

**FUTURE MELBOURNE (ECO CITY)  
COMMITTEE REPORT**

**Agenda Item 5.6**

**CLIMATE CHANGE ADAPTATION ACTION PLAN**

**7 December 2010**

**Presenter:** Krista Milne, Manager Sustainability

**Purpose and background**

1. The purpose of this report is to seek endorsement of the Climate Change Adaptation Action Plan ('the Plan') (refer Attachment 2).
2. In 2008, the City of Melbourne commissioned a risk assessment and strategy for adapting the municipality to the impacts of predicted climate change. The resultant Climate Change Adaptation Strategy was endorsed by Council in June 2009.
3. The Climate Change Adaptation Strategy has informed the development of the Plan. The Plan seeks to embed adaptation to climate change throughout City of Melbourne functions and planning procedures, aligns actions with Council's risk management framework and includes annual reporting to Council on progress.
4. The Plan identifies actions for Council to take in the following broad areas:
  - 4.1. increasing water capture, reuse and recycling;
  - 4.2. managing the effects of increased warming in urban areas;
  - 4.3. adapting infrastructure to be durable;
  - 4.4. reducing the risk of flooding;
  - 4.5. reducing the impacts of extreme weather; and
  - 4.6. improving the health and value of our parks and trees.
5. Undertaking these actions will help prepare the municipality for the impacts of climate change and reduce potential liability for the City of Melbourne.
6. The Administration's response to climate change, including the development of the Plan was presented to and noted by the City of Melbourne Audit Committee.

**Key issues**

7. The Plan is a comprehensive response to reduce the risk of impacts to the city and is not considered to be controversial.
8. The actions in the Plan range in complexity, timeframe and resource requirements with the short term actions to be commenced within one to two years and medium term actions to be commenced within the next five years. The Chief Executive Officer will nominate a lead work area for each action and it will be the responsibility of the lead area to scope the project, its timeframe, and budget.
9. The budget for the implementation of actions in the Plan will be considered in the annual budget process. Monitoring and reporting on progress of the Plan will be included in Council's corporate reporting process.

**Recommendation from management**

10. That the Future Melbourne Committee endorses the Climate Change Adaptation Action Plan.

**Attachments:**

1. Supporting attachment
2. Climate Change Adaptation Action Plan

## SUPPORTING ATTACHMENT

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### Legal

1. Section 3C of the *Local Government Act 1989* provides that:

*“The primary objective of a Council is to endeavour to achieve the best outcomes for the local community having regard to the long terms and cumulative effects of decisions.”*

### Finance

2. There are no immediate financial implications arising from the Climate Change Adaptation Action Plan ('Plan'). However, as noted in the report, budget requirements to undertake specific actions will need to be considered in the future budget cycles.

### Conflict of interest

3. No member of Council staff, or other person engaged under a contract, involved in advising on or preparing this report has declared a direct or indirect interest in relation to the matter of the report.

### Stakeholder consultation

4. Extensive stakeholder engagement through workshops and meetings was undertaken in the development of the Climate Change Adaptation Strategy in 2008. These workshops were themed and were as follows:
  - Water and Wastewater - Monday 11 February 2008
  - Transport and Mobility - Monday 18 February 2008
  - Buildings and Property - Tuesday 19 February 2008
  - Social, Health and Community - Friday 22 February 2008
  - Business and Industry - Monday 25 February 2008
  - Energy and Communication- Tuesday 26 February 2008
  - Emergency Services - Thursday 28 February 2008
5. All branches across Council have been involved in the development of the Plan. Branches with lead responsibilities have endorsed the actions and agreed to build them into future work planning.
6. Once the Plan is endorsed by Committee, a community engagement and communication plan will be developed to ensure consistent messaging across the City of Melbourne on climate change adaptation.
7. Through the consultation process undertaken for the strategy, cooperative working relationships have been established with State Government agencies, in particular Melbourne Water and VicUrban on climate change adaptation.

### Relation to Council policy (if applicable)

8. The Plan builds on the Climate Change Adaptation Strategy and reinforces Council's strategies set out in 'Total Watermark- City as a Catchment', and contributes to achieving the Future Melbourne Eco-City goals.

### Environmental sustainability

9. The impacts of climate change have the potential to cause significant disruption to most aspects of council operations and the municipality as a whole. The Plan will facilitate the City of Melbourne to commence a long term planning process to address projected and emerging challenges and impacts on the

municipality. The Plan is also careful to consider maladaptation (where carbon emissions are increased by the adaptation action) in how we approach ways to adapt the municipality.

# Climate Change Adaptation Action Plan

**Key:** Short term = 2010 - 2013  
Medium term = 2013 - 2020

## Action Area 1: Managing the implications of reduced rainfall and increased evaporation

Timeframe	Action
Short Term	1.1. <i>Create water efficiency standards and implement as normal practice within CoM</i>
	1.2. <i>Implement water efficiency product standards within CoM.</i>
Medium Term	1.3. <i>Expand stormwater capture, harvesting, treatment and water recycling to capture and reuse water.</i>
	1.4. <i>Investigate and implement, where appropriate, local water recycling and grey water use in new and retrofitted buildings.</i>
	1.5. <i>Increase installation and usage of community rainwater tanks for rainwater storage.</i>
	1.6. <i>Increase use of domestic rainwater tanks for rainwater storage through planning regulations.</i>
	1.7. <i>Develop a municipal-wide fit for purpose water policy, to encourage exploitation of water sources other than potable mains water.</i>

## Action Area 2: Managing the implications of increasing average temperatures and increased frequency of hot days

Timeframe	Action
Short Term	2.1 <i>Identify accessible safe locations in the Emergency Management Plan.</i>
	2.2 <i>Redesign the public realm for thermal comfort in hotter conditions: implement shading, cool places and public water facilities.</i>
Medium Term	2.3 <i>Implement changes to urban form to reduce the heat island affect: urban and rooftop gardens; lighter building; roof and road colours; more extensive network of stormwater fed urban wetlands.</i>
	2.4 <i>Revise building standards to incorporate passive cooling, ventilation, and suitably rated materials.</i>

**Action Area 3: Managing the impact of extreme weather on our infrastructure**

Timeframe	Action
Short Term	3.1 Increase the extent of porous surfaces to reduce rainfall run-off where it has been identified as appropriate to do so.
	3.2 Revise CoM asset management plans to include consideration of climate projections: application of contingency standard (Strength) to soon-to-be constructed or refurbished key infrastructure ahead of revision of standards; critical asset augmentation; increased maintenance monitoring.
	3.3 Support practical proposals to increase building strength standards.
	3.4 Develop a flood mitigation plan to reduce the number of existing local flooding problems and subject to funding, commence the on-going implementation of the plan.
	3.5 Implement an ongoing drainage asset renewal program including the identification of the drainage network condition, implementation of a drain cleaning program and the replacement of aging / underperforming drainage infrastructure to maximise the capacity of the drainage network.
	3.6 Examine the feasibility of emergency and/or grid independent energy generation (e.g. Solar) to reduce dependence on mains power supply.
	3.7 Investigate appropriate application of infrastructure changes to protect areas from property damage by flood water.

**Action Area 4: Managing the impact of inundation from flooding and sea-level rise**

Timeframe	Action
Short Term	4.1 Develop communication strategies to increase awareness of sea level rise and increased flooding risk.
	4.2 Collaborate with the relevant authorities to review and revise planning guidelines to consider Sea Level Rise.
	4.3 Expand stormwater capture, harvesting and treatment and water recycling to reduce impact of flooding events.
	4.4 Develop a Sea Level Rise Adaptation Action Plan which outlines cost effective adaptation measures.
Medium Term	4.5 Investigate a process to ensure safe access and egress to at-risk new, or proposed to be retrofitted, residential buildings for people in the event of a significant flood.

**Action Area 5: Managing the impact of extreme weather on people and property**

Timeframe	Action
<b>Short Term</b>	<p>5.1 Revise event protocols to enable safe, successful events in extreme weather conditions including:</p> <ul style="list-style-type: none"> <li>improved communications with event attendees and organisers regarding precautions</li> <li>water provision on hot days</li> <li>event restriction during adverse weather conditions when required and</li> <li>collaboration with event operators to promote responsible alcohol consumption, on hot days, where appropriate.</li> </ul>
	5.2 Provide public communication and awareness regarding safety in extreme weather events.
	5.3 Review and increase, if required, insurance cover to better protect Council from sudden clean-up costs.
	5.4 Implement the Heatwave Response Plan: actively identify at risk populations and consider measures to tackle high risk situation including events.
	5.5 Identify critical road locations and routes for control and access for emergency procedures, and devise a response plan to ensure emergency passage and access.
	5.6 Communicate the importance of keeping roads and tramways clear for the passage of emergency services.
<b>Medium Term</b>	5.7 Investigate improvement of shading at outdoor public events and key spaces used for events and implement where appropriate.
	5.8 Establish a Public Steward education program (e.g. City Volunteers).
	5.9 Develop a business and retail security education program on safe practices during transport delays.
	5.10 Develop communications campaigns to increase awareness of the impacts of extreme weather for businesses with at risk properties to assist with preparation for such events and promote adequate insurance against such events.
	5.11 Identify and apply protective measures to minimise risk of potential flying/falling debris from vegetation and buildings.
	5.12 Develop a business and public education program regarding stormwater risk.
	5.13 Implement rapid response cordoning of flooded areas to prevent entry by pedestrians and vehicles.
	5.14 Manage the costs of extreme weather damage through strategic prioritisation and coordinated clean-up.
	5.15 Provide access to safe shelters in the event of mass stranding (ideally located at or near major transport hubs).

**Action Area 6: Managing our parks and trees in a changing climate**

Timeframe	Action
Short Term	6.1 Expand the grass replacement program in sports fields to drought tolerant species.
	6.2 Continue the roll-out of the tree replacement program and prioritise replacement according to high risk locations.
	6.3 Undertake appropriate measures to strengthen trees, reduced risk of falling trees, branches.
	6.4 Install artificial turf for sports fields where intensification of use requires it.
	6.5 Review and increase insurance coverage, if required, for Council and sports clubs to control potential costs from increased injuries.
	6.6 Advise sporting groups that protective sporting gear to minimise injuries is recommended to be worn on dry sports grounds.
	6.7 Offer alternative locations to sporting groups where existing outdoor facilities cannot be maintained and facility capacity allows.
	6.8 Restrict usage of sports grounds during summer months and/or dry periods to minimise risk of injury and associated liability until alternative irrigation sources are in place.
	6.9 Ensure a diversity of sporting choices provided which are not all dependent on irrigated sports grounds.
Medium Term	6.10 Identify locations likely to be affected by storm damage where CoM is responsible for associated clean up costs e.g. parks and gardens.