Climate change action by local government:

case studies

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Focused areas for action:	rainfall	climate	heatwaves	sea level rise	emissions

City of Greater Geelong, Victoria
Climate Change Adaptation Strategy

An example of adaptation responses that:

- *ensure that risks are addressed by those who are best placed to manage them.*
- *avoiding unintended consequences (maladaptation)*
- *not undermined the ability to adapt to climate change over the long-term*
- *considering trade-offs and understand and recognise the costs of and limits to adaptation.*

Image credit: City of Greater Geelong

City of Greater Geelong's Climate Change Adaptation Strategy outlines their approach to integrate climate change risk. This seeks to embed adaptation work through a centralised climate change risk register, a cross-council working group, risk assessments at a divisional level and a central document outlining impacts specialised to the Geelong area.

This includes a centralised database containing risks, adaptation actions, and triggers where appropriate in line with the International Standard on risk management. This is accessible to all employees and integrated into councils' overall risk management strategy.

Greater Geelong has also developed a toolkit to assist with the range of scenarios and non-linear nature of climate change decision-making. Tools 1 and 2 support the development and refining of an adaptation strategy, by exploring risk context, and developing adaptation actions that remain viable under the widest range of probable climate futures. Tool 3 complements existing decision-making processes by providing a methodology for incorporating climate change issues into the planning and design of initiatives. The toolkit is free for any council to use.

City of Greater Geelong (2011), Climate Change Adaptation Strategy, City of Greater Geelong, Melbourne.
City of Greater Geelong (2019), 'Climate Change Adaptation Toolkit.' accessed 5 Nov 2020, available at: https://www.geelongaustralia.com.au/climatetoolkit/article/item/8cf7e8cfb9bad9d.aspx

Planning and building

Statutory Planning

Strategic Planning

Urban Design

Environmentally Sustainable Design referrals

Building Surveying

City of Greater Geelong, Victoria
Planning scheme flood controls

The City of Greater Geelong implemented updated planning scheme flood controls through a local planning scheme amendment in 2020.

An example of coastal inundation controls via an amendment to the Greater Geelong Planning Scheme.

Image credit: City of Greater Geelong

The amendment ensures that coastal hazard and inundation risk is considered in planning decisions on land subject to current and projected future coastal inundation.

The Planning Scheme Amendment will apply to 1,614 coastal properties on the Bellarine Peninsula and Corio Bay.

City of Greater Geelong (2020) 'Amendment C394 - Land Subject to Inundation Overlay - Bellarine Peninsula and Corio Bay,' accessed 17.12.20, available at: https://www.geelongaustralia.com.au/amendments/item/8d6fe3cb76c04fa.aspx
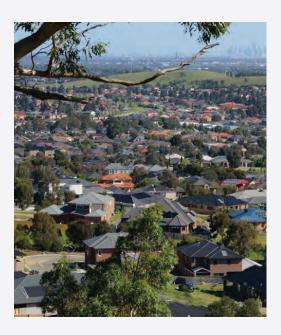
City of Whittlesea, Victoria
Urban Tree Canopy Project

This project collected and analysed data on urban tree canopy cover to support changes to the Whittlesea Planning Scheme, ensuring that more canopy trees are delivered as part of new residential development in certain zones.

An example of adaptation responses that:

- *use a strong evidence base to declining tree canopy cover to amend the planning scheme to ensure this is reversed with future developments*

The urban tree canopy cover project was awarded 'Best Planning Ideas - Small Project' at the Victorian Planning Institute of Australia (PIA) 2019 Awards for Planning Excellence, where it was recognised for being delivered in-house by Council staff and for delivering an innovative, replicable and low-cost approach to determine urban tree canopy coverage at the neighbourhood level.

The project used a remote sensing method to benchmark tree canopy coverage in 2009 and measure the change in tree canopy cover over time using 2017 aerial imagery.

The results of the urban tree canopy coverage project clearly linked the loss of urban tree canopy cover between 2009 and 2017 in the established suburbs of City of Whittlesea, to infill development.

This provided strong evidence to support changes to General Residential Zone Schedules 4 and 5 requiring a canopy tree in front and rear setbacks of medium density development via a planning scheme amendment.
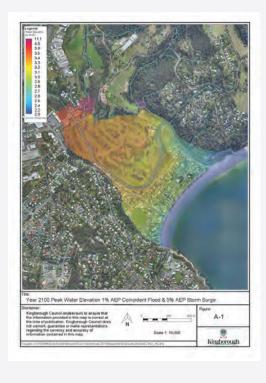
Kingborough Council, Tasmania

Coincident flood modelling at Kingston Beach.

An example of adaptation responses that:

- *are based on the best available evidence in the context of uncertainty*
- *flexible and iterative, allowing for adjustments as circumstances change and new information is made available.*

Image Credit: Kingborough Council (2016), Coincident flood modelling. https://www.kingborough.tas.gov.au/wp-content/uploads/2019/07/Kingston-Beach-Flood-Maps-Series-V1.pdf

In 2012 Kingborough Council identified that parts of the Kingston Beach community may be at risk of localised riverine flooding, which could be exacerbated by instances of extreme rain/storms in the future.

Modelling also revealed that the community was at risk of coastal flooding as a result of sea level rise and storm surge.

The council was concerned about what might happen if these events coincided – if a storm came through causing riverine flooding at the same time as a storm surge, then this could pose a considerable risk to people, property and assets.

In 2016, Kingborough council explored risks to Kingston Beach in more depth and adopted the Queensland Government guidelines to examine these risks in isolation, as well as coincident events.

This revealed that flooding from the river, rather than storm surge, was driving much of the flood risk for the Kingston Beach community.

A proposed flood reduction scheme focuses on channel straightening and opening the Browns River mouth.

Further research is being undertaken on erosion patterns, coincident flooding under surge and high tide conditions; tidal water level and flow; ongoing feasibility in terms of cost and maintenance of opening the river mouth.

Climate Planning (2015), Kingston Beach Integrated Climate Change and Natural Hazards Project, Kingborough Council; Doole, J., 2017: Kingborough Council – Coincident Flood Modelling at Kingston Beach.

Assets and infrastructure

Land

Roads

Buildings

Drains

Footpaths

Bridges

Shire of Baw Baw - Road Upgrades

Extreme rainfall events led to numerous landslips and road closures. Shire of Baw Baw considered both climate change and finances in deciding to upgrade their road surfaces.

An example of integrated decision-making. Integrating the competing long-term, medium-term and short-term environmental, economic, health and other social considerations relating to climate change when planning a response.

Image credit: Baw Baw Shire Council

The Shire of Baw Baw addressed both climate change and financial impacts when upgrading its roads to a more resilient service.

- Extreme rainfall events in 2011 and 2012 led to numerous landslips in the Shire of Baw Baw, resulting in road closures and loss of service to the community.

- Some stretches of road were impacted more than once in the space of a year.

- Council received Natural Disaster Financial Assistance to replace the affected roads. However, the assistance only covers 'replacement to the same standard'. Also, delays in reimbursements left council financially exposed.

- Baw Baw Shire assessed whether replacing assets to a different standard following a flood or storm had the potential to achieve a better financial outcome for Council and a better economic outcome for the community overall, particularly in the context of climate change.

- It found that upgrading the road to a more resilient surface was likely to be a more cost-effective option in the medium and longer terms than paying less and replacing to the same standard.

Marsden Jacob Associates (2015) 'Business Case: Executive Summary,' Alternative approaches to landslip management in the context of climate change: a business case study, Report prepared for Shire of Baw Baw as part of the Financial Risk Adaptation Planning Project, Camberwell.

Glen Eira City Council, Victoria
Making Carnegie Library more resilient

As part of Glen Eira City Council's energy-efficiency upgrade program, they identified an opportunity at Carnegie Library to improve its resilience to extreme weather days by reducing grid-based energy consumption and carbon emissions.

An example of adaptation and mitigation responses that:

- *use design (retrofitting) to support reduced emissions for council facilities,*
- *view council assets as potential refuge for extreme climate events*

Image credit: Glen Eira City Council (n.d.) Making Carnegie Library more resilient

Libraries are community spaces that are creative and safe spaces for everyone in our community. They're also places of respite and refuge during heatwaves.

In 2016, they installed 240 LED lights and a 70 kW solar system. This reduced Council's carbon footprint by 522 tonnes, equivalent to taking 113 cars off the road each year.

Solar allows them to generate clean energy on-site and protects against rising energy costs. In the first four years, they've saved $97,849. This represents a 21 per cent reduction in energy bills.

Carnegie Library is now a climate resilient building that is ready for the future.

How Well Are We Adapting (n.d.) 'Making Carnegie Library more resilient,' Assets and Infrastructure accessed 16.12.20, available at: https://adapt.waga.com.au/AssetsandInfrastructure#

Hobsons Bay, Victoria
Virtual Power Plan

A large-scale Solar Installation Program includes new solar installations on more than 30 buildings and additions to existing solar installations delivering about 1,830 kW of solar generated power.

An example of working beyond developing institutional capacity and actions for council operations, they can also build capacity within the community through supporting local communities to connect, scale up, and develop solutions which work for them.

Hobson Bay council is committed to achieving zero net corporate greenhouse gas emissions by 2020 and zero net community greenhouse emissions by 2030.

Their Large-Scale Solar Installation Program includes new solar installations on more than 30 buildings and additions to existing solar installations delivering about 1,830 kW of solar generated power. The solar energy system is expected to reduce greenhouse gas emissions by over 4000 tonnes a year.

The project will introduce a Virtual Energy Network that enables solar energy from all buildings to be distributed across all Council-owned and leased assets, and in the longer term to consider availability to community groups and the wider community. It can become a true Virtual Power Plant by adding batteries at any stage in the future, when battery technology becomes more affordable.

The project will generate substantial savings for the Council by reducing energy costs.

This project sets up the possibility for the community to participate in a Hobsons Bay community solar network. Further work will be undertaken to design a community access model for such a network, and this will be undertaken in close collaboration with the community.

Hobsons Bay City Council (2020) 'Virtual power,' Sustainability, accessed 16.12.20, available at: https://www.hobsonsbay.vic.gov.au/Community/Sustainability/Virtual-Power

Council Initiatives
City of Melbourne permeable bluestone

City of Melbourne is trialling permeable bluestone to pave the city.

An example of adaptation responses that:

- *retrofits existing assets to improve environmental outcomes.*

Since the early 1980s, the City of Melbourne has been upgrading the footpaths in the central city from asphalt to sawn bluestone pavers. Bluestone paving is a defining element of Melbourne's character. It is a durable and long-lasting surface that improves footpath accessibility, especially for disabled community members.

However, standard bluestone paving is impermeable or sealed – it does not allow water to pass through. Rainwater collected on the paving flows into the drains and out to the Yarra River. It gathers litter and pollution along the way.

This new approach allows rainwater to soak down between the pavers. It also improves soil moisture and waters the adjacent trees, so improving tree health as well.

Since the successful trial in Collins Street, the council have installed permeable bluestone paving in several locations across the central city.

City of Melbourne & State Government of Victoria (n.d.) 'Permeable bluestone pavement,' accessed 16.12.20, available at: http://urbanwater.melbourne.vic.gov.au/projects/permeability-infiltration/permeable-bluestone-pavement/

Local residents

Extreme weather events

Financial and livelihood

Health

Natural environment

+

Health & community services

Public health

Environmental health

Maternal and child health

Immunisation programs

Family and youth services

Aged and disability services

Moonee Valley City Council, Victoria
Heat Wave Monitoring Project

Moonee Valley City Council implemented a Heat Wave Monitoring Project to coordinate a project to improve quality of life and reduction in the associated negative health and wellbeing impacts of Flemington Housing Estate residents.

An example of adaptation responses that aim to be:

- *be equitable and fair*
- *consider both the present and the short, medium and long-term future*
- *adhere to principles of intra- and intergenerational equity.*

Moonee Valley residents were experiencing distress during hot days, especially during heat waves due to the building design of the housing estate.

Evidence for the project was captured through in-home recording of temperature during summer months, with a focus on heat wave periods.

The data showed that the heat made it difficult for many residents to sleep, that running an air conditioner did not necessarily improve sleep in many situations and that hotter weather prevented residents from cooking meals at home.

There were several reports of residents finding the conditions too hot to stay in their homes.

This data has been used for advocacy for improved tenant rights and infrastructure and the development of a Heat Wave Action Plan.

The project also employed a project officer from the local housing estate community to help promote the project and awareness of the issue within the housing estate, and to establish relationships and resilience within the community.

This community employment model encouraged greater resident ownership of the project and provided training and skills development back to local residents.

Source: How Well Are We Adapting (n.d.) 'Moonee Valley City Council Heatwave Monitoring Project,' Strengthening community. Available at: https://adapt.waga.com.au/StrengtheningCommunity#

Mornington Peninsula Coastal, Victoria.
Villages and Neighbourhoods Strategy

An example of adaptation responses that:

- *actively involve the community in setting policy directions and priorities*
- *value and respect the knowledge and perspectives of Traditional Owner groups and Aboriginal Victorians.*

Image credit: Mornington Peninsula Shire Council

The Western Port Coastal Villages & Surrounding Settlements Strategy was adopted by Mornington Peninsula Shire in 2019.

The Strategy aims to address potential climate change impacts on the Western Port Bay coastline – specifically inundation and erosion – and uses the findings of the Western Port Local Coastal Hazard Assessment.

The Strategy has undergone extensive engagement and consultation to date with the community to inform:

- An overall vision and set of design objectives for each township;
- A framework plan for each township;
- Defined character areas and associated design guidelines for commercial, industrial and foreshore land in each township, with residential guidelines adapted from Council's adopted Neighbourhood Character Study & Guidelines;
- Mapping of potential coastal inundation and erosion hazards for each township; and
- Recommended actions to address coastal hazards through the planning system and other initiatives in partnership with the State Government and allied government agencies.

Mornington Peninsula Shire will continue to engage and consult with the community through the statutory implementation of the Strategy into the Mornington Peninsula Planning Scheme, via a proposed Planning Scheme Amendment.

How Well Are We Adapting (n.d.) 'Mornington Peninsula Coastal Villages and Neighbourhoods Strategy,' Planning, building and regulation, accessed 16.12.20, available at: https://adapt.waga.com.au/PlanningBuildingandRegulation#

Bayside City Council, Victoria
Golden Opportunities Project (Aged care partnerships)

An example of adaptation and mitigation responses that:

- *support local (and potentially vulnerable) residents to understand their energy use, make reductions, and improve their comfort levels.*

Bayside City Council's Golden Opportunities project engaged a range of aged care facilities in Bayside from individual small business to regional business. Council provided training and workshops in energy efficiency for operations managers of aged cared facilities across the city of Bayside.

Following these workshops, Regis Aged Care completed energy audits at its Brighton and Sandringham aged care homes.

These audits identified opportunities to reduce energy use and save money while improving the comfort for elderly residents.

They implemented initiatives that will reduce their environmental impact by approximately 213 tonnes of CO2-e and energy consumption by 184,000kWh each year.

The energy saved is equivalent to the annual use of 32 average Bayside homes.

Image credit: Bayside City Council (n.d.) Golden Opportunities

Bayside City Council (2019) 'Golden Opportunities save energy,' News, accessed 16/12/20, available at: https://www.bayside.vic.gov.au/news/golden-opportunities-save-energy

Indigo Shire Council, Victoria
Totally Renewable Yackandandah

A project to achieve 100% renewable power for Yackandandah by 2022.

An example of mitigation responses that:

- *have been built from the ground up and a partnership that has sustained a long term objective for renewable energy work towards.*

Image credit: Totally Renewable Yackandandah, website caption: TRY member Denis Ginnivan with the TRY mascot, the Golden Yak

Indigo Shire Council organised a forum on community energy in 2014. From that forum, a community group formed with the goal of achieving 100% renewable power for Yackandandah, and energy sovereignty for the town by 2022 – Totally Renewable Yackandandah.

They have developed community energy projects, worked closely with the regional electricity distributor to implement microgrids (residents are now connected to the towns third microgrid) and have launched an electricity retailer to facilitate generating and selling energy locally.2

They also have a Perpetual Energy Fund, which raises funds from donations that are reinvested in community projects around the town to increase energy efficiency, generate renewable electricity and for storage.

Loans are repaid from the savings made on electricity bills and the Fund is perpetuated for community sustainability projects.

Totally Renewable Yackandandah n.d. '100% renewable by 2022,' accessed 5 Nov 2020, available at: https://totallyrenewableyack.org.au/about/100-renewable-by-2022/
Totally Renewable Yackandandah n.d. 'How to get to 100%,' accessed 5 Nov 2020, available at: https://totallyrenewableyack.org.au/
Totally Renewable Yackandandah n.d. 'Perpetual Energy Fund,' accessed 5 Nov 2020, available at: https://totallyrenewableyack.org.au/resources/perpetual-energy-fund/
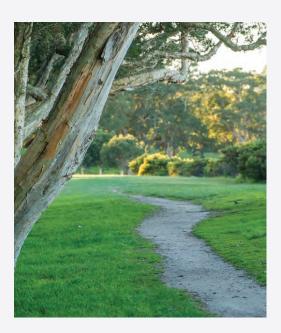
City of Greater Bendigo, Victoria
Shadeways Project

An example of adaptation responses that:

- *link actions that promote walking and cycling within a safe and comfortable temperature information for community to access*

Shadeways project at the City of Greater Bendigo, which provides a platform that integrates maps of land surface temperatures to inform users of urban hot spots.

This enable pedestrians and cyclists to understand how their route could expose them to extreme temperatures.

The platform interfaces well known mapping systems such as Google Maps and Apple Maps, allowing users to take advantage of hotspot information using apps they are familiar with. The platform also enables the council to communicate the benefits of greening and to enable walkers and cyclist to move in comfort and safety.

Image Credit: Pixabay https://pixabay.com/photos/park-trees-grass-path-trail-341574/

Shadeways 2020, Overview, accessed 5 Nov 2020, available at: https://www.shadeways.net/about

Emergency management

Coordination between agencies

Emergency relief centres

Plant and equipment

Traffic management

Other support such as the vulnerable persons register

The Shire of Nillumbik, Victoria
Community Bank Stadium Refuge

The Shire of Nillumbik's Hybrid Solar and Battery off-grid stadium and relief centre is a facility renovated to operate as an emergency shelter.

An example of adaptation and mitigation responses that:

- *have invested in a critical asset that can support their vulnerable community members during extreme weather events*

The Stadium plays a critical role as an Emergency Relief Centre for their community who are vulnerable to power outages during heatwaves, flooding and bushfires.

They have installed a solar panel and battery system that can provide off-grid power for up to eight hours during emergencies. In normal times, the system is helping to cut emissions and costs by reducing grid-sourced electricity by 80 per cent.

The system also includes an electric vehicle charging station that anyone can use to charge their electric car for free.

Image credit: Nillumbik Shire Council (2018), Community Bank Stadium. Accessed 11.12.20, available at https://www.nillumbik.vic.gov.au/News/Diamond-Creek-Sporting-Stadium-becomes-Centre-for-Relief

Nillumbik Shire (2018), 'Diamond Creek Sporting Stadium becomes Centre for Relief,' accessed 5 Nov 2020, available at: https://www.nillumbik.vic.gov.au/News/Diamond-Creek-Sporting-Stadium-becomes-Centre-for-Relief

Local businesses & industry

Extreme weather events

Financial

Workforce

Job security

Duty of care, health & safety & liability

City of Port Phillip, Victoria
Economic recovery and supporting business

The City of Port Phillip coordinate a Sustainable Business Network with 170 members.

- *build on existing networks to raise awareness, support behaviour change and partnerships to respond to climate change and covid.*
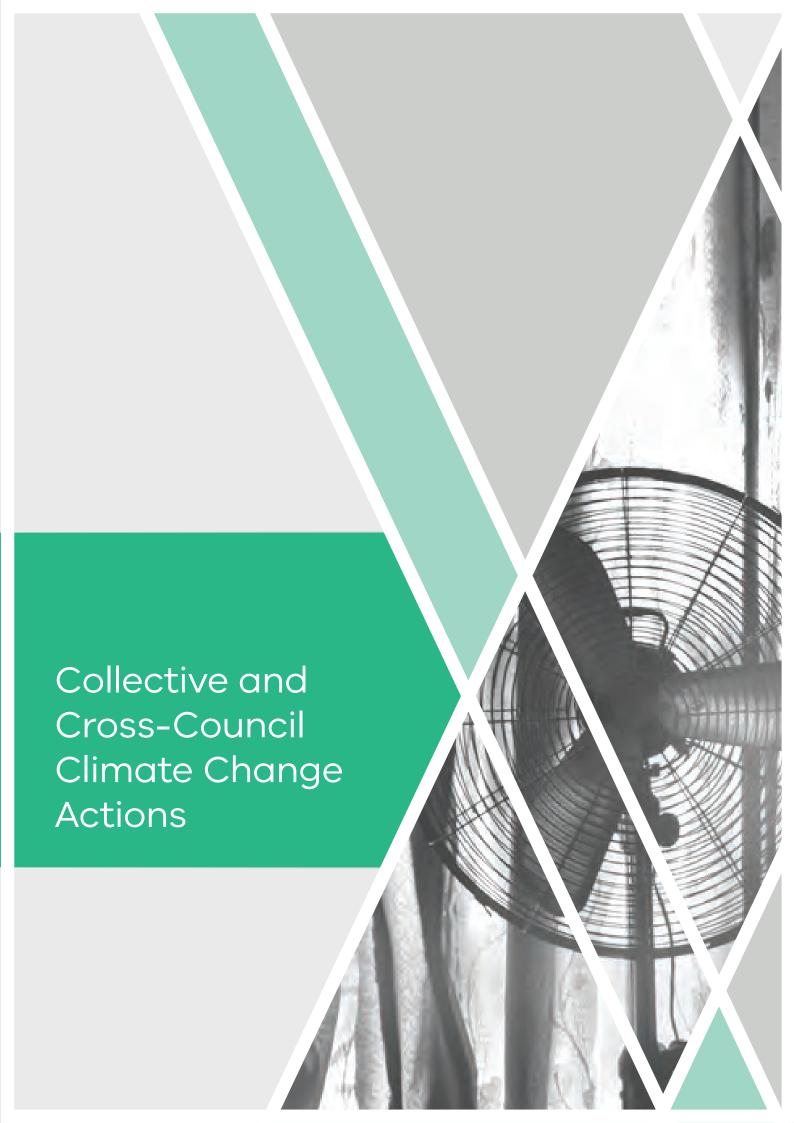

Councils can provide support, advice and practical projects for their business communities to improve sustainability outcomes. The focus is to link emissions reduction advice to cost saving and economic benefits.

There are many opportunities to align emissions reduction with good business decision making rather than positioning them as competing priorities.

Often described as a "Green Recovery" this thinking will support the economic development of your municipality as we recover from the impacts of the COVID-19 pandemic.

At the City of Port Phillip, the existing sustainable business network actually grew during the pandemic lockdowns as local businesses sought opportunities to connect and collaborate with council and with each other. They pivoted from in-person breakfast meetings to webinars and a Facebook group.

Lisa Paton (City of Port Phillip), anecdotal, email communication, (Dec 2020).

Collective and Cross-Council Climate Change Actions

Council initiatives - Climate Emergency Declarations

Local governments were among the first to declare a climate emergency – starting with the City of Darebin in 2016. This has grown to nearly 100 councils across the country and more than 30 in Victoria. Worldwide, this movement is representing over eight million people and as well as over 1,800 municipalities.

NAGA, the Greenhouse Alliance in the north of Melbourne, worked with City of Darebin to set up a mechanism for local government across Australia to work together on the climate emergency.

Climate Emergency Australia (CEA) was set up for a 12-month pilot period from June 2020. Hosted by the City of Melbourne, run by NAGA and funded by 13 founding councils. In its first year, Climate Emergency Australia is focusing on developing a framework for what declaring a climate emergency means, advocating for change, and sharing knowledge amongst councils.

Climate Emergency Declaration (2020), Climate emergency declarations in 1,856 jurisdictions and local governments cover 820 million citizens, accessed 14.12.20, available at: https://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens/ NAGA 2020, 'Climate Emergency Australia,' accessed 4 Nov 2020, available at: https://www.naga.org.au/climate-emergency-australia.html

Council initiatives - Local government power purchase agreement

Local government is also part of this transition.

- The largest local government buying group for renewable energy of 47 councils in Victoria will be procuring 238 GW of renewable electricity for their own operations from 2021. This is the equivalent to powering nearly 45,000 homes and accounts for over half of all the electricity used by all Victorian councils.

- Victorian local government tripled the amount of solar on their own rooftops between 2017 and 2020.

Council initiatives - How Well Are We Adapting Project

'How Well Are We Adapting' is a collaborative project designed with councils from across Victoria to monitor, evaluate and report on local government risks, impacts and responses relevant for climate change adaptation.

Working with community wellbeing and service delivery teams within councils, several indicators were designed to understand how maternal and child health and home and community care services are impacted by hazards such as heatwaves.

Through collecting data against these indicators, councils are better able to understand how climate change is currently impacting services and identify potential risks. Baseline data also allows them to better understand the efficacy of any interventions they make.

Source: How Well Are We Adapting (2020), Various case studies available via the public interface, accessed 5 Nov 2020, available at: https://adapt.waga.com.au/

Council initiatives - Fleets Vehicles

Councils are looking at reducing their own greenhouse gas emissions from non-building emissions.

Often the next highest source of emissions is from their own fleet. Measures councils are taking include:

- Purchasing electric waste trucks, like the cities of Casey and Yarra.

- Developing fleet policies that prioritise electric vehicles when purchases of cars and light fleet are being made, like City of Moreland.

- Converting vehicles to electric, like Canterbury Bankstown Council in NSW. They also provide their electric pool vehicles to members of the public to use at weekends as part of a car share scheme. This maximised usage of the vehicles and normalised electric vehicles in the community.

City of Casey (2019) 'Electric waste trucks arrive in Casey,' News, accessed 16.12.20, available at: https://www.casey.vic.gov.au/news/electric-waste-trucks-arrive-casey ; Yarra City Council (2019) Yarra
City of Yarra (2019) 'Yarra Home to Australian First Electric Tipper Truck,' News, accessed 17.12.20, available at: https://www.yarracity.vic.gov.au/news/2019/09/12/tipper-truck
Moreland City Council (n.d.) 'Electric vehicles, accessed 17.12.20, available at: https://www.moreland.vic.gov.au/parking-roads/transport/electric-vehicles/
Victorian fleet coordinators, presentation, Oral communication, (Sep 2020).

Council Initiatives - Lighting in the West Project

Starting in 2014, the original Lighting the West project was a partnership between Wyndham City, Moonee Valley, Maribyrnong and Hobsons Bay to bring sustainable street lighting to the west.

As part of the project, over 26,000 80W mercury vapour street lights were changed to energy efficient technology across the municipalities. Across the four Councils, this resulted in a reduction of 129,000 tonnes equivalent of carbon dioxide emissions and an estimated $24 million saving over the 20-year lifespan of the assets.

The enhanced quality and reliability of street lighting has a number of social benefits including reducing light spill and improved community safety.

Wyndham City Council has continued Lighting the West and has committed to upgrading all inefficient street lights on council roads by 2021.

By replacing these lights, more than 2600 tonnes of greenhouse gases will be avoided per year. Council will save $13 million over the 20-year lifespan of the new globes.

Lighting the West (n.d.) 'What is Lighting the West?' About. Available at: https://www.lightingthewest.com.au/about/what_is_lighting_the_west

Assets: Sports Fields

Council Initiatives - Sport facilities upgrade

Kingston City Council has growing demand for its sports facilities but recognises the increasingly dryer conditions and extended periods of hot weather negatively impact its playing fields.

It undertook a number of measures to ensure better quality playing surfaces, while reducing use of potable water and improving stormwater flows.

The Edithvale Recreation Reserve stormwater treatment and reuse system was completed in January 2018. The fields at Edithvale Reserve were poor quality and required excessive irrigation to stay alive through summer. This project will save ratepayers $25k annually, will pay for itself in under 3 years, and the playing surface will be improved. It includes a bio-retention system, and five tanks which can store up to 1.8 million litres.

The system is currently being expanded to irrigate the Edithvale Common. The captured stormwater is also used for street tree watering and flushing the toilets at the Edithvale Family and Children's Centre. Smaller scale stormwater treatment systems are irrigating sports grounds across the municipality.

To ensure efficient and effective use of water, Kingston installed a central control irrigation system. This ensures the correct volume of water is applied when its needed. The system includes flow monitoring capability so that leaks can be quickly detected. Weekly inspections from grounds crew determine watering requirements.

They converted all sports fields to warm season turf, in other words, turf that is more drought tolerant.

Hobsons Bay City Council, Maribyrnong City Council, Wyndham City Council, Brimbank City Council, Melton City Council and Glen Eira City Council are amongst council who have also carried out programs to upgrade their active sports fields to warm season grasses which will be better suited to a warmer climate and require reduced watering.

How Well Are We Adapting (n.d.) 'Climate proofing our sports fields,' Our local parks and sports fields, accessed 16.12.20, available at: https://adapt.waga.com.au/OurLocalParks#
How Well Are We Adapting (n.d.) 'Warm season grasses for sports fields,' Our local parks and sports fields, accessed 16.12.20, available at: https://adapt.waga.com.au/OurLocalParks#

Council Initiatives - Water Sensitive Urban Design (WSUD)

In a changing climate, Victoria's overall rainfall is projected to decrease, though there will be more instances of extreme precipitation, which poses a flood risk.

The natural water cycle is also impacted by buildings and sealed surfaces. As a result, natural water flows are altered and stormwater is created.

This stormwater carries pollution into our waterways and can cause local flooding during heavy rainfall events.

Water Sensitive Urban Design minimises the hydrological impact of urban development on the surrounding environment and waterways and considers the urban water cycle in a more holistic way.

It involves treating and reducing stormwater flows, increasing soil moisture, urban greening and providing an alternative waters source.

Water Sensitive Urban Design can take various forms including infrastructure upgrades, streetscape layout changes, piping reconfigurations, storage tanks, and the use of different paving.

Several councils including Moonee Valley, Campaspe, Yarra and Stonnington have this design policy as part of their planning scheme.

Municipal Association of Victoria (2018), 'What we do,' CASBE, accessed 16.12.20, available at: https://www.casbe.org.au/what-we-do/state-local-planning-policy/

Council Initiatives - Sustainable Subdivisions Framework

16 partner councils, the Victorian Planning Authority and the Council Alliance for a Sustainable Built Environment (CASBE) partnered to develop a Sustainable Subdivisions Framework.

This Framework complements the existing Sustainable Design Assessment in the Planning Process Framework and caters for the needs of growth area and regional communities where the principal form of development is residential subdivision.

It is being trialled across Victoria from 2020 to 2022 by a number of councils, initially on residential subdivisions but is also able to be applied to commercial and industrial subdivisions.

Using this framework, sustainable subdivisions are carefully planned to achieve improved quality of life, protect and use resources efficiently and improve the health of the environment and people. Crucially, sustainability is embedded from the beginning of the subdivision process.

Councils will assess subdivision applications against the Framework, which covers:

- Site Layout and Liveability
- Streets and Public Realm
- Energy
- Ecology
- Integrated Water Management (IWM)
- Urban Heat
- Circular Economy (Materials and Waste)

CASBE (2020), 'Sustainable Subdivisions,' accessed 5 Nov 2020, available at: https://www.casbe.org.au/what-we-do/sustainable-subdivisions/

Council Initiatives - Central Victorian Greenhouse Alliance: Cool It project

The Cool It project across Central Victoria helped inform better decision making for landscape-based cooling solutions.

It provided a proof of concept for a simplified methodology that uses existing, publicly-available data to determine areas where social vulnerability and heat exposure overlap. This can be replicated by other councils without the need to purchase expensive thermal imagery.

The mapping now enables councils to instantly prioritise areas for cooling interventions and inform:

- tree planting programs (in both streets and parks)
- irrigation programs of open space
- where to position "shady walkways and cycle ways"
- where to prioritise Water Sensitive Urban Design for cooling
- capital works, strategic planning and planning

Stage 2 of Cool It used the outcomes identified in stage 1 to carry out tree planting, develop a climate resilient tree asset planting list for councils to use across the region in streetscapes, parks and gardens, and expanded heat vulnerability mapping to three more councils in the region.1

Shires involved: Ararat Rural City; Buloke Shire Council; Central Goldfields Shire Council; Gannawarra Shire Council; Hepburn Shire Council; Macedon Ranges Shire Council; Mount Alexander Shire Council; Pyrenees Shire

CVGA n.d., 'Cool It Stage 2.' Accessed: 26 Oct 20, Available at: http://www.cvga.org.au/cool-it-stage-2.html

Maintenance and operations

Council Initiatives - Local Government Power Purchase Agreement

The Local Government power purchase agreement is the largest ever emissions reduction project undertaken by local government in Australia.

The landmark initiative will enable 47 Victorian councils to switch to their operations to renewable electricity from mid 2021.

The buyers' group of councils involved in the project aggregates over half of the entire Victorian council's electricity load – equivalent to powering 44,500 homes with renewable energy or taking over 82,000 cars off the road each year.

Councils participating in this project recognise the benefits of renewable energy for local economies and job creation, environmental purposes, and reducing costs.

The project was initiated and facilitated by the Victorian Greenhouse Alliances and is now being led by Darebin City Council who oversaw procurement activities relating to the tender process.

EAGA n.d. 'Local Government PPA,' Accessed 5 Nov 2020, Available at: https://eaga.com.au/projects/local-government-ppa/

Energy

Council Initiatives - The Local Government Energy Saver Program

The Local Government Energy Saver program helped resource-constrained local government authorities across regional Victoria with a grant offering for energy audits and upgrades in council buildings, along with capacity building resources for all Victorian councils.

The program helped councils to understand, prioritise and implement energy efficiency and renewable energy upgrades on existing buildings and facilities.

Webinars and resources continue are available from Sustainability Victoria.1 This video provides an overview of work it enabled.

Sustainability Victoria (2020) 'Local Government Energy Saver Program,' accessed 16.12.20, available at: https://www.sustainability.vic.gov.au/Grants-and-funding/Local-Government-energy-saver-program

Energy

Council Initiatives - Solar Savers

Solar Savers was initiated in the City of Darebin in 2014 and pioneered the use of council rates as an underpinning finance mechanism to support low-income households access solar.

In 2016, the Greenhouse Alliances secured a State Government Grant and extended Solar Saver across 22 councils. The program delivered over 434 solar systems, saving households an average of $260 per year in reduced electricity costs.

Independent evaluation demonstrated:

- solar provides low-cost energy throughout the day meaning that householders could cool their homes during heatwaves without fear of 'price shock'.

- councils can facilitate private-sector investment within a community segment traditionally viewed as high risk to investors by establishing partnership finance models with the banking sector

- a shared services approach to project implementation enabled access to dedicated capability and reduced resource requirements and risks to councils.

EAGA (n.d.) 'Solar Savers.' Projects, accessed 16.12.20, available at: https://eaga.com.au/projects/solar-savers/

Energy

Council Initiatives - Melbourne Renewable Energy Project

The first Melbourne renewable energy project (otherwise known as MREP 1) established a new wind farm to enable many local councils in Melbourne and cultural institutions to become powered by renewable energy.

The second purchasing group was brought together by the City of Melbourne and consists of seven large energy users: RMIT University, Deakin University, CBUS Property, ISPT, Fulton Hogan, Citywide Asphalt, and Mondelez International.

Over the 10-year contract, the renewable electricity will be used to power 14 shopping centres, nine office buildings, seven educational campuses, and four manufacturing facilities across greater Melbourne.

City of Melbourne (2020) Melbourne Renewable Energy Project: A new generation of energy, accessed 16.12.20, available at: https://www.melbourne.vic.gov.au/business/sustainable-business/mrep/Pages/melbourne-renewable-energy-project.aspx

Council Initiatives - The One Million Homes Alliance

The Alliance brings together local governments and Greenhouse Alliances, along with community, business and environment groups, to advocate for efficient and healthy housing, and renewable energy.

After many years of behind-the scenes work, the One Million Homes Alliance delivered a joint submission to the consultation on the Residential Tenancies Amendment Act 2018, calling for the Victorian Government to set strong minimum energy performance standards for rental homes, on the basis that 'all rental homes should be safe, healthy and affordable to run.'

The Act was revised to allow such standards to be brought in through regulation, and the Victorian Government announced in 2020 that it will introduce minimum efficiency standards for rental properties. These standards are expected to benefit 320,000 renters who currently live in poor-quality housing.

Environment Victoria (2020) 'Ensuring all rental homes are safe and healthy,' News, accessed 16.12.20, available at: https://environmentvictoria.org.au/2020/02/05/ensuring-all-rental-homes-are-safe-and-healthy/
Victorian Government (2020) 'HELPING VICTORIANS PAY THEIR POWER BILLS,' media release, accessed 16.12.20, available at: https://www.premier.vic.gov.au/helping-victorians-pay-their-power-bills

Council Initiatives - Healthy Homes project, Sustainability Victoria

An example is the Healthy Homes project, run by Sustainability Victoria in partnership with Victorian councils. People with complex health needs and low incomes in Melbourne's western suburbs and the Goulburn Valley were provided with home energy efficiency upgrades. One avenue of recruitment was through local government – particularly through home care support services.

The project aims to help residents adapt to climate change by finding it easier to cool their homes (so helping those more vulnerable to health issues in heatwaves) and reduce electricity bills so be able to afford to heat their homes in winter.

Sustainability Victoria (2020), Victorian Healthy Homes Program, accessed 5 Nov 20, available at: https://www.sustainability.vic.gov.au/Grants-and-funding/Victorian-Healthy-Homes-Program

Council Initiatives - Supply Chain Sustainability School

The provision of free resources for council to increase the sustainability of school supply chains.

The City of Port Phillip, the City of Whittlesea and the City of Wyndham worked in collaboration with the Supply Chain Sustainability School and ECOBuy to develop free learning resources for councils to increase the sustainability of their supply chain.

Net Balance Foundation (n.d.) 'Local Government Sustainable Supply Initiative,' Partner Landing Pages, accessed 18.12.20, available at: https://www.supplychainschool.org.au/learn/partner-landing-pages/vcss/

Networks, Alliances and Partnerships

Council Initiatives - Networks, Alliances and Partnerships

Collaboration is a way for councils to scale their own action and for low-resourced councils to have an impact.

Networks exist on the regional scale – here in Victoria we have the Victorian Greenhouse Alliances, which cover many councils across the state. There is also the national Cities Power Partnership network. Global movements of local elected representatives are also taking ambitious climate action, and making connections, such as ICLEI.[1] Subject-specific partnerships also help take action, like the council alliance for a sustainable built environment (CASBE).

Networks allow councils to share knowledge and learnings and build strong advocacy platforms.

The Victorian Greenhouse Alliances are networks of councils that work together on projects and strategies that respond to regional challenges in innovative ways, advocacy to raise the voices of local government on climate change, and knowledge sharing amongst councils. Most councils in Victoria are a member of a Greenhouse Alliance.[2]

The 2020 Parliamentary Inquiry into tackling climate change in Victorian communities report identified Greenhouse Alliances as leading examples of collaboration for climate change action through the establishment of consensus between the individuals who represent member municipalities. They recommended that the Victorian Government work to strengthen the Greenhouse Alliances and provide assistance to enable local governments to fully participate as members of their respective Alliance, and that the Government should also work to extend coverage of the Greenhouse Alliances to all Victorian local governments.[3]

The Council Alliance for a Sustainable Built Environment (CASBE) is an association of Victorian councils. It provides a forum for the exchange of information, and ideas on innovation and best practice in Environmentally Sustainable Development and focuses on applying sustainable principles to the built environment through the planning system.[4]

The Cities Power Partnership connects councils across the country to take action on climate change, providing tools for connecting and support in communicating actions.[5]

1. ICLEI Oceania (n.d.) 'Home,' accessed 16.12.20, available at: https://www.icleioceania.org/
2. Victorian Greenhouse Alliances, N.D., 'Home' accessed 14.12.20, available at: http://www.victoriangreenhousealliances.org/
3. Parliament of Victoria Legislative Assembly Environment and Planning Committee (2020), Inquiry into tackling climate change in Victorian communities. Final Report. Victorian Government Printer
4. Municipal Association of Victoria (2018), 'What we do,' CASBE, accessed 16.12.20, available at: https://www.casbe.org.au/what-we-do/state-local-planning-policy/
5. Climate Council (2020) 'Home' Cities Power Partnership, accessed 17/12/20, available at: https://citiespowerpartnership.org.au/