

Climate Ready Whittlesea

Climate change adaptation plan

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1. Introduction

Australia is already observing the impacts of climate change. Increased average temperatures and changing rainfall patterns have contributed to the severity and frequency of natural disasters, coral bleaching on the Great Barrier Reef and Victoria's driest June on record (2017).

Lowering our emissions globally is important as it will slow and limit the change, however we are 'locked in' to the next few decades of changes. The continuation of some level of climate change is certain and planning for this has become a reality.

1.1. Purpose of this plan

This plan has been developed to ensure that the City of Whittlesea is undertaking the necessary actions to ensure that our organisation is adapting to the ongoing changes in our climate. It is intended as an organisational document, focussed on making sure that our services and assets are taking into consideration the latest science so that we can build a vibrant and resilient city.

1.2. What is climate change adaptation?

Adaptation is a policy response to climate science with the principle aim to minimise the risks of projected changes and current vulnerabilities. The Federal government describes adaptation as "helping individuals, communities, organisations and natural systems deal with the consequences of climate change that emissions reduction cannot help us avoid." (CoA, 2015).

Emissions reduction, also called mitigation, is an important part of addressing climate change. Mitigation is the deliberate attempt to reduce greenhouse gases through reducing the sources of emissions or increasing carbon sinks (IPCC, 2001a). In essence, mitigation strives to reduce the overall risk of changes occurring where adaptation seeks to reduce the risks of changes we are already seeing and are locked-in for the near future.

1.3. The role of local government

Global issues that create local impacts provide a challenge for government in deciding where responsibility lies. In adapting to climate change it has been well

recognised internationally, nationally and by the state that local government is at the frontline. The consequences of climate change are felt most keenly at the local level and so Councils are faced with understanding and managing the risks to services and assets; developing and delivering locally appropriate responses; and providing good governance, representing the needs and values of communities and communicating these to state and federal governments. The *Victoria's Climate Change Adaptation Plan 2017-2020* defines the Role of Local Governments as follows:

- Provide leadership and good governance, represent the needs and values of local communities, and foster community cohesion.
- Manage climate change risks to Council community services and assets, with support from the State Government.
- Identify the needs and priorities of the municipality and communicate these to State Government where needed.
- Develop and deliver locally-appropriate adaptation responses.
- Build the resilience of local assets and services.
- Plan for emergency management at the municipal level, provide relief and recovery services, and support emergency response operations.
- Help the State Government understand localised impacts and responses.
- Work with the community to help people understand and get involved in climate change adaptation.
- Help connect the State Government with the community.

1.4. Policy context

International and National efforts

The 2015 Paris Climate Accord paves the way for international action on climate change. It sets a limit on global warming of 2°C and creates a priority for adapting to climate change impacts and fostering resilience. As part of this agreement Australia has set emissions reductions targets and developed a national adaptation and resilience strategy.

Victorian Adaptation Plan

In February 2017, the Victorian Government released *Victoria's Climate Change Adaptation Plan 2017-2020*. This is the blueprint for action to help Victoria meet the challenges and act on the opportunities of climate change.

The Adaptation Plan lays out the priorities for the next four years for the Victorian Government to better understand and manage current impacts and to prepare for the long-term risks of climate change.

City of Whittlesea

The strategic context for adaptation planning within the City of Whittlesea comes from the *Shaping Our Future Whittlesea 2030 Strategic Community Plan* which states Living Sustainably as a Future Direction. This is further defined as a strategic objective in the *Council Plan 2017-2022*:

“We reduce greenhouse gas emissions and help our community to adapt to the effects of climate change.”

These two objectives are reflected in the ***Environmental Sustainability Strategy 2012-2022 (ESS)***. The ESS is Council’s overarching environmental strategy and considers Climate Change a priority area for action. To achieve the Strategic Objective of adapting to the effects of climate change it provides the following direction:

“C4: Council will assess the impacts of climate change within the municipality and adopt appropriate adaptation strategies to reduce the associated risks

C4.2 – Develop and implement a climate change adaptation plan encompassing all Council planning and development, infrastructure provision, and community services to appropriately prepare and adjust to the impacts of climate change”

The first stage of this was delivered through the *Integrated Regional Vulnerability Assessment (IRVA)* developed in 2015 by the Northern Alliance for Greenhouse Action (NAGA). This assessment looked at the risks and statistical data of vulnerabilities across the NAGA region which includes nine northern metropolitan Councils including the City of Whittlesea. The extreme and high level risks are detailed in the [*Climate Change Impacts, Risks and Vulnerability Background Report \(2016\)*](#).

2. Climate change

2.1. Impact on the City of Whittlesea

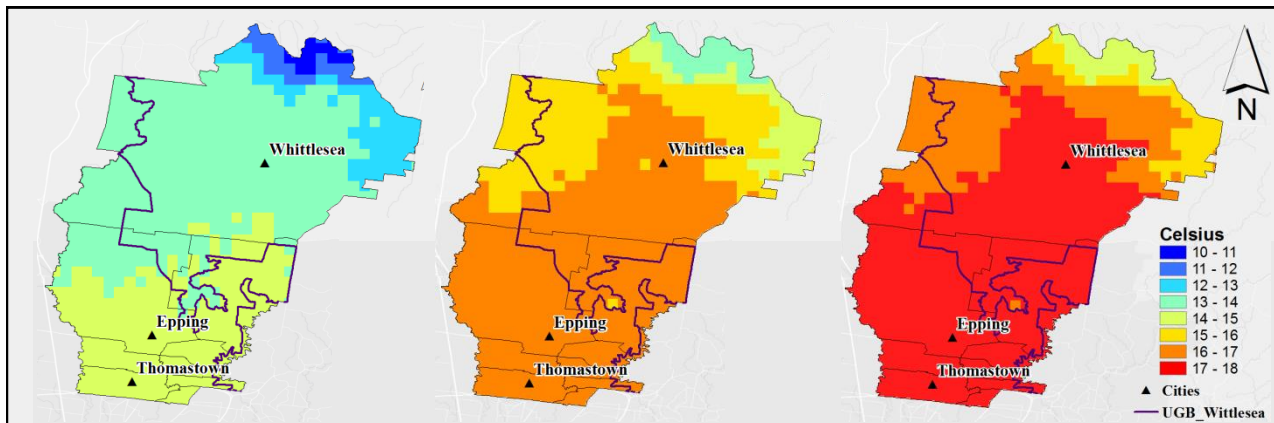


Figure 1: The average annual temperature 1969-1990 (left), 2050 (middle), and 2070 (right)



Annual temperatures will rise between 2 and 3 degrees by 2050. There will be more days of extreme heat and more heatwaves



Droughts are likely to get worse. The El Nino/La Nina cycle will intensify meaning longer, harsher droughts



The fire season will be longer and bush/grassfires will be more intense and frequent



Rainfall patterns will shift. Winter, spring and autumn will be drier and summer will be wetter



Localised flooding will increase with more rain predicted to fall in individual events



Storm events will increase in frequency and intensity

For more detail on local effects of climate change please see the [Climate Change Impacts, Risks and Vulnerability Background Report \(2016\)](#)

2.2. Current work at the City of Whittlesea

Because climate interacts with every aspect of our work and life, even if only in the background, many adaptation activities are already underway across the City of Whittlesea. A broad summation of current activity is outlined in the table below.

Climate impact	What Council already does
Extreme temperatures	<ul style="list-style-type: none"> • Implementation of the Heatwave Plan • Corporate extreme heat guidelines • Heat health emergency alerts to signed up participants (internal and external)
Rainfall and Drought	<ul style="list-style-type: none"> • Investigation and use of alternative water sources for park irrigation • Installation of water sensitive urban design features in open spaces • Install water saving measures in Council facilities • Implementation of the Sustainable Water Use Plan and Stormwater Management Plan • Integrated Water Cycle Management Local Planning Policy requiring all new development to integrate water saving measures into their planning applications
Storms and Flood	<p><i>Preparation</i></p> <ul style="list-style-type: none"> • Implementation of the Flood Emergency Plan and Flood Management Strategy • Engineering standards (1 in 100 year flood standard) • Integration of water sensitive urban design features in public spaces • Proactive pit maintenance program ensuring all Council owned pits are checked and cleared of blockages (as well as reactive maintenance) • Ongoing tree maintenance to reduce risk of storm damage <p><i>Response</i></p> <ul style="list-style-type: none"> • The Municipal Emergency Management Plan is activated
Fire	<p><i>Preparation</i></p> <ul style="list-style-type: none"> • Implement the Municipal Fire Prevention Plan • Annual grading of fire tracks • Annual roadside maintenance program

Climate impact	What Council already does
	<ul style="list-style-type: none"> • Annual program issuing ‘unsightly’ notices requiring maintenance of vacant urban land • Annual program working with rural landholders on managing land for fire hazard (fire prevention enforcement under the Metropolitan Fire Brigade B and Country Fire Authority acts) • Support the Municipal Fire Management Committee • Planned burn program <p><i>Response</i></p> <ul style="list-style-type: none"> • The Municipal Emergency Management Plan is activated

Figure 2: Existing systems for managing the impact of climate

Modern techniques for modelling climate change provide an additional advantage in long term planning. The ability to understand the longer term trends allows us to exploit the opportunities that might arise as well as prepare for the challenges.

An excellent example of utilising modelling to plan for the future is the Land Capability Project. Whittlesea Council is working in partnership with Deakin University and the local farming community. The aim of the project is to investigate the potential of agriculture in the rural north of the municipality and its role in supporting the economic and environmental sustainability, and social wellbeing of our community both now and into the future.

To do this the project has modelled two separate climate change scenarios and the impact these have on a number of different commodity types. This has been tied to local farmers’ knowledge and other environmental conditions to provide robust localised data on the potential for agriculture in the municipality.

This project is still underway however it has already resulted in the release of Story Maps. These Story Maps represent this modelling and allow local landholders, farmers, residents and other interested individuals and organisations to have access to this study via an interactive platform. It also gives Council the information to formulate policy and strategy to strengthen the agricultural sector, as well as advocate to other levels of government to do the same.

2.3. Opportunities for the City of Whittlesea

Opportunity and climate change is not often mentioned compared to the challenges, however they do exist. At a technical level they can exist through co-benefits; for example, action to reduce the impact of drought will likely provide an economic saving— and modelling future conditions and scenarios can provide a detailed understanding of future opportunities as described in the Land Capability Assessment (section 2.2). There are also broader opportunities that were identified through the consultation process.

Building partnerships

The main opportunity that Climate Ready Whittlesea affords us is the ability to coordinate these activities in a more strategic way. Because the issues are spatial, there are currently separate efforts taking place in different sections of the organisation. Bringing people together and developing collaborative efforts will improve Council's efficiency and capacity to deal with the impacts of climate change. Similarly, there is the opportunity to work more efficiently at the regional scale. The issues faced by the City of Whittlesea will be very similar to our neighbouring Councils. If we work harder to partner with other Council's in the region we can spread the cost of tackling these issues, potentially leverage additional funding and share knowledge.

Advocacy

The State Government's renewed focus on climate change and adaptation opens up opportunities to push for more funding of adaptation activities. A large part of their adaptation plan focusses on partnering with local governments and as stated in section 1.3, they acknowledge up front the role of local government in communicating the needs and priorities of our community. Additionally the Sustainability Fund has been underutilised by the State Government and so there is a perfect opportunity to campaign for release of these funds to support adaptation work at the local government level.

2.4. Challenges for the City of Whittlesea

The impacts of climate change raise many concerns and challenges, from direct impacts such as heat, to indirect impacts such as food security. The following challenges were identified through research and staff consultations as key concerns for the City of Whittlesea.

Heat, Heatwaves and the Urban Heat Island Effect

Heat already causes more deaths each year in Australia than all other disasters combined. Climate change and rising temperatures will only intensify the risks posed by heat and heatwaves. For the City of Whittlesea this is also coupled with our increased urbanisation and development due to population growth. The urban area faces the additional challenge of the Urban Heat Island Effect (UHIE). The building materials we use in urban settings from footpaths and roads to our houses collect heat during the day and continue to radiate it through the night keeping the ambient air temperature higher than the surrounding countryside. UHIE is of particular concern as heat stress causes most problems when our bodies cannot cool down overnight. Effectively addressing the problems of heat and the UHIE requires collaboration across Council.

Resilience of our natural and built assets to disasters and incremental climate change

Council is responsible for a wide range of assets, from buildings to historical collections. Each type of asset will be impacted differently by climate change and this must be accounted for in the creation of new assets as well as the maintenance of existing ones. Buildings/ facilities are key assets as they are fundamental to Council providing services and are used by the community for a variety of activities from emergency relief in disasters to holding weddings. Our natural assets are also highly important. Council has responsibility for a wide variety of natural assets from individual street trees to large patches of native vegetation. Council will have to ensure that decisions are made to provide the best chance for our natural ecosystems to adapt and for our urban open spaces to thrive.

3. The adaptation plan

3.1. How has this plan been developed?

Climate Ready Whittlesea was developed in three stages.

Stage 1: Research and data collection

This stage included production of a Background Report that contained:

- An analysis of the best localised data on historic trends and future predictions of the City of Whittlesea's exposure to climate change
- the collation of information on the key regional risks (extreme and high) from the IRVA
- Update of statistical information on the vulnerabilities in our municipality and collation of the information from each sector in the IRVA
- Production of sector specific factsheets to be used in consultation
- Presentation of this work to both the Project Working Group and Project Board for any comment

Stage 2: Internal stakeholder engagement

Five workshops were run in early 2017. These were open to all staff and were themed by sector: emergency management and community development; infrastructure; industry; planning; and natural ecosystems.

ARUP were engaged through a DHHS funded Community Sector Resilience Program to facilitate the sessions. The sessions focussed on the key questions

- Which risks are most important for the City of Whittlesea?
- What could/should we do about it?

A discussion paper based on the outcome of the sessions was then distributed to participants and the working group for further input.

Stage 3: Prioritisation and refinement

A set of criteria were used to evaluate and prioritise the final list of ideas/actions (appendix 1). Each idea was then ranked to provide a priority list of ideas (top 10). These ideas were integrated into a series of projects that form the action plan detailed in Section 3.5.

Actions are listed in the order of priority based on the criteria ranking. Action 7 (Building partnerships) should be considered integral to all other actions.

3.2. How will we monitor and measure progress?

The outcomes of adaptation are extremely difficult to quantify because they are subject to a number of external influences such as socio-economic shifts; the timeframes are very long (decades); and the impact of an event or incident *not* happening is not measurable

However it is important to have a robust system for understanding our progress as an organisation. This plan sets out two separate steps to achieve this.

1. Measuring progress through indicators

NAGA (on behalf of the City of Whittlesea) is working with the Western Alliance for Greenhouse Action (WAGA) and RMIT to develop a grant extending WAGA's 'How well are we Adapting?' tool. This is an innovative tool that is developing best practice methodology for collecting and reporting on local government adaptation. It aims to monitor the impact of climate events on Council processes and allows for comparison:

- Across time - to see changes in the way Council handles climate events; and
- Across member Councils - allowing benchmarking against other similar organisations.

It is expected that 'How well are we Adapting' will be a cornerstone of monitoring and evaluating our organisations ability to adapt to climate change.

The City of Whittlesea also undertakes broader Environmental Indicators Reporting as a core part of measuring Council's performance against its environmental strategy, the ESS. Climate change adaptation is identified as a current gap in this process and for the purposes of the Indicators Report a single adaptation indicator is required. Given that a single indicator can never cover the range of climate change impacts, heat was determined as the key aspect to measure. Therefore tree canopy coverage as an indicator for long term action taken by Council to reduce the impact of rising temperatures will be used. This is identified in *Action 3 Cultivating Whittlesea's Urban Forest*.

2. Monitoring implementation

In order to monitor the implementation of the projects in this plan an annual update will be provided to ELT/Councillors in the form of a short report/memo. These updates will contain

- Key achievement for projects within that year
- Results of any deliverables within each project
- Next steps

3.3. How will we implement the plan?

This plan is expected to follow the timeframe outlined in the table below. Each individual project will potentially have different timelines over years 2-5 of the plan. These will be better understood following the detailed scoping in year 1.

Year	Activity
Year 1 (17/18FY)	Project scoping - Develop detailed project briefs for each action. These will include: <ul style="list-style-type: none"> • A project plan • Consultation and engagement plan • Estimated budget
Year 2 (18/19FY)	Implementation <ul style="list-style-type: none"> • Start implementing of actions where current resources are sufficient (focusing on higher priority actions) • Investigate alternative options for funding where additional funds are required (State Government grants; advocacy for Sustainability Fund Money)
Year 3 (19/20FY)	Implementation <ul style="list-style-type: none"> • Continue implementation of actions • Continue to investigate alternative options for funding projects where required • Develop internal budget bids for highest priority actions that have failed to secure external funding (budget bids for 20/21FY)
Year 4 (20/21FY)	Implementation <ul style="list-style-type: none"> • Continue implementation of actions Review <ul style="list-style-type: none"> • Review progress of the plan to inform <ul style="list-style-type: none"> ○ ESS 2022-2032 development ○ Future needs for adaptation planning in the City of Whittlesea
Year 5 (21/22FY)	Implementation <ul style="list-style-type: none"> • Finalise implementation of actions Review <ul style="list-style-type: none"> • Finalise recommendations • Enact any recommendations from Year 4 review

3.4. How will we engage with the community on adaptation?

Council will invite our communities and local organisations to participate in climate change adaptation in two distinct ways. The first is to focus on building capacity to manage specific climate impacts such as thunderstorm asthma, heatwave planning or fire preparedness. The second is to provide opportunity for the community to inform adaptation projects with their local knowledge.

Managing impacts

Individuals and communities play a vital role in managing private risk due to the impacts of climate change. Broad discussions about climate change adaptation can be overwhelming and negative, reducing the engagement and effectiveness of such discussions. It is considered more productive to ensure that community participation focusses on:

- specific climate change impacts that are affecting them directly (such as heatwaves)
- positive actions and opportunities
- ensuring that participants have access to the materials and understanding that allow them to make practical changes
- being flexible and understanding that local context is critical. The same solutions will not work everywhere so placed-based, community led adaptation will be the most powerful.

Both the emergency management and human service sectors (more broadly than just in Council) engage routinely with communities and other non-government agencies on specific impacts of climate change in order to build community resilience. Examples of Council's involvement include direct education such as the thunderstorm asthma session run in October, annual campaigns such as the fire season property maintenance education and enforcement, and providing heat health alerts for extreme heat conditions to other agencies and services allowing them notice to alter their schedules and provide additional advice/support to their clients.

Knowledge sharing

As well as individuals having their own role in adapting and building resilience it is important to acknowledge the local expertise of communities. The first iteration of Climate Ready Whittlesea is focused on internal operations and functions in order to build the Council's capacity to understand and act on climate change impacts. However as this capacity grows it will benefit greatly from the experience and knowledge of our residents. The Land Capability Assessment project is a prime

example of this knowledge sharing. Over the course of the last year it has combined the knowledge of local farmers with scientific modelling in order to increase the quality of the research and build both the community and Council's capacity in understanding the implications of climate change on the local agricultural sector.

In order to begin building a culture of engaging with community when it comes to adaptation it is expected that the projects in this plan will be scoped in order to maximise the ability for the community to participate in their implementation. The scoping of priority projects will be undertaken in the 17/18FY with the implementation to begin in 18/19FY.

3.5. Actions

1. Developing a better understanding of how heat affects our City

Why do this?

Extreme heat is a key risk to people's health causing more deaths each year than all other natural disasters combined. Spatial analysis of heat can provide both a broader picture as well as directing attention to specifically vulnerable areas and is a useful tool in defining where work is most necessary. It also creates baseline information that allows Council to explore the impact that urban environments and the choices we make impact on local temperatures.

What we will do

- Identify the key sensitivities and adaptive capacity of our community and develop a heat vulnerability map for the City of Whittlesea
- Utilise the vulnerability map to explore further opportunities to cool the City (community engagement programs, infrastructure such as trees or 'cool' surfaces, land use planning and urban design)
- Instigating a vulnerable persons database for targeted advice and support through existing systems

Who will this involve?

Sustainability Planning, Community Health and Wellbeing, Aged and Disability, Family, Children and Young People

2. Increase the thermal comfort of private dwellings

Why do this?

Providing better quality housing has a significant impact on environmentally related health issues. There are also energy efficiency gains which translate into reduced bills for residents. In 2017, Council's Municipal Strategic Statement (MSS) was updated, which included key ESD objectives (Amendment C197). This could be strengthened further by developing an ESD Local Planning Policy. In Victoria, 6 other Councils joined together as part of a Council Alliance for a Sustainable Built Environment CASBE process to implement ESD Local Planning Policies into their Planning Schemes. These policies have been operating successfully since 2015 and ensure that, for development that needs a planning permit, environmental sustainability is considered at the design stage. Other Councils have since undertaken similar amendments and the City of Whittlesea has the opportunity to join a similar CASBE process in a third round of Councils to introduce a local planning policy. Joining the CASBE process will provide cost and time savings, as well as other benefits of a combined approach and advocacy efforts.

What we will do

- Join the CASBE process to develop and introduce an ESD local planning policy into the Whittlesea Planning Scheme to improve the thermal capacity of some housing stock (to help reduce heat related illness).
- Ensure that Development Assessment staff are trained in reviewing ESD assessments.
- Investigate participation in programs that upgrade existing housing stock

Who will this involve?

Strategic Planning and Design, Sustainability Planning, Development Assessment, Sustainable Projects, Building Services

3. Cultivate the City of Whittlesea's urban forest

Why do this?

Trees are a vital part of our environment, even in urban areas. At the most basic level produce oxygen humans need to breathe; they provide shade, cool the environment around them by modifying the microclimate, make our neighbourhoods more liveable and facilitate healthy lifestyles. They also support biodiversity, slow stormwater runoff, improve housing prices and connect people to landscapes (STMP, 2016).

What we will do

- Build community awareness of the health, economic and environmental benefits that trees provide
- Develop a baseline data of tree canopy coverage in the municipality and include as repeatable indicator in the Environmental Sustainability Strategy Indicators Report
- Support the development of the Metropolitan Urban Forest Strategy (MUFS) to increase tree and other vegetation cover in greater metropolitan Melbourne.
- Extend planting programs in parks to increase overall canopy cover in the municipality integrating findings from the heat vulnerability mapping into planting plans

Who will this involve?

Parks and Open Space, Sustainability Planning, Strategic Planning and Design

4. Improve the resilience of our assets to climate change

Why do this?

Facilities are some of the most important assets that Council owns. They provide workspaces for staff as well as community spaces for a variety of functions from Libraries to Emergency Relief Facilities. Ensuring that we are building and maintaining these assets to resist the worst impacts of climate change and to avoid disruptions of services is highly important.

What we will do

- Pilot a tool for assessing the vulnerability of our current facilities to extreme weather events and incremental climate change
- Use the pilot to inform maintenance plans as well as future development guidelines

Who will this involve?

Major Projects, Sustainability Planning, Facilities Maintenance

5. Identify how climate change will impact the City of Whittlesea's biodiversity values

Why do this?

Climate change will result in changes to natural ecosystems and biodiversity that is difficult to predict. It is likely to exacerbate the existing threats, as well as

introducing new threats into the system. The best practice currently is to protect large areas which provide the species with the best possible chance of moving and adapting as micro-climates change.

What we will do

- Focus activities on protecting core habitat patches and refuges along waterways.
- Continue to control existing threats (pest plant and animal)
- Consider climate change effects on habitat in the preparation of the Biodiversity Action Plan.

Who will this involve?

Sustainability Planning, Parks and Open Space

6. Advocate for our community

Why do this?

For our society to properly adapt, local governments cannot support the weight entirely. State and Federal Governments can both contribute in different ways. They have a part in supporting research and broad-scale solutions but they are not able to respond to the variety of localised impacts that will be seen across the state or country. Making sure they are aware of the issues on the ground and proactively looking for support in taking action will be vital in any attempts to adapt.

What we will do

- Develop an itemised list of projects that build our community's resilience to climate change and advocate for release of State Government Sustainability Fund money directly to local governments and/or regional partners to undertake such work
- Continue to seek State and Federal Government support to meet the community's needs and priorities in adapting to the localized impacts of climate change

Who will this involve?

Sustainability Planning, Other departments where needed

7. Build partnerships

Why do this?

Partnerships are a powerful way to increase the efficiency and efficacy of climate change adaptation projects. The impacts of climate change are not limited to council boundaries and so working with regional partners can allow Council to pool resources with other stakeholders to improve regional outcomes.

What we will do

- Continue to support the NAGA as an established network of Local Governments working on climate change mitigation and adaptation activities
- Explore research opportunities and collaborations with Universities and other relevant organisations to support the delivery of key adaptation projects
- Ensure that community, local emergency management agencies and health service providers are engaged on adaptation projects where appropriate
- Work with the Western Alliance for Greenhouse Action and other regional partners to extend the 'How well are we are Adapting' tool for monitoring and evaluation of organisational climate change adaptation

Who will this involve?

Sustainability Planning, other internal and external stakeholders

Appendix 1 – Prioritisation Criteria

Category	Criteria	-1 (low)	0 (medium)	1 (high)
Environmental sustainability	Adaptation	-	-	Action directly addresses impacts of climate change (2 points)
	Biodiversity	Result in loss of biodiversity	Would not affect biodiversity	Will improve local biodiversity
	Mitigation co-benefit	Result in Greenhouse gas emissions	Would not affect greenhouse gas emissions	Would reduce greenhouse gas emissions
Social sustainability	Equity	Benefit to few people	Benefit to many people	Significant benefit to people
	Vulnerability	Has no additional benefit for a vulnerable community	Has limited additional benefit for a vulnerable community	Significant additional benefit to a vulnerable community
Economic sustainability	Implementation cost	Cost is high relative to cost of inaction	Cost is moderate relative to cost of inaction	Cost is low relative to cost of inaction
	Funding source	External funding sources are required and have not been identified or committed	Internal funding sources are required but have not been secured	Funding is available externally or internally
Responsibility	Council role	Council has no control (advocate)	Council has only partial control (facilitate/partner)	Council has control (provide)
Effectiveness	Robustness	Effective for a narrow range of plausible future scenarios	Effective across many plausible future scenarios	Across a wide range of plausible future scenarios
	Ancillary benefit	Will contribute little if not at all to other City goals and programs	Will contribute somewhat to other City goals and programs	Will contribute significantly to other City goals and programs
Opportunity	Window of opportunity	There is no window currently	A window of opportunity could be created	A window of opportunity exists to implement
	No regrets	Will have little or no benefit if climate change impact does not occur	Will have some benefits regardless of actual climate change impact	Will result in significant benefits regardless of actual climate change impact