



Moreland
City Council

Climate and Nature



<https://conversations.moreland.vic.gov.au/imagine-moreland>

Topic snapshot

Climate change threatens Moreland's people, plants and animals. To be more resilient to the warmer climate and wilder weather to come, the community, homes, workplaces and city infrastructure in Moreland need to be prepared.

Working together with residents, schools and local businesses around energy use and minimising waste to landfill will help reduce emissions and keep valuable resources circulating in the economy. While the Covid-19 pandemic has taken some attention away from the climate crisis, there is a unique opportunity to invest in 'building back better' through the recovery phase.

The key issues are:

- 1. Carbon emissions:** partnering with the community to reduce carbon emissions.
- 2. Climate resilience:** preparing community and infrastructure for warming and weather extremes.
- 3. Open space:** providing more cool and green open spaces for everyone to access.
- 4. Nature:** protecting and enhancing natural areas for wildlife and community benefit.
- 5. Reducing waste:** supporting the reuse and recycling of materials to avoid sending waste to landfill.



Relevant Council services

- Assisting residents, businesses and organisations with uptake of solar systems and energy efficiency upgrades through advice, quotes and installation by trusted suppliers. This year a Covid-19 Recovery grants program is directly enabling solar or thermal upgrades for eligible low income / CALD residents.
- Ensuring more sustainable development in the planning application process through application of Environmentally Sustainable Development (ESD) standards and compliance programs.
- Providing a network of electric vehicle recharging stations across the city, powered by renewable electricity and free for the public.
- Construction of shared paths, public buildings, facilities consistent with environmental sustainability standards.
- Development of new parks (particularly in 'gap areas') as well as tree planting programs, improving and maintaining existing parks and open space.
- Protecting and enhancing natural areas, especially along waterways, including through revegetation, weed management and construction of wetlands and stormwater harvesting systems.
- Fostering community-led sustainability initiatives and advocacy (via Friends groups, schools, climate groups etc.) through project grants, capacity-building, networking etc.
- Waste and recycling services (including kerbside, recycling drop-off stations, digital platforms) and community education on waste, recycling and litter reduction.
- Advocating for urgent climate action at the State and Federal Government level, including as members of Northern Alliance for Greenhouse Action and Climate Emergency Australia.

Data and community feedback

Community feedback

- A large part of the Moreland community think it is important that they take actions to reduce emissions to avoid dangerous climate change and felt that Council is helping Moreland to become a green and environmentally sustainable city (92% and 71% of surveyed residents respectively) (MCC, 2018).
- Community feedback on Council strategies such as the Moreland Nature Plan, A Park Close to Home and the Urban Forest Strategy suggest residents want a greener city with easy access to green space and natural areas (see MCC 2020c, MCC 2017a, MCC 2017b).
- Waste management and environmental sustainability services have received relatively high satisfaction scores from the Moreland Community (66/100 and 61/100 respectively) (Wallis 2020).
- There are a growing number of environmental community groups and organisations in Moreland (MCC, 2020a). Groups such as the Upfield Urban Forest Group and creek Friends Groups have been highly successful in achieving on-ground change as well as supporting strong social cohesion.
- Recent research with the Moreland community identified several barriers to household waste reduction including recycling and waste bins overflowing, and a lack of awareness and/or unwillingness of some residents with a Food and Garden Organics (FOGO) bin to use it for meat products and other food waste. (Colmar Brunton 2020).
- Large parts of Australia will face severe climate impacts even with up to 1.5 degrees of warming, and the effects get significantly worse with 2 degrees (IPCC 2020).
- More people die in Australia due to heatwaves than any other natural disaster and it is estimated that there may be an extra 402 deaths per year in Victoria by 2050 due to heatwaves if no action is taken (DHHS 2020).
- In Moreland the key sources of direct carbon emissions into the atmosphere are from the use of electricity (49%) and gas (19%), on-road transport (29%) and organic waste (3%) (Ironbark Sustainability and Beyond Zero Emissions 2020).
- In 2019/20 Moreland sent nearly 30,000 tonnes of waste to landfill and collected nearly 28,000 tonnes of recyclables and green organics through the kerbside service (MCC 2020d).
- Around half of the average Moreland garbage bin is food waste and a further 20% of material in the landfill bin is recyclable (MCC 2015).
- Moreland's urban heat island hotspots are mostly located in Activity Centres, Neighbourhood Centres and major industrial areas. Older persons, socio-economic disadvantage groups and families with young children are identified as vulnerable groups to urban heat (UFC, 2015).
- Tree canopy covers some 14% of Moreland. Over the past ten years cover has been declining on private land largely to urban development and has been slowly increasing in public spaces (street and park trees) (MCC 2017).
- Moreland has a network of 179 parks, gardens, sports fields and other open spaces. This covers 576 hectares and includes significant green space along Merri and Moonee Ponds creeks. (MCC 2017).
- The Moreland community has one of the lowest rates of access to public open space in the Melbourne Metropolitan area (VPA 2017) and forecasted population growth will put additional pressure on Moreland's public open space provision.

Independent data

- Australia's climate has warmed just over 1 degree since 1910; with increased frequency of extreme heat events, declining rain fall in the southeast, increase in extreme fire weather and the length of the fire season (BoM 2018).



Key issue 1: Carbon Emissions

Partnering with the community to reduce carbon emissions

Overview

Greenhouse gas emissions (including carbon dioxide and methane) from human activities are the key drivers of global warming.

Action has been taken for over 20 years to reduce carbon emissions from the community and in council's operations. Council has upgraded to energy efficient buildings and streetlights, installed solar systems, transitioned to zero emissions vehicles and buys 100% renewable electricity. Council operations have been certified carbon neutral since 2012 (MCC, 2020e) and our 'residual emissions' (prior to offsets) are around 70% below 2011 levels.

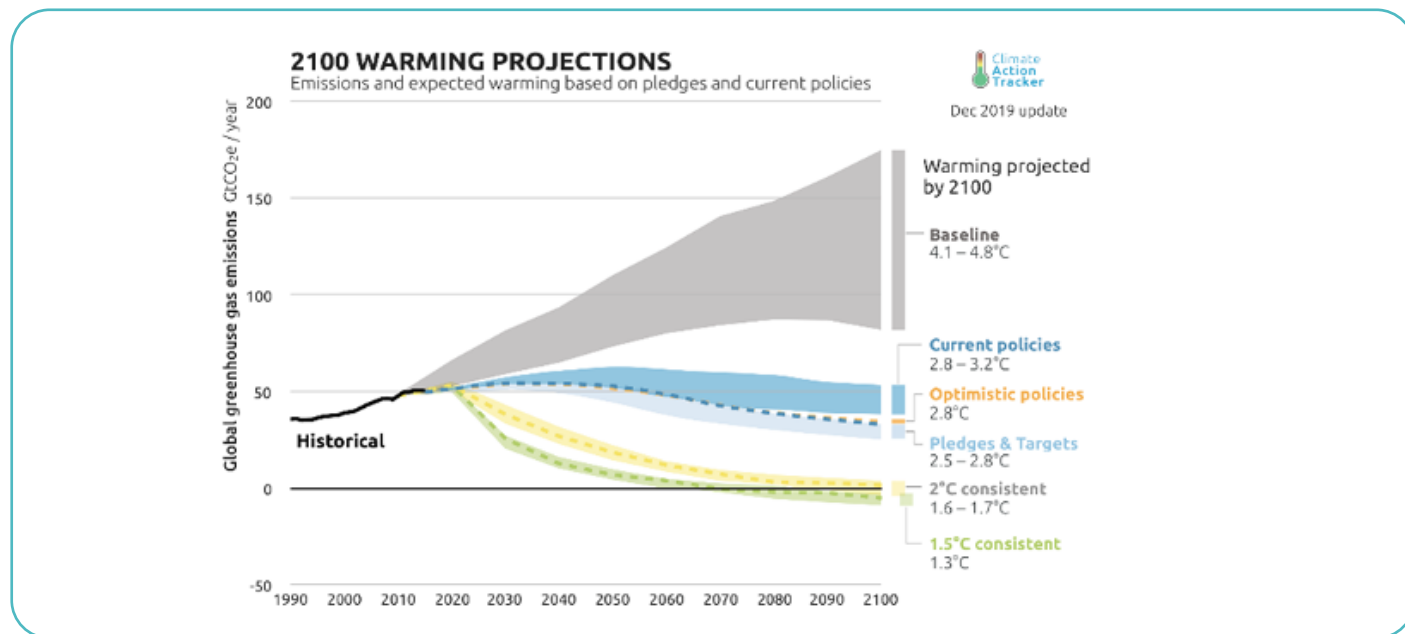
However, Council's emissions are only a small proportion of the whole of Moreland. Supporting the community to shift to zero or low carbon energy and transport, and to reduce energy use and waste to landfill, is a core part of local government leadership in responding to the climate crisis.

A collective shift towards more ambitious action by all levels of government and the communities they represent is critical to avoid the catastrophic impacts projected from global warming of 2 degrees or more.

Key issue 1: Carbon Emissions

Pictured: The national policies, pledges and targets in place around the world are not sufficient to limit warming to 1.5 or even 2 degrees.

Tackling the drivers of global warming, in keeping with the scientific consensus, has proven a 'wicked problem' for governments and societies around the world.



Opportunities

- Expand our programs to engage and support more residents and business to reduce their emissions.
 - Support community groups and schools to take collective action.
 - Work with other councils to establish higher environmental standards for new developments in the planning scheme.
 - Take a leading role with our local government partners to advocate for strong climate action. For example, join with others to advocate for much improved energy performance for new homes through the National Construction Code due to be revised in 2022.
 - Implement programs to support low-income households to improve energy efficiencies as part of the Covid-19 response.
 - Encourage more local trips to be made by zero carbon modes like walking and cycling (and use of public transport in a Covid-safe way).
- Work with the community to reduce the amount of food and garden waste sent to landfill and reduce waste related emissions. Around 72% of eligible households have access to our Food and Garden Organics (FOGO) fortnightly collection service. The transition to a weekly FOGO collection for all households in 2022 should significantly reduce emissions caused by municipal waste sent to landfill.

Challenges

- Local government can only influence rather than directly control the municipality's carbon emissions.
- Success is reliant on action by a cross section of community, business and government.
- Policy improvements, such as raising environmental standards in the planning scheme, take a long time and can be hard to get approved.
- Uptake of low emissions vehicles is slow. Electric vehicles are currently more expensive to buy than petrol and diesel cars, although cheaper to run.



Key issue 2: Climate Resilience

Preparing community and infrastructure for impacts of warming and weather extremes

Key issue 2: Climate Resilience

Overview

Melbourne's climate is warming. There is a trend towards hotter summers and more frequent heatwaves and storm events. Most of our infrastructure was not designed to deal with this. This has implications across all our services, operations and assets.

There are people and infrastructure being impacted by weather extremes now. For example, poor quality housing puts vulnerable residents at risk during heatwaves, and footbridges have been washed away in flash floods.

Re-thinking how to plan and build new buildings and community infrastructure is needed so that they can perform well now and into the future. There are ways to design, build or renew our infrastructure to be more resilient and sustainable, potentially avoiding unnecessary damage and repair costs.

Some residents are more exposed and vulnerable to climate impacts than others. Factors include, quality of housing, pre-existing health conditions, and the social networks to support each other in an emergency.


Opportunities

- Design, build or renew our infrastructure to be more resilient and sustainable. This will help avoid unnecessary damage and repair costs.
- Improve the thermal efficiency of our homes (for example, with insulation and draughtproofing) to minimise impacts of temperature extremes. This will lower energy bills, improve health and well-being and reduce pressure on health services. Government investment in home energy efficiency can provide economic stimulus and job creation, improve reliability of energy provision and improve social equity.
- Consider future climate scenarios and invest in capital works programs that deliver better outcomes over the long-term.

- Ensure flood mapping and planning overlays consider projected rainfall changes and other extremes and inform developers of emerging risks.
- Outreach to community to build community resilience and social cohesion using existing community networks.

Challenges

- Building the resilience of our social and natural systems, and our infrastructure, requires significant investment.
- Landlords of rented properties can be reluctant to invest in upgrading rented properties to be more energy efficient and healthy if they do not get a return on the investment.
- Poorly adapted housing may be significantly underinsured in the event of weather damage.



Key issue 3: Open Space

Providing more cool and green open spaces for everyone to access

Overview

Access to local parks and green space supports the health and wellbeing of everyone in the community. Amongst other benefits, it provides cool and green areas for walking, picnics, exercise, relaxation, socialising and connecting with nature.

The Moreland community has one of the lowest rates of access to public open space in the metropolitan area and with population growth forecast to continue, this will put more pressure on public open space provision. Many residents do not have walkable distance to parks and there are several significant access gaps across the municipality (MCC 2017a). Creating and improving open space in these areas should be a priority. In the past 2 years we have spent \$42 million acquiring land to protect existing open space and to create 6 new parks.

Opportunities

- Run maintenance programs in all our open spaces to maintain the cooling and greening benefits from trees, vegetation and grass.
- Plant extra street and park trees each year to enhance our 'urban forest' and, over time, increase municipal canopy cover.
- Purchase land in gap areas to convert to open space – this takes significant investment.
- Change planning scheme to require more space to be set aside in unit developments for the planting of trees.
- Investigate how many significant trees there are on private land and how to use the planning scheme to protect them.
- Inspect new developments to ensure trees are

being protected and planted.

- Enhance existing parks so the whole community feels welcome and safer. Parks and open space can also be co-managed with the community.
- Construct wetlands or raingardens in open space to capture and treat stormwater. This can be used for watering open space and reducing pollution of local waterways.

Challenges

- Development and maintenance of new spaces requires a lot of resources.
- It is difficult to protect trees on private land.
- Maintaining cool and green open spaces is more challenging in a changing climate. Existing vegetation may prematurely die, and new plantings need to factor in this challenge.

Overview

Moreland has a rich diversity of native plants and animals living in natural areas. These natural areas provide important habitat for many native animal species, including reptiles, marsupials, bats, frogs, birds and bees. Council's responsibility is to help ensure our natural areas and waterways are managed and improved to provide native wildlife with the food, water and shelter they need to survive.

Since the late 1970s, we have been investing in land restoration and revegetation with our partners. This has resulted in re-establishing much of the natural landscape we have today.

Across Australia, many native species are under threat of extinction from habitat loss, invasive species, drought and bushfires. Moreland is home to some of these. 46% of Australia's endangered wildlife can be found in towns and cities (Ives et al, 2015).

Moreland's natural areas are also historically, socially and culturally significant. They offer opportunities for community to explore, learn, relax and restore.

Key issue 4: Nature

Protecting and enhancing natural areas for wildlife and community benefit

Opportunities

- Protect and manage existing vegetation through revegetation and maintenance.
- Plant more large canopy trees and increase habitat diversity.
- Plant understorey species including native grasses and wildflowers important for small birds and insect pollinators.
- Retain water in the landscape and reduce stormwater pollution to waterways, for example through constructed wetlands, creek naturalisation and other water sensitive initiatives.
- Expand partnerships with Traditional Owners and local environmental groups to enhance natural areas.

Challenges

- Warming and drying climate amplifies existing threats to local natural areas and adaption of our land management practices is required. For example, carefully considering use of Indigenous plant species from warmer and drier regions.
- Establishing and maintaining newly revegetated areas requires adequate ongoing resources.
- Sourcing an effective alternative to glyphosate, an herbicide used to control weeds that has been linked to health concerns.



Key issue 5: Reducing Waste

Supporting the reuse and recycling of materials to avoid sending waste to landfill

Overview

All the products people buy have an environmental impact. This may be due to the raw materials, water, energy and chemicals used to grow, make, transport, use or dispose of them. When an item is sent to landfill all the resources that went into making it are lost. When an item is reused, repaired, repurposed or recycled these resources continue to circulate, reducing the need for further resource extraction. This concept is known as the circular economy.

According to the Ellen Macarthur Foundation (2020) a circular economy is based on 3 principles:

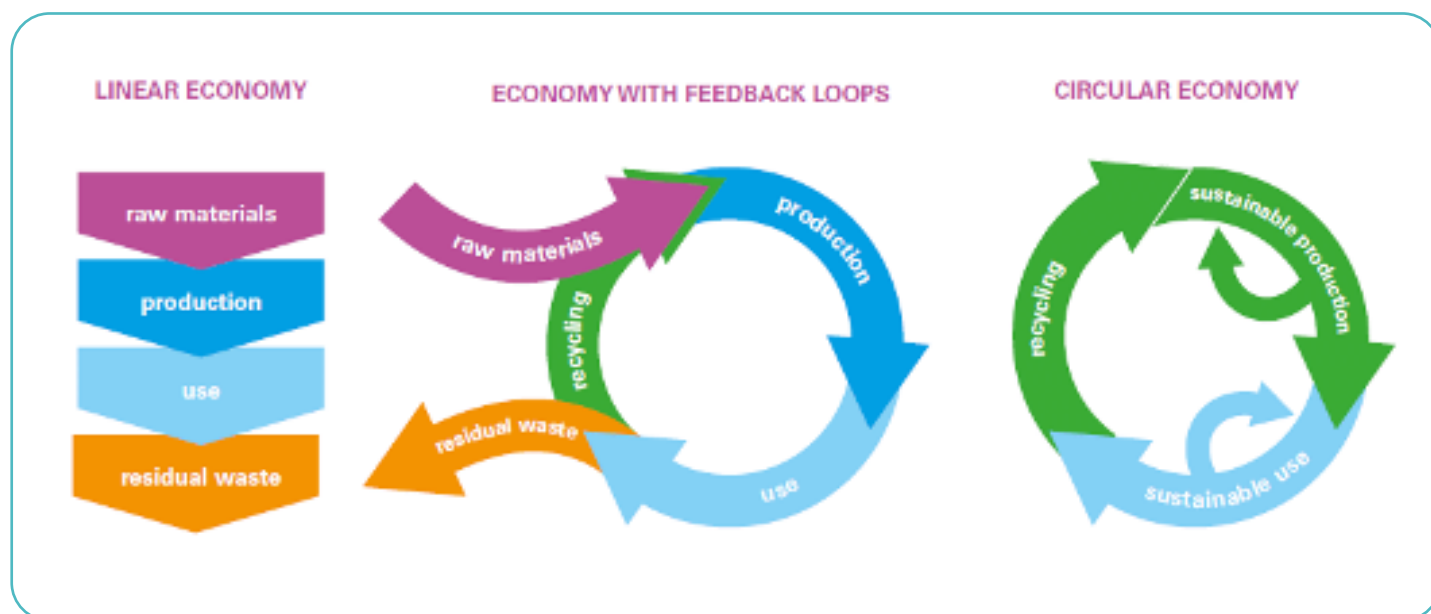
- Designing out waste and pollution
- Keeping products and materials in use
- Regenerating natural systems

The impacts of sending waste to landfill include loss of valuable resources, carbon emissions and potential contamination from leaks. At a local, state and federal level, general agreement exists on the aim to transition from a linear to a more circular economy. For example, over the next few years the state government is significantly increasing the cost of sending waste to landfill.

In Moreland from 2019-2020 we sent nearly 30,000 tonnes of waste to landfill through our kerbside service and collected nearly 28,000 tonnes of recyclables and green organics (MCC,2020d). There are some limitations to how well residents engage in 'waste reduction'. Factors include having too much waste for their bins, lack of awareness, and not using the food and organics bin properly (Colmar Brunton 2020).

There are many benefits from avoiding food waste. Turning it into compost, for example, supports healthier soils, saves money and reduces our emissions.

Key issue 5: Reducing Waste



Opportunities

- Reduce the amount of waste sent to landfill through changing our waste service and community behaviours. For example, we can switch to weekly collection of food and garden organics, and more community education can help ensure things are put in the right bins.
- Support households and businesses to minimise the amount of waste generated. We can also prioritise the use of products made from recycled material (for example, benches and bollards containing soft plastics).
- Support a growing number of community-based 'conscious consumer' initiatives (for example, through neighbourhood share / repair groups) and help build local awareness and skills.

Challenges

- Households have varying needs so a one size fits all approaches may not work.
- Contamination of our existing recycling service is higher than the Melbourne average.
- Our waste service must minimise waste to landfill, be operationally feasible, cost effective, equitable and broadly supported.
- The pandemic may have deterred interest away from waste and recycling.
- Promoting conscious consumer behaviour is challenging when the many benefits aren't always visible or obvious.

Related projects and strategies

Project/Strategy	Description	Links
Zero Carbon Moreland (ZCM) Climate Emergency Action Plan	Sets out targets and programs for Council's work with staff and the community to reduce carbon emissions from energy, transport and waste over the next 5 years.	https://morelandzerocarbon.org.au/about/
Waste and Litter Strategy	The Waste and Litter Strategy 2018 sets the goal of zero waste to landfill by 2030 and outlines a range of actions to minimise waste and increase resource recovery. It identifies key projects such as rolling out the municipal-wide food and garden organics collection service and eliminating single use plastics from Council festivals and events.	https://www.moreland.vic.gov.au/about-us/news-and-publications/policies-and-strategies/
Urban Heat Island Action Plan	Includes a broad cross-section of actions to cool the city, focusing on built up neighbourhoods identified as particularly hot during summer.	As above
Towards Zero Carbon in the Planning Scheme (ESD Policy V2 project)	A collaborative initiative to raise the environmental standards in the planning scheme.	https://www.moreland.vic.gov.au/about-us/projects/planning-design-projects/achieving-zero-carbon-in-the-planning-scheme--esd-policy-v21.0/
Park Close to Home framework	The Park Close to Home framework is about creating and improving access to open space in the areas that need it most. It identifies gap areas in the community where residents are not within walking distance to their closest park.	https://www.moreland.vic.gov.au/about-us/projects/park-playground-and-creek-projects/a-park-close-to-home---bringing-new-parks-and-open-spaces-to-moreland/

Related projects and strategies

Project/Strategy	Description	Links
Urban Forest Strategy	The Urban Forest Strategy headline goal is to double public land tree canopy by 2030. It sets a target of 5,000 trees to be planted per year.	https://www.moreland.vic.gov.au/environment-bins/trees/tree-canopy/
Moreland Nature Plan	Provides strategic directions to enhance biodiversity and celebrate nature in our City. The Plan includes strategies to create more resilient natural landscape and identifies opportunities to support community connection to nature at home, school and in the community.	https://conversations.moreland.vic.gov.au/nature-plan



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- <https://vpa.vic.gov.au/wp-content/uploads/2018/02/Open-Space-Network-Provision-and-Distribution-Reduced-Size.pdf>