

## **Item 5.**

### **Sustainable Sydney 2050 Update - Environment and Resilience (Strategic Directions 1 and 5 - A Leading Environmental Performer and A Resilient City)**

**File No: X012101**

#### **Summary**

In August 2018, Council resolved to begin work to develop Sustainable Sydney 2050; an evolution of Sustainable Sydney 2030 that incorporates the Resilient Sydney Strategy, includes new research and technical advice and is underpinned by comprehensive engagement with the community and all those who have an interest in our city.

Considerable work has subsequently taken place to progress the development of Sustainable Sydney 2050.

In December 2019, Council noted a Sustainable Sydney 2050 Update that provided the key findings from the comprehensive engagement program as well as details of research undertaken to inform the plan. The proposed strategic framework, which includes a vision, principles, strategic directions and targets to measure progress, was also set out in the report. Subsequently, the reports from the engagement activities have been published on the City of Sydney website. The research reports will also be progressively made available on the City's website.

The analysis and insights from the research and engagement programs have shaped the development of the forthcoming Sustainable Sydney 2050 plan.

This report provides an outline of the proposed environment and resilience components of the plan (Strategic Directions 1 and 5 - A Leading Environmental Performer and A Resilient City). It sets out the background to the issues, the proposed strategic response and initial actions that have been proposed, as well as relevant targets proposed for inclusion in the forthcoming Sustainable Sydney 2050 plan.

#### **Recommendation**

It is resolved that Council note the Sustainable Sydney 2050 Update - Environment and Resilience (Strategic Directions 1 and 5 - A Leading Environmental Performer and A Resilient City) report and suggested targets that pertain to these strategic directions.

#### **Attachments**

Nil.

## Background

1. In August 2018, Council resolved to begin work to develop Sustainable Sydney 2050; an evolution of Sustainable Sydney 2030 that incorporates the Resilient Sydney Strategy, includes new research and technical advice and is underpinned by comprehensive engagement with all those who have an interest in our city.
2. This report provides an update on the proposed environment and resilience components of the forthcoming Sustainable Sydney 2050 plan (Strategic Directions 1 and 5 - A Leading Environmental Performer and A Resilient City). It sets out the proposed strategic response to the issues identified from the research and community engagement, initial actions, as well as relevant targets for inclusion in the plan.
3. Environmental action has been a priority for our communities for more than a decade and much has been achieved. The focus for the proposed Sustainable Sydney 2050 plan however, is the greater urgency with which we need to act to reduce our impact on the environment as well as the action we need to take to build resilience in our city, its infrastructure, systems and its communities to the impacts of a changing climate.
4. The climate emergency is the biggest challenge cities face. Global heating has already caused average global temperatures to rise 1.1°C above pre-industrial levels, which is having a significant impact on the climate.
5. Under the Paris Agreement, most countries, including Australia, have agreed to halt warming at 1.5°C or "well below" 2°C above pre-industrial levels. However, while the Paris agreement implied net zero emissions by 2050, it didn't set the probability criteria for achieving 2°C (i.e. the scale and timing of emissions reductions).
6. The United Nations Environment Programme's Emissions Gap Report 2019 shows that at the current levels of commitment, temperatures can be expected to rise by 3.2°C above pre-industrial levels. The UNEP report states global emissions must reduce by 7.6 per cent per year. The scale and urgency of the action we all need to take is enormous.
7. The latest International Panel on Climate Change SR15 (Special Report) Summary for Policy Makers (2018) outlines a carbon budgeting method in setting targets that takes into account emissions that have already been produced i.e. if we continue with high annual emissions our carbon budget will run out sooner. This supports taking action early as the budget will last longer.
8. The Special Report states that faster carbon reductions result in higher probability of limiting global heating to 1.5°C. To have a 66% chance of staying below 1.5°C the world has 10 years of carbon budget to expend at the current rate, or 14 years for a 50 per cent chance. If applied to the City of Sydney local government area this method suggests that net zero must be achieved around 2040. The sooner action is taken, the greater the probability of staying below 1.5°C.
9. In addition, if we wait too long to act the required offset actions to bring the temperature back down will be massive. Tree planting is one of the most viable offsetting methods currently, however the recent Australian bushfires have highlighted the fragility of this method as a long term reliable solution.

10. Without immediate actions, we will miss the opportunity to limit global warming to 1.5°C and our resilience as a city in the face of increasing climate hazards will be severely tested. The Deadline 2020 report by C40 shows that cities like Sydney with high per capita emissions and GDP have an obligation to reduce emissions steeper and sooner - to share the burden across all cities - based on principles of equity, responsibility and capacity.
11. The environment and economy are inextricably linked. The city's continuing economic success will depend on the speed and efficiency at which the national economy decarbonises. Our international standing can support or pose a material risk to financial markets and globally exposed industries. There are also advantages for those who move first to solve environmental problems whether through innovation and technology, financing, or other business solutions.
12. Around the world, cities are setting ambitious targets and taking action to reduce local emissions, protect water sources, manage waste innovatively, increase canopy cover, improve nature in cities and protect biodiversity. The City of Sydney must also play its part, acting locally to contribute to national and global outcomes.

### **Community perspectives**

13. Overwhelmingly people want a response to climate change. People want a city with sustainable waste management and use of resources, reduction in emissions, fewer cars and less congestion, more electric vehicles, more public transport and active travel.
14. Climate change is an important issue for everyone - across age groups, gender and whether they are residents, workers, visitors or business owners. It is of critical importance to young people.
15. People have acknowledged that the most vulnerable in our community can often bear an unequal share of the consequences of climate risks or the effects of our changed climate.
16. Our communities distinguished between living sustainably and a 'green' liveable city, but clearly articulated the fact that a green city with plants and trees is an important response to climate change.
17. A Citizens Jury was formed from 47 randomly selected residents, workers and citizens from across metropolitan Sydney to consider what concepts should be implemented in the City of Sydney by 2050. In meeting over six Saturdays, the jury distilled over 2,500 public submissions for ideas into eight concepts; one of which was envisaging the city as a 'regenerative ecosystem'. That is, a leader in reversing climate change and restoring the natural environment. The jury recognised that there are finite natural and financial resources and that air pollution, water pollution and water scarcity must all be addressed for a healthy city. Buildings must not contribute to the degradation of the city and waste must be transformed to feed back into the economy.

### **Proposed strategic response**

18. By 2050, we want our city to be part of a decarbonised world. We will build on the actions we've taken over more than a decade that have realised a reduction in emissions in our local area of 21 per cent from the 2006 baseline. This reduction has occurred whilst the resident population has increased 45 per cent and jobs 22 per cent, with more than 50 per cent growth in the economy over the same period. But we need to accelerate.

19. To actively decarbonise the city, we anticipate it will be necessary for all activity in the local government area to be net zero emissions by around 2040. Efficient buildings using 100 per cent renewable electricity will be essential. A greater focus on zero carbon transport and waste will also be critical.
20. We will maintain our focus on minimising the use of potable water, through efficiency measures as well as the use of other water sources. Our aim is to maintain zero increase in potable water use, despite the significant growth in the city's residential, workforce and visitor populations. Currently we are 13 per cent above the 2006 level. To achieve zero increase, we must have the capacity to recycle water at building, precinct and metropolitan scale.
21. We will continue our efforts to green the city, having already increased the canopy cover from 15.5 per cent to 18.1 per cent toward our target of 23 per cent by 2030. Shaded and cool places will be essential if we want to support our community to have healthy active outdoor lifestyles and increase our city's resilience to the changing climate. More trees and connected areas of urban bushland will also be necessary for wildlife habitat and healthy ecosystems in the urban environment. But achieving a greener city will rely on access to an increased supply of non-potable water, as well as increasing the extent to which trees are planted on public and private land.
22. Our collective approach to the consumption of resources and production of materials and products must change over time. The end goal is to minimise raw material use through design, use of recycled sources, share-economy initiatives, and changes in consumer behaviour and producer responsibility. This will ensure that resources are retained for as long as possible within the product lifecycle, at the highest-value use, and waste is kept to a minimum. Opportunities for new business models and new manufacturing processes can result from this transition.
23. Infrastructure must support the decarbonisation of our city as well as our adaptation to a changed climate. The City's investment in flood mitigation and management will continue in order to help keep people and property safe as the number and intensity of storm events increases.
24. We will also ensure that the design and construction of all new infrastructure and assets take into account our changed climate. As well, we will adapt existing infrastructure and assets to improve their resilience.
25. We want our communities to be prepared and able to withstand any shocks and stresses that they will encounter, as well as recover quickly from emergency situations. This includes encouraging a strong culture of volunteerism and willingness to help each other, one that is amplified in times of need.
26. It will be important that the vulnerable in our city are not exposed to further inequity due to climate change. We will endeavour to make environmental services and facilities accessible and affordable. We will also review our services and put plans in place to support those in the community who need it in times of extreme weather or other events.

**Some ideas for action we might take**

27. To realise the aspiration for our city to 2050 will take concerted action over the next three decades. Some initial ideas for actions we could add to our portfolio of ongoing actions include:
- (a) Supporting the increased uptake of renewable energy by residents and business in the city, both local rooftop solar and the purchase of renewable energy generated in regional Australia.
  - (b) Pursuing the development and implementation of a recycled water scheme in the city centre. Wastewater could be treated to produce recycled water for non-potable uses such as irrigation of parks and gardens and use in cooling towers. The pipelines that form the base infrastructure for the scheme have been installed along George Street between Circular Quay and Central.
  - (c) Becoming a partner with the NSW Government and other champions of the circular economy, defining and promoting resource conservation and other economic benefits.
  - (d) Advocating for and contributing to a national plan that responds to the climate emergency, and the creation of a just transition plan to ensure that those employed in fossil fuel related industries have pathways to alternative employment.
  - (e) Exploring new forms of financing, delivery and incentives to encourage retrofitting of existing buildings to take place at scale across all building types in the city.
  - (f) Accelerating the greening of our city by exploring a range of measures. As well as ensuring we plant trees and shrubs on all appropriate public land, we will explore how to strengthen requirements for increased greening on private land. Many of the ideas we will explore will require consensus before they can be implemented and will take time and commitment from everyone.
  - (g) Investigating whether it is possible to aggregate commercial waste collection services in geographical zones of the city to reduce fragmentation and deliver better transport, public domain and environmental outcomes.
  - (h) Developing and implementing a plan to support vulnerable communities impacted by climate change.
  - (i) Ensuring our community is supported to increase their resilience, including providing relevant information and services, and developing protocols to support them in extreme weather and other events.
  - (j) Reviewing all asset management plans to prioritise critical infrastructure and assets and measures to ensure and / or improve their resilience. As well, plans will be put in place to build for resilience as assets and infrastructure are replaced or built in future.

### How we will measure progress

28. It is proposed that the Sustainable Sydney 2050 plan will include ten targets that collectively measure the transformation of our city in the decades to 2050. It is important to note that the City has limited direct control over these outcomes. Our role is to encourage behaviour change, advocate for policy or legislative reform, galvanise community action, improve outcomes through planning controls and lead by example through our own operations.
29. From the research and technical studies recently undertaken, the proposed targets for the Sustainable Sydney 2050 plan most relevant to environmental outcomes would be:
  - (a) By 2040, the local government area will achieve net zero emissions.
  - (b) By 2036, there will be zero increase in potable water use across the local government area from the 2006 baseline, achieved through water efficiency and recycled water.
  - (c) By 2050, the local government area will have a minimum overall green cover of 40 per cent, including 27 per cent tree canopy cover.
  - (d) By 2030, there will be a 15 per cent reduction in waste generation per capita based on 2015 levels. By 2030, there will be a 90 per cent recycling and recovery of residential waste, commercial and industrial waste, and construction and demolition waste from the local government area, maintained at that level to 2050.
30. Further engagement with industry stakeholders on these targets will be undertaken in the coming months before endorsement by Council is recommended.

### Key Implications

#### Strategic Alignment - Sustainable Sydney 2030 Vision

31. Sustainable Sydney 2030 is a vision for the sustainable development of the City to 2030 and beyond. It includes 10 strategic directions to guide the future of the City, as well as 10 targets against which to measure progress. This report sets out how the current strategic directions will be revised and updated in the forthcoming Sustainable Sydney 2050.

### Budget Implications

32. The proposed Sustainable Sydney 2050 plan builds upon and continues the City's commitment to achieve its core objectives. The majority of the financial implications associated with implementing the plan will therefore already be incorporated within the City's Long Term Financial Plans and forward budget estimates. Where elements of the plan require additional resources, these projects and initiatives will be balanced against existing commitments, to ensure the City prioritises its efforts to deliver the plan while maintaining the City's financial sustainability.

## **Public Consultation**

33. A comprehensive community engagement program was undertaken from November 2018 and continued throughout 2019 to inform the development of the proposed Sustainable Sydney 2050 plan. Copies of the engagement reports can be found on the City of Sydney website.

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