the community. As a council we have several key roles to play. Within our own operations Yarra Council will significantly accelerate emission reductions and ensure our infrastructure, assets and community are resilient to climate impacts. Many of the necessary responses to the climate emergency are outside the direct control of local governments and will require significant policy reform and intervention at other levels of government. Council has a strong role to play in bringing people together and building the community's capacity to push for meaningful and effective change.

Yarra Council's role

In responding to the climate emergency, Yarra Council has the following roles to play:

- Operating as a carbon neutral organisation, rapidly reducing carbon emissions from our own operations prior to purchasing carbon offsets
- Planning, designing and building a city that is adapted to climate impacts
- Supporting the community to be healthy and resilient in a climate impacted world
- Enabling and supporting community-led climate action and advocacy
- Partnering with other organisations such as Yarra Energy Foundation to implement solutions to reduce emissions (refer break out box)
- Partnering with others – businesses, community and other key stakeholders – to recognise the global climate emergency and take action
- Advocating to state and federal governments to commit to and deliver the transformational changes required to avoid overwhelming climate damage
- Embedding climate resilience into all of Council's work and supporting Council staff to understand the climate emergency and to deliver climate responses as part of their roles

Yarra Energy Foundation
The *Yarra Energy Foundation* (YEF) is an independent organisation working to support a zero-carbon future in the City of Yarra. Established by Yarra Council in 2010, YEF receives core funding to deliver programs that support households, schools, community groups and businesses to participate in energy efficiency and renewable energy programs to move towards a zero-carbon city.

Yarra Council has strategic partnerships which assist with accelerating climate action. These include:

- *Global Covenant of Mayors for Climate and Energy:* the world's largest global alliance for city climate leadership, with over 10,000 participants promoting and supporting voluntary action to combat the climate emergency and move to a low emissions, resilient society.
- *Northern Alliance for Greenhouse Action (NAGA):* a partnership between nine local governments in Melbourne's north that delivers carbon reduction programs and advocacy across municipal borders.
- *Cities Power Partnership (CPP):* Australia's largest local government climate network, with 115 participants sharing information and building connections in order to accelerate local action.
- *Resilient Melbourne:* a collaboration between inner-Melbourne councils to address the chronic stresses and acute shocks facing our city.
- *Take 2:* A state-government led pledge program working across all sectors towards achieving zero-net emissions for Victoria.

Yarra's climate emergency response

Focussing on areas of greatest opportunity

Many of the solutions to rapidly reduce carbon emissions are viable and available now – it is often a question of scaling up their implementation. Over the years, considerable robust, evidence-based work has been carried out to identify the areas of greatest opportunity to reduce emissions across the Australian economy, such as by Climate Works and Beyond Zero Emissions. Internationally, the 'Drawdown' project brought together peer-reviewed science on the top 100 impactful climate solutions, highlighting the benefits and costs of each. At the municipal-level, we have analysed the emissions profiles of both Yarra Council and the community and identified emission reduction opportunities, along with climate adaptation actions. A review of the work at the national, international and local level has informed the development of this plan to focus on actions with the potential for the greatest impact.

Our first Climate Emergency Plan sets longer term objectives for Yarra Council's response to the climate emergency and identifies strategic priorities to focus our work over the next four years.

Climate emergency response objectives

- Achieve zero-net emissions across the entire Yarra community as soon as possible, and accelerate the removal of excess carbon;
- Ensure our community is engaged, healthy and resilient — especially those most vulnerable to severe climate impacts;
- Create a city that is adapted to a changing climate and ecologically healthy for all species, and
- Lead by example with a best-practice climate emergency response that inspires other local governments, businesses and communities to take strong climate action.

Strategic priorities

We have set five strategic priorities to focus our climate emergency response:

1. Mobilise and engage the community to respond to the climate emergency

Vision: *The Yarra community and Yarra Council are engaged and taking local action as part of a global climate movement*.

2. Accelerate renewable energy, zero carbon buildings and efficient operations

Vision: *Yarra homes, businesses, and community buildings are of the highest energy efficiency standard and powered by renewable energy*.

3. Create a climate adapted city

Vision: *Yarra's natural and built environments are healthy and resilient in a climate impacted world.*

4. Transition to zero emissions transport

Vision: *Sustainable transport is the most attractive, safe and convenient way to travel in and through Yarra*.

5. Move towards zero waste and conscious consumption

Vision: *The Yarra community are conscious consumers who actively avoid and reduce waste, preserving resources for current and future generations.*

Timeframes and review

This plan sets out actions to be carried out over the next four years. It has been designed with flexibility to adapt to emerging opportunities and other changes. We will take an adaptive approach to implementation, responding to new opportunities and changes over the period. The actions will be reviewed and updated every two years.

Strategic Priority 1: Mobilise and engage the community

Vision: *The Yarra community and Yarra Council are engaged and taking local action as part of a global climate movement*.

The sheer scale and complexity of the climate emergency challenge requires that we work together — the actions of individuals, particular institutions or sectors cannot solve it alone. There is an urgent need to increase people's understanding of the climate emergency, and support the community to lead effective, sustained and collective climate action and advocacy.

In a climate emergency context, Yarra Council has a greater role to play in bringing people together and building their capacity to be active citizens working collectively for change. We will deliver a significantly expanded and comprehensive suite of community mobilisation and engagement programs, including a 'climate connectors' initiative, and skills-building to assist community members and groups to take climate action, build momentum for change and undertake grassroots resilience projects.

These projects will inevitably be as diverse as our communities and draw upon their unique strengths, while addressing community needs. We will dedicate a substantial pool of community grant funds to accelerating community-led climate action, with an emphasis on projects that support people who are most vulnerable to climate impacts and increase social connectivity.

Yarra Council will engage across sectors — households, businesses, neighbourhood houses, community groups, schools and young people, as well as vulnerable and harder-to-reach people — to build a greater understanding of the climate emergency and the various ways people can take action. Building partnerships with business and community stakeholders that have broad and considerable influence within our community, will be critical to achieving large-scale mobilisation.

We will deliver a range of communications campaigns to encourage and promote community-led climate action, as well as events to share practical ways people can reduce their carbon emissions and environmental impacts. We'll continue to partner with Yarra Energy Foundation to accelerate renewable energy uptake and reduce energy consumption and emissions. Furthermore, a new program 'Nature in the Neighbourhood' will aim to connect more people with our natural environment, increasing appreciation and respect for urban biodiversity and ecosystems, and enabling people to take a more active role in ecological restoration.

As we experience more extreme climate impacts, including heat waves, intense storms and flooding, there will be a growing need for community members to support each other. This includes supporting people experiencing climate-related anxiety brought on by the loss of iconic and loved places, landscapes and species; concern about future generations and their ability to live healthy lives on a climate-damaged planet; and other impacts of the climate emergency. Council will work with other partners to strengthen community connections and build people's capacity to support each other.

Additionally, Council will actively work with other councils, community groups and alliances, to influence state and federal governments, to respond to the climate emergency at the scale and speed the crisis requires. Through collaborative partnerships we can scale up our advocacy and amplify our efforts to effect greater change.

1. Mobilise and engage the community to respond to the climate emergency			
No.	**Action description**	**Resourcing**	**Who**
Community mobilisation and capacity building			
1.1	Design and deliver an expanding suite of community mobilisation and engagement programs to accelerate climate action and advocacy, and support community members to be resilient to climate impacts. Main elements include: ▪ Building climate emergency awareness, literacy, action and advocacy across the community. This includes a '*community connectors'* program to build people's capacity to be active citizens who work together for change, take grassroots action, share knowledge and skills and hold climate conversations in their communities ▪ Communications campaigns and educational events to assist people to understand the climate emergency and how to reduce their carbon emissions and environmental impacts through lifestyle changes ▪ Developing a '*100% Renewable Yarra'* campaign in partnership with YEF ▪ Facilitating and supporting stronger collaboration between groups and sectors taking climate action ▪ Showcasing community climate action through open days, tours, communications campaigns and other recognition activities ▪ Collaborating with others in the climate emergency movement, including other councils, to advocate for stronger state and federal government climate action	$100,000 year 1 Year 2 resourcing based on outcomes and lessons from Year 1	**Lead:** Sustainability **Support:** Communications **Partners**: Local environment groups Other community organisations Yarra Energy Foundation Advocacy and Engagement
Support vulnerable communities			
1.2	Support the most vulnerable in our community to prepare and cope with extreme climate impacts, including heatwaves, storms, floods, transport disruptions and power outages through: ▪ Targeted communications and in-home support to older people, those who are unwell, have additional needs or are living in unsuitable housing during times of climate related disruption ▪ Communicating heatwave and other climate risk messages and partnering with other organisations to build the capacity of people to prepare for and respond in extreme events	Within existing resources and resources listed in action 1.1	**Partners:** Sustainability Aged and Disability Services Health, Safety and Risk Community Planning Municipal Emergency Management Planning partners DHHS

1. Mobilise and engage the community to respond to the climate emergency			
No.	**Action description**	**Resourcing**	**Who**
	(e.g. community service organisations, emergency response agencies, places of refuge, such as neighbourhood houses, libraries and leisure centres) ▪ Providing training that strengthens community connections and builds the capacity of community members to support vulnerable neighbours ▪ Adapting Yarra Council's emergency preparedness and response procedures (Municipal Emergency Management Plan and Business Continuity Plan) and reviewing resourcing needs as climate impacts worsen ▪ Liaising with community organisations and outreach workers, such as those that care for people experiencing homelessness or provide refuge from extreme weather, to review their practices as climate impacts worsen ▪ Assisting older and vulnerable people to upgrade their homes to improve energy efficiency and thermal comfort, through draft proofing, insulation and efficient lighting (Refer action 2.1)		
Engage key sectors in climate emergency action			
1.3	Work broadly across the Yarra community: ▪ Engaging businesses to understand the value in declaring a climate emergency, climate related financial and legal risks, and the opportunities to reduce carbon emissions and transition to renewable energy ▪ Supporting and enabling businesses, households, neighbourhood houses, community groups, schools and young people to: o discuss the climate emergency in ways that allow people to understand the real impacts on our community and natural environment. This includes coming to terms with the impacts on iconic and loved places, landscapes and species. o lead climate action and advocacy within their circles of influence	Within budget for action 1.1, and additional sustainable business resource in action 2.3. Additional projects subject to annual budget process.	**Partners:** Sustainability Yarra Energy Foundation Youth Services Aged and Disability Services Local community groups, childcare centres, neighbourhood houses and schools.

1. Mobilise and engage the community to respond to the climate emergency			
No.	**Action description**	**Resourcing**	**Who**
Fund community-led climate action			
1.4	Dedicate a substantial pool of community grant funds to accelerate community-led climate action, with emphasis on projects focusing on: ▪ Mobilising community to take climate action, including advocating for change ▪ Supporting the most vulnerable in our community to cope with more extreme weather and rising energy and food costs ▪ Building stronger social connections, especially across demographics ▪ Presenting replicable models to reduce carbon emissions and waste, support local food systems and minimise high consumptive lifestyles	$150,000 per annum	**Lead:** Sustainability **Support:** Community Partnerships **Partners**: Local environment groups, Not-For-Profits and other community organisations
Nature in the Neighbourhood			
1.5	Deliver a new 'Nature in the Neighbourhood' initiative focusing on: ▪ Reconnecting people with our natural environment, to gain an appreciation of urban biodiversity and understand our interdependence with ecological systems ▪ Engaging the community as stewards of our environment, providing hands-on experiences for people to connect with nature and take a more active role in ecological restoration ▪ Improving connectivity between ecological communities and create habitat, by skilling up the community to plant more vegetation on private land	To be delivered via Yarra's Nature Strategy (under development)	**Lead:** Streetscapes and Natural Values **Support:** Sustainability Communications
Divestment			
1.6	Continue to implement and update Yarra Council's divestment activities, including: ▪ Utilising Council's *Ethical Procurement and Investment Commitment* to actively screen Council's investments to ensure divestment of funds away from banks and other institutions that invest in fossil fuel industries, in line with a climate emergency response ▪ Assisting staff to understand and consider the climate implications of superannuation options including divesting from fossil fuels	Within existing resources.	**Lead:** Finance **Support:** Sustainability

1. Mobilise and engage the community to respond to the climate emergency			
No.	**Action description**	**Resourcing**	**Who**
Advocacy and partnerships			
1.7	Advocate to other levels of government for stronger climate action by: ▪ Partnering with other organisations to advocate to state and federal governments to declare a climate emergency and take strong action commensurate with the scale and urgency of the emergency ▪ Supporting a formal alliance for local governments delivering a climate emergency response ▪ Advocating for policy reform relevant to the climate emergency, including renewable energy, buildings, waste and transport	Within existing resources.	**Lead:** Advocacy and Engagement Sustainability **Partners**: Northern Alliance for Greenhouse Action Other local governments
1.8	Support growth of the climate emergency movement by: ▪ Collaborating and sharing learnings with others to encourage more councils, organisations, businesses to declare and respond to the climate emergency ▪ Working with councils and other organisations that have declared a climate emergency to grow the movement and take collective action	Within existing resources.	**Lead:** Sustainability **Support:** Advocacy and Engagement **Partners:** NAGA Other local governments

Strategic priority 2. Accelerate renewable energy, zero carbon buildings and efficient operations

Vision: *Yarra homes, businesses, and community buildings are of the highest energy efficiency standard and powered by renewable energy.*

Energy use, from electricity and gas used in buildings, is the largest source of carbon emissions (83 per cent) in the municipality. To achieve our net-zero emissions, our homes, business, schools and other buildings need to use less energy, be powered by 100 per cent renewable energy and shift away from gas. The technologies and conditions needed for this transition exist, including more effective and affordable solar and battery storage, more grid-supplied renewable energy. There is no reason all-electric shouldn't be the norm for new homes.

There is significant opportunity for Yarra Council to assist the community to reduce energy use and transition to 100 per cent renewable energy. It's also important that those most vulnerable to rising energy costs, and often least able to install solar or buy renewable electricity, are assisted to live in energy efficient, thermally comfortable homes.

Currently 9.5 per cent of rooftops in Yarra have solar, with a total installed capacity of 10,909 kW[13]. This has grown dramatically from 1,200kW in 2010. The amount of solar installed is comparable to other inner-city municipalities with similar constraints including a high portion of medium density, multi-unit housing and rental properties. Even though there has been a strong rate of growth in installations in Yarra over ten years, there is still substantial potential to install additional solar, with considerable roof space not yet utilised.

Although there is potential for much more rooftop solar, even if all viable roof space in Yarra was optimised for solar we wouldn't come close to meeting our city's energy needs. Furthermore, there are considerable portions of our community 'locked-out' from installing solar because they rent (50.3 per cent), live in an apartment (46 per cent) or may own a home with roof space but are living on a low income, such as an aged or disability pension. In addition to more roof top solar, there is a need to prioritise other options to significantly cut emissions, including reducing energy demand and purchasing renewable energy.

The Yarra Council-funded Yarra Energy Foundation (YEF), plays a strong role in supporting solar installations on homes, businesses and community buildings, and advising on purchasing renewable electricity. YEF also facilitates energy improvements in buildings through advising on products and technologies and changing energy behaviours. Council and YEF can provide increased assistance to upgrade the homes of people most vulnerable to energy price rises and extreme heat and cold, including older people and social housing tenants. We can further assist businesses to buy renewable energy and work further with apartment owners, tenants and managers to navigate the complexities of installing solar in multi-unit developments.

While significant emissions reductions are to be made by sourcing renewable energy and upgrading existing housing stock, we need to raise the energy performance requirements for new buildings in Yarra. To transition towards zero-carbon buildings and precincts, we will work with others to advocate to the state government to raise mandatory standards, including pushing for minimum energy performance standards to be met at point of sale and lease for residential and commercial buildings.

[13] Australian PV Institute, https://pv-map.apvi.org.au/

Yarra Council will continue to lead climate action in our own operations. Council's entire electricity needs are met by 100 per cent renewable power - with gas usage now representing 22 per cent of our organisation's carbon emissions. Hence the focus is on transitioning our buildings away from gas to electricity as soon as practicable. We'll continue a strong focus on energy performance to reduce costs, through public lighting upgrades and optimising building performance with new technologies and approaches. Yarra Council will aim to be at the leading edge of best practice for building design, equipment and management to operate efficient zero emissions buildings.

2. Accelerate renewable energy, zero carbon buildings and efficient operations			
No.	**Action description**	**Resourcing**	**Who**
Residents			
2.1	Accelerate residential solar installs and the reduction of carbon emissions via tailored programs: **Homeowners:** Providing expert energy advice and facilitating affordable, quality solar and battery installations and home upgrades including heating and cooling, insulation, lighting, draught proofing, and moving off gas. **Vulnerable households:** Partnering with aged and community care providers to upgrade the homes of at least 60 of the most vulnerable community members each year (those experiencing energy hardship, with health conditions, frailty and additional needs). Customised energy retrofits may include insulation, lighting, draft proofing, door and window seals, fans and blinds, to improve thermal comfort, reduce bill stress and improve health outcomes. **Tenants:** Providing energy saving information and facilitate low-cost energy retrofits including draft proofing and lighting changes. Assisting renters to engage property owners and managers around more significant energy improvements. **Multi-unit developments:** Supporting apartment owners, property managers and tenants to work through the complexities of installing solar and upgrading buildings to improve energy performance. **Low-income housing:** Exploring options to assist low-income households to buy renewable energy and/or cover the upfront cost of solar system installs with repayments to be made via Council's rates mechanism. Explore partnerships with community housing providers. **Offer ongoing support through:** ▪ Online tools to help people prioritise actions to reduce carbon emissions ▪ Seeking external funding opportunities to support additional households with energy-efficiency retrofits and solar installs, particularly low income and vulnerable households ▪ Remaining at the forefront of emerging technologies and trends, such as micro-grids and virtual networks, as well as partnership and funding opportunities to reduce emissions	Largely to be delivered by existing Council contribution to Yarra Energy Foundation. Additional $30,000 per annum for upgrading homes of vulnerable people	**Lead:** Yarra Energy Foundation **Support:** Sustainability **Partners:** Aged and Disability and other related service providers Community service organisations Social and public housing providers, including Office of Housing Funding agencies, such as state government

2. Accelerate renewable energy, zero carbon buildings and efficient operations			
No.	**Action description**	**Resourcing**	**Who**
2.2	Reduce the complexity for residents seeking to buy ethical, affordable, renewable electricity by: ▪ Developing a '*100% Renewable Yarra'* campaign ▪ Independently reviewing renewable electricity retail options and educating residents about different choices available, particularly those who are unable to install rooftop solar Stay abreast of emerging community energy models, such as solar gardens, or other approaches for the community to invest in renewables and enjoy greater energy independence	Existing resources. An expanded program may require additional resources.	**Lead:** Yarra Energy Foundation **Support:** Sustainability
Businesses			
2.3	Support Yarra businesses to transition to 100% renewable electricity and more efficient operations through: ▪ Facilitating solar and battery installations and building upgrades, including accessing Environmental Upgrade Finance or other financial incentives ▪ Supporting businesses to increase the uptake of energy audits, and high efficiency technologies and management processes ▪ Supporting businesses to purchase renewable electricity at a lower cost, including the potential for group Power Purchasing Agreements (PPA) for large businesses and other innovative mechanisms for smaller businesses ▪ Including businesses in the '*100% Renewable Yarra'* campaign to promote and educate on the renewable electricity options and choices ▪ Promoting sustainable businesses in Yarra who are taking strong action, such as purchasing 100% renewable electricity, to show leadership and create brand awareness	Additional resource required. Year 1 budget: $30,000 Year 2 budget: To be confirmed.	**Lead:** Sustainability Yarra Energy Foundation **Support:** Economic Development

2. Accelerate renewable energy, zero carbon buildings and efficient operations			
No.	**Action description**	**Resourcing**	**Who**
Community organisations			
2.4	Support Yarra community organisations to transition to 100% renewable electricity and upgrade their buildings through: ▪ Facilitating solar installations and the upgrade of buildings used by community groups, including assisting with access to financial support, such as government grants ▪ Supporting access to 100% renewable electricity in the most cost-effective way, via: ○ Enabling community organisations operating in Yarra Council buildings to purchase renewable energy as part of Council's long-term renewable electricity contract ○ Supporting other organisations to understand and access options to buy renewable energy including via the '*100% Renewable Yarra'* campaign	Existing resources.	**Lead:** Yarra Energy Foundation **Support:** Sustainability
Yarra Council buildings			
2.5	Ensure all new Yarra Council buildings are net zero carbon in construction and operation, and aim for net carbon negative, by: ▪ Setting strong design standards in an updated *ESD (Environmentally Sustainable Design) Buildings Policy* to ensure new Council buildings demonstrate environmental sustainability and climate resilience principles throughout design, construction and operation ▪ Eliminating the use of gas, maximising solar energy generation and battery storage, and powering buildings with 100% renewable energy ▪ Incorporating natural cooling and insulation via green walls, roofs and landscaping ▪ Utilising partnerships and trialling new and emerging technologies	Within existing resources. Additional projects subject to annual capital budget process.	**Lead:** Sustainability Building and Asset Management

2. Accelerate renewable energy, zero carbon buildings and efficient operations			
No.	**Action description**	**Resourcing**	**Who**
2.6	Ensure all existing Yarra Council buildings are highly efficient and zero emissions. This will be achieved by: ▪ Progressively transitioning our facilities off gas, focusing on: ○ All sites with relatively simple gas systems (i.e. hot water systems and domestic-type heating) transitioned off gas by the end of year 2 (30 of 38 sites) ○ Sites with highly complex, building integrated, gas systems (i.e. leisure centres and town halls) to be off gas by 2030 where feasible, noting that the ability to shift leisure centres off gas will rely on new technologies and may need to be coupled with site redevelopments ▪ Ensuring all Council buildings' roof space is maximised with solar panels by the of end year 2, including: ○ Provision for solar capacity beyond site electricity usage (where roof space allows) to feed additional renewable electricity into the grid ○ Use of integrated battery storage where daytime electricity usage is low ○ Investigating the use of microgrids or other innovative technologies ○ Provision of solar panels on community used Council-facilities ▪ Implementing best-practice energy efficiency and building optimisation by: ○ Utilising smart control and monitoring technologies to operate buildings at the highest possible energy and building performance standards ○ Identifying and investing in priority building energy efficiency upgrades, and ensure energy efficiency outcomes are factored into all building project works	Within existing resources. Year 1 budget: $710,000 Future years subject to budget processes.	**Lead:** Sustainability **Support:** Building and Asset Management
Public lighting			
2.7	Accelerate the transition of Yarra's public lighting to the most energy efficient technology and management techniques by: ▪ Upgrading all Council owned main road lights to LED in Year 1 ▪ Upgrading all main road lights shared with the Department of Transport in Years 2-3	Year 1 budget: $1.4 million (approx.)	**Lead:** Sustainability **Support:** Traffic and Civil Engineering **Partners:** Open Space, Urban Design,

2. Accelerate renewable energy, zero carbon buildings and efficient operations			
No.	**Action description**	**Resourcing**	**Who**
	▪ Reviewing residential street lights to upgrade from T5 to LED when appropriate, based on emerging technology and management practices ▪ Reviewing and upgrading other public lighting (e.g. parks, sports fields) as appropriate	Year 2 budget: (To be confirmed approx. $700,000)	Department of Transport
Planning requirements for private developments and precincts			
2.8	Seek to transition towards zero-carbon buildings and precincts through the planning process by: ▪ Working with other partners (e.g. Council Alliance for Sustainable Built Environment (CASBE) / the Inner Melbourne Action Plan (IMAP) to raise the standards for energy performance in the Sustainable Design in the Planning Process (SDAPP) Scheme ▪ Increase Council's efforts to ensure planning applicants understand good ESD practice for new developments ▪ Foster leadership in the local development industry and promote examples of best practice buildings, such as local commercial and residential developments that have met passive house standards ▪ Encourage best practice energy performance in new developments to go beyond current mandatory requirements, such as passive house design and the use of low carbon energy sources ▪ Work with energy distributors to plan future energy systems to match projected growth ▪ Prepare guidelines aimed at supporting the installation of solar panels on heritage buildings	Within existing resources.	**Lead:** Strategic Planning Statutory Planning **Support:** Sustainability **Partners:** CASBE Other local governments
Advocacy and partnerships			
2.9	Advocate to other levels of government to improve energy performance of buildings with an ultimate aim of achieving zero carbon buildings, such as through: ▪ Increasing ESD requirements in all planning schemes across Victoria	Within existing resources.	**Lead:** Strategic Planning, Sustainability

2. Accelerate renewable energy, zero carbon buildings and efficient operations			
No.	**Action description**	**Resourcing**	**Who**
	▪ Dramatically increasing energy performance standards in the National Construction Code ▪ Mandating energy performance disclosure at point of sale and lease for residential and commercial buildings ▪ Introducing minimum energy standards to be met at point of sale and lease ▪ Significant investment of government funds and incentives like rebates, to assist homeowners to upgrade their homes (e.g. insulation, draft proofing etc.) ▪ Advocating to the government and electricity distributors to reduce impediments to installing solar PV on multi-unit developments, such as distribution network constraints, on-site embedded networks and metering arrangements		**Support:** Advocacy and Engagement **Partners**: NAGA, CASBE, Million Homes Alliance
2.10	Advocate to the state government for a rapid transition to 100% renewable grid-supplied electricity and improved energy data provision: ▪ Increasing Victoria's Renewable Energy Target (VRET) to 100% by 2030, and ensure a fair and equitable transition for those in the community affected by energy insecurity ▪ Improving access to and analysis of energy and emissions data by sector to inform policies and programs	Within existing resources.	**Lead:** Sustainability **Support:** Advocacy and Engagement **Partners**: NAGA, Other councils

Strategic Priority 3. Create a climate adapted city

Vision: *Yarra's natural and built environments are healthy and resilient in a climate impacted world*.

As the climate changes, our city's infrastructure and assets (both natural and built forms), will be placed under increasing pressure due to rising urban heat, storm and flood risks and water insecurity. Continued global heating means that the average number of number of days in Melbourne over 35°C will likely increase to between 13 and 21 by the 2050's. The impact of continued global heating on water supply shows that by 2040 the Yarra catchment area will see evapotranspiration increase by 4.6 per cent and rainfall reduced by 2.7 per cent annually, resulting in an 11 per cent reduction in runoff volume[14].

While these impacts pose significant challenges, they also present an opportunity to create a cooler, more climate resilient city that improves livability. Our city's green spaces, parks and reserves also provide considerable physical and mental health benefits that need to be preserved as people cope with the impacts of a changing climate. To address these challenges, we need to adapt the way we design, build and manage our infrastructure and assets – our parks and reserves, buildings, roads, streetscapes and drainage network. We will implement a range of on-ground solutions and embed climate adaptation approaches across Council's works, strategies and policies.

As our city warms and we experience more downpours, trees and other vegetation cover will be increasingly important to provide canopy cover, shade buildings, footpaths and roads and to intercept polluting stormwater run-off. As part of our climate emergency response, we will continue to use blue/green infrastructure solutions to help mitigate flood, drought, heat, and enhance habitat and green spaces. This includes increasing water sensitive urban design treatments, such as permeable surfaces and investing in water harvesting and treatment storage solutions. We will create additional green and open spaces where possible, and provide spaces for growing food locally in order to build community resilience and reduce the emissions associated with growing and transporting food.

To inform the adaptive management of our water assets, we will conduct city-wide flood modelling, including climate sensitivity analysis. For Yarra Council's buildings, we will regularly review and raise the ESD standards and design-in climate resilience to deliver shade and use heat reflective, light-coloured surfaces, as appropriate.

In order to protect and enhance our parks, reserves and ecological assets, we need to adapt our land and vegetation management practices. Aboriginal peoples have been living in connection with country for thousands of years, observing, experiencing, and successfully adapting to significant changes in the landscape. This traditional knowledge, handed down through generations, provides a valuable base for adaptive land management in a changing climate[15]. Partnering with Traditional Owners, we also need to ensure that areas of cultural significant are protected and resilient to climate impacts and ensure future generations are able to enjoy and pay respect to these important places.

[14] Melbourne Water tool (insert reference)
[15] Adams, M. (2013). Indigenous knowledge and climate change in Australia: Can the traditional knowledge of Australia's indigenous communities keep pace with climate change? Current Conservation, 7 (1), 17-21.

3. Create a climate-adapted city			
No.	**Action description**	**Resourcing**	**Who**
Street trees			
3.1	Significantly enhance our urban forest to increase tree canopy cover, diversity and climate resilience, including: ▪ Accelerate street tree planting via Priority Precinct Plans, informed by areas most affected by urban heat and social vulnerability ▪ Adapting tree selection and establishment practices to optimise tree health, lifespan and function in a changing climate ▪ Strategically installing passive irrigation to enable trees to cope with drier, harsher conditions and increasing soil moisture in the wider landscape ▪ Adapting tree management practices as the climate changes, such as monitoring injury due to extreme weather ▪ Partnering with other councils and government agencies to improve vegetation connectivity across borders	Additional resources required	**Lead:** Urban Design Streetscapes and Natural Values Drainage and Stormwater City Works **Support:** Sustainability Asset Management **Partners:** Resilient Melbourne and other networks

3. Create a climate-adapted city			
No.	**Action description**	**Resourcing**	**Who**
Local precincts and streetscapes			
3.2	Plan and design streetscapes, open spaces and precincts considering increasing climate vulnerability, such as urban heat, flood risk and vulnerable communities: ▪ During Local Area Place Making and capital works processes, maximising opportunities for increased permeability and vegetation cover, sustainable infrastructure and enhanced walking and cycling ▪ Creating more green and open spaces where possible, via a number of mechanisms, including land acquisition and reclaiming road space ▪ Continuing to provide spaces for growing food locally through the Community Growing Spaces program	Delivered based on capital budget bids Existing resources	**Lead:** Streetscapes and Natural Values Asset Management Strategic Planning Waste Minimisation and Urban Agriculture
Parks and reserves			
3.3	Ensure climate resilient and ecologically healthy parks, reserves and green spaces by: ▪ Adapting management practices and managing for diversity to ensure our landscapes, parks and reserves are resilient in the face of a changing climate ▪ Partnering with other landholders and government agencies to enhance habitat, canopy cover, carbon drawdown potential, and connectivity between ecological communities ▪ Drawing from and engaging with Indigenous cultures and traditional knowledge to assist in managing land as our climate continues to change ▪ Providing support to new proposed community garden projects, in line with our guidelines	Proposed resources in Nature Strategy Existing resources	**Lead:** Streetscapes and Natural Values Urban Design Waste Minimisation and Urban Agriculture

3. Create a climate-adapted city			
No.	**Action description**	**Resourcing**	**Who**
Integrated and water sensitive solutions			
3.4	Develop an *Integrated Water Management Plan* and ten-year capital works program to enhance Yarra as a water smart city, improving liveability, social and economic outcomes of the community. Utilise integrated and water sensitive solutions to intercept run-off, increase soil moisture, manage flood risk throughout the city and enhance green spaces and waterway health by: ▪ Investing in stormwater harvesting infrastructure at Edinburgh Gardens to achieve a five-fold increase on current storage capacity and reduce reliance on drinking water for irrigation by 80 per cent ▪ Investigating the feasibility of stormwater harvesting facilities at a further three locations to reduce reliance on potable water for irrigation ▪ Including blue/green infrastructure considerations in future capital projects to achieve multiple water outcomes and support urban cooling ▪ Conducting city-wide flood modelling, including climate sensitivity analysis, to adaptively manage our water assets	Subject to capital budget approval 2020/21. Additional resource required. Capital works identified through the IWM Plan subject to approval in future budgets. IWM Plan development within existing resources.	**Lead**: Drainage and Stormwater **Support:** Asset Management and Building Strategic Planning Streetscapes and Natural Values Traffic Strategic Transport Urban Design Open Space **Partners:** Melbourne Water
Council assets and infrastructure			
3.5	Improve the climate resilience of Yarra Council's assets, such as buildings, roads, and drainage, including through: ▪ Enhancing road design and construction for climate outcomes, including identifying opportunities for lower embodied energy and recycled content ▪ Investigating and trialling smarter and integrated asset management technologies ▪ Updating Council's ESD Buildings Policy to ensure our buildings are adapted to future climate impacts (e.g. withstand increased rainfall, back-up power for critical buildings) ▪ Partnering with neighbouring Councils and regional alliances to improve cross-border issues, such as flooding and tree corridors	Existing resources. Additional projects subject to annual budget process.	**Lead:** City Works Assets and Building Management CityLab Traffic Sustainability

3. Create a climate-adapted city			
No.	**Action description**	**Resourcing**	**Who**
Planning requirements for private developments and precincts			
3.6	Work though state and local planning mechanisms to facilitate a more climate resilient city, including: ▪ Ensuring future climate projections are considered in flood risk information that informs flood overlays ▪ Continue to update the planning scheme to ensure climate related impacts are addressed in line with evolving best practice	Subject to annual budget process.	**Lead:** Strategic Planning **Support:** Urban Design and Open Space Sustainability **Partners**: State government
Organisational climate responses			
3.7	Embed climate resilience into Council's strategies, policies and decision-making processes: ▪ Ensuring new and updated policies, plans and strategies consider climate related risks and plan for climate resilience ▪ Identify climate resilience opportunities when undertaking planning for activity centres, precincts and other strategic land use planning processes ▪ Planning for intensifying climate impacts when reviewing key plans for heat waves, extreme weather and emergency responses ▪ Continue to engage staff around the climate emergency and support staff to deliver climate responses as part of their roles ▪ Incorporating climate adaptation considerations into future *Asset Management Plans* and associated *Project Implementation Plans* for Council assets ▪ Continuing to ensure all new design works are assessed using climate adaptation considerations through Council's *Green Infrastructure Guidelines, Climate Adaptation Guidance Tool* and *Quadruple Bottom-Line Tool* (QBL) ▪ Remaining at the forefront of adaptation information and technologies and periodically reviewing our approaches to climate adaptation based on the best available evidence	Year 1 budget: $10,000. Additional projects subject to annual budget process.	**Lead:** Sustainability **Support:** Health, Safety and Risk Various units across Council

Strategic Priority 4: Transition to zero emissions transport

Vision: *Sustainable transport is the most attractive, safe and convenient way to travel in and through Yarra.*

Carbon emissions from transport make up 15 percent of Yarra community's emissions, with the majority of emissions being a result of car travel. Despite an extensive network of sustainable transport options in Yarra, the number of car trips starting, ending and occurring within Yarra is increasing, and is forecast to reach 42,800 by 2031 – equivalent to a 48 per cent increase from 2011.

There is considerable opportunity to reduce transport emissions and realise a range of co-benefits including reduced congestion, improved air quality, health, amenity and overall liveability of the city. Reducing Yarra's transport emissions largely depends upon reducing car dependency, increasing the portion of trips taken by public transport, walking and cycling, and rapidly transitioning to electric (or other zero emissions) vehicles.

Bike mode share in Yarra has remained static at about 7 per cent over the past ten years, and this is likely to continue unless measures are taken to significantly improve the quality of Yarra's cycling infrastructure. While Yarra has an established cycling culture and cycling levels are high in Yarra compared to most Melbourne municipalities, leading cycling cities in Europe that have a comparable density and urban form to Yarra have a bike mode share of over 25 per cent.

There is, significant opportunity to increase the portion of trips taken by bicycle by improving Yarra's bicycle network to encourage cycling by people who may be interested in riding but currently do not feel safe. In order to reduce car dependency and the number of car trips in Yarra, a range of interventions are needed including additional investment in sustainable transport infrastructure, public transport improvements, car share and other initiatives to discourage car ownership, along with bicycle and pedestrian infrastructure.

To deliver sustainable transport priorities that respond to the climate emergency, Council will implement actions through an *Integrated Transport Plan* (ITP). The ITP will set out Council's strategic objectives for transport and how future projects could be delivered. Council will also develop a new Parking Management Plan, in conjunction with the ITP, to ensure the strategic directions of both plans deliver on climate emergency objectives and transport priorities for Yarra.

The ITP will seek to:

- Set ambitious targets to increase the share of trips by bicycle and public transport and decrease the share by car
- Provide a comprehensive evidence-based update on the status of transport and development in Yarra
- Identify existing and emerging issues and opportunities using an evidence base
- Refine and improve existing Yarra Council transport policy objectives and vision statements
- Identify a list of actions that align with transport objectives
- Provide a monitoring framework for informed decision making
- Collaborate with neighboring councils to improve active and sustainable transport connections
- Use parking provisions, or other mechanisms, to encourage car-share and electric vehicles
- Prioritise efficient use of road space for active transport, public transport, shared transport and zero emissions vehicles
- Highlight new approaches to delivering transport projects, such as pilots and trials, to enable a more innovative and time and cost-effective way of implementing projects
- Inform an update to Yarra's Bicycle Strategy and a Parking Management Plan

While public and active transport modes are preferenced ahead of vehicular transport, electric vehicles and other low emissions vehicles, present an immediate opportunity in reducing transport emissions. Establishing Yarra as a leading zero emissions vehicle municipality will provide other local benefits, including reduced noise and air pollution. Work to achieve this will include developing a strategic and shared plan for a diverse charge point network in Yarra.

Yarra Council will lead by example by transitioning our fleet to all electric vehicles as soon as practical and help others by sharing our experience. Council currently operates a number of electric vehicles powered by 100% renewable electricity, as part of our operational fleet, including electric bikes and the first electric tipper truck in Australia. Council will also work with our contractors to transition their vehicles to low emission and electric vehicles.

Transitioning how we move, requires urgent improvements across Melbourne's transport network. We will continue to collaborate with local, state and federal governments to deliver an integrated, accessible and convenient transport system for metropolitan Melbourne, in which sustainable transport is prioritised and the most attractive transport option for the community. Yarra Council will advocate for improved public transport connections and capacity, powering public transport with 100% renewable energy, and mechanisms to support the electric vehicle transition.

4. Transition to zero emissions transport			
No.	**Action description**	**Resourcing**	**Who**
Public and active transport			
4.1	Develop an Integrated Transport Plan to facilitate the uptake of sustainable modes of transport and the long-term reduction of private car use by: ▪ Reallocating road and parking space for upgrades, enabling footpath widening, bike lanes, public transport improvements and greening opportunities ▪ Prioritising walking, cycling and public transport through improved infrastructure, with infrastructure improvements based on evidence and future predicted transport modelling ▪ Promoting and facilitating car-sharing and other alternatives to private car ownership ▪ Investigating parking restrictions to facilitate improved access for sustainable modes of transport through changes to allocation of road space	$200,000 for years 1 and 2 for strategy development	**Lead:** Strategic Transport **Support:** Parking Management Traffic **Partners**: To be confirmed
4.2	Increase sustainable transport solutions throughout the city including: ▪ Using iterative trials for temporary sustainable transport infrastructure, car free zones and curfews and reallocation of car space for sustainable transport modes ▪ Delivering additional safe cycling infrastructure projects and on-going maintenance improvements ▪ Increasing active transport infrastructure, and traffic calming and filtering solutions via Local Area Place Making (LAPM) projects and capital works process, including additional 30km per hour zones ▪ Working with other partners (e.g. Council Alliance for Sustainable Built Environment (CASBE) / The Inner Melbourne Action Plan (IMAP) to increase best practice for sustainable transport for new residential and commercial developments (i.e. Green Travel Plans) in the Sustainable Design in the Planning Process (SDAPP) Scheme	Within existing works program resources.	**Lead:** Strategic Transport **Support:** Traffic **Partners**: VicRoads Public Transport Victoria

4. Transition to zero emissions transport			
No.	**Action description**	**Resourcing**	**Who**
4.3	Develop a Parking Management Plan that is informed by the Integrated Transport Plan that would seek to: • Apply user-pays principles and remove incentives that preference car use and ownership • Apply the road-use hierarchy to favour active and public transport modes • Develop a model for Council's parking revenue that's financially and environmentally sustainable • Reduce on-street parking, where necessary, to enable improvements to sustainable transport infrastructure and the public realm • Take a restraint-based approach to the provision of off-street parking • Introduce a parking overlay in the Yarra Planning Scheme to reduce the on-site car parking requirements for new developments	Resourced by the requested additional resource for supporting the Integrated Transport Plan	**Partners:** Strategic Transport Compliance and Parking Statutory Planning Strategic Planning
4.4	Partnering with neighbouring councils and state government agencies to improve active transport connectivity and improve the safety of local cycling and walking paths	Within existing resources.	**Lead:** Strategic Transport **Support:** Traffic
Electric and low emissions vehicles			
4.5	Support the rapid transition to zero emissions vehicles, including the expansion of electric vehicle charging points across private and public spaces within the municipality, and across greater Melbourne by: ▪ Developing strong relationships with local businesses with public car parks, to collaborate and coordinate the roll out of public electric vehicle chargers to support residents and local economic development ▪ Incorporating in the planning permit process requirements for new developments to make appropriate provision for electric vehicle charging infrastructure ▪ Collaborating with car-sharing businesses to accelerate the transition to electric vehicles ▪ Supporting, educating and promoting the transition to electric vehicles by Yarra residents and businesses.	Resourced by the requested additional resource for supporting the Integrated Transport Plan Budget: $100,000 p.a. for years 1 and 2	**Lead:** Strategic Transport **Support:** Sustainability Economic development Statutory Planning **Partners**: Local businesses NAGA

4. Transition to zero emissions transport			
No.	**Action description**	**Resourcing**	**Who**
4.6	Support the transition of Yarra Council's fleet to zero emission vehicles and low emissions vehicles including: ▪ Converting all Council fleet pool and non-commuter vehicles to zero emissions by 2030 ▪ Converting at least one Council bus to electric by 2022 ▪ Progressively switching to electric or other zero emissions vehicles at time of renewal where possible, utilising full-life cycle cost budgeting rather than purchase price ▪ Utilise lower emissions and hybrid options where zero emissions vehicles/charging infrastructure is not practical ▪ Monitoring vehicle numbers and their usage against organisational needs ▪ Reducing vehicle usage through use of alternative solutions including active transport, e-meetings and remote monitoring. Use telematics to better understand the opportunities ▪ Ensuring Council's service delivery contractors transition as quickly as possible to zero emissions vehicles. Participate in sector-leading pilots and trials for new vehicles or zero emissions fuel opportunities.	Additional capital costs subject to annual budget process.	**Lead:** City Works **Support:** Procurement Sustainability

4. Transition to zero emissions transport			
No.	**Action description**	**Resourcing**	**Who**
Advocacy and partnerships			
4.7	Advocate to state and federal governments for improved active and public transport infrastructure including: ▪ Prioritising public transport infrastructure spending over road infrastructure spending and increased funds for active transport projects ▪ Providing more frequent, increased capacity, and better-connected modes of public transport ▪ Powering all trains with renewable electricity ▪ Zero emissions public transport buses, with trials focused on routes through Yarra ▪ Improving separated bike infrastructure with good interconnectivity across intersecting municipal areas Seek to enhance effectiveness of advocacy through partnerships and collaboration with other local governments and key partners.	Within existing resources.	**Lead:** Strategic Transport Advocacy and Engagement **Support:** Sustainability **Partners**: NAGA Other local governments
4.8	Advocate to state and federal governments to accelerate the uptake of electric vehicles including: ▪ Developing a coordinated national electric vehicle strategy and support mechanisms ▪ Implementing best-practice national vehicle emissions standards ▪ Funding and planning for public charge points ▪ Providing financial incentives for businesses and private owners to purchase electric vehicles Seek to enhance effectiveness of advocacy through partnerships and collaboration with other local governments and key partners.	Within existing resources.	**Lead:** Advocacy and Engagement **Support:** Advocacy and Engagement Strategic Transport Sustainability **Partners**: NAGA Other local governments

Strategic Priority 5. Move towards zero waste and conscious consumption

Vision: *The Yarra community are conscious consumers who actively avoid and reduce waste, preserving resources for current and future generations.*

What and how people consume has a profound impact on our planet. In Australia as a whole, we are over consuming; depleting the Earth's natural resources, generating harmful carbon emissions and creating unnecessary waste. If everyone in the world consumed as many natural resources as the average Victorian today, there would need to be three to four planets to sustain this level of consumption.

To accelerate reductions in carbon emissions and curb the overuse of resources, we need to consume resources more consciously with an understanding of the environmental and social implications of our choices. Emissions associated with using goods and services – such as buying food, plastic items and packaging, electronics and clothing — occur right across the supply chain. For example, there are considerable emissions at each stage of growing crops, processing, distribution, storing, cooking and disposal of food waste. By some estimates direct emissions from food growing represents between 25-30 per cent of its emissions[16], with the rest occurring along the food supply chain through to disposal.

Reducing consumption and waste will require a shift in mindsets to move away from a traditional 'take-make-dispose' model to one that values any 'waste' as a resource and aspires to a zero waste system. Through approaches such as applying circular economy principles[17], waste can be designed out of a system and finite resources are valued and kept circulating within it.

Figure 4 – A circular economy *(adapted from Gaia Foundation Short Circuit Report)*

Community education and engagement are critical in accelerating this transition. It also requires bold changes in government policies, regulatory settings, and investment to drive new industries, infrastructure and processing facilities.

Yarra Council has long had a role in delivering waste behaviour change programs, services and infrastructure. We engage the community to avoid waste in the first place; to take up alternative models, such as sharing, repairing, re-using; and enable greater recycling. Council also continues to evolve its services and infrastructure, such as kerbside collections and recycling systems and infrastructure, to apply new approaches and meet community needs.

[16] Victorian Eco Innovation Lab, Sustainable and Secure Food Systems for Victoria: What do we know? What do we need to know?, 2008, https://research.unimelb.edu.au/__data/assets/pdf_file/0016/2312206/018_VEIL_Food_Report_-_Summary.pdf

[17] Ellen MacArthur Foundation, 'What is the Circular Economy', https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy

One of the most impactful and immediate ways we can assist residents to reduce waste and waste-related carbon emissions is by providing services and programs to keep food waste out of landfill. When disposed to landfill, food waste produces highly polluting methane that contributes to global heating. Through the *Waste Revolution,* Council is trialling a food and garden waste kerbside collection service, sending organics to a commercial composter to be processed into nutrient rich mulch and fertiliser to regenerate soils. Additionally, Yarra Council supports community compost hubs and promotes local composting and food growing options.

As part of the *Waste Revolution*, we are also testing a segregated kerbside glass collection service. Removing glass from the other recyclables produces better quality paper, cardboard and plastic material for recycling. The higher quality glass is turned into new glass products, and low-quality glass is repurposed including in local road construction. Through procuring products made from recycled content, we support local markets for high-quality recycled products.

Yarra Council will continue to partner with other councils and state agencies to create more resilient resource management systems based on circular economy principles. Through state and federal government advocacy, we will also seek systemic improvements in the consumer products, waste and recycling industries.

5. Move towards zero waste and conscious consumption			
No.	**Action description**	**Resourcing**	**Who**
5.1	Implement Yarra's Waste and Resource Recovery Strategy and support the community to practice sustainable consumer behaviour, foster a circular economy and minimise waste. Examples of initiatives include: ▪ Promoting and supporting alternative consumption models through education, tools and programs such as the Zero Waste Map, Plastic Free July, Grow Your Own, sharing economy, and repairing initiatives ▪ Integrating sustainable consumption messaging into waste and urban agriculture programs ▪ Encouraging community groups to apply for Yarra grants to develop and implement zero waste initiatives that engage the Yarra community	Within existing resources. New programs subject to annual budget bids.	**Lead:** Waste Minimisation **Support:** Communications Sustainability **Partners**: Local environment groups and other community institutions
5.2	Seek to implement a municipal-wide food and organic waste collection service, informed by the results of the Waste Revolution trial	Additional capital costs subject to annual budget process.	**Lead:** Waste Minimisation **Support:** Service Contracts
5.3	Engage the community to practice food waste avoidance and improve recycling behaviours by providing education and engagement programs, including through partnerships.	Within existing resources.	**Lead**: Waste Minimisation **Support**: Sustainability **Partners**: Local environment groups and other community institutions
5.4	Work collaboratively with other local governments and state government agencies to design and deliver comprehensive and robust waste management and local recycling solutions, including investigating new opportunities for Council-run resource recovery facilities	Subject to annual budget process.	**Lead**: City Works **Support**: Sustainability **Partners**: state government agencies

5. Move towards zero waste and conscious consumption			
No.	**Action description**	**Resourcing**	**Who**
5.5	Develop a cross-organisational approach to embed systems-based decision making (e.g. circular economy principles and life cycle assessment) during the design, procurement, delivery and management of Council's assets, goods and services. This would include building the capacity of staff to apply these approaches across the whole life cycle (e.g. identifying opportunities to design-out resource use, minimise inputs and maintenance, maximise resource recovery loops and reduce residual waste and carbon emissions).	Resourcing needs to be determined.	**Lead**: Sustainability, City Works **Support**: Waste Minimisation Other teams across Council
Advocacy and partnerships			
5.6	Advocate for state and federal government action to accelerate a climate emergency response across consumption, waste and recycling including: ▪ Placing a future ban on food waste to landfill ▪ Supporting recycling industry innovation and market development ▪ Improving and expanding domestic recycling and composting systems and facilities ▪ Imposing stricter sustainable packaging standards ▪ Expanding product stewardship schemes Seek to enhance effectiveness of our advocacy through partnership and collaboration with other local governments and key partners.	Within existing resources.	**Lead**: City Works **Support**: Advocacy and Engagement Waste Minimisation Sustainability

Monitoring and review

The next decade is considered critical in the transition to zero emissions and restoration of a safe climate. The scale and immediacy of the climate emergency means that governments, businesses, institutions and individuals must work together to deliver unprecedented changes.

This plan lays out a comprehensive suite of actions, and signals Yarra Council's commitment to working alongside a growing cohort of leading Australian and international councils undertaking climate emergency action. Given the rapid growth in the climate emergency movement particularly across local government sectors globally, and the possible changes in policy and carbon technologies over the period of the plan, it is essential that we continue to learn and adapt our response to the climate emergency. In this context, Council commits to reviewing and updating the actions listed in the plan every two years.

We hope that this plan provides an inspiring way forward for Council and the community to continue to work together to take bold and meaningful climate action, and importantly, contributes to local, national and international knowledge about how councils and communities can effectively respond to the climate emergency.

Glossary

Carbon offset

The action or process of compensating for carbon dioxide emissions arising from industrial or other human activity, by participating in schemes designed to make equivalent reductions of carbon dioxide in the atmosphere.

Carbon negative

Taking more greenhouse gases out of the air than has been emitted in order to lower the overall level of greenhouse gases in the atmosphere. Carbon negativity or negative emissions are needed to restore a safe climate.

Carbon neutral

Carbon neutral refers to the balance achieved when emissions that are created by a human activity are offset in equal amount. Carbon neutrality is often achieved through a combination of reducing carbon emissions and buying carbon offsets, which means investing in projects that reduce or absorb greenhouse gas emissions of equal value to what they produce. Carbon neutrality is sometimes referred to as having a net zero carbon footprint.

Climate crisis

See climate emergency.

Climate emergency

Climate emergency can be understood in two ways. Firstly, it refers to the catastrophic changes to the climate brought about by human activity and which pose a dangerous threat to all life on the planet. Secondly, a climate emergency *response* can be considered taking effective action at the scale and speed of action commensurate with the magnitude of the crisis.

Drawdown

The removal of excess greenhouse gases from the atmosphere with the aim of restoring a safe climate[18].

Environmentally Sustainable Development (ESD)

Environmentally sustainable development is the integration of environmental considerations in urban planning with the aim of protecting the environment while meeting current and future community needs. The term refers to building performance in relation to the use of environmentally sustainable design and orientation, low-impact materials, reuse and recycling of materials, energy efficiency, waste management and use of closed loop systems.

Green/blue infrastructure

Green and blue infrastructure refers to landscape elements that are designed to deliver a range of environmental, economic, and social benefits including improved water quality, enhanced climate resilience and restoring the health of ecosystems. Examples include, natural and artificial waterways and water courses, raingardens, vegetated swales, trees and indigenous landscapes.

[18] Darebin City Council, Darebin Climate Emergency Plan 2017-2022, http://www.darebin.vic.gov.au/climateemergency

Greenhouse gas (GHG) emissions

Carbon dioxide, methane, nitrous oxide and other gases that contribute to climate change.

Renewable energy

Energy generated by renewable sources such as wind, solar, tidal and hydro.

Safe climate

A climate that allows the natural environment, existing and future generations and communities to survive. The current climate conditions are not safe for a large range of species and increasingly unsafe for millions of people.

Urban heat island

An urban heat island is an urban area that is significantly warmer than its surrounding areas. This increased warmth is due to both heat being retained by roads, buildings, footpaths made of concrete and asphalt, and waste heat created by cars, industry and people. The urban heat island effect can negatively impact the natural environment and human health.

Water sensitive urban design treatments (WSUD)

Water sensitive urban design (WSUD) uses better urban planning and design to mimic the natural water cycle as closely as possible, such as by slowing down, intercepting and reusing stormwater and improving the quality of water discharged to waterways. Examples of WSUD treatments include raingardens, rainwater tanks, swales, wetlands and sediment ponds.

Zero net emissions

See carbon neutrality.