



Climate Action Plan

Our plan to deliver what is important to our community
to further reduce our city's environmental footprint.



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Our plan

We have developed Boroondara's Climate Action Plan to deliver what is important to our community and in recognition of the real and increasing threat to our environment, to our health and wellbeing, and to the quality of the lives of current and future generations as the result of our changing climate.

In 2017, Council produced the Boroondara Community Plan responding to the needs and aspirations of our community. It reflects major themes from the associated community consultation, including supporting sustainability and our natural environment. Since then, we have heard from our community more and more often that environmental sustainability, specifically climate change, is an important issue for Boroondara.

During 2020 and 2021, we consulted our community about refreshing the Boroondara Community Plan and about this Climate Action Plan. The feedback showed enthusiastic support for this Plan and for Council to prioritise action for our environment.

A successful response to climate change requires a holistic approach, new ways of thinking and shifts in how we live, work and play. It requires action by individuals, businesses and all levels of government.

This Plan outlines how Council will respond to this challenge and how we will work with our community and other levels of government to do the same.

At Council, we have already made big improvements, but we can build on these as we continue to adapt our own practices. As a local government, our

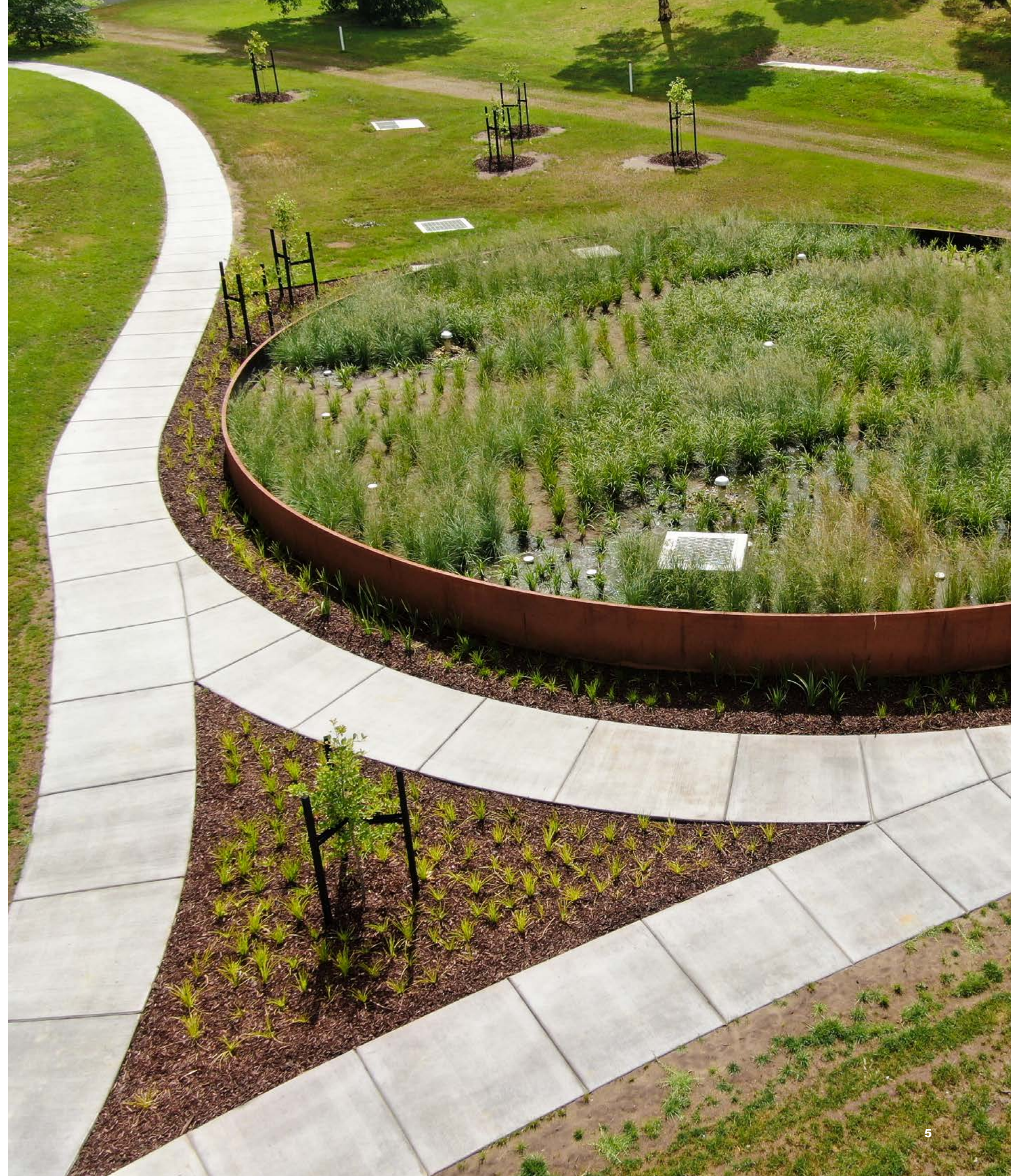
role extends beyond our own buildings, assets and operations to serve and support our community to mitigate threats, adapt and become more resilient.

We acknowledge the important global movement towards zero net emissions and that the City of Boroondara should be part of this movement.

Climate change is about more than just greenhouse gas emissions and this is reflected in this Plan. Even if all countries substantially reduce emissions now, it is too late to avoid some long-term changes to our environment. We must prepare to adapt to a warmer, more variable climate with more extreme weather events.

This will impact on both our people and biodiversity. It will affect how we travel, how we use water and how we live our lives. This Climate Action Plan will support the delivery of the Boroondara Community Plan and it will inform all other related strategies and actions, and set Boroondara on a path to a holistic response to these broad challenges.

Outcomes of the Climate Action Plan will be reported on an annual basis, and it will be reviewed and updated in five years.



Our vision

Boroondara is a vibrant and thriving city that lives within its means. We have the capacity to achieve our aspirations, and inspire others along the way. Our vision is that:

- Council and all those that live, work and play in Boroondara will come together in partnership to achieve our goals.
- Boroondara is a green and leafy city with healthy trees, plants and other thriving biodiversity. Our trees and plants absorb and store carbon dioxide emissions, provide habitat and our canopy provides shade and urban cooling.
- Our homes, businesses, schools and other buildings are efficient and resilient to the extremes of our environment. They make efficient use of renewable energy and they are constructed from sustainable materials.
- We travel using a range of convenient, reliable and healthy options. Walking and cycling provide safe and convenient exercise and transport. We use electric vehicles, powered by renewable energy, and other low emission forms of transport.
- We conserve our valuable drinking water and make use of alternatively harvested water in our efficient buildings, gardens and parks.
- Our environment is clean and unpolluted. The quality of our air and waterways is substantially improved.
- We make efficient use of our valuable resources. We avoid single-use items, and we reuse and repurpose. We recycle into a circular economy and make new things from our recycled resources.
- We are ready to incorporate new and evolving technologies that help us mitigate and adapt to climate change.
- We have a flourishing local economy that provides sustainable goods and services to our community.

Our role

We have an essential role to play in climate action. We can:

- Continue to lead, facilitate and support our community to reduce emissions.
- Build on our existing efforts to reduce greenhouse gas emissions from Council-run buildings and services.
- Act on the growing expectation of our community to take holistic action to reduce the impacts of climate change.
- Support our community to mitigate the threats and outcomes of climate change.
- Keep working towards sustainability and resilience within our organisation and for the broader community.
- Partner with councils, governments, agencies and groups to carry out or create opportunities for actions to reduce emissions.
- Play a role in emergency management where appropriate.
- Promote and provide opportunities to learn about climate change mitigation and adaptation through programs and partnerships.
- Take action to achieve net zero carbon neutrality in Council operations by 2022 and support the community to achieve net zero carbon neutrality by 2035.
- Advocate to other levels of government to take climate action.
- Actively incorporate climate change mitigation and management into any new Boroondara Council strategy and policy.
- Support staff to understand the targets and apply the actions of this plan.
- Prepare to adopt and adapt to new and evolving technology.

Our response so far

Strategy

At Council, we have policies and programs that seek to embed environmental sustainability into our operations and services, while also supporting our community to do the same.

The Boroondara Community Plan 2017–2027 (BCP) is Council’s overarching strategic document. It guides our decisions and directly informs our annual plans and budgets, as well as all of our strategies, policies and actions.

The BCP has seven priority themes. Theme Three is The Environment and its strategic objective is: Our natural environment is healthy and sustainable for future generations.

Lead our community through advocacy and action to mitigate against and adapt to the impacts of climate change to minimise adverse impacts on community health and wellbeing, our natural environment and facilities and services.

Strategy 3.7 of the Boroondara Community Plan



Other themes and strategies from the BCP also guide our response to environmental sustainability and climate change.

These include:

- Theme Two: Your Parks and Green Spaces
- Theme Five: Getting Around Boroondara
- Theme Seven: Civic Governance and Leadership

The BCP includes the Boroondara Public Health and Wellbeing Plan (MPHWB). The Victorian Government *Climate Change Act 2017* requires that local governments must have regard to the potential impacts of climate change when preparing a MPHWB.

Council has policies and strategies that guide us to meet the objectives of the BCP.

These include:

- Our Low Carbon Future Strategy (2009–2020)
- Boroondara Urban Biodiversity Strategy (2013–2023)
- Boroondara Integrated Water Management Strategy (2014–2024)
- Boroondara Waste Minimisation and Recycling Strategy (2017)
- Boroondara Integrated Transport Strategy (2016)
- Boroondara Tree Strategy (2017–2027)
- Boroondara Sustainable Council Buildings Policy (2016)

The adoption of Council’s Our Low Carbon Future – City of Boroondara Strategy (OLCFS) in 2009 set the direction for our climate change mitigation response. The strategy has been supported by three action plans, including the most recent Action Plan Update 2017–2020.

The 2009 strategy had core objectives:

1. Reduce Council’s own greenhouse gas emissions
2. Reduce aggregate emissions for Australia
3. Reduce the impact of increasing energy prices on Council’s budget
4. Reduce the impact of increasing energy prices on vulnerable sectors of the community
5. Support the Australian Government to introduce more ambitious greenhouse gas reduction targets
6. Increase local energy security through investment in renewable energy sources.

The strategy set us a target to reduce our corporate greenhouse gas emissions by 30 to 40 per cent below 2007/08 levels by 2020, and to support the reduction of community emissions by at least 50,000 tonnes of CO₂-e by 2020 through community programs and projects.

Projects

Actions from Our Low Carbon Future strategy focused on addressing key sources of greenhouse gas emissions from our buildings, street lighting and fleet vehicles.

We have made substantial progress in increasing the energy efficiency and low carbon technologies in Council-owned buildings. Significant initiatives and policies that we have delivered include:



- Powering more than 12,000 streetlights and 16 major City of Boroondara buildings with 100 per cent local renewable energy from a Gippsland wind farm until 2030. This accounts for over 85 per cent of Council’s total electricity use.
- Upgrading over 7,000 streetlights with more efficient technologies.
- Installed cogeneration at Ashburton Pool and Recreation Centre in 2011 and at Hawthorn Aquatic and Leisure Centre in 2014. This technology uses natural gas to ‘co’ generate both heat and electricity onsite where and when it is needed.
- Installing solar PV (rooftop solar) on our buildings including our four aquatic centres. By June 2021, we installed, or had committed to, over 1,133 kW of Solar PV on all Council office, depot and community buildings.
- Delivering a broad suite of cost-effective energy efficiency upgrades at Council’s largest buildings via an Energy Performance Contract (EPC) model as used in the Victorian Government’s Efficient Government Building Program. This \$2.5M project is now saving 1,700 tonnes of CO2-e per year and delivering annual savings of over \$250,000.
- During 2020/21 alone, Council implemented over \$1M in additional energy-saving initiatives drawing on what we learned from the EPC project.

Other initiatives

We also run other projects and programs that support environmental sustainability within Council and for our whole community. Key examples include:



- The Council Climate Change Risk Assessment (2020).
- The Sustainable Buildings Policy (2016) which ensures that all new or upgraded buildings are environmentally sustainable while still providing high quality spaces for the community. This policy requires that all Council building projects are equivalent to the 5 Star standard set by the Green Building Council of Australia’s Design & As Built Tool.
- The launch in May 2020 of the Food Organics Garden Organics Program (FOGO), providing a huge boost to the diversion of organic materials away from landfill. This is one of the most significant changes in municipal waste management since the introduction of kerbside recycling.
- Supporting the uptake of behaviours and technology to improve residential energy efficiency through community education and incentives via programs such as our Living for our Future program.
- Engaging the Australian Energy Foundation to provide up-to-date and impartial energy efficiency and renewable energy advice and one-to-one support for residents and businesses.
- Discounts for residents on products such as worm farms and compost bins through our Compost Revolution program to divert organic waste from landfill.
- Supporting schools to embed sustainability in their operations and curriculum via programs such as the Teacher Environment Network.
- Constructing roads using recycled asphalt. Council uses asphalt containing materials such as recycled soft plastic bags, glass and leftover cartridge toners. We also reuse recovered asphalt from other Council road projects.
- Participation in the Eastern Alliance for Greenhouse Action where Boroondara is a member of the alliance of eastern suburb councils in Melbourne, combining to deliver programs to reduce greenhouse gas emissions and provide support for adapting to the impacts of climate change in our region.

Emissions in Boroondara

Council corporate emissions

As part of Boroondara’s Our Low Carbon Future Strategy, we have monitored greenhouse gas emissions since 2007/08 across all Council-run buildings and services. In the baseline year these emissions were 26,837 tonnes of CO2-e.

Due to ongoing efforts to reduce our greenhouse gas emissions and environmental footprint, corporate emissions are now below¹ 6,000 tonnes CO2-e which represents a reduction of over 80 per cent compared with our baseline year.

Though this an excellent effort, a comparison of the municipal emissions and Council’s corporate emissions reveals that Council is directly responsible for less than 1 per cent of municipal emissions. For this reason, we have an important role to play in supporting our community to tackle the greenhouse gas emissions of the broader municipality.

¹ Actual emissions for 2020/21 will be calculated prior to final endorsement of this Plan. From 1 July 2020, Council has purchased 100 per cent renewable electricity for the majority of buildings and street lighting. From 1 July 2020, annualised emission are calculated to be 4,500 tonnes of CO2-e. This result is partly driven by atypical Council operations in response to the COVID-19 pandemic.

We have reduced greenhouse gas emissions from Council-run buildings and services by 80 per cent since FY 2007/08

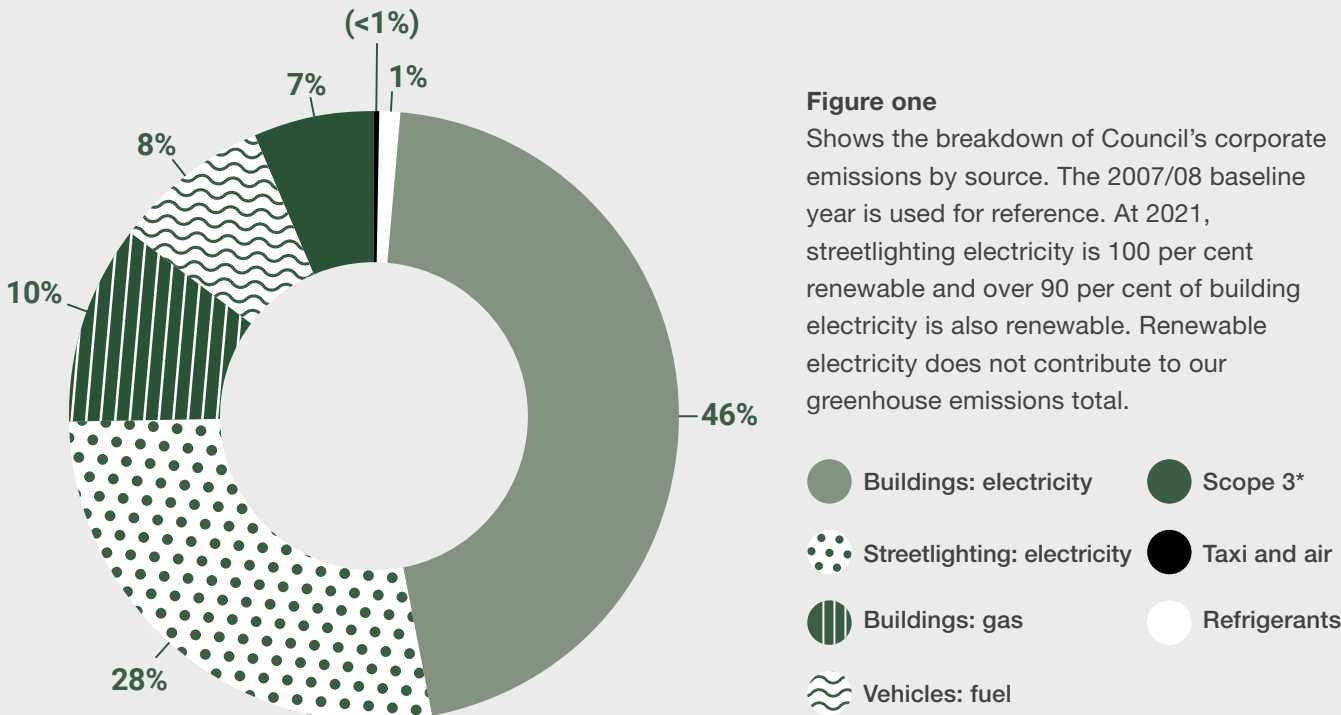


Figure one
Shows the breakdown of Council’s corporate emissions by source. The 2007/08 baseline year is used for reference. At 2021, streetlighting electricity is 100 per cent renewable and over 90 per cent of building electricity is also renewable. Renewable electricity does not contribute to our greenhouse emissions total.

- Buildings: electricity
- Streetlighting: electricity
- Buildings: gas
- Vehicles: fuel
- Scope 3*
- Taxi and air
- Refrigerants

*Scope 3 emissions are indirect greenhouse gas emissions

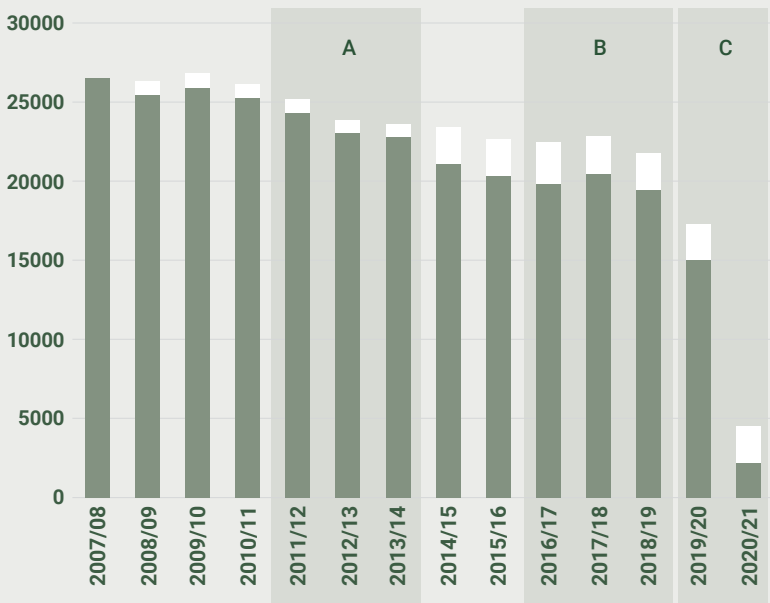
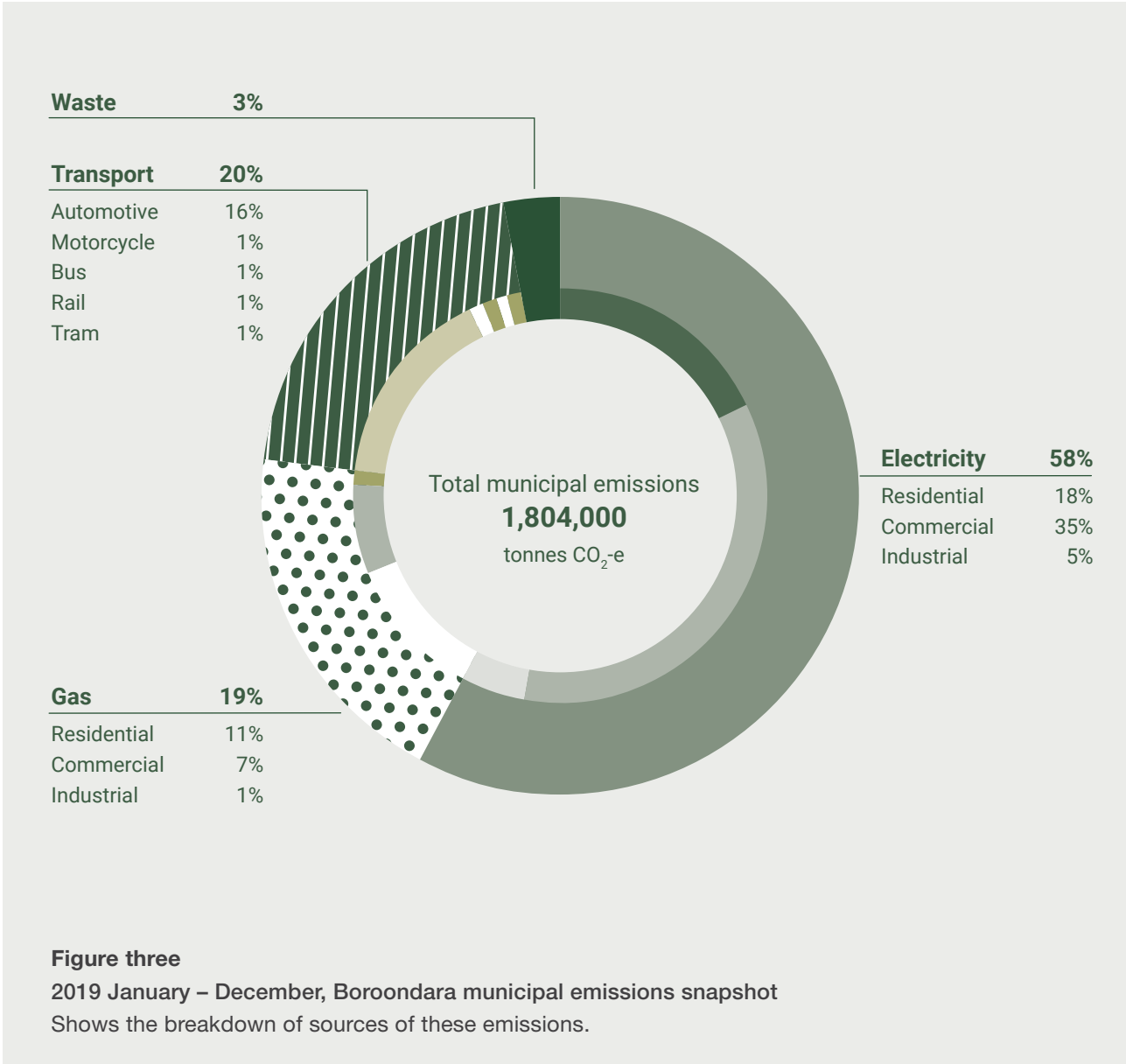


Figure two
Shows Council’s corporate emissions over time. The columns represent actual emissions. The white portion represents emissions from vehicle use which have been offset by the purchase of Australian Biodiversity Regeneration Offsets. The shaded portion represents net emissions after offsetting.

- A = Renewable electricity for streetlights introduced
- B = Energy Performance Contract begins
- C = Power Purchase Agreement begins

Municipality-wide emissions

The Snapshot² database provides information on a subset of the greenhouse gas emissions for the Boroondara municipality. This includes emissions associated with electricity, natural gas, road transport and some elements of waste management. This data also provides a breakdown of emissions according to sector. The Snapshot database is the most readily available information about community emissions in Victorian Local Government areas.



² <https://snapshotclimate.com.au/explore>

The corporate greenhouse gas emissions inventory and Snapshot data that we have tracked at Council mostly highlight the emissions related to the purchase of energy in the forms of fuel, natural gas and electricity by individuals, businesses and organisations. This provides a useful indicator of our collective environmental impact and is a useful tool to track our progress.

It is important to recognise that our environmental impact is made up of far more than our energy use alone. Decisions we all make every day contribute to our carbon footprint and impact on the environment. These include what we buy and use, how our food is produced, how we dispose of things and the materials used to build our homes, roads and cities.

In order to truly respond to the challenges of climate change, all of these factors should be considered when developing any plan or action to support environmental sustainability. It is also important to consider opportunities that are particularly relevant to Boroondara. Boroondara is well known for its leafy tree canopy. Our trees and plants provide an

important carbon sink, and by capturing groundwater they reduce flooding and erosion of our waterways. They also provide shade and urban cooling and are vital habitat for our wildlife.

The Plan gives significant consideration to our trees and ways that we can not only protect our existing canopy cover but actually improve on current levels.

Council's recent implementation of our Food Organics Garden Organics Program also has substantial implications for climate change. Diversion of organic material from landfill not only preserves a valuable resource, it also prevents the formation of methane which is a potent greenhouse gas.

Though we don't have a good estimate of average individual greenhouse gas emissions in Boroondara – as such analysis would be difficult, time consuming and expensive to undertake – we do know that there are many actions that we can take as a Council and as a community to reduce our collective impact and create a sustainable, vibrant future.

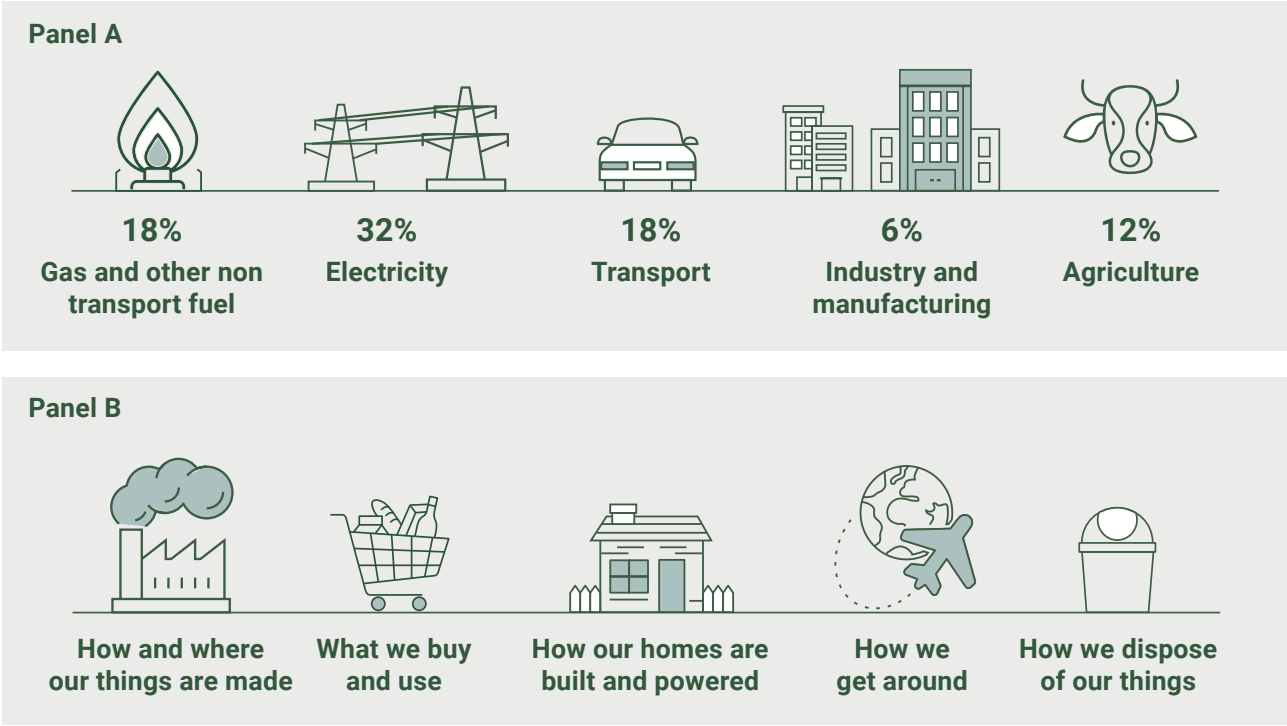


Figure four Greenhouse Gas Emissions Sources (Adapted from Australia State of the Environment Report (2016) and Australian National Greenhouse Accounts)

Panel A Shows the top five emissions sources in Australia and their approximate percentage contribution. **Panel B** Shows how we contribute to Australian and global greenhouse gas emissions.

Community consultation informing the plan

We undertook consultation with our community about this Climate Action Plan in 2020.

During the first phase of the consultation, we heard from more than 1,500 community members who shared their feedback online, over the phone and in writing. One third of these community members were randomly selected to participate.

In March/April 2021 we did a follow up survey and workshops. This second phase of consultation told us we were mostly on the right track and that action to mitigate the Boroondara-wide contribution to climate change is

important and necessary, and that our community broadly supports Council to take bold action.

A survey report outlining the consultation process for this plan is published on Council's website.

During 2021, we undertook consultation on the refresh of the Boroondara Community Plan. Community feedback during this process has been considered and incorporated in the development of this Climate Action Plan. The details of the consultation will be publicised during 2021.

Considerations in developing this plan

This Climate Action Plan seeks to guide the City of Boroondara on the most effective path to reduce emissions and to a more sustainable environment.

In developing this plan, Council has considered:

- Community feedback
- Contributions to greenhouse gas emissions by operations managed by Council
- Contributions to greenhouse gas emissions by the Boroondara community
- The relationship between climate change and other previous and future environmental issues such as our biodiversity and the availability of water
- The sphere of influence and capacity to contribute to climate change mitigation and adaptation that Council has beyond our own operations
- Emission reductions required to avoid the worst impacts of climate change
- Metrics where data is available to us to track and report on the progress of Council and community emissions, and metrics where monitoring and reporting is unfeasible.



Targets

This Climate Action Plan defines targets³ for both Council and the municipality of Boroondara as a whole.

Council corporate greenhouse gas emissions targets

The majority of Council’s electricity now comes from renewable energy. This has been an important factor in reducing our own corporate emissions by more than 80 per cent compared with our baseline year of 2007/08. This outcome is double Council's high range target of 40 per cent from the OLCFS. Many of the most cost-effective and best future opportunities for Council to further reduce energy use and costs are at facilities which are supplied by renewable electricity. Improvements at these facilities are important and will continue to be a priority for Council but will not help us achieve our new emissions target on their own.

In setting a corporate greenhouse gas target, Council’s approach aligns with the following objectives:

- Reduce energy use and pollution
- Prioritise cleaner energy alternatives
- Pursue cost-effective approaches
- Pursue options that invest locally and offer lasting benefits for Boroondara.

In delivering the Plan, Council will continue to invest in energy efficiency, renewable energy and other local projects and programs that reduce our energy use and any emissions.

Council has set a target to be carbon neutral by 2022. This will be achieved through an investment in meaningful greenhouse gas offsets that are measurable and verifiable. Carbon neutrality has been deferred until one year after adoption of this Plan to allow Council to determine the most appropriate mechanism for achieving it.

As Council continues to improve our own operations, the requirement for offsets will reduce as our level of emissions will shrink as we use less and less greenhouse gases.

Council's approach to targets has considered both what can feasibly be achieved but also the importance of setting objectives that are difficult and will continue to push us as we strive to do better. We may not hit every target but if the opportunities arise, we will go further and sooner.

Targets will be reviewed as part of an update to the Climate Action Plan five years after adoption or sooner if required.



Community greenhouse emissions aspirational targets

Unlike Federal and State Governments, local governments do not have broad legislative or financial control over major community emissions sources. For example, electricity generation and distribution, transport policy, planning controls and agricultural regulations are mostly controlled by the State and Federal Governments. Additionally taxation and levies along with associated financial incentives are less available to local governments. Council recognises a role in all of these matters but can only partner in solutions and is not able to enforce an outcome.

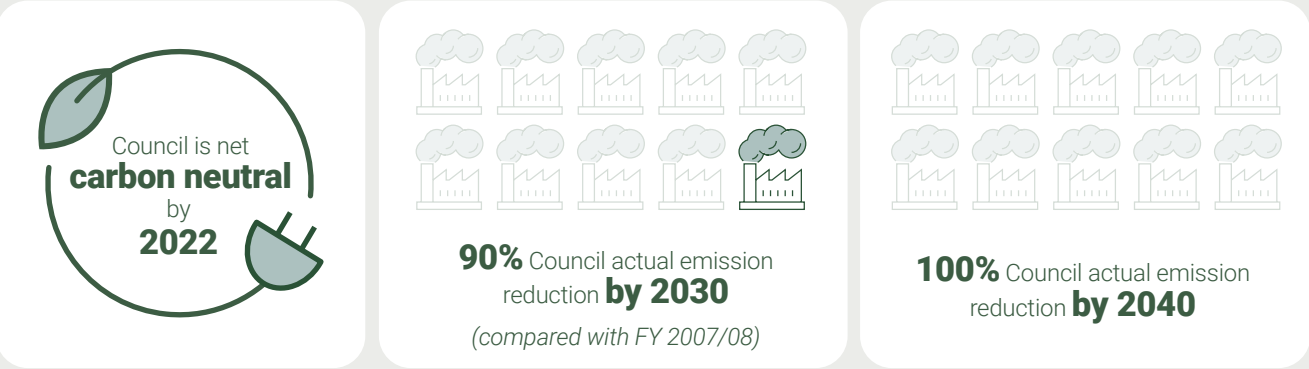
The aspirational targets for the whole Boroondara community will be more difficult to achieve and will require efforts from Council and the whole community.

These targets reflect where we need to be to avoid the worst impacts of climate change, and will only be achievable if other levels of government and the Boroondara community are committed to the same path. Council cannot mandate a target like other levels of government, due to the different powers they hold that enable them to make decisions which directly influence the level of emissions. Meeting these targets will require productive partnerships with community members, businesses and institutions.

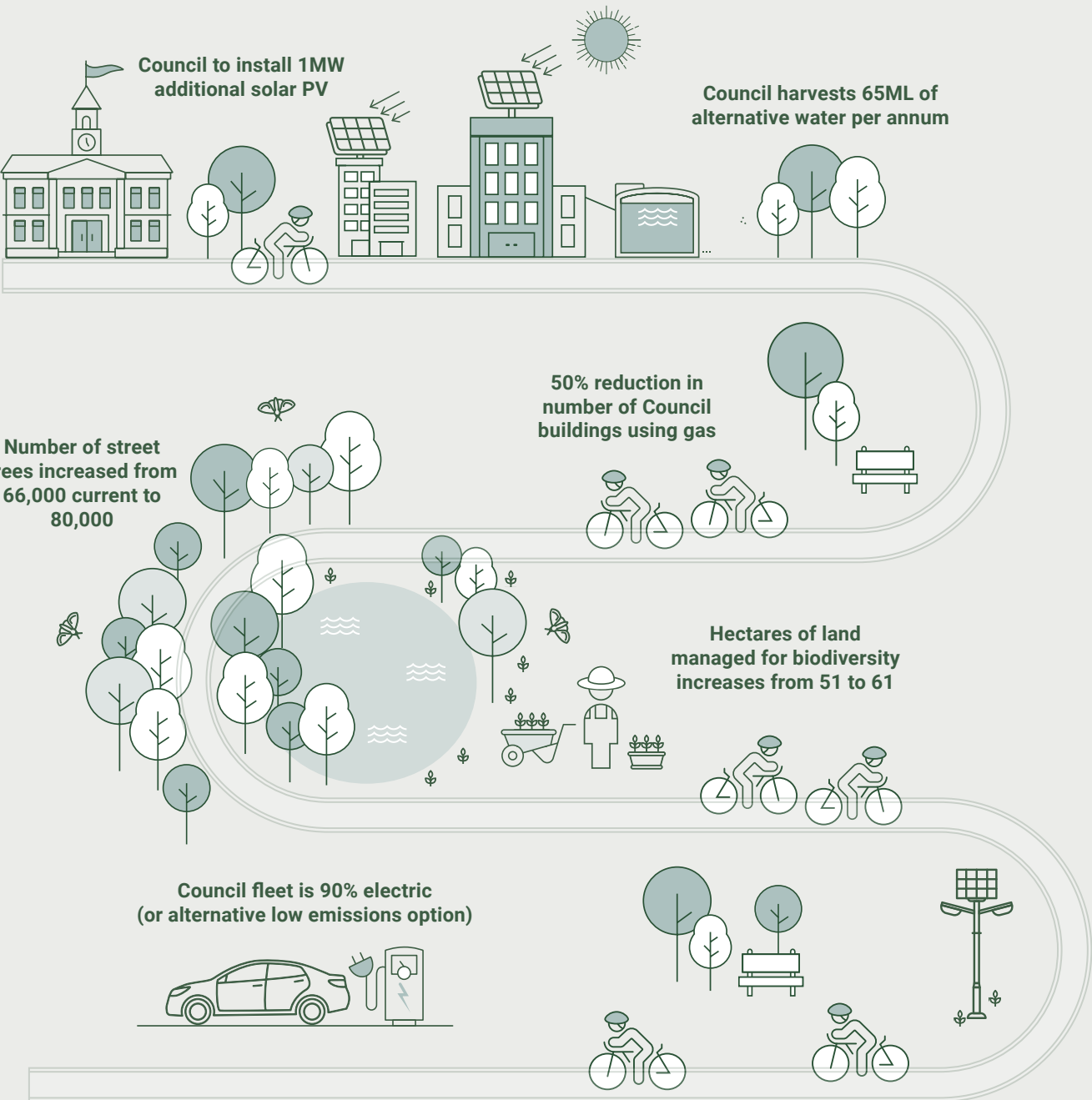
We have set targets that are challenging but achievable.

3. Reporting methodology may change during the life of the Plan and targets. Where methodology or other changes impact on reported progress, Council will publish the details of any changes and the impact of these changes on reported progress. ie changes in emissions factors or criteria for determining the extent of tree canopy.

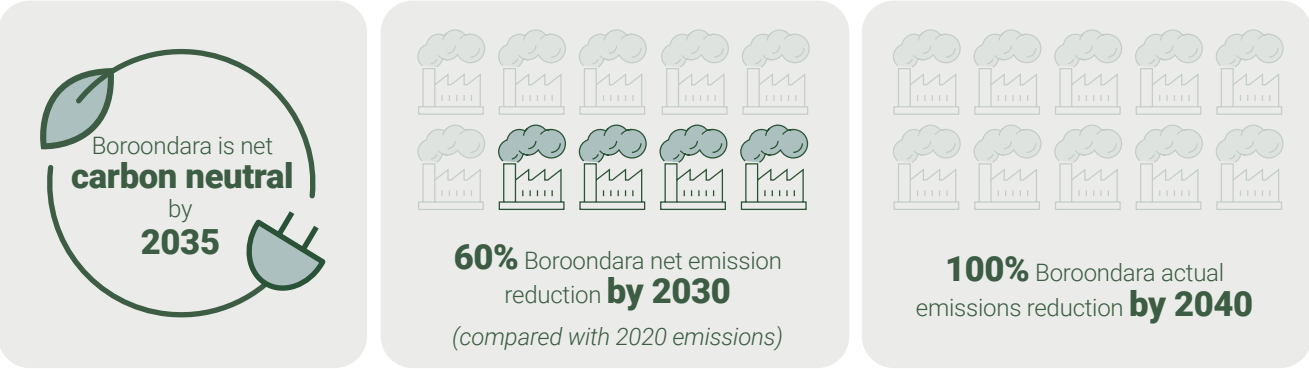
Council’s corporate targets



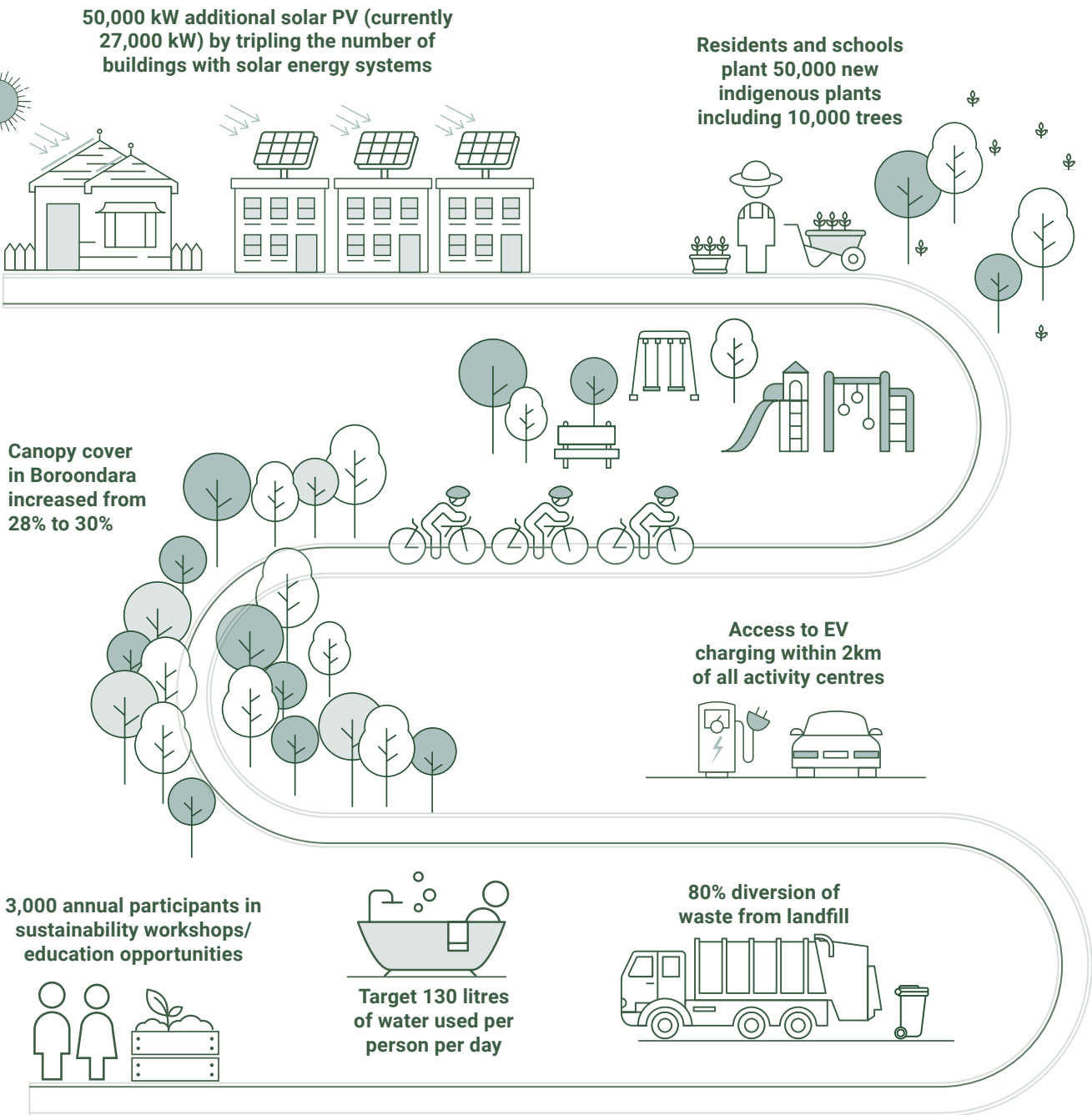
Supporting measures by 2030



Aspirational community targets



Supporting measures by 2030



Actions

The actions identified in this Climate Action Plan will set the municipality on a path to meet our targets.

Some of these actions are ready to roll out, and some require more planning and development. Other actions define how new or updated policy frameworks should be developed in order to allow us to meet our objectives and targets.

These actions have been identified as achievable priorities by our community and staff, and through researched best practice to mitigate and adapt to the effects of climate change.

Though some items require commitments from partners, or some technology to be more widely available, our action plan includes taking steps towards the implementation of those items when possible to do so.

As an example, around 8 per cent (based on 2007/08 levels, and making up a total of 40 per cent of emissions in 2021) of Council's greenhouse gas emissions from natural gas is used primarily to heat buildings and pools. A further 8 per cent (also based on 2007/08 levels) is from Council's vehicle fleet which includes large waste collection vehicles.

Council has set a target to halve the number of Council buildings using natural gas by 2030. This will be most readily achieved through the transition of smaller facilities and buildings to using electric

power exclusively. Council will also actively pursue opportunities to transition our larger facilities and aquatic centres off natural gas. Heat pump technology is currently the most viable solution for heating these facilities, but further work is required to demonstrate the operational and cost-effectiveness of this type of technology in the Melbourne climate. The timing for conversion of these larger facilities will mostly be determined by the development of viable technological solutions. Council will work with other Victorian councils to build knowledge and trial appropriate technologies.

Council has set a target to convert 90 per cent of our passenger fleet to electric vehicles (EVs) or an alternative low emissions technology by 2030. This transition will initially focus on light vehicles but will progressively include heavier vehicles where appropriate. Small EV and other low emissions vehicles are now readily available but further development is required before replacement of Council's larger vehicles is viable. Supporting infrastructure will also be required to make the transition feasible. Council will respond to opportunities presented by industry transformation throughout the life of the Plan.

Council's actions over the ten year life of the Plan are summarised under five key themes:



Energy efficiency and renewable energy



Biodiversity and trees



Water and waterways



Transport



Circular economy (waste)



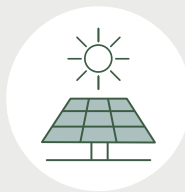
Actions which impact on more than one theme are captured as overarching actions.

Under each theme the actions are classified as:

- Council corporate actions
- Partnership actions
- Adaptation actions
- Policy and advocacy actions

These long-term and broad actions will be supported by more detailed actions identified in the Climate Action Plan Implementation Plans, theme-specific strategies and as part of Council's annual budget process.





Energy efficiency and renewable energy

Corporate actions

- 1.1 Implement and update Council's Sustainable Council Building Policy to progressively enhance the energy performance of Council buildings
- 1.2 Expand Council's renewable energy generation capacity by:
 - installing solar PV on all suitable buildings
 - installing batteries at suitable locations
 - supporting the use of solar PV at other locations
- 1.3 Progressively transition Council buildings off natural gas
- 1.4 Offset residual Council emissions from 2022
- 1.5 Convert remaining Council legacy lighting to LED technology
- 1.6 Progressively audit Council's building stock to identify energy efficiency opportunities.
- 1.7 Progressively upgrade major road streetlights to LED (subject to State Government co-funding and an updated business case)
- 1.8 Transition Council's small machines to electric powered alternatives.

Partnership actions

- 1.9 Implement a community solar PV, battery and energy efficiency bulk buy program
- 1.10 Assist large energy users to switch to renewable energy via Power Purchase Agreement or other mechanism
- 1.11 Provide advice and support to encourage ESD standards in building, renovation and development (beyond requirements of Planning Scheme and Building Regulations)
- 1.12 Deliver energy efficiency workshops, advice and support programs for community and businesses

- 1.13 Support businesses to reduce the environmental impact of their operations
- 1.14 Encourage community to offset residual emissions
- 1.15 Develop a program to support energy efficiency and renewable energy upgrades for Boroondara homes and businesses.

Adaptation actions

- 1.16 Maintain an Emergency Management Plan that considers likely impacts of climate change
- 1.17 Progressively enhance the Environmentally Sustainable Design (ESD) in Council buildings
- 1.18 Promote the benefits of cool roofs
- 1.19 Support vulnerable and low-income residents to upgrade home energy efficiency.

Policy and advocacy

- 1.20 Support increased ESD in Council's Planning Scheme through Council policy and advocacy
- 1.21 Advocate for the enhanced environmental sustainability standards for new commercial and residential developments
- 1.22 Advocate to State and Federal Government for the adoption of ambitious emission targets
- 1.23 Develop a Natural Gas Transition Plan to bring forward the adoption of low emissions alternatives to natural gas use at Council buildings.



Biodiversity and trees

Corporate actions

- 2.1 Increase area managed for biodiversity by 10 hectares from the current 51 hectares
- 2.2 Enhance habitat for biodiversity
- 2.3 Enhanced tree planting program to support transition of our urban canopy to one that is resilient and future proofed and provides shade and urban cooling

Partnership actions

- 2.4 Provide tree giveaways to schools, community groups and residents
- 2.5 Deliver education workshops and programs that support protection and enhancement of our biodiversity.

Adaptation actions

- 2.6 Include climate change criteria in Council's tree renewal and plant selection guidelines
- 2.7 Deliver a program of habitat restoration and the installation of nest boxes
- 2.8 Provide support for increasing the number of canopy trees and shade to reduce urban heat
- 2.9 Increase open space in gap areas
- 2.10 Review the Naturestrip Guidelines to facilitate using these spaces.

Policy and advocacy

- 2.11 Develop an Urban Forest/ Urban Greening Strategy for Boroondara with an associated planting plan
- 2.12 Expand and implement policies to protect trees on private land
- 2.13 Advocate to the Victorian Government to enhance tree protection on private land
- 2.14 Expand and enforce tree protection regulations for developers
- 2.15 Update the Boroondara Open Space Strategy.





Water and waterways

Corporate actions

- 3.1** Implement and update Council's Sustainable Council Building Policy to progressively enhance efficient water use at Council buildings
- 3.2** Continue to increase water harvesting at Council buildings, parks and sports grounds
- 3.3** Develop a new Integrated Water Management (IWM) infrastructure program: a prioritised plan to develop and implement new IWM projects (stormwater treatment, harvesting and reuse, litter management).

Partnership actions

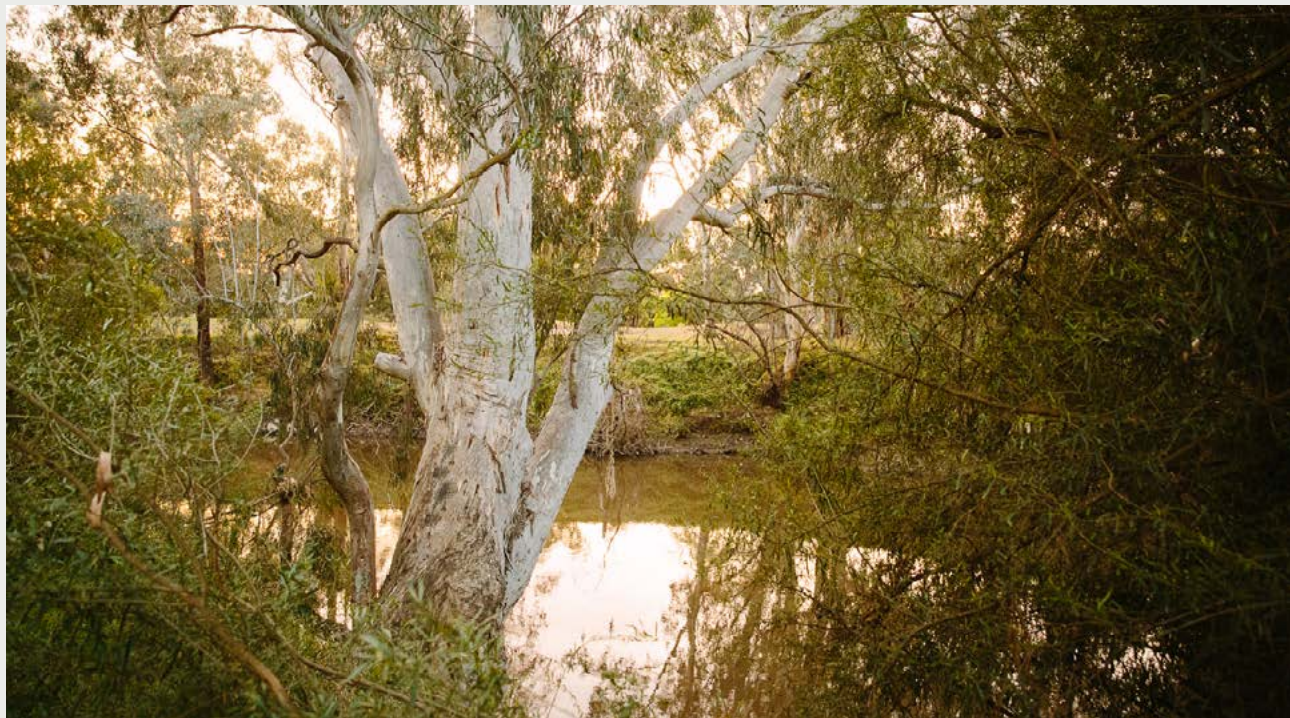
- 3.4** Deliver sustainability workshops to enhance community capacity to use water sustainably
- 3.5** Provide water efficiency advice and support programs for businesses
- 3.6** Develop a cleaner building site program, targeting sediment runoff from development sites, and an engagement and enforcement program.

Adaptation actions

- 3.7** Progressively increase harvesting of alternative water and increase efficiency of water use to reduce reliance on mains water
- 3.8** Update and implement Council's Integrated Water Management Plan
- 3.9** Continue to build capacity of our infrastructure to withstand storm and flooding events.

Policy and advocacy

- 3.10** Maintain an Integrated Water Management Strategy and Action Plan for Boroondara
- 3.11** Implement and promote actions to reduce urban stormwater runoff including permeable surface requirements
- 3.12** Improved building site management preventing pollution to our waterways
- 3.13** Develop a winter irrigation strategy for Boroondara
- 3.14** Develop and implement updated soil management and irrigation management plans for healthier open space.



Transport

Corporate actions

- 4.1** Reduce the total number of vehicles in Council's fleet and accelerate the transition to electric-powered or other low emissions options
- 4.2** Identify and set aside land for fast charging stations including car-sharing models
- 4.3** Pursue opportunities to include electric vehicle and bicycle charging in all relevant Council civil works
- 4.4** Support flexible working arrangements for Council staff to reduce trips by motor vehicles
- 4.5** Require contractors to use low emission vehicles where practicable in new contracts.

Partnership actions

- 4.6** Promote sustainability programs and events to encourage more sustainable modes of transport
- 4.7** Support installation of electric vehicle and bicycle charging infrastructure
- 4.8** Support improved off-road shared or separated bicycle and pedestrian infrastructure
- 4.9** Connect the off-road cycling network through new links (on and off-road) including improved crossing facilities on main and local roads
- 4.10** Investigate and support more on-road bike lane facilities
- 4.11** Create and enhance walking routes to transport hubs
- 4.12** Deliver a range of sustainable transport events and programs for schools.

Adaptation actions

- 4.13** Implement Council's Shade Policy and pursue opportunities to enhance shade on walking routes
- 4.14** Install lighting for shared paths and paths in reserves and parks to encourage walking and cycling (with consideration of adverse impacts from light pollution).

Policy and advocacy

- 4.15** Review and update Council's Integrated Transport Strategy
- 4.16** Develop a Bicycle Strategy
- 4.17** Develop a Public Transport Strategy
- 4.18** Advocate for the reduction of freight emissions including incentives for electric trucks and anti-idling
- 4.19** Advocate for all Victorian transport projects to provide ready to use electric vehicle and bicycle charging infrastructure
- 4.20** Advocate for fast charging in service stations
- 4.21** Review Council's Car Share Policy and Procedures to provide support for sustainable transport
- 4.22** Advocate for the construction of location-appropriate DDA-compliant tram stops
- 4.23** Support local business hubs which reduce commuter travel
- 4.24** Develop a Council Fleet Transition Plan to support the adoption of low emission vehicles in Council operations.



Circular economy (waste)

Corporate actions

- 5.1 Increase recycling options available to the Boroondara community and support new recycling options for items such as solar PV panels
- 5.2 Increase the use of recycled materials in Council projects and operations
- 5.3 Eliminate non-essential use of single-use plastic at Council-sponsored and organised events
- 5.4 Develop opportunities to use FOGO compost in Council's open spaces and parks
- 5.5 Investigate opportunities to expand the FOGO program.

Partnership actions

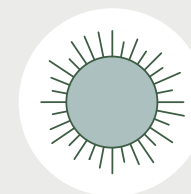
- 5.6 Deliver workshops and support for:
 - Increased use of recycled materials
 - Reduced food waste
 - increased composting
- 5.7 Deliver business focused programs to:
 - Reduce food waste
 - Reduce packaging waste.

Adaptation actions

- 5.8 Support increased home food gardening and community gardening and composting
- 5.9 Explore options for waste disposal other than landfill.

Policy and advocacy

- 5.10 Develop a Circular Economy Strategy for Boroondara to replace the current Waste Minimisation and Recycling Strategy
- 5.11 Advocate for greater environmental sustainability in the National Construction Code.



Overarching

Corporate actions

- 6.1 Report annually on Council's climate action performance
- 6.2 Include climate action education as part of staff induction
- 6.3 Increase funding for climate action grants as part of Council's grant program
- 6.4 Promote Council action on climate and the benefits of community action
- 6.5 Embed climate action into staff roles and responsibilities and performance management
- 6.6 Collaboration with other councils to increase collective impact
- 6.7 Introduce interim targets at least equal to those set by the State and Federal Governments
- 6.8 Consider environmental sustainability in investment decisions
- 6.9 Pursue opportunities to use smart technologies and IOT (Internet of Things) to achieve greater environmental sustainability
- 6.10 Provide training and resources for Councillors about climate change and other sustainability issues relevant to Boroondara.

Partnership actions

- 6.11 Provide workshop programs and sustainability festivals
- 6.12 Provide regular sustainability education and advice through Council's communication channels including the Boroondara Bulletin
- 6.13 Support greater sustainability measures through the planning permit assessment process including a new Environmentally Sustainable Development (ESD) Planning Officer position at Council
- 6.14 Continue to participate in the development of an Environmentally Sustainable Development (ESD) policy to include in the Boroondara Planning Scheme as part of Council's membership in the Council Alliance for a Sustainable Built Environment (CASBE)
- 6.15 Provide a program of sustainability support and advice for schools and young people.

Adaptation actions

- 6.16 Develop options for the use of alternative permeable and/or heat-reducing surfaces in roadways and pathways
- 6.17 Develop a Climate Action Plan/Risk Management Strategy for Boroondara
- 6.18 Implement actions to respond to climate change risks identified for Boroondara.

Policy and advocacy

- 6.19 Update our Procurement Policy, emphasising greater sustainability
- 6.20 Develop a Litter and Pollution Reduction Plan for Boroondara
- 6.21 Consider climate change impacts in relevant Council reports and decision-making
- 6.22 Embed climate action into all new and revised Council policies, processes and strategies
- 6.23 Advocate for and support greater Environmentally Sustainable Development (ESD) through the planning scheme
- 6.24 Pursue opportunities to improve air quality in Boroondara such as anti-idling education around schools
- 6.25 Pursue opportunities for enhanced data collection and monitoring for reporting on climate actions and impacts
- 6.26 Advocate to other levels of government and relevant agencies to provide funding for Local Government Authorities and communities to take action to respond to climate change.



How this plan links to other work and policies

The broad nature and impact of climate change means that it is not possible to capture all actions in a single document.

The Climate Action Plan will be supported by a range of other specific strategic documents, as outlined below. Some of these strategies already exist, and others will be developed or refreshed as part of the actions of this plan.

Our Boroondara Community Plan incorporates the Health and Wellbeing Plan which is required to respond to climate change under the *Local Government Act 2020*.

- Strategic links will include:**
- Urban Forest Strategy (New strategy as an action of this plan.)
 - Open Space Strategy
 - Integrated Water Management Strategy
 - Urban Biodiversity Strategy
 - Sustainable Transport Policy
 - Public Lighting Policy (Refresh of our current policy to better integrate sustainability.)
 - Sustainable Procurement (Refresh of our current policy to better integrate sustainability.)
 - Council Fleet Policy (Refresh of our current policy to better integrate sustainability.)
 - Circular Economy Strategy (Refresh of our Waste Minimisation and Recycling Strategy.)
 - Climate Change Adaptation Plan (New strategy as an action of this plan.)

Monitoring and reporting on our actions

This plan will be periodically monitored to track our progress.

Annual monitoring and reporting will include:

- Greenhouse gas emissions for Council
- Snapshot emissions for community
- Waste, recycling and FOGO data
- Tree planting and renewal
- Water use and harvesting
- Biodiversity actions
- Workshops and community support programs.

The Climate Action Plan will be reviewed and updated in five years and the implementation plan will be updated every two years. These updates will include a community check-in survey.



Community suggestions for future action plans

During our consultation and planning for the Climate Action Plan, we received many ideas and suggestions from the Boroondara community, Council staff and technical experts.

Not all of these ideas could make it into the plan. Some are included, some

require further investigation and planning, some have been tried before, some are currently being tried by other Councils and others do not align with Council priorities. Whether these suggestions are able to be enacted or not, they are all worth recording for future consideration⁴.



- Adapt infrastructure to climate change
- Backyard chickens
- Buying from bulk food shops
- Buying second hand
- Clean up our local waterways
- Councillors and Council staff should use sustainable transport
- Declare a climate emergency
- Divest from fossil fuels
- Dog poo composting
- Efficient glazing
- Energy efficient public lighting
- Expand FOGO
- Get rid of all plastic bags
- Growing our own fruit and vegetables
- Household batteries
- Increase permeable surfaces
- Keep cats inside at night
- LED lighting
- Less fast fashion
- More community gardens
- More focus on good building design
- More nesting boxes for biodiversity
- More sharing, possibly sharing cafes
- More sustainable planning and building controls
- Plant appropriate trees for the location
- Plant native gardens
- Promote Clean Up Australia Day
- Reduce air travel
- Reduce chemical and other pollution
- Reduce concrete use
- Reduce meat consumption
- Reduce the use of gas
- Repair broken items
- Simplify recycling
- Support a container deposit scheme
- Support bees and insects
- Support cycling
- Support edible plants on nature strips
- Support for apartment dwellers
- Support for renters
- Support schools and students
- Undertake cost benefit analysis before making decisions
- Use more renewable energy
- Using grey water
- Worm farms and home composting

4. Many of the comments have been paraphrased or combined with similar suggestions. Feedback opposing action was also received but has not been included in this list.

Glossary

Actual carbon emissions total carbon emissions without offsets.

Carbon emissions amount of carbon dioxide released into the atmosphere by coal-fired power generators, transport, forest burning, slash-and-burn agriculture, etc.

Net carbon-neutrality a state in which an organisation or country balances its carbon emission against its carbon reductions to achieve zero net emissions of carbon dioxide.

Actual carbon emissions are defined by Council as emissions that do not include carbon emissions offsets. Actual carbon-neutrality requires all energy to be from zero carbon sources.

Circular economy an economy in which all the elements in the production cycle are reused or recycled, so that there is no pollution or waste.

Climate change a significant change in the usual climatic conditions persisting for an extended period, especially one thought to be caused by global warming.

CO2-e or carbon dioxide equivalent a term used to describe a standard unit used to measure carbon footprint. CO2-e includes carbon dioxide (CO2) and other more potent greenhouse gases such as methane. These gases are expressed as equivalent (-e) to CO2. 1kg of methane has an equivalent contribution to global warming to 25-28kg of CO2.

Cogenerator technology that uses natural gas to generate both heat and electricity, and is significantly more efficient than using energy from a single source.

Emissions offset a reduction in emissions made in order to compensate for emissions made elsewhere.

Electric vehicle a car or other vehicle that is powered using an electric motor, unlike traditional vehicles that use fuel and/or gases.

ESD Ecologically Sustainable Development or Environmentally Sustainable Design. These terms or other variations are often used interchangeably.

FOGO food organics and garden organics, often referring to collection services of these items.

Greenhouse gas one of a number of gases found in the atmosphere that contribute to the retention of heat by the process known as the greenhouse effect.

IOT the Internet of Things is the network of physical objects that are embedded with sensors, software and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet.

IWM Integrated Water Management – the coordinated management of all components of the water cycle including water consumption, rainwater, stormwater, wastewater and

groundwater, to secure a range of benefits for the wider catchment.

Net carbon emissions actual carbon emissions minus emissions offsets.

Renewable energy energy from a renewable source, such as solar energy, wind energy or biomass. Sometimes also referred to as ‘green energy’ or ‘green electricity’.

Scope 3 emissions are indirect greenhouse gas emissions that occur as a consequence of activities. For Council these include electricity transmission losses and taxi travel. Council treats streetlighting as Scope 2. More detail is available on request or at www.cleanenergyregulator.gov.au/NGER

Snapshot database CO₂ emissions snapshots for municipalities in Australia at snapshotclimate.com.au

Single-use items intended for disposal after only one use.

Solar PV (also known as solar photovoltaic) is technology that converts sunlight into electricity.

Urban cooling reducing heat levels in urban areas through efforts such as increased vegetation, shade and tree canopies.

Zero net emissions achieving a balance in the amount of greenhouse gas produced and the amount removed from the atmosphere.



For more information on the Climate Action Plan:



www.boroondara.vic.gov.au/CAP



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