CITY OF SYDNEY

19 July 2021

At the conclusion of the Corporate, Finance, Properties and Tenders Committee

Environment Committee

Agenda

1. **Disclosures of Interest**
2. **Post Exhibition - Environmental Strategy 2021-2025**
3. **Post Exhibition - Greening Sydney Strategy**
4. **Project Scope - Harry Noble Reserve Playground, Erskineville**
5. **Knowledge Exchange Sponsorship - 2021 Impact X Climate Growth Sydney Summit Sponsorship**

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1. Register to speak by calling Secretariat on 9265 9702 or emailing secretariat@cityofsydney.nsw.gov.au before 10.00am on the day of the meeting.
2. Check the recommendation in the Committee report before speaking, as it may address your concerns so that you just need to indicate your support for the recommendation.
3. Note that there is a three minute time limit for each speaker (with a warning bell at two minutes) and prepare your presentation to cover your major points within that time.
4. Avoid repeating what previous speakers have said and focus on issues and information that the Committee may not already know.
5. If there is a large number of people interested in the same item as you, try to nominate three representatives to speak on your behalf and to indicate how many people they are representing.

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Item 1.

Disclosures of Interest

Pursuant to the provisions of the City of Sydney Code of Meeting Practice and the City of Sydney Code of Conduct, Councillors are required to disclose pecuniary interests in any matter on the agenda for this meeting.

Councillors are also required to disclose any non-pecuniary interests in any matter on the agenda for this meeting.

This will include receipt of reportable political donations over the previous four years.

In both cases, the nature of the interest must be disclosed.

Item 2.

Post Exhibition - Environmental Strategy 2021-2025

File No: X027797.008

Summary

This report seeks Council approval of the Environmental Strategy 2021-2025 (the Strategy). The Strategy sets the directions, actions and targets for the environmental performance of City of Sydney operations and for the local government area.

The previous strategy, Environmental Action 2016 - 2021 Strategy and Action Plan, was adopted by Council in March 2017 and has underpinned environmental action by the City for the last five years. This has led to reductions in carbon emission, water use and waste generation in City operations; and has contributed to improvements in environmental performance across the local government area. This update reflects changes over that time, documents our achievements and incorporates the latest research and data that supports the future strategic direction.

This new Strategy outlines the City's commitment to responding to the climate emergency and working in partnership with residents, businesses, and other levels of government to build a resilient, inclusive and regenerative city.

(a) Direction 1 - Smart and resilient City operations

(b) Direction 2 - Efficient, future-proof buildings and transport powered by renewable energy

(c) Direction 3 - A regenerative and inclusive city

(d) Direction 4 - Strong foundations for delivery

Approval was given by Council on 17 May 2021 to publicly exhibit the Draft Strategy for a minimum of 28 days to allow an opportunity for the community to provide feedback.

Public exhibition of the draft Strategy occurred from 19 May 2021 to 16 June 2021. Consultation included online engagement, social media promotion and presentation to several organisation and committees. Members of the public were able to comment through Sydney Your Say or directly to City staff. An online stakeholder briefing was conducted on 3rd June 2021. Over 100 pieces of feedback were received.

Feedback provided indicated strong support for the plan and the for City's ongoing action on climate change. Submissions highlighted the following key areas: concern that action by government, business and the community is not adequate to address the impacts of climate change; the desire for more use of walking and cycling and more support for electric vehicle charging; the importance of transitioning to renewable energy; the need for ambitious targets. Based on the nature of the feedback provided, the final Environmental Strategy 2021 requires only minor amendments to clarify the City's plans in several specific areas and to incorporate the most recent environmental data.

Recommendation

It is resolved that:

(A) Council note the submissions and feedback received through the public exhibition period as shown at Attachment D to the subject report

(B) Council adopt the Environmental Strategy 2021-2025, incorporating amendments as shown at Attachment A to the subject report;

(C) Council adopt the Environmental Sustainability Policy, as shown at Attachment B to the subject report;

(D) Council rescind the Sustainable Events Management Policy, as shown at Attachment C to the subject report, which is superseded by the Environmental Sustainability Policy;

(E) authority be delegated to the Chief Executive Officer to make minor editorial amendments to the Environmental Strategy 2021-2025 and the Environmental Sustainability Policy; and

(F) Council note that people and organisations who made submissions will be notified of the adoption of the Environmental Strategy 2021-2025 and the City responses as shown at Attachment D to the subject report.

Attachments

Attachment A. Environmental Strategy 2021-2025

Attachment B. Environmental Sustainability Policy

Attachment C. Sustainable Events Management Policy

Attachment D. Engagement Report

Attachment E. Letter from C40

Background

1. Signatories to the Paris Agreement have agreed to halt warming to 1.5°C or well below 2°C above preindustrial levels. Yet global heating is already approaching 1.2°C above preindustrial levels and it is accelerating.

2. The Intergovernmental Panel on Climate Change says that to limit global warming to 1.5°C global emissions must be 45 per cent lower than 2005 levels by 2030. To date, commitments by countries around the world are nowhere close to being on track to limit global heating.

3. Climate change is projected to increase the magnitude and frequency of extreme weather events. These will affect urban infrastructure systems for energy, transportation, telecommunications, water and wastewater, solid waste and food production.

4. The economic benefits of emissions reduction far outweigh the costs of extreme weather events if nothing is done. A report by the Climate Council, Australia's leading independent climate change communications organisation, states that extreme weather events have cost Australia $35 billion over the past decade, which is double the cost in the 1970s. By 2038, these events, as well as the impacts of rising sea levels, could cost the Australian economy $100 billion every year.

5. Cities are major contributors to climate change. According to UNHabitat, cities consume 78 per cent of the world's energy. C40 Cities has calculated that urban areas produce more than 70 per cent of GHG emissions.

6. However, cities also have a vital role in managing climate change. Individually and collectively, cities can drive change, influence future policy and demonstrate the power of collaboration for communities and governments, addressing the impacts of climate change globally. The City of Sydney is part of a vanguard of global cities that are taking strong action on climate change and leading a green recovery from the COVID-19 pandemic.

7. The Strategy also responds to our community's demand for environmental action. Our extensive community engagement work to inform Sustainable Sydney 2050 revealed an overwhelming desire for a response to climate change. It is an important issue for people of all ages, genders, nationalities and socio-economic groups. In an online survey, 86 per cent of respondents agreed that the City should invest in and advocate for addressing climate change.

Environmental Strategy 2021 - 2025

8. The Strategy reinforces the important work the City has done and will continue to do in the areas of energy and emissions reductions, water management and use of alternate water sources, waste management and recycling, and climate adaptation. Our focus continues to be on asset management in our own operations, partnering with residents and businesses to reduce the environmental impact of buildings in our city, and undertaking advocacy for broader changes required to state and federal policy.

9. This Strategy also addresses some emerging topics: circular economy, inclusive climate action and the opportunity to work more closely with Aboriginal and Torres Strait Islander people on environmental action.

10. The concept of a circular economy is rapidly gaining traction with stakeholders in our city. While the systemic change required must be led by State and Federal governments, the City has an important role to play. We can utilise our significant procurement spend to drive circular economy outcomes, and we are supporting a number of circular economy initiatives through our grants program.

11. People already marginalised in our city are likely to suffer disproportionate impacts from climate change and urban hazards. As we create solutions to our challenges, we need to be inclusive. We must look at which groups are most affected by climate change, who benefits from our environmental programs, and how we can diversify the voices heard when shaping our environmental future.

12. The City acknowledges the importance of the living cultural practice of caring for Country. The Gadigal of the Eora Nation used resilient land management practices for thousands of generations. The City will enhance its environmental program by working with Aboriginal and Torres Strait Islander groups and investing in knowledge and practices that restore natural equilibrium by caring for Country. This will also contribute to the achievement of the City's Stretch Reconciliation Action Plan goals.

13. The Strategy outlines four directions, and 23 supporting actions:

    (a) Direction 1 - Smart and resilient City operations

        (i) Action 1 - Deliver energy, water and resilience outcomes through City asset design and management

        (ii) Action 2 - Keep City parks green with water efficiency and alternate water sources

        (iii) Action 3 - Regenerate the environment through the City’s carbon-neutral commitment

        (iv) Action 4 - Ensure the City’s programs and services use resources efficiently

        (v) Action 5 - Reduce the amount of operational waste sent to landfill through avoidance and resource recovery

        (vi) Action 6 - Reduce embodied carbon in our supply chain and support circular economy outcomes

        (vii) Action 7 - Manage environmental risks and issues

    (b) Direction 2 - Efficient, future-proof buildings and transport powered by renewable energy

        (i) Action 8 - Improve energy efficiency, water efficiency and waste management in existing buildings

        (ii) Action 9 - Drive all new buildings to be resource-efficient and net zero energy

        (iii) Action 10 - Support the transition to zero-emissions transport

(iv) Action 11 - Encourage community uptake of renewable electricity and stimulate the green economy

(v) Action 12 - Support our residents to reduce utility costs and environmental impact

(vi) Action 13 - Help businesses to reduce utility bills and demonstrate environmental achievement

(c) Direction 3 - A regenerative and inclusive city

(i) Action 14 - Incorporate the perspectives of Aboriginal and Torres Strait Islander people in environmental action

(ii) Action 15 - Address equity issues related to climate change

(iii) Action 16 - Build community resilience and momentum on climate action

(iv) Action 17 - Support the development of circular economy systems

(v) Action 18 - Drought-proof the city by facilitating water recycling

(vi) Action 19 - Regenerate polluted waterways, air and land

(vii) Action 20 - Reduce the amount of residential waste sent to landfill through avoidance and resource recovery

(d) Direction 4 - Strong foundations for delivery

(i) Action - 21 Build staff capability to deliver environmental outcomes

(ii) Action 22 - Deliver high-quality internal and external environmental reporting and communications

(iii) Action 23 - Employ efficient and effective decision-making processes

14. The Strategy also includes carbon, water and waste targets for the City's operations and for the local government area. This includes an updated local government area target of net zero emissions by 2035.

15. In 2008 when the City set its target to reduce 2006 emissions by 70 per cent by 2030, it was based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report. In the ensuing years, the climate science is showing that the rate of global heating is accelerating. The latest Fifth Assessment Report was completed in 2014 as the main scientific input to the Paris Agreement. Key inputs to the Sixth Assessment Report on climate science, mitigation, impacts and adaptation will be released this year in time for the 26th UN Climate Change Conference of the Parties (COP26) in Glasgow in November 2021. The Secretary General of the United Nations has made it clear that the world's current greenhouse reduction pledges are not enough to limit global warming to well below 2°C, the goal of the Paris Agreement.

16. A recent report, *Carbon Budgets for 1.5 and 2°C Briefing Note*, by the National Centre for Climate Restoration indicates that IPCC carbon budgets have underestimated current and future warming, with 1.5°C of average global heating likely by 2030 or earlier.

17. The recent Australian report, *Updating The Climate Change Authority's 2014 Emissions Reduction Targets* by the Climate Targets Panel (an independent group of Australia's most senior climate scientists and policymakers), has calculated that net zero by 2035 is Australia's 'fair share' for the world to stay below 1.5 degrees budget based on its contribution (0.97 per cent) to global emissions. It finds that to be consistent with the Paris Agreement goal of limiting global warming to 1.5°C, Australia's 2030 emissions reduction target must be 74 per cent below 2005 levels, with net-zero emissions reached by 2035.

18. The City has commissioned modelling of a downscaled carbon budget for the local government area (based on ten years of 2017 level emissions). If emissions were to remain at 2017 levels, this would imply net zero emissions are needed by 2027 to remain within the carbon budget. However, emissions have been falling year on year and continued improvements in the energy efficiency of new and existing buildings, local renewable electricity, transport interventions and waste management are anticipated to make further significant reductions, as shown by the Chart 5 in the draft Strategy.

19. Modelling uses the step-change scenario of the 2020 Integrated System Plan (ISP) by the Australian Energy Market Operator (AEMO) to model greening of the grid. AEMO has begun working on the next version of the ISP which indicates that greening of the grid is occurring more rapidly than envisaged due to the low cost of renewable energy compared to coal and gas fired electricity. This is likely to see early closure of thermal plants (for example the recent announcement to close Yallourn four years ahead of schedule).

20. Whilst very ambitious, achieving net zero emissions by 2035 and remaining within a city carbon budget is deemed feasible, however it is likely to require the use of carbon credits via purchased reductions of emissions savings created elsewhere. It is estimated that between 350,000 to 1.12 million tonnes of offsets will be required, mostly depending on how rapidly the electricity grid becomes renewable.

Environmental Sustainability Policy

21. A policy statement is required to supplement the Strategy in order to:

    (a) Strengthen the environmental management expectations of City partners including suppliers, grant recipients and event organisers holding events in City spaces. City partners will be required to comply with specific requirements of the policy and supporting guidelines including Single-Use Guidelines and Sustainable Design Technical Guidelines.

    (b) Enable the City's Environmental Management System (EMS) to be aligned to the ISO14001 standard. The standard states that the organisation must have an environmental policy.

    (c) Bring the principles outlined in the City's 2020 Climate Emergency Response into a policy statement.

22. The Environmental Sustainability Policy will result in the Sustainable Events Management Policy being rescinded as it will include coverage of the same areas.

Key Implications

Strategic Alignment - Sustainable Sydney 2030

23. 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 Strategy is aligned with the following strategic directions and objectives:

    (a) Direction 1 - A Globally Competitive and Innovative City - Sydney is globally recognised for its environmental ambition and performance. The Strategy will enable the City to maintain and enhance this reputation.

    (b) Direction 2 provides a road map for the City to become A Leading Environmental Performer - The Directions and actions areas proposed in the Strategy will help the City to lead by example in its own operations and contribute towards improved environmental performance in the LGA.

    (c) Direction 3 - Integrated Transport for a Connected City - outlines the importance of moving to zero-emissions modes of transport to reduce the city's environmental impact.

    (d) Direction 4 - A City for Walking and Cycling - The Strategy reinforces the importance of shifting to active modes of transport to reduce the city's environmental impact.

    (e) Direction 6 - Vibrant Local Communities and Economies - The Strategy acknowledges that climate change disproportionately impacts vulnerable members of the community, and that action is needed to ensure the shift to a zero-carbon future is equitable and inclusive. The Strategy also highlights that the green economy is an area of growth for Sydney.

    (f) Direction 9 - Sustainable Development, Renewal and Design - The Strategy highlights the crucial role that sustainable design will play in achieving the environmental targets for the LGA.

    (g) Direction 10 - Implementation through Effective Governance and Partnerships - The Strategy outlines how collaboration with other levels of government, business and the community is essential for effective climate action.

Organisational Impact

24. In developing the Strategy, consultation was undertaken with relevant City staff. Actions and projects are being proposed in the budgets and business plans of responsible units.

25. Direction 4 - Strong foundations for delivery address the need to strengthen staff capability to ensure effective delivery of the Strategy

Risks

26. The successful implementation of the Strategy is subject to risks arising outside the City's control, including:

    (a) the lack of federal plan to transition to net zero emissions across electricity, gas, and vehicles;

(b) unsupportive State government regulatory framework, and higher fees imposed on utilities by the Independent Pricing and Regulatory Tribunal, deterring the uptake of recycled water schemes in urban renewal locations; and

(c) lack of direction and investment in waste infrastructure in the Sydney metropolitan region.

27. The implementation may also be advanced through opportunities including:

(a) implementation of the NSW Government Electricity Infrastructure Roadmap and Renewable Energy Zones - leading to faster than anticipated greening of the grid;

(b) increasing private sector action by investors to divest from fossil fuels and to require companies to incorporate climate-related risks and opportunities into their risk management and strategic planning processes; and

(c) new technological solutions including opportunities to draw down carbon from the atmosphere

Social / Cultural / Community

28. The Strategy specifically addresses the concept of inclusive climate action, which is a concept being promoted by C40 and many leading cities globally. We know that people already marginalised in our city are likely to suffer disproportionate impacts from climate change and urban hazards.

29. The City will engage with vulnerable groups in the community to gain a clearer understanding of how climate-related issues are affecting them. The City will also collaborate with other organisations to advocate for more equitable access to clean energy and resilient housing. As part of our emergency preparedness work, we will look at how we can provide more options for respite for vulnerable community members during extreme weather events.

30. The City acknowledges the importance of the living cultural practice of caring for Country. The Gadigal of the Eora Nation used resilient land management practices for thousands of generations. The City will enhance its environmental program by working with Aboriginal and Torres Strait Islander groups and investing in knowledge and practices that restore natural equilibrium by caring for Country. This will also contribute to the achievement of the City's Stretch Reconciliation Action Plan goals.

Environmental

31. This Strategy provides a focussed, realistic plan of action for the City to follow to improve environmental performance in its own operations and in the LGA over the next five years. Details of environmental targets and actions are outlined within the Strategy.

Economic

32. The Strategy emphasises the opportunity provided by the growth of the green economy. The green economy covers activities ranging from environmental law and sustainable goods and services to advocacy, education, regulation and advisory services.

33. Sydney is at the heart of Australia's financial and professional services sector, as many capital raising and management and support services are located here. There is an opportunity for the city to be the centre for carbon and other trading systems. Sydney's strengths in the finance and professional services sectors will play an important role in raising capital, redirecting financial systems, and providing the knowledge that will help NSW and Australia become renewable energy superpowers.

34. The city also has a dynamic entrepreneurial sector that is developing solutions to climate change and methods for building a circular economy.

35. The City's forthcoming Economic Strategy will explore further how the City can help develop the green economy.

Financial Implications

36. The Strategy includes actions that have capital and operational funding implications. These actions will be costed into individual capital project and operating budgets and incorporated into the City's approved Long Term Financial Plan which is subject to Council approval.

Relevant Legislation

37. Local Government Act 1993.

Options

38. The City is required to have an Environmental Strategy in accordance with the Local Government Act 1993.

39. It is not recommended to adopt a less comprehensive strategy on environmental issues as urgent action on climate change is needed and not proceeding as recommended would impact the City's ability to deliver against our targets, build our community's resilience to climate impacts and play our part in the fight against climate change.

Public Consultation

40. The draft Environmental Strategy 2021-2025 was placed on public exhibition from 19 May 2021 to 16 June 2021. Submissions could be made in writing or via the City of Sydney website online survey form, telephone or email.

41. The draft Environmental Strategy 2021-2025 featured on the City of Sydney's Sydney Your Say page. During the consultation period, there were 923 unique pageviews of the Sydney Your Say page and 287 downloads of the draft strategy.

42. The draft Environmental Strategy 2021-2025 was available for download on the City of Sydney website. It was available as an accessible PDF.

43. An exclusive ran with the Sydney Morning Herald, followed by a broad release. There were 159 media mentions, including syndication, with a total reach of 4.7 million.

44. The story was syndicated multiple times and was given broad play on radio as well as in bespoke environmental and industry publications.

45. Paid posts were created across LinkedIn, Facebook, Twitter and Instagram to drive people to the consultation page.

46. An online stakeholder briefing was held on 3 June 2021, with 160 participants. Online briefings were also provided to the City's Aboriginal and Torres Strait Islander Panel, The Better Buildings Partnership and the Sustainable Destination Partnership.

47. Over the public exhibition period, the City received a total of 121 submissions comprising ten email submissions and 111 submission surveys.

48. Feedback provided indicated strong support for the plan and the for City's ongoing action on climate change. Submissions highlighted the following key areas: concern that action by government, business and the community is not adequate to address the impacts of climate change; the desire for more use of walking and cycling and more support for electric vehicle charging; the importance of transitioning to renewable energy; the need for ambitious targets. Based on the nature of the feedback provided, the final Environmental Strategy 2021 requires only minor amendments to clarify the City's plans in several specific areas and to incorporate the most recent environmental data.

49. A summary of all feedback received and the City’s response is provided at Attachment D.

Alignment with C40 Cities Deadline 2020 framework

50. As a member of C40 Cities, the City is required to meet C40's Leadership Standards. This includes having a Council-endorsed climate action plan that fulfills a number of specific requirements e.g. ambitious carbon reduction targets.

51. The City provided a draft of the Strategy to C40 for review. C40's Executive Director has since written to the Lord Mayor to confirm that the Strategy meets these requirements and to highlight the high level of ambition contained in the plan and the focus on connecting with Aboriginal and Torres Strait Islander people.

52. The letter from C40 is provided at Attachment E.

KIM WOODBURY

Chief Operations Officer

Anna Mitchell, Acting Sustainability Director

Attachment A

Environmental Strategy 2021-2025

Environmental Strategy 2021 - 2025

July 2021

Contents

Contents

The City acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of this place we now call Sydney, and we acknowledge their continued connection to Country. We pay respect to Aboriginal and Torres Strait Islander Elders past, present and emerging.

Message from the Lord Mayor

In 2007 Sydney was the first Australian city to become carbon neutral and this year we met our 2008 goal of 70 per cent emissions reduction by 2030 – nine years early.

It's a great case of the City leading by example to take action on accelerating global warming.

In that time, we've worked to reduce the impact of our operations, buildings, people and transport on our local area and beyond. Organisationally, we're now proudly powered by 100 per cent renewable electricity, we've set up water reuse schemes in multiple parks, and increased recycling in our buildings by more than 40 per cent.

Similarly, we're working to improve the environmental performance of our local government area. We've planted more than 15,000 trees since 2005, given 11,000 households access to a food scraps collection service, and worked with the Better Buildings Partnership, City Switch and Sustainable Destinations Partnership. Across the local area, emissions have been reduced by 26 per cent.

But we know the world is not on track to meet the Paris Agreement targets and avert catastrophic climate change, and that we need to do more. We declared a climate emergency in 2019, together with 85 Australian councils representing 7.4 million people. As we plan the next four years of action, we need to collaborate more closely - with councils, all levels of government and business. We will increase our focus on addressing the impacts of climate change on vulnerable communities and collaborate with our First Nations' communities to care for Country.

The Covid and climate crises have affected our economies and communities. The actions we need to take to combat the former and to protect the latter are closely aligned. The pandemic has shown us that swift action is possible. It has also shown us that by aligning actions globally – underpinning global decision-making with the goal of protecting both people and planet – we create opportunities for a sustainable economic future.

Clover Moore
Lord Mayor

Caring for Country

For thousands of years, Aboriginal and Torres Strait Islander people lived sustainably on the land we now call Sydney. It was part of their Lore, the coming together of ecology and religion. It provided rules on how to interact with the land and community. Every generation had to understand how to maintain this.

However, since 1788, the landscape dramatically changed due to the built environment and expansive urban development. This resulted in the breakdown of the natural ecological systems and the loss of traditional and sustainable forms of land management.

Today, as we face the challenge of climate change and pandemics, there is the urgent need to review our relationship with the land and how we face those challenges.

Community consultation to inform The City of Sydney's Sustainable Sydney 2050 plan, shows overwhelmingly that the wider community wants a response to climate change and at the First Peoples of Australia Dialogue Forum in 2019, participants stated that 'Sustainability, carbon neutrality, water positive and global warming action' were priority aspirations for Sydney's future.

The City's Environmental Strategy 2021-2025 responds to those community concerns but we must make sure that this is a living document and that actions are implemented.

The priorities and concerns of the community are in sync with Aboriginal and Torres Strait Islander peoples' perspectives. 'Caring for Country' means to participate in activities on land and in water with the objective of sustaining ecological, spiritual and human health.

By drawing on Aboriginal and Torres Strait Islander peoples' experience and knowledge there is an opportunity for all of us in the community to integrate those perspectives in urban policies. Integration in policy areas of land use planning, design and natural resource management can encourage sustainable practices and reduce socio-spatial disadvantage which is primarily driven by the market and not just a result of government policies.

Sustainable land management is the use of land to meet changing human needs while ensuring long-term socioeconomic and ecological functions of the land.

Aboriginal and Torres Strait Islander people believe that there is a balance in everything and that is the challenge for every one of us to identify and understand. What does the balance actually look like and how do we achieve it?

The Environmental Strategy 2021 – 2025 is an opportunity for us as a community to rise to the challenges ahead of us and to reach a balance in the way we live.

Sydney is an amazing place to live, play and work. We want to make sure that future generations can enjoy it too.

Cathy Craigie

Writer, Gamilarray woman and
City of Sydney resident

Image: Bangala, a public artwork by Jonathan Jones and Aboriginal Elder Aunty Julie Freeman, is at Green Square's Gunyama Park Aquatic and Recreational Centre. The work provides close links to the area's history and traditional culture and represents Eora bark water carriers. Photographer: Silversalt Photography

Executive summary

The world is heating up – and it's happening faster in Australia. The Paris Agreement aims to halt warming to 1.5°C or well within 2°C above pre-industrial levels. But the world is already close to 1.2°C above pre-industrial levels, and the speed of heating is accelerating.[1]

Climate change will increase the scale and frequency of extreme weather events, and it will affect the health of people – and of the natural and built environment – as well as the liveability of the city. Infrastructure for energy, water, transport, telecommunications and food production will come under increasing pressure.

Cities contribute to climate change. According to UN Habitat, they consume 78 per cent of the world's energy.[2] So inaction comes at a high price, motivating the City of Sydney to want to be a global leader in tackling the environmental and economic effects of climate change.

We have already worked hard to develop sophisticated strategies with ambitious targets to make our city resilient; protect our residents, workers, visitors and businesses; and restore the natural environment. We are making strong progress toward our targets of reducing carbon emissions in the local area by 70 per cent by 2030 and getting to net zero emissions by 2035.

Our operational achievements include improving our energy and water efficiency and waste management, making deep cuts in our operational emissions, and expanding the sustainability of our transport fleet. We have also contributed to green measures for our local area, ranging from helping to reduce greenhouse gas (GHG) emissions, to allocating $3.8 million in environmental grants since 2016.

This Strategy has four directions and 23 actions, and outlines the most important measures to help make Sydney a sustainable and resilient city. Key operational measures include phasing out natural gas from our operations, and using alternative water sources to keep our parks green. We will also look for opportunities to reduce embodied carbon in our supply chain, electrify our fleet, and support the growth of a circular economy.

The City is committed to growing the number of net zero emissions buildings. We have advocated for better performance standards for new buildings; now we will focus on opportunities to make existing buildings more energy- and water-efficient, with improved waste management.

Transport is a major source of air pollution. In 2017–18, the sector contributed 16 per cent of emissions in Sydney. The City can't control many aspects of transport, which is overseen by the NSW Government, but we can advocate for more walking, cycling and public transport, and for the transition to zero emissions fuel sources.

We will also continue to work on initiatives that mitigate the urban heat island effect, improve air quality and contribute to a water-sensitive city that protects biodiversity, green spaces and waterways. Our Draft Greening Sydney Strategy outlines how we will work towards increasing overall green cover to 40 per cent of the local area, including at least 27 per cent tree canopy, by 2050.

We must act urgently to create a city that is more resilient, inclusive and regenerative.

1 http://www.climaterealitycheck.net/

2 https://www.un.org/en/climatechange/climate-solutions/cities-pollution

Direction 1
Smart and resilient City operations

1 Deliver energy, water and resilience outcomes through City asset design and management

2 Keep City parks green with water efficiency and alternate water sources

3 Regenerate the environment through the City's carbon-neutral commitment

4 Ensure the City's programs and services use resources efficiently

5 Reduce the amount of operational waste sent to landfill through avoidance and resource recovery

6 Reduce embodied carbon in our supply chain and support circular economy outcomes

7 Manage environmental risks and issues

Direction 2
Efficient, future-proof buildings and transport powered by renewable energy

8 Improve energy efficiency, water efficiency and waste management in existing buildings

9 Drive all new buildings to be resource-efficient and net zero energy

10 Support the transition to zero-emissions transport

11 Encourage community uptake of renewable electricity and stimulate the green economy

12 Support our residents to reduce utility costs and environmental impact

13 Help businesses to reduce utility bills and demonstrate environmental achievement

Direction 3
Regenerative and inclusive city

14 Incorporate the perspectives of Aboriginal and Torres Strait Islander people in environmental action

15 Address equity issues related to climate change

16 Build community resilience and momentum on climate action

17 Support the development of circular economy systems

18 Drought-proof the city by facilitating water recycling

19 Regenerate polluted waterways, air and land

20 Reduce the amount of residential waste sent to landfill through avoidance and resource recovery

Direction 4
Strong foundations for delivery

21 Build staff capability to deliver environmental outcomes

22 Deliver high-quality internal and external environmental reporting and communications

23 Employ efficient and effective decision-making processes

Our achievements since 2016

City operations

Reduced emissions by estimated

76%

including 31 per cent through energy efficiency and on-site solar

100%

renewable electricity from July 2020

Installed a grid-scale battery at our Alexandra Canal depot in 2018

Installed **2MW of onsite solar photovoltaic panels** on our properties

Composted 7 tonnes of food waste a month from City properties

City fleet has 19 electric cars, 40 hybrid cars, 70 hybrid trucks and one fully electric truck

Set up water reuse schemes in twenty parks, providing **80,000 litres of non-potable water per day in summer**

Established a precinct-scale recycled water scheme at Green Square

Increased recycling in our buildings from 28 per cent in 2018 to 42 per cent in 2020

Introduced guidelines for reducing single-use items to help staff and event managers avoid waste and increase recycling

Developed Sustainable Design Technical Guidelines for our assets

Introduced a Sustainable Procurement Policy

Local Area

Emissions reduced by **26%** to June 2020

Worked with NSW Government to install an air quality monitoring station

Over **9,500** street lights converted to LED since 2012

Owners corporations in **172 apartment buildings saved over $4 million reducing emissions by 20,000t and water by 697ML**

75% zero

of Better Buildings Partnership members committed to net zero emissions

Signed up more than 30 leaders from the hospitality, events and property sectors to the Sydney single-use pledge

Established the Sustainable Destination Partnership, which has 46 members

Advocated for a National Australian Built Environment Rating System (NABERS) tool for apartment buildings, with 89 buildings rated

Laid a recycled water pipeline in George Street in the city centre

Installed **24.6 kms** of separated cycleways since 2010

11,000 households have access to a food scraps collection service

Made e-waste recycling collections available to all residents

Allocated over $3.8 million in environmental grants

Increased canopy cover from **15.5%** in 2008 to **19.2%** in 2020

Created **11.5ha** of new green space since 2009

Achieved 6 Star Green Star – Communities rating for the Green Square town centre

Established Sydney City Farm

Planted 15,052 street trees since 2005

Our targets

City operations

Targets	Latest data
Carbon	
80% reduction in emissions generation by end June 2025, from 2006 baseline	31% reduction (June 2020) Estimated 76% reduction by June 2021
Maintain emissions from the City's fleet below 2014 levels, and aim to achieve zero fleet emissions by 2035 or sooner	40% reduction (June 2020)
Water	
Zero increase in potable water use annually until 2025, from 2006 baseline	4% reduction (June 2020)
Waste	
90% diversion from landfill, with 50% source separated recycling, from City-managed properties by end June 2025	92% landfill diversion (September 2020) 42% recycling (December 2020)
15% reduction in total waste generated from City-managed properties by end of June 2025, from 2019 baseline	945 tonnes (2019 baseline)
70% resource recovery of waste from office strip out and fit out by end of June 2025 [4]	Data not yet available
90% resource recovery of construction and demolition waste generated and managed by City operations by end June 2025	89% (June 2020)
50% resource recovery of waste from City parks, streets and public places by end June 2025	46% (June 2020)

4 This is a new target and data is not yet available. The City will establish a measurement process later in 2021

Local area

Targets	Latest data
Carbon	
70% reduction in greenhouse gas emissions by 2030, from 2006 baseline	26% reduction (June 2020)
Net zero emissions by 2035	
50% of electricity demand met by renewable sources by 2030 [5]	17.7% (NSW average, December 2020)
Water	
Reduce residential potable water use to 170 litres per person per day by 2030	223 litres/person/day (June 2019)
10% reduction in non-residential potable water use per m2 by 2030, from 2019 baseline	2.32 litres/sqm/day (June 2019)
50% reduction in the annual solid pollution load discharged to waterways via stormwater by 2030 [6]	Data not yet available
15% reduction in the annual nutrient load discharged to waterways via stormwater by 2030 [7]	Data not yet available
Greening	
Increase overall green cover to 40% across the local area, including 27% tree canopy by 2050	33% green cover (2020) 19.2% tree canopy (2020)
Waste	
90% diversion from landfill of residential waste, with 35% as source-separated recycling by 2030	45% diversion, 27% source-separated recycling (June 2020)
90% diversion from landfill of commercial and industrial waste by 2030 [8]	56% diversion (estimate, June 2016)
90% diversion from landfill of construction and demolition waste by 2030 [9]	77% diversion (NSW average, June 2018)
15% reduction in residential waste generation per capita by 2030, from a 2015 baseline	12% per capita reduction in waste since 2015 (June 2019)

5 Comprehensive data on renewable electricity use for our local area is not available. Therefore the City uses data from OpenNEM that measures the average amount of renewable electricity in the NSW grid.

6 The City anticipates it will be able to report against this target later in 2021.

7 The City anticipates it will be able to report against this target later in 2021.

8 The City does not have jurisdiction over commercial and industrial waste collection. Data on landfill diversion rates for commercial and industrial waste is not available at a local area level. In 2016 the City undertook a survey to establish an estimated landfill diversion figure. The City will repeat this survey in 2021 to enable an updated figure to be reported.

9 The City does not have jurisdiction over construction and demolition waste collection. Data on landfill diversion rates for construction and demolition waste is not available at a local area level. Therefore the City uses the NSW average landfill diversion figure for this waste stream, supplied by the EPA.

Why we need to act

A heating planet

Signatories to the Paris Agreement have agreed to halt warming to 1.5°C or well below 2°C above pre-industrial levels. Yet global heating is already approaching 1.2°C above pre-industrial levels [10] and it is accelerating.

The Intergovernmental Panel on Climate Change [11] says that to limit global warming to 1.5°C global emissions must be 45 per cent lower than 2005 levels by 2030. To date, commitments by countries around the world are nowhere close to being on track to limit global heating.

Global heating is occurring faster in Australia, where the average surface air temperature has already increased by more than 1.4°C since 1910. [12] The CSIRO/Bureau of Meteorology *State of the Climate 2020* report identified 2019 as Australia's hottest year on record – and this would be an average year in a 1.5°C warmer world. [13] High temperatures exacerbated the Black Summer bushfires and widespread drought [14].

The Bureau of Meteorology recently gave evidence to the Senate Standing Committee on the Environment and Energy that shows Australia is on track for 4.4°C of warming this century.[15] This would be catastrophic for our health, economy and environment. Many areas would be unliveable and mass extinctions would take place.

Climate change is projected to increase the magnitude and frequency of extreme weather events. These will affect urban infrastructure systems for energy, transportation, telecommunications, water and wastewater, solid waste and food production. [16]

In January 2021, the Climate Targets Panel, an independent group of Australia's most senior climate scientists and policymakers, said in a report that to comply with its commitment to reduce warming by 2°C, Australia would need to reduce its emissions to 74 per cent below 2005 levels by 2030, and reach net zero emissions by 2045. [17] To achieve a 1.5°C target, it would need to cut emissions by 74 per cent by 2030 and reach net zero emissions by 2035.

Australia's emissions fell 4.4 per cent in the year to September 2020, due to the continued rise in renewable electricity production and the impact of COVID-19 restrictions.[18] However, Australia needs to increase its annual emissions reductions.

For this reason, the City of Sydney joins international leaders, the scientific community, major business groups, and all state and territory governments in setting and working towards a net-zero target.

Images (Above): Storm in Sydney 2020. © City of Sydney. (Below): George Street during the black summer bushfires in 2019. © VirtualWolf

10 http://www.climaterealitycheck.net/

11 https://www.ipcc.ch/sr15/chapter/spm/

12 https://www.climatechangeinaustralia.gov.au/en/changing-climate/climate-trends/australian-trends/

13 http://www.bom.gov.au/state-of-the-climate/

14 https://theconversation.com/yes-australia-is-a-land-of-flooding-rains-but-climate-change-could-be-making-it-worse-157586

15 https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commrep/5ca35f98-9c86-4d68-bd04-327e34cfef3e/&sid=0002

16 https://resourcecentre.c40.org/resources/assessing-risks-in-cities

17 https://www.climatecollege.unimelb.edu.au/australias-paris-agreement-pathways

18 https://www.industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-updates

The cost of inaction and climate risk

The economic benefits of emissions reduction far outweigh the costs of extreme weather events if nothing is done.

A Climate Council report states that extreme weather events have cost Australia $35 billion over the past decade, which is double the cost in the 1970s. [19] By 2038, these events, as well as the impacts of rising sea levels, could cost the Australian economy $100 billion every year.

The University of Melbourne recently estimated that not meeting the Paris Accord target from now to 2050 could cost Australia $1.19 trillion. [20] This is due to infrastructure damage ($611 billion from lost property values), agricultural and labour productivity losses ($211 billion), and the effects on biodiversity and human health ($368 billion).

Sixty of the world's central banks, including the Reserve Bank of Australia, have warned that without action on climate change, global gross domestic product (GDP) could fall by 25 per cent by 2100.[21] This would be reduced to 4 per cent if global heating is limited to 2°C.

Business responses

The Australian Prudential Regulation Authority (APRA) has been advising large financial institutions about the financial risks posed by climate change and the possibility of future lawsuits if no action is taken. [22]

According to APRA, banks and insurers are preparing for worsening bushfire seasons and more extreme weather events. [23] This will push up the cost of insurance premiums and lead to millions of people being uninsured, with resulting pressure on the financial system.

In response, institutions are moving away from investing in or lending to climate-damaging projects and shifting towards technologies for efficient and clean energy, sustainable farming and carbon drawdown - processes that draw carbon out of the atmosphere and lock it away such as in soils.

To date, more than 135 globally significant banks – including Australia's Big Four – and insurers have announced they will divest from coal mining and/or coal-fired power plants. [24]

Recognition of climate risk

To help investors make informed decisions about which companies will endure and prosper as the climate changes, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures (TCFD). [25] This requires companies to incorporate climate-related risks and opportunities into their risk management and strategic planning processes.

At November 2020, 58 of Australia's top 100 companies were following the TCFD and 78 per cent of S&P/ASX 100 companies had acknowledged climate change as a financial risk to their business. [26]

19 https://www.climatecouncil.org.au/resources/hitting-home-compounding-costs-climate-inaction/

20 https://sustainable.unimelb.edu.au/news/what-are-the-full-economic-costs-to-australia-from-climate-change

21 https://www.theguardian.com/australia-news/2020/jun/26/reserve-bank-warns-of-25-gdp-loss-by-2100-unless-action-taken-on-climate-change

22 https://www.theguardian.com/australia-news/2021/mar/02/climate-change-could-put-insurance-out-of-reach-for-many-australians

23 https://www.theguardian.com/australia-news/2021/mar/02/climate-change-could-put-insurance-out-of-reach-for-many-australians

24 https://ieefa.org/finance-exiting-coal/

25 https://www.fsb-tcfd.org/about/

26 https://home.kpmg/au/en/home/media/press-releases/2020/11/asx100-companies-ahead-of-global-firms-in-acknowledging-climate-risks-20-november-2020.html

Green recovery – the benefits of action

Around the world, cities have been at the forefront of responding to the COVID-19 crisis. Measures to help economies and communities recover from the pandemic focus on building an equitable and sustainable 'new normal'. This means being able to contain future pandemics, and addressing the immediate and longer-term impacts of climate change on our economies, ecosystems and populations.

A green recovery embeds a sustainable vision for business, for equity across our populations, and for greener, healthier living spaces.

As outlined by the Organisation for Economic Co-operation and Development, cleaner air, healthier water, effective waste management and enhanced biodiversity protection help make communities more resilient and less vulnerable to pandemics.[27] This has the potential to boost economic activity, generate income, create jobs and reduce inequalities.

ClimateWorks Australia's *Decarbonisation Futures* report found that if governments directed stimulus spending to climate solutions, Australians could use available technologies to reach net zero emissions by 2035.[28]

Examples include photovoltaic technology for homes and commercial buildings; large-scale renewable energy and storage; electric vehicle charging; recycling in supply chains; and planting and protecting trees to sequester carbon.

This would also create more jobs. Every $10 million invested in the renewable energy sector creates 75 jobs, and energy efficiency 77 jobs, compared to 27 jobs for every $10 million invested in fossil fuel industries.[29]

Image: Sydney park wetlands. © City of Sydney

27 http://www.oecd.org/coronavirus/en/themes/green-recovery

28 https://www.climateworksaustralia.org/resource/decarbonisation-futures-solutions-actions-and-benchmarks-for-a-net-zero-emissions-australia/

29 https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/can-a-low-carbon-recovery-agenda-create-jobs-and-help-the-economy

As a centre for finance, investment, insurance and innovation, Sydney is well placed to support a green recovery by providing capital, knowledge and services to renewable new industries. The NSW Government wants to establish Sydney as a world-leading carbon services hub by 2030, as part of the state's Net Zero Plan. [30]

The City has called on the NSW and Australian governments to establish a 'just transition' authority, to secure workers' rights and livelihoods by diversifying jobs and investing in communities that depend on fossil fuels. Government investment is needed to develop new industries and employment opportunities in communities that will be affected by decarbonisation.

The role of cities

Cities are major contributors to climate change. According to UN-Habitat, cities consume 78 per cent of the world's energy. [31] C40 Cities has calculated that urban areas produce more than 70 per cent of GHG emissions. [32]

However, cities also have a vital role in managing climate change. Individually and collectively, cities can drive change, influence future policy and demonstrate the power of collaboration for communities and governments, addressing the impacts of climate change globally.

C40 Cities

The City of Sydney is part of C40 Cities, a network of 97 megacities, representing more than 700 million (one in 12) of the world's citizens and a quarter of the global economy. C40 Cities members collaborate, share knowledge and drive meaningful, measurable and sustainable action on climate change.

The City's Environmental Strategy 2021-2025 delivers on a C40 Cities requirement to develop an inclusive and equitable climate action plan that meets the aims of the Paris Agreement and commits to a green recovery from COVID-19.

Image: The Sydney CBD viewed from Pyrmont. © City of Sydney

30 https://www.environment.nsw.gov.au/topics/climate-change/net-zero-plan

31 https://www.un.org/en/climatechange/climate-solutions/cities-pollution

32 https://www.c40.org/ending-climate-change-begins-in-the-city

What we heard from the community

Our extensive community engagement work to inform Sustainable Sydney 2050 revealed an overwhelming desire for a response to climate change. [33]

It is an important issue for people of all ages, genders, nationalities and socio-economic groups. In an online survey, 86 per cent of respondents agreed that the City should invest in and advocate for addressing climate change. How we manage our environment and climate change is a top priority for high school and primary school students, who want their voices heard because Sydney in 2050 is their future.

Residents at community sessions emphasised that they wanted better waste management, with more recycling, reuse and waste reduction, especially of plastic.

Many participants want more education programs and initiatives that encourage people to reduce their waste, and for the City to use new technologies to manage waste and recycling more efficiently.

Business owners acknowledge that a sustainable environment is essential for the City's future and are already preparing for changing consumer behaviours.

Citizens' jury

In August 2019, a citizens' jury of 43 randomly selected Sydneysiders came together over three months to imagine the city in 30 years' time. Those who were living in Sydney 30 years ago recognised that it has changed dramatically in that time and will continue to change over the next three decades.

The jury envisioned the city as a leader in reversing climate change and restoring the natural environment. It wants space to be maximised for the greater community good (such as more spaces for trees and less for cars); buildings to be made of materials that support the environment, not degrade it; and people to transform their waste into materials that feed back into the economy.

The jury produced a vision for Sydney that bridges the past to the future. [34] It concluded by saying: "Our hope for Sydney in 2050 is that it is a sustainable, inclusive, diverse city that is welcoming and embraces people from all walks of life. A city where people want to live."

Image: The City hosted summits with children and young people as part of planning for Sydney 2050. © City of Sydney

33 https://www.cityofsydney.nsw.gov.au/-/media/corporate/files/2020-07-migrated/files_f/final-community-insights-low-rez-web.pdf

34 https://www.cityofsydney.nsw.gov.au/-/media/corporate/files/2020-07-migrated/files_c/citizens-jury-concepts-report.pdf

01

Smart and resilient City operations

Reducing our footprint

The City has worked on minimising our environmental footprint for more than a decade. This has involved introducing programs to save water and energy, and minimise waste. Where possible, we have also switched to renewable power sources to reduce our emissions. While it is incumbent on us to reduce our own environmental footprint, it is by seeking transformative environmental performance that we also positively influence change in the operations of our service providers, businesses and communities and establish Sydney as a global exemplar in environmental performance.

A net-zero organisation

At June 2020, efficiency projects and generation of renewable electricity on our properties had reduced the City's operational emissions to 31 per cent below 2006 levels. From July 2020, we began using 100 per cent renewable electricity sources, and we expect our emissions to drop to more than 76 per cent below 2006 levels by the end of June 2021.

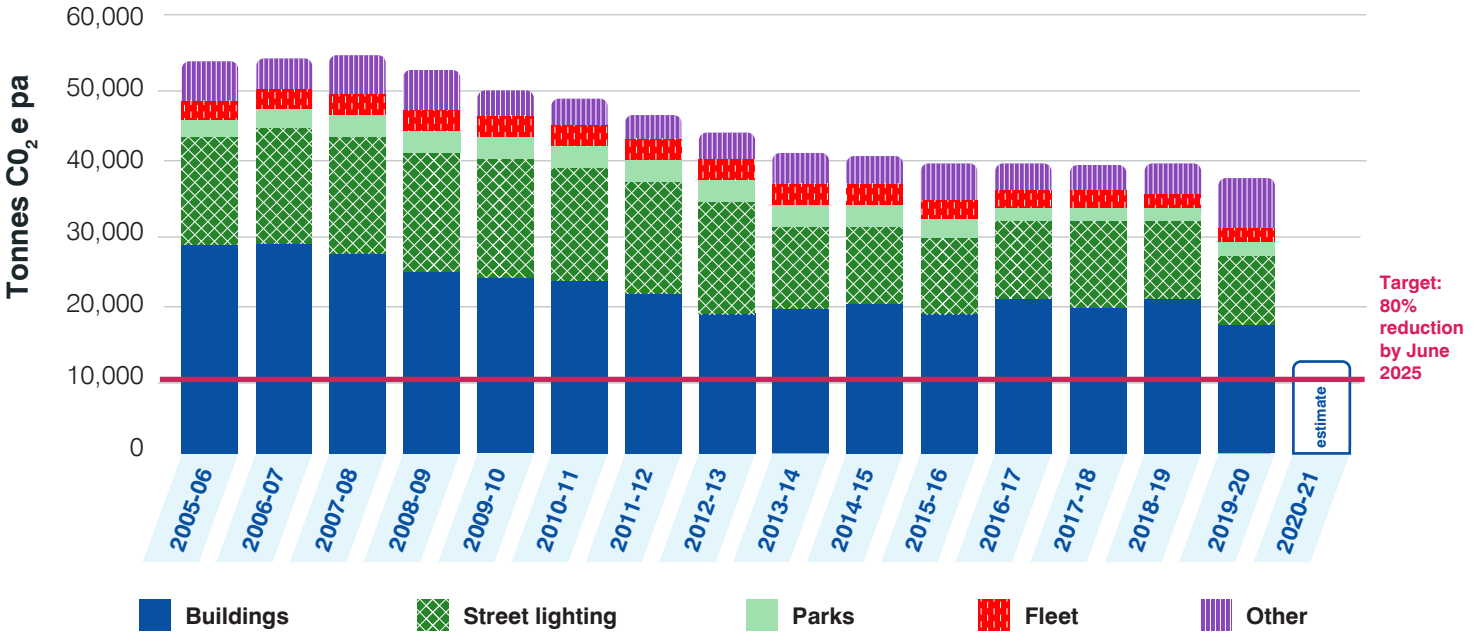
The City has been certified as a carbon-neutral organisation under the Australian Government's Climate Active program since 2011. We achieved energy savings through significant projects like our Major Properties Efficiency Project to improve lighting, heating and cooling systems.

We have been working with Ausgrid to install LED street lights, which improve lighting quality and reduce energy consumption and bills. Installation is due to be completed in 2022.

Better monitoring of energy consumption and other utilities in our properties and parks has also led to better detection and response times when problems are detected.

In July 2020, the City began a 10-year 100 per cent renewable electricity contract for power from the Sapphire Wind Farm in New England, the Bomen Solar Farm near Wagga Wagga and the community-owned Repower Shoalhaven solar farm. This will reduce our annual emissions by around 24,000 tonnes initially, based on 2019–20 levels.

Chart 1: Operational emissions history



At December 2020, the City had installed over 2MW of onsite solar PV panels on our properties. Onsite renewable electricity generation is important as it provides the energy directly where it is used, avoiding system losses and the need for costly electricity network infrastructure. Also, it pays for itself by saving on energy bills.

The City has also installed over 2MW of trigeneration and cogeneration, reducing grid electricity demand by around 6,000 MWh a year, avoiding 5,340 tCO2e of grid electricity emissions.

In partnership with the transmission operator TransGrid, we have also installed a grid-scale battery at our Alexandra Canal Depot, which in conjunction with 1665 rooftop solar panels enables the site to generate more electricity than it consumes.

We have also been transitioning to electric and hybrid vehicles, and have introduced eco-driving strategies.

Since 2020, we have been buying nature-based offsets, which remove carbon from the atmosphere. In 2021, we sourced our offsets from a Tiwi Island traditional land management cultural burn project in northern Australia. This is an important partnership that also delivers toward the City's Aboriginal and Torres Strait Islander economic development plan. The City will also continue to purchase carbon offsets to remain a certified Carbon Neutral organisation under the Climate Active program with an increasing share of higher quality, nature-based carbon offsets.

Over the next four years the City will focus on leveraging its investment in efficiency measures, management systems and low emissions technology.

The City has made significant emissions reductions through energy efficiency and the use of renewable electricity. The next major opportunity to meeting our corporate target of 80 per cent reduction in emissions generation by end June 2025 on 2006 levels will be to procure renewable gas.

Renewable gas can be generated from composted food or the nutrients in wastewater, through an anaerobic digestion facility. Gas is then injected back into the gas grid to supply home and business gas needs, as natural gas does, but with a much lower carbon footprint. There is an emerging renewable gas market in NSW. An accreditation scheme will need to be established to enable gas customers, like the City, to purchase renewable gas credits, in a similar way to how renewable electricity from off-site sources is procured.

Image: © Bomen solar farm

City of Sydney goes 100 per cent renewable

The City of Sydney began using 100 per cent renewables to meet its grid electricity needs in July 2020. The renewables commitment will see the City's operations initially saving around 24,000 tonnes a year – equivalent to the power consumption of around 4,000 households.

The City's 2019–20 emissions were 31 per cent below our 2006 baseline, and our 2020–21 emissions are expected to be around 76 per cent below 2006 levels by using 100 per cent renewable electricity. Using 100 per cent renewable electricity is essential to achieve our commitment to reduce organisational emissions by 80 per cent.

The City purchases renewable power from Sapphire Wind Farm in the New England area, Bomen Solar Farm near Wagga Wagga, and the community-owned Repower Shoalhaven solar farm.

The shift to renewable energy in the broader electricity sector is happening much faster than anyone imagined as the cost of new renewable energy continues to fall. The NSW Government's *Electricity Infrastructure Investment Act 2020* now provides significant support to assist with the renewable energy transition.

The City estimates it may save up to $500,000 a year in electricity costs by sourcing its grid electricity from a renewable energy provider.

This chart shows potential emissions reductions from opportunities identified by the City and may be subject to change. For example, if more energy efficiency is deployed, the City would require less renewable electricity, and vice versa. Likewise, the City will continue to purchase additional high-quality carbon offsets to remain carbon neutral until renewable gas becomes available. Ultimately, the mix of energy efficiency measures the City deploys will be based on what is most feasible and cost-effective.

Operational emissions include all Scope-1 and Scope-2 emissions based on aggregated data for facilities and core activities. In addition, some Scope-3 emissions sources including fuel emissions from major contractors are included.

Chart 2: Operational emissions to 2025

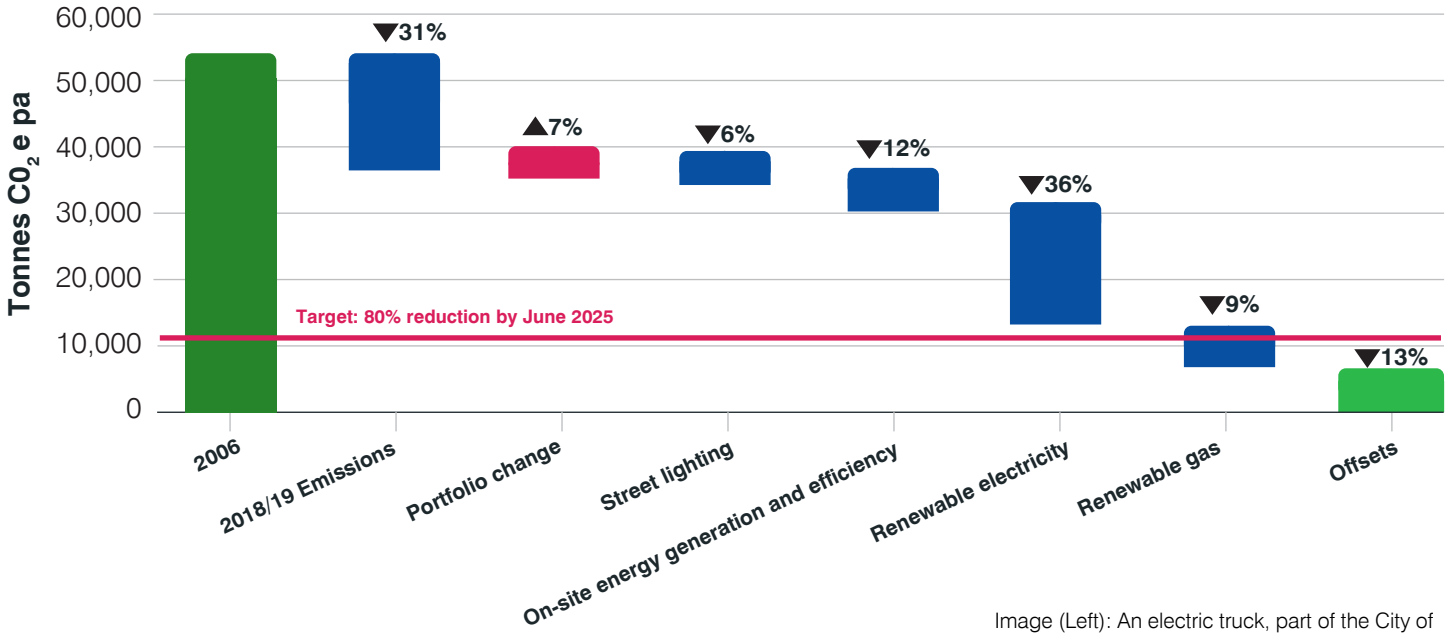


Image (Left): An electric truck, part of the City of Sydney fleet. © City of Sydney. (Right): Tiwi Island Carbon Project staff and Indigenous rangers. © Aboriginal Carbon Foundation

Water-sensitive operations

The City aims to keep potable water use below 2006 levels, but this been challenging because the area of parks and open spaces requiring irrigation has since increased by more than 50 per cent, and we have also grown our property portfolio.

To help drought-proof our parks, we have implemented water reuse schemes at twenty parks, established a real-time irrigation monitoring and control system, embedded sustainability key performance indicators into our service contracts and optimised performance of our water recycling schemes, water features and irrigation systems.

We are also installing water-efficient fixtures and fittings in our properties and training our staff and contractors to make sure they are proactively identifying, reporting and fixing leaks.

Chart 3 shows the City's operational water use since the baseline year of 2016. In 2019-20 we exceeded our target for the first time in a decade. Savings are due to the measures described above, with a portion of savings also attributed to increased rainfall and COVID-19 related closures of water intensive City sites such as aquatic centres and public buildings.

The City has contributed to minimising local flood risk and enhancing greening and urban cooling by retrofitting the stormwater management network with raingardens, wetlands, swales and traps that reduce stormwater pollution.

Image (Above): Most of Harold Park's irrigation needs are met by an extensive stormwater harvesting and treatment scheme.
© City of Sydney. (Below): © City of Sydney.

Chart 3: Operational water use history

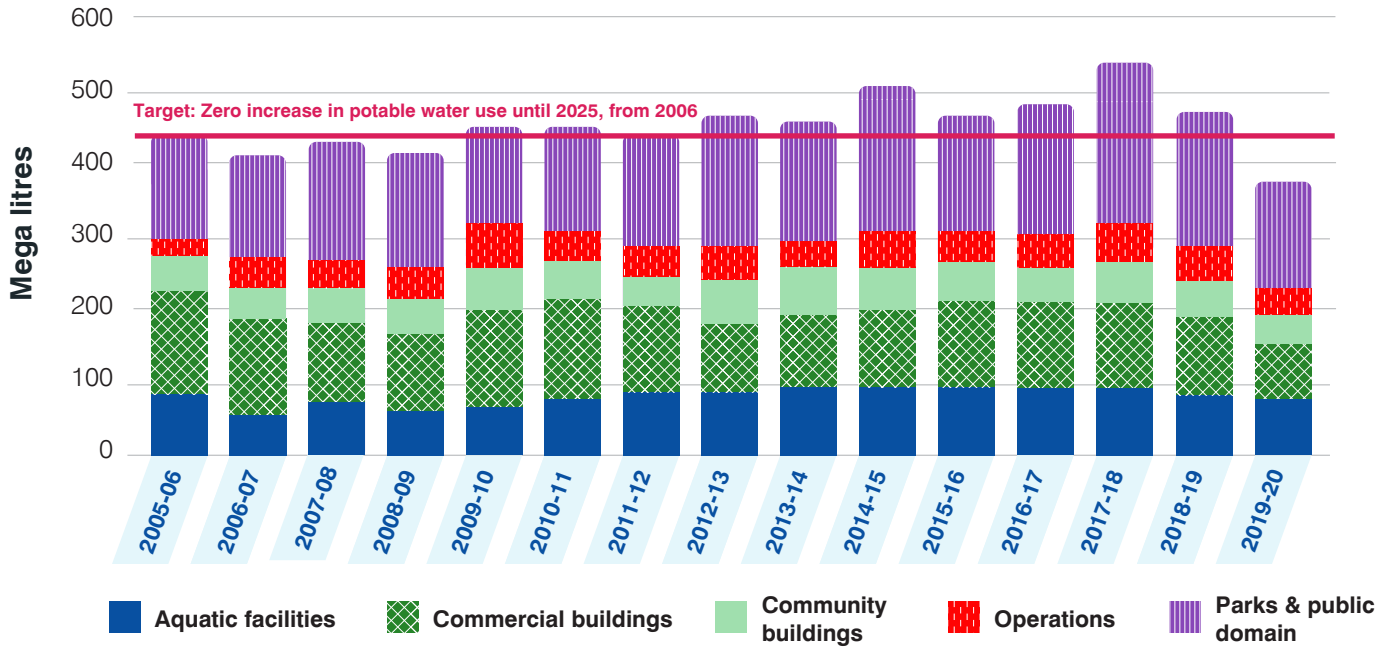


Image: Monitoring water reuse at Harold Park.
© City of Sydney

Reducing operational waste

We strive to show leadership in sustainability through our own management of waste and resources. As part of this effort, we created a digital platform to improve the accuracy and transparency of data on how we collect, report on and verify recycling and landfill from our operations. This also helps us better monitor our performance against our targets, and react more quickly to changes in waste types or volumes.

Recycling from City-owned buildings has increased from 28 per cent in 2018 to 42 per cent in 2020. We achieved this by introducing a separate food waste collection service and improving our education programs. Garbage that previously went to landfill is now sent to a processing facility where it is used to create fuel that displaces coal in a local brick kiln.

In 2019, the City also pledged to dramatically reduce single-use plastics by phasing out bottled water, straws, serveware, utensils and cups at our buildings and venues, and at events in our area.

Image (Above): Battery, mobile phone and light bulb recycling stations located at Green Square Library, one of the City's ten recycling stations. © City of Sydney. (Below): Getty Images.

Paving the way to better glass recycling

Around 14 per cent of glass collected from recycling bins during kerbside garbage collections can't be recycled and is instead stockpiled or sent to landfill.

To reduce the amount of materials going to landfill, the City supported and promoted the Paving the Way program, as a member of the South Sydney Regional Organisation of Councils (SSROC). The program focuses on using glass fines (crushed glass) instead of virgin sand for building roads and footpaths. This will increase the amount of collected glass that can be recycled from 65 per cent to 79 per cent, the equivalent of nearly 100 million glass containers each year. This Sydney-based initiative also reduces the transport of glass interstate and provides long-term markets for what was previously considered a waste product.

The program demonstrates collaboration on circular economy principles in procurement between local, regional and state governments. It is the first project under the Procure Recycled memorandum of understanding (MoU), signed by SSROC members in November 2019, to promote the procurement of recycled materials.

Climate resilience and risk management

The effects of climate change – such as increasing temperatures, changing rainfall patterns, flooding and rising sea levels – pose risks for the City's $5.3 billion portfolio of assets. The cost of not proactively managing these risks could be extremely high, so the City is diligent about ensuring climate resilience.

Managing risk begins with asset design. The Sustainable Design Technical Guidelines define the sustainability requirements for all our capital works and upgrade projects. This tool addresses all aspects of sustainability – from ecology to energy intensity and construction management practices.

We use our environmental management system (EMS) to comply with relevant legislation and apply a risk based approach to improve environmental processes. The scope of the EMS includes construction works, operations, property management, depots, libraries, community centres, aquatic centres, parks, events, and the purchase of goods and services.

We are strengthening processes related to management of contaminated land, piloting materials with low embodied emissions in construction works and developing climate risk assessments for projects. The City's commitment to environmental responsibility and reducing its environmental footprint spans the supply chains that support its operations. The City values suppliers who share a commitment to achieving leading and innovative environmental performance for a sustainable future. These values are reflected in our Sustainable Procurement Policy, Supplier Code of Conduct, and Sustainable Events Guidelines. The City has also implemented staff sustainability training, focusing on the foundations of environmental sustainability and embedding outcomes into work processes and behaviour.

Socially responsible investments

We avoid investments that are harmful to the environment and work with financial institutions and investment advisors to investigate suitable products that support positive environmental performance and meet our financial risk and return outcomes. Following market feedback, including from the City of Sydney, Westpac developed a new sustainable investment product known as a Green Tailored Deposit. The City was the first council to invest in Green Tailored Deposits, in late 2018. These deposits are associated with a defined pool of eligible assets which meet the Climate Bond Standard criteria including renewable energy, low carbon transport, low carbon intensity emitting buildings, waste and water products and are independently certified annually.

The Commonwealth Bank subsequently launched a similar product, with the City placing its first investment in early 2020.
At February 2021, the City held $85 million across thirteen tranches with Westpac's Green Tailored deposit, $5 million in a Floating Rate Note (FRN) / Sustainability Bond issued by Bank Australia and $95 million (sixteen tranches) in Climate Bond-certified Green Term Deposits with the Commonwealth Bank of Australia.

Image: Glebe Library © City of Sydney

Actions

Action 1

Deliver energy, water and resilience outcomes through City asset design and management

The City will continue to electrify its fleet to achieve zero emissions before 2035. We aim to trial an electric version of most vehicle and plant types while expanding our electric passenger fleet. Our ongoing driver behaviour program both improves safety and reduces emissions.

We will continue to power many of our facilities with onsite renewable electricity. Building on the 2MW already installed, we will add solar to new properties that present a strong business case. Because local power sources improve grid resilience, we will install batteries on our properties where this contributes to energy and cost savings.

The City aims to phase out natural gas from our operations. We will develop a plan to electrify gas-using assets and in the interim we will seek to purchase renewable gas to provide all our gas needs by 2025.

In the next four years, we will also focus on continuously improving the sustainability performance of our properties. As part of this, we will invest in metering and monitoring to address anomalies, which can significantly improve energy efficiency.

The City will continue to improve the Sustainable Design Technical Guidelines that define the sustainability requirements for our capital works and upgrade projects. An update of the guidelines in 2021 will streamline these requirements, particularly for small works and asset renewal programs and projects. Other codes and guides will also be updated to embed environmental requirements into asset design.

Keeping our city cool and resilient against extreme weather events will become increasingly important, so we will actively integrate climate risk assessments into asset design and management.

Action 2

Keep City parks green with water efficiency and alternate water sources

The CBD recycled water scheme will provide non-potable water for keeping parks green, as well as enabling City-owned and privately held buildings to connect to an alternate water source.

We will investigate and implement alternative water sources for priority parks. Some of them could be connected to the CBD recycled water scheme while others will require individual solutions. In addition, the City will analyse irrigation data to set a new target for parks irrigation, supported by efficiency plans.

Action 3

Regenerate the environment through the City's carbon-neutral commitment

The City is committed to maintaining carbon-neutral operations in perpetuity. Over the next four years, we aim to transition away from purchasing overseas offsets and instead use 100 per cent high-quality Australian regenerative offsets. We will also work with other offset purchasers and Indigenous organisations to help strengthen the local regenerative offset market and support expansion of traditional land management practices by providing and selling nature-based Australian carbon credit units.

Action 4

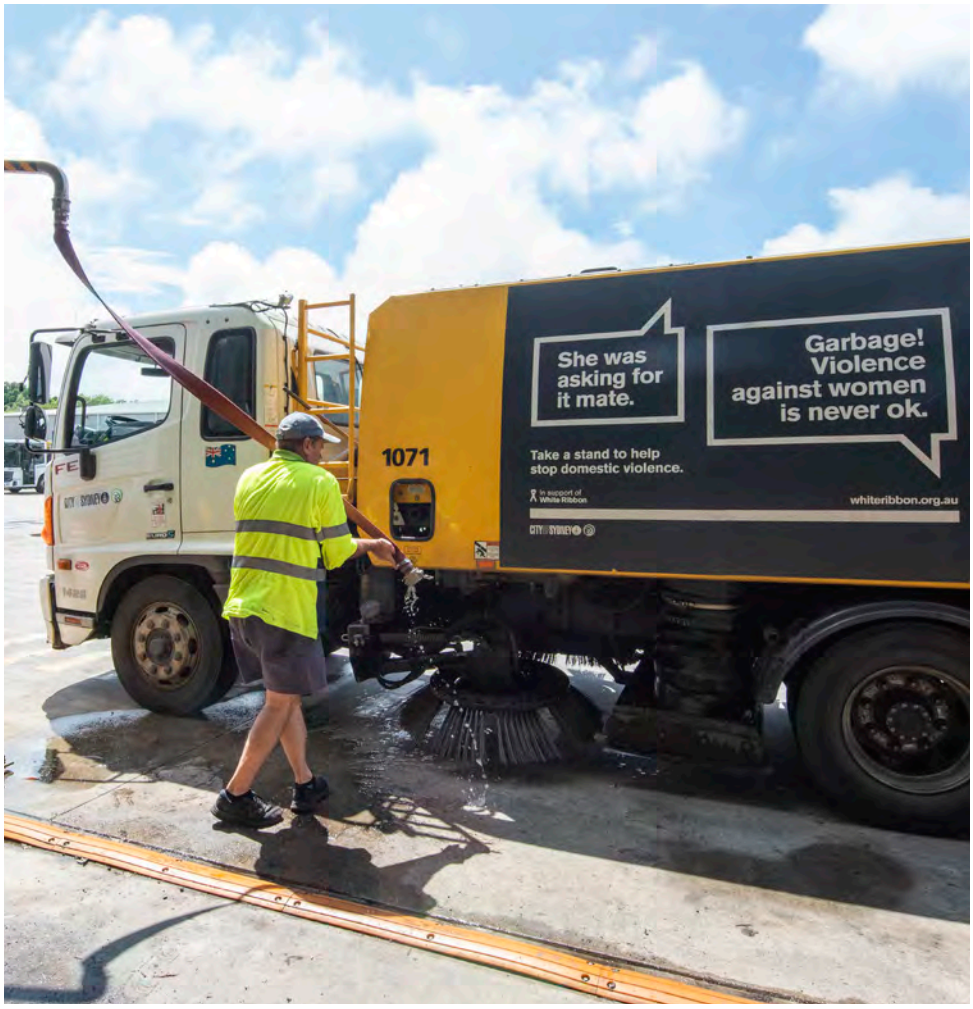
Ensure the City's programs and services use resources efficiently

We will strengthen the environmental performance of City-run events, venue management, external events on City land and grant-funded projects, ensuring they align with our Environmental Sustainability Policy.

Action 5

Reduce the amount of operational waste sent to landfill through avoidance and resource recovery

The City will collect more food waste from our largest commercial food service areas and our busiest buildings. Increasing awareness among staff and visitors about waste avoidance and what can be recycled is another priority. We will also improve resource recovery from our own construction and demolition projects and office strip-outs.



Action 6

Reduce embodied carbon in our supply chain and support circular economy outcomes

We will evaluate our supply chain for opportunities to reduce embodied emissions and deliver circular economy outcomes. Where those opportunities are identified, the City can specify increased use of recycled content in major contracts and collaborate with other local governments to establish standards for sustainable content in procured products.

Action 7

Effectively manage environmental risk and issues

The Environmental Management System (EMS) is a vital tool for managing environmental risks associated with our operations and services. We will continue to implement the EMS to improve the processes for managing and monitoring capital works programs, operational environmental impacts, and works on Council-owned contaminated land and provide relevant environmental controls training for staff.

Image (Previous page): Solar panels on the roof at Gunyama Park Aquatic and Recreation Centre © City of Sydney, Paul Patterson (This page): Monitoring building efficiency © City of Sydney, Jessica Lindsay

02

Efficient, future-proof buildings and transport powered by renewable energy

Working together

Opportunities abound in our local area to reduce emissions and move to a zero carbon economy

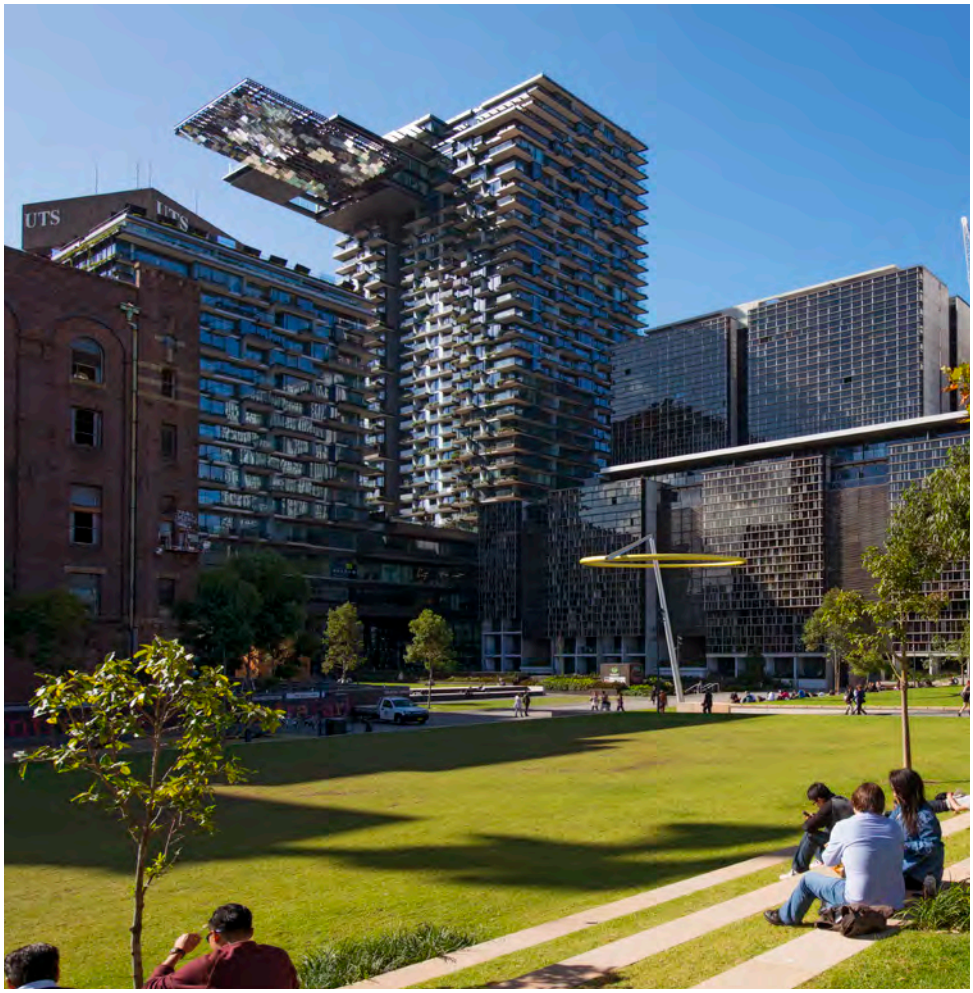
We partner with key commercial sectors in our local area to facilitate the transition to renewable energy sources by building owners, residents and commuters.

Through consistently providing up-to-date information to the public, establishing and facilitating business and community programs, and mechanisms such as environmental grants and sponsorship programs we influence environmental resilience in decision making. In addition, a dynamic entrepreneurial sector harnesses opportunity for a competitive, green economy through innovative new technologies and services, backed by a strong professional services sector.

Energy efficient buildings

The move toward net-zero-emissions buildings is gaining momentum, with key groups such as the Australian Sustainable Built Environment Council, private developers and the Property Council of Australia making significant contributions.

The minimum energy performance standards for new buildings and major retrofits of existing buildings are defined in the National Construction Code. This is updated every three years, and the 2019 update demanded significantly improved performance for new commercial buildings. The next review will focus on residential buildings.



Closer to home, the City has been working with developers, the NSW Government and other local councils to establish performance standards for new buildings, including multi-unit residential and commercial buildings, shopping centres and hotels. The standards cover energy efficiency, onsite renewable energy and offsite renewable energy recognised in the planning system. Importantly, these standards are tailored to the Sydney climate and are designed to be used by other councils across metropolitan Sydney.

New buildings are only part of the story. The performance of existing buildings presents the biggest opportunity to reduce energy and emissions, improve the comfort and resilience of occupants, and reduce costs.

Australia has the world-leading National Australian Built Environment Rating System (NABERS) scheme, which rates the performance of many building classes. As NABERS tools are developed and adopted voluntarily, there is potential to introduce mandatory disclosure so that tenants and owners are better informed about the performance of a building, especially when making purchasing decisions. We also have the Green Star sustainability rating and certification system. Under this system, buildings must be net-zero (fully electric, fossil-fuel free and 100 per cent powered by renewables) to achieve the highest possible 6 Star rating.

New technologies are helping more buildings meet their heating, cooling and cooking needs with electricity rather than natural gas, which is a fossil fuel. Our research shows that any increase in the use of natural gas would result in the city exceeding its carbon budget in decades to come due to the long

Image (Previous page): Fleetview building, a participant of the Smart Green Apartments program. © City of Sydney, Jessica Lindsay. (This page): Businesses in Sydney increasingly choose GreenPower. © City of Sydney, Jessica Lindsay

life of gas assets. The gas grid is likely to transition to renewable energy sources more slowly than the rate of greening underway for the electricity grid. This supports the case for electrification of new buildings. Existing buildings with gas connections should procure renewable gas as it becomes available for the remaining life of gas assets.

Reducing transport emissions

The transport sector produces emissions, through either petrol-fuelled vehicles or electricity generation to power transport systems and vehicles. In Sydney – especially in the city centre – poor air quality caused by vehicle emissions has been an issue for decades.

In 2019–20, the transport sector contributed 17 per cent of Sydney's carbon emissions, which are increasing every year. As at September 2020, transport emissions accounted for 17.6 per cent of Australia's total emissions [35].

With a growing population, the City is increasingly focused on the best use of public space. This means a shift is needed away from private vehicles, which have high emissions and take up space, to modes of transport with lower emissions that need less space - public transport, walking and cycling. This also reduces congestion and noise, improves air quality and leaves more space for greening.

The City does not control many aspects relating to transport sector emissions or the uptake of low- or zero-emissions vehicles. We are responsible for planning and development; working with residents and businesses to achieve sustainability outcomes; and implementing changes to roads (such as adding new cycleways) if the NSW Government approves.

We can help to reduce emissions from transport by partnering with the Australian and NSW Governments. The NSW Government is already committed to net zero emissions by 2050 and is developing programs to accelerate the uptake of zero-emissions technologies. It is best placed, for example, to facilitate the rollout of a network of electric vehicle charging stations.

To achieve our net zero by 2035 target, significant changes will be required to the transport system in our city: reducing and eliminating emissions at the point source; speeding up the shift from private cars to walking, cycling and public transport; transitioning public transport and private vehicle fleets to zero-emissions fuel sources and supporting off-street charging for electric vehicles.

Choosing renewable energy

In the year to March 2021, the National Energy Market delivered 27.6 per cent renewable energy, with 6.8 per cent from rooftop solar. [36] However, the NSW grid, which still relies on coal-fired power stations, delivered just 18.8 per cent renewable energy. About 5.7 per cent of electricity consumption in this state comes from rooftop solar.

The Australian Energy Market Operator (AEMO) has been modelling scenarios for the energy transition currently underway.[37] Its most ambitious scenario envisages a grid that is nearly 100 per cent renewable by 2040. The next iteration of the AEMO plan, to be released in 2022, will model renewable energy generation in excess of 100 per cent, to allow for renewable energy exports.

The NSW Government has passed the *Electricity Infrastructure Investment Act 2020* and released a roadmap to provide support and investment certainty for Renewable Energy Zones across the state. This is expected to deliver a NSW grid that is 60 per cent renewable by 2030. [38]

Renewable energy from wind and solar is now the cheapest form of new electricity generation in most areas of the world. The International Energy Agency notes that "solar PV is consistently cheaper than new coal- or gas-fired power plants in most countries, and solar projects now offer some of the lowest-cost electricity ever seen". [39]

Australia has one of the highest rates of rooftop solar PV installations in the world. At June 2020, more than 2.5 million units had been installed, with a combined capacity of almost 12 gigawatts – equivalent to six small coal-fired power stations.

But fewer buildings in the city have rooftop solar due to their small roof areas and height, and the complex decision-making in strata properties. The City estimates that there is approximately 400 megawatts of potential rooftop solar capacity in the local area. So far, 14 megawatts of rooftop solar has been installed, and at current installation rates, the City projects the local area will reach 50 megawatts by 2030.

Despite this, the number of significant installations is increasing, including on apartment buildings. In 2021, amendments to the *Strata Schemes Management Act 2015* (NSW) make it easier to install renewable energy in strata buildings, partly due to advocacy by the City.

35 https://www.industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-updates

36 https://opennem.org.au/energy/nem

37 https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp

38 https://www.theguardian.com/australia-news/2020/nov/09/nsw-unveils-32bn-renewable-energy-plan-with-focus-on-pumped-hydro

39 https://www.iea.org/reports/world-energy-outlook-2020

Encouraging residents and businesses to switch to renewable electricity

We've heard from residents and businesses that they overwhelmingly want a response to climate change and to reduce emissions [40]. At a national level, since the devastating Black Summer bushfires in January 2020, 82 per cent of Australians are concerned that climate change will result in more bushfires, up from 76 per cent in 2019 [41].

In response to this concern, the City has been supporting residents and businesses to switch to offsite renewable electricity, through a rolling program of communication and online education. Targeting renters and residents in apartments, a range of resources and marketing content promoting GreenPower have been shared online through the Renewable Energy Help Centre, social media, City of Sydney News and media partnerships.

Starting with the promotion of our own power purchase agreement, the City developed a range of resources to educate businesses about offsite renewable electricity options, including PPAs and GreenPower.

Image © City of Sydney, Jessica Lindsay

40 City of Sydney, Community Engagement Insights Report, 2020

41 The Australia Institute, Climate of the Nation report, 2020

Chart 4: Local area emissions history

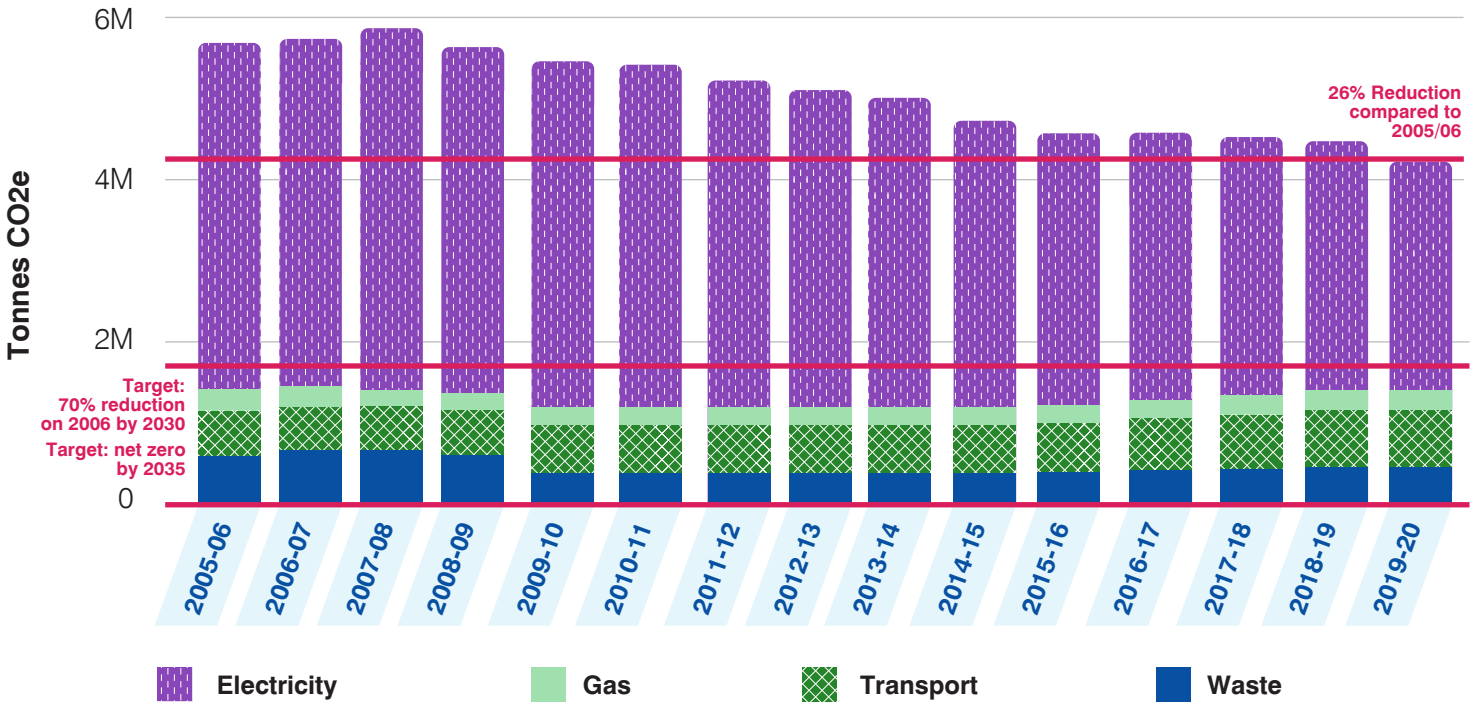
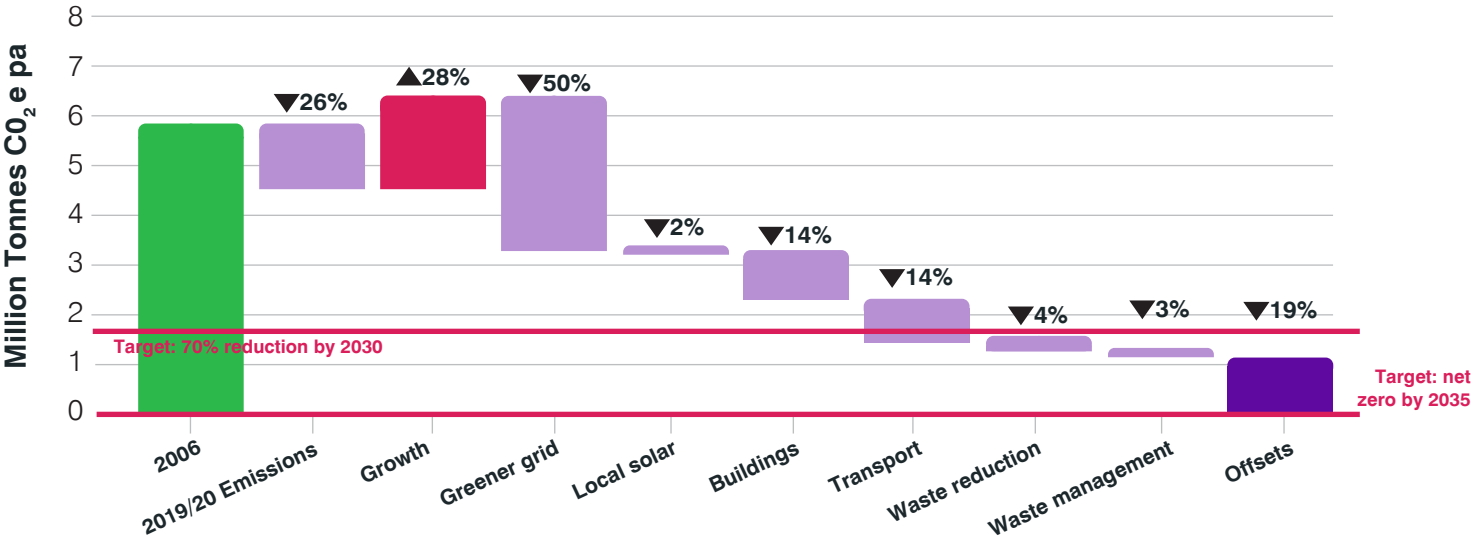


Chart 5: Local area emissions in 2035

The renewable energy transition is well underway in Australia. By 2035, increasing use of renewable energy in the electricity grid will help reduce GHG emissions. The greening of the grid is happening fast - whilst this chart shows emissions reduction of 50 per cent, it may be 70 per cent or more by 2035. The energy performance of new and existing buildings and the transport sector should have also improved, along with waste avoidance and management.



Green economy growth

The green economy covers activities ranging from environmental law and sustainable goods and services to advocacy, education, regulation and advisory services. This is particularly important for the City's economy, which is based on professional services and education rather than manufacturing.

In 2019, we studied the green economy in our local area and found that it was robust and fast growing. Based on 2018 figures, it:

– accounted for 16,000 workers (2.5 per cent to 3 per cent of employment), half of them employed in environmental law, advocacy, and research and development

– added $2.4 billion in gross value to the local economy

– generated $400 million in economic value in the sustainable finance sector

– provided strong connections to state and national green economies – for example, waste streams from the local area create around 500 processing jobs elsewhere

– created growing demand for green skills in occupations such as law, sales and marketing

– showed a doubling in employment compared to overall jobs growth, but lagged behind international peers.

This shows a robust base for growth in our green financial and professional services industries.

Sydney is at the heart of Australia's financial and professional services sector, as many capital raising and management and support services are located here. There is an opportunity for the city to be the centre for carbon and other trading systems. Sydney's strengths in the finance and professional services sectors will play an important role in raising capital, redirecting financial systems, and providing the knowledge that will help NSW and Australia become renewable energy superpowers.

The city also has a dynamic entrepreneurial sector that is developing solutions to climate change and methods for building a circular economy.

The City's forthcoming Economic Strategy will explore further how we can help develop the green economy.

CleanTech knowledge sharing grows Australia's green economy

One of the key programs under the City of Sydney's Tech Startup Action Plan is the Visiting Entrepreneur Program (VEP). Since its November 2017 launch, the VEP has brought high-profile international entrepreneurs to Sydney to share their expertise and knowledge with the local tech startup community. The program has delivered 74 events for over 6,500 founders, and in doing so, helped to foster a culture of entrepreneurship and innovation and raise awareness of Sydney's tech startup ecosystem globally.

The 2020 CleanTech program was disrupted by COVID-19 restrictions. However, due to the importance of the content, amount of planning that was already complete and the need to support this vulnerable part of the tech startup ecosystem, we decided to adapt the program and run a virtual event series.

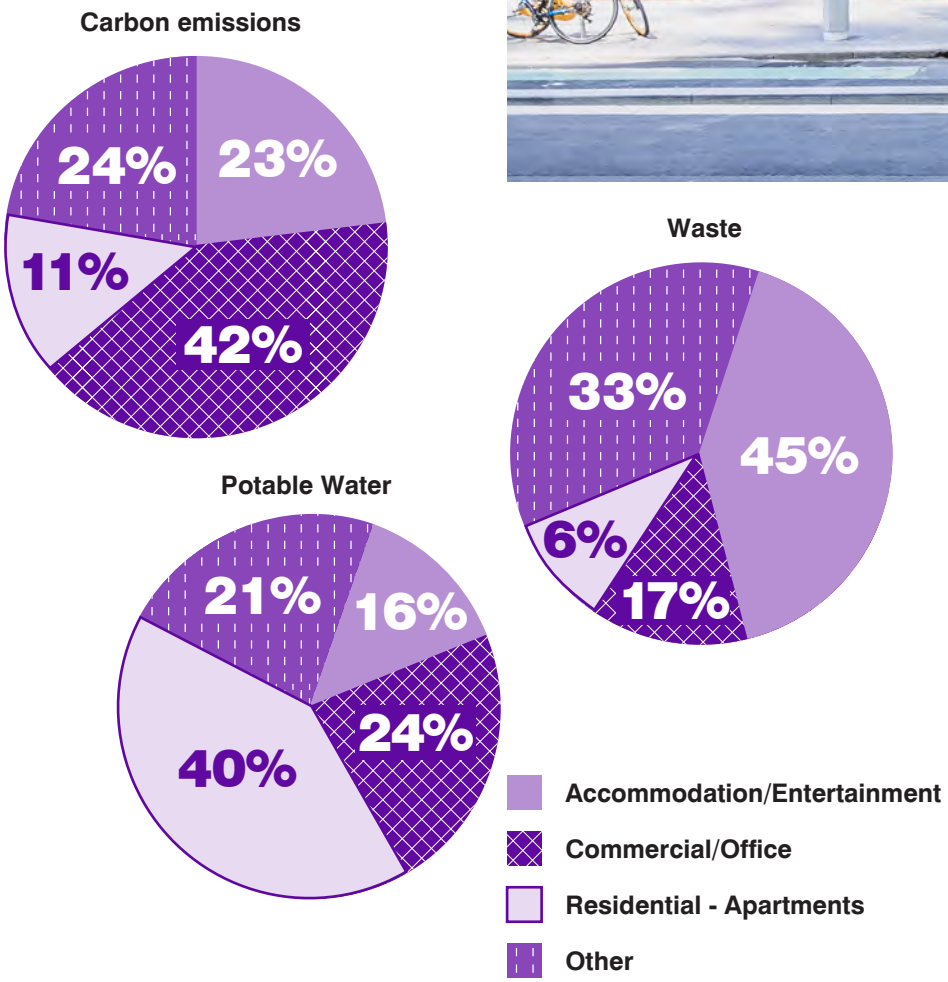
There were strong indications pre-pandemic of a shift towards a green economy. Now, as the economy restarts, a clean energy transition will be more vital than ever. As a hub of knowledge, capital exchange and innovation, Sydney has a key role to play in enabling and facilitating Australia's transition to green.

The program with our three virtual visiting entrepreneurs live streamed discussions to over 1,100 viewers where the CleanTech conversations focussed on the intersection of technology, environmental sustainability goals and the growth of the green economy. Technology has an important role in the transition to sustainable energy, particularly as we rebuild from the pandemic. Australia is well placed to export goods, services and technology locally in Asia's clean energy transition. Food and agritech entrepreneurs are reimagining the food system to meet the needs of a growing global population, whilst also committing to sustainable growth.

Partnering with our key sectors

The City works closely with the sectors that have the greatest environmental impact in our local area. The commercial office sector is responsible for 42 per cent of the city's emissions; the accommodation and entertainment sector contributes 45 per cent of waste sent to landfill; and residential apartment buildings use 40 per cent of the city's potable water. Through programs like Smart Green Apartments, the Better Building Partnership (BBP), CitySwitch Green Office and the Sustainable Destination Partnership, we partner with owners and operators to reduce these impacts.

Chart 6: Local area environmental footprint by sector



Residential apartments sector

Around three-quarters of our residents live in apartment buildings. The City of Sydney has the highest residential density on any local government area in Australia. Between 2020 and 2030, the population is forecast to increase by more than 29 per cent, to around 319,000, and about 80 per cent of residents will live in apartments. At least 90 per cent of new buildings will be six or more storeys high.

Image: Barrack Place, 420 George Street, Sydney by Investa. © Investa

There is significant energy and water efficiency potential within residential apartment buildings. Increasingly complex centralised plant, equipment and services coupled with rising energy and water costs mean efficiency and good asset management is an increasing priority for city residents. Occupants of high-rise apartment buildings are responsible for more carbon emissions than people in houses. This is a result of the high energy consumption of centralised equipment systems on common property, which increases with building height.

The Smart Green Apartments program is a key initiative of our Residential Apartments Sustainability Plan. We work with strata communities to improve environmental performance and a building's liveability and value, while reducing operating and maintenance costs for owners.

The environmental performance of buildings is unlikely to improve without intervention and assistance. The collective ownership model of strata and unique governance structures require tailored support and information to better operate and upgrade buildings and precincts. Barriers for existing buildings include access to independent and accurate information; lack of time, expertise and support; and the long, complex decision-making processes in strata buildings. For new buildings, improving performance standards could significantly lower environmental footprints from the start.

We aim to work with the sector to raise the bar on environmental performance, build capacity for environmental decision-making and empower communities to make green living choices.

Achievements

– The Smart Green Apartments program currently includes 172 buildings, with 13,876 apartments that are home to more than 27,000 people.

– The program has reduced GHG emissions by an average of 30 per cent per strata community.

– It has also cut energy use by 31 per cent, saving $2.89 million on power bills.

– WaterFix® Strata, a partnership with Sydney Water, has reduced consumption of potable water by almost 700 kilolitres, saving $1.30 million in water bills.

Environmental grant enables building owners to cut electricity use by 85 per cent

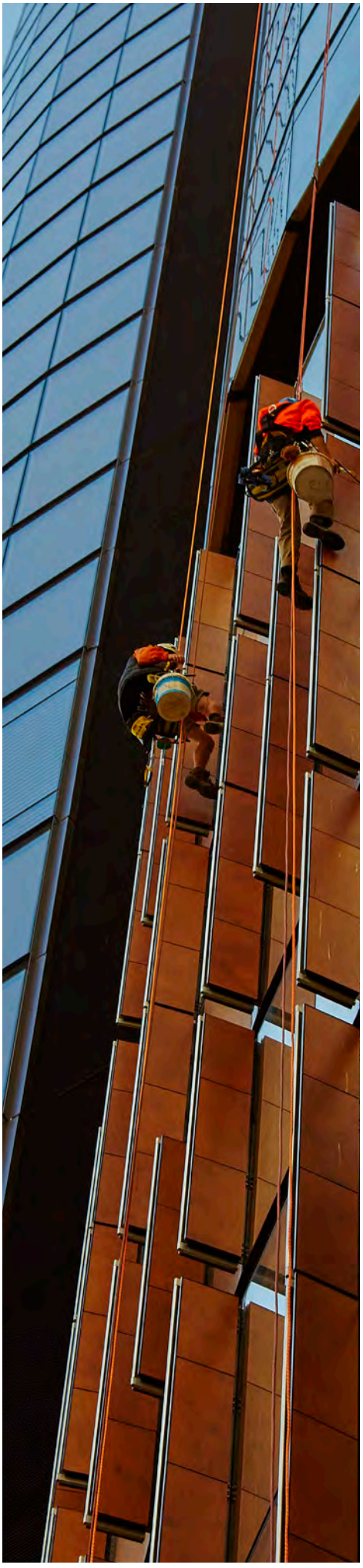
With an exceptionally low monthly electricity bill for powering its common areas ($14.71!) and an impressive 6 Star NABERS energy rating, it is worth taking a closer look at the environmental achievements of Zinc, a 45-lot apartment building in Alexandria.

Using an environmental grant from the City, the owners corporation engaged an independent consultant to conduct an energy efficiency assessment, solar feasibility study and NABERS rating. Nathan Hage, strata committee representative, credits the City's environmental performance grants program with gaining the participation of all owners in the building – and results that followed.

"Having the initial energy efficiency assessment and NABERS rating fully funded by the City was key to our success. It would have been much harder for a relatively small building like ours to sell it to the owners," Nathan said.

Work started with an upgrade of common-area lighting, which was soon followed by the installation of a 27 kilowatt-hour rooftop solar system. Next up, the owners switched to an electricity provider offering a renewable and carbon-neutral product, to cover the emissions from their grid-sourced electricity. The results? An 85 per cent reduction in common area electricity use, with a corresponding 99 per cent cost saving.

The owners are now looking to invest in solar sharing technology and battery storage to supply power to individual apartments.



Commercial office sector

Commercial office buildings and their tenants contribute 44 per cent of the city's carbon emissions, making it vital to reduce this impact. The City's long-running BBP and CitySwitch programs have helped reduce GHG emissions and water consumption, improve energy efficiency, and increase use of renewable electricity and recovery of materials from waste.

Sydney is home to Australia's largest commercial property cluster, and the City through the BBP has provided a forum for sharing knowledge and grappling with the market transformations required to meet our environmental goals and deliver a sustainable city. In addition to environmental outcomes both BBP and CitySwitch deliver unique intellectual and social capital through the networking and capacity building that arises from collaborating and networking on common sustainability problems.

The benefits of these programs extend beyond Sydney. All BBP portfolio owners are implementing sustainability initiatives in their other property types across Australia. By design, CitySwitch is a national program that engages tenants and businesses in other local government areas.

In addition to these programs facilitated by the City other factors have also contributed to the excellent sustainability performance of the commercial office sector in Sydney. These include, mandatory NABERS ratings, international reporting requirements of the Task Force on Climate-related Financial Disclosures and the Global Environmental, Social and Governance Benchmark for Real Assets. There is also an investor-led desire for green investment options and tenants who want sustainable work and retail spaces driving environmental improvements in this sector.

Achievements

– We engage with 59 per cent of commercial landlords in the city through the BBP. These landlords reduced carbon emissions by 61 per cent and water use by 39 per cent in 2019–20, compared to 2006. (The city has six net-zero commercial office buildings, and another 18 committed to achieving net-zero targets.)

– The BBP has delivered sector-wide change, particularly in waste management, which is embedded in NABERS Waste and Good Environmental Choice Australia certification of waste service providers. The program has also established best practices in energy demand management, the circular economy, cooling tower management and pathways to net-zero buildings.

– Through CitySwitch, we engage with 221 office tenants (27 per cent of commercial tenants). The average carbon emissions reduction of these tenants is 26.4 per cent, and 29 have been certified as carbon-neutral by Climate Active.

Image: EY Centre at 200 George Street, Sydney, by Mirvac. © City of Sydney

Accommodation and entertainment sector

Sydney's accommodation and entertainment sector has a large environmental footprint. Accommodation needs lights, air conditioning and ventilation 24 hours a day. Entertainment venues use energy-intensive stage lights, sound systems and air conditioning. Food and beverage outlets have high energy and water consumption, and they generate large amounts of waste.

Industry members wanting to improve their performance have signed up to the SDP, a collaboration of 46 property owners, managers and key influencers. The International Convention Centre, Sydney Opera House, Art Gallery of NSW and iconic hotels are among the 72 buildings represented by these property owners.

Before the COVID-19 pandemic, Sydney had more than 10 million annual visitors. This number fell dramatically in 2020 due to COVID-19, with an extreme slowdown in business. Despite this, more hotels sought a NABERS rating; more SDP members identified water leaks in empty buildings and worked on their sustainability strategies; and more staff used the downtime to train in food waste avoidance through Love Food Sydney, a City partnership with the NSW Government.

Many opportunities exist to lessen the environmental impact of the sector; for example, energy and water-efficiency, minimising waste, increasing sustainable procurement, and raising the energy performance standards for new buildings and major refurbishments, including 4 Star NABERS Commitment Agreements for new hotels. These measures would also provide long-term economic benefits.

The City's support includes providing grants for environmental ratings and assessments, and promoting actions to improve environmental performance.

Sydney awarded for its innovative sustainability initiatives

Sustainability is big business in Sydney – or should we say, big in business. So much so that Sydney has ranked 8th in the world for hosting sustainable business events, in the Global Destination Sustainability Index (GDS-Index).

The GDS-Index rates the business events industries of more than 50 cities globally against benchmarks for social and environmental performance.

In 2019, Sydney's Sustainable Destination Partnership (SDP) won the GDS-Index's Innovation in Sustainability award at the International Congress and Convention Association's annual conference, in Houston, in the US. The award recognised outstanding collaboration in environmental footprinting with ambitious targets.

"Sustainability is becoming an important requirement for our global client base when choosing a host destination, and the City of Sydney's approach in creating a collaborative framework for our whole industry to work with them is truly visionary," said Business Events Sydney CEO and SDP Associate Member, Lyn Lewis-Smith.

The City established the SDP to work in partnership with major hotels and tourist attractions to help reduce their environmental impacts and combat climate change. Sydney Lord Mayor Clover Moore said, "This award recognises their success in becoming more sustainable and working to address the most pressing issue of our time. I hope it encourages more businesses and organisations to become involved."

Achievements

– Emissions have been reduced by 19 per cent, compared to the target of 10 per cent from the 2017–18 baseline. Use of potable water has been cut by 21 per cent against a target of zero increase on the 2017–18. Currently, 74 per cent of partners report waste data, edging closer to the target of 100 per cent reporting. A total of 37 per cent of waste is diverted from landfill against a target of 75 per cent. (These figures are based on 2018–19 results, with data for 2019–20 delayed due to COVID-19).

– In 2019, the SDP won the Global Destination Sustainability Index award for innovation in collaboration.

– Since 2018, the SDP has launched the single-use pledge, developed a roadmap to halve food waste by 2026, worked with Sydney Water to research water-saving opportunities, and tested NABERS waste in City-owned buildings.

Environmental grants and sponsorship program

Our grants and sponsorship program supports initiatives and projects that build the social, cultural, environmental and economic life of the city. We partner with the community and businesses to meet the targets set by Sustainable Sydney 2030.

The environmental grants and sponsorship program offers a powerful incentive for residents and businesses to improve their environmental performance. It provides funding for innovation; energy, water and waste management projects; and ratings and assessments. It also aims to address barriers to action.

Since 2016 the City has awarded $3.8 million in environmental grants in response to 330 applications from 198 individual organisations.

– 248 Environmental performance grants - assisting building owners and managers better understand their environmental impact by undertaking ratings and assessments, and to initiate projects to improve the environmental performance of their buildings. A comprehensive profile of environmental grants can be found here.

– 46 Innovation grants – supporting testing or use of new technologies or processes that are not being implemented in the local market and could be used at scale in the local area. These are technologies that have the potential to support greenhouse gas emission reductions, climate adaptation efforts, resource efficiencies, sustainable transport or greening initiatives.

– 20 Knowledge Exchange Sponsorships with environmental outcomes - supporting programs or events that promote the sustainable development of cities; tools or guides to communicate best practice and build skills and expertise; and networking events that bring people together to learn from each other.

– 16 Matching Grants with environmental outcomes - supporting grassroots and local projects that contribute to vibrant sustainable communities and economies by matching contributions towards a project.

Image: City farm, Sydney Park.

Innovation grant helps demonstrate the value of integrated green roofs

The City is proud to support a flagship green roof project through its environmental performance innovation grants program. The project involves a partnership between University of Technology Sydney (UTS), Lendlease and Junglefy to compare two rooftops on two identical buildings in Barangaroo: one made of concrete with a solar PV system, and the other comprising a solar PV system integrated with a green roof.

The research project is one of the longest and most complete studies of its kind in Australia. It will provide the City with empirical evidence and data on the benefits of integrated green roofs in Sydney, and the results to date are compelling.

Integrated green roofs appear cooler on average by 5.5°C. The green roof remains at a steady 25°C throughout the day, compared to the usual swings of 20–60°C on a typical city roof. A green roof cools the roof, resulting in more power from the solar panels.

An integrated green roof stores and 'polishes' rainwater. It slows discharge to the stormwater system in high rainfall events to 7 litres/second, compared to 634 litres per second on the concrete roof. The green roof's plant species provide an added benefit through their biological processes, which work to increase air quality.

Green roofs encourage biodiversity in city spaces. Whereas a typical non-green roof might host four species of fauna, more than 30 species have been observed on the project's green roof, including native bees, insects and birds.

There is huge potential across the city for more integrated and co-located solar green roofs.

Image: © Lucy Sharman Lend Lease

Actions

Action 8

Improve energy efficiency, water efficiency and waste management in existing buildings

The City will advocate for stronger requirements for mandatory disclosure of environmental performance. Through our partnerships and grants programs, we will support building owners, operators and tenants to implement efficiency measures, use renewable electricity and transition from gas to electricity.

Action 9

Drive all new buildings to be resource-efficient and net-zero energy

We will implement net-zero performance standards in our planning controls, and look for opportunities to develop controls to reduce the impact of urban heat.

The City will continue to advocate for higher environmental design standards, including in the National Construction Code and the Building Sustainability Index (BASIX).

Where the City can comment on State Significant Developments, we will advocate for ambitious environmental goals, including alignment with the NSW Government's target of net-zero emissions by 2050.

Action 10

Support the transition to zero-emissions transport

Our transport priorities can be delivered via direct actions, partner actions and advocacy. We will advocate that the Australian Government develop a national plan for transitioning vehicle fleets to zero emissions by 2035. One key element will be transitioning existing service stations to become zero emissions fuelling stations, creating the backbone of the urban charging network.

The City will advocate for public transport projects, partnering with the NSW Government to build a bicycle network and reallocate road and kerb space for walking, cycling and public transport. We will also advocate for a low-emissions zone in the city centre.

Image: Cycling through Green Square.

We will also advocate for public transport powered by renewable energy and the uptake of zero emissions vehicles for point-to-point operators, ridesharing, and last-mile delivery and servicing systems.

We will support charging for electric vehicles in off-street parking through City planning instruments and advocacy to the NSW Government.

Action 11

Encourage community uptake of renewable electricity and stimulate the green economy

Through our partnership programs, we will provide advice and support to increase the use of onsite and offsite renewable energy. We will also look for opportunities to help local businesses to aggregate their purchasing power for renewable electricity, which can create economic opportunities within NSW.

Action 12

Support our residents to reduce utility costs and environmental impact

We will continue to encourage residential apartment building owners to improve the energy and water efficiency of their buildings. The City will also keep advocating for capacity building in relation to strata legislation and management, to help residents manage their buildings.

Action 13

Help business to reduce utility bills and demonstrate environmental achievement

The City will provide ongoing support for the BBP, strengthening its contribution to a sustainable city, and embedding best-practice standards and tools. Focus areas in the next four years will include the circular economy, shifting from gas to electricity, and whole-of-building performance.

Through the CitySwitch Sydney program, we will support office tenants in their work with building owners to improve environmental performance. We will use the CitySwitch national program to support collective action, including in relation to mandatory tenant disclosures.

As the accommodation and entertainment sector recovers from the devastating impact of COVID-19, the City will help members of the sector make their operations more efficient while also positioning Sydney as a safe and sustainable destination.

Innovative technology enables metropolitan-wide decision making on environmental performance

© Lucy Sharman Lend Lease

The Resilient Sydney Platform is a collaboration between Resilient Sydney, City of Sydney, Kinesis and the local councils of metropolitan Sydney. This award winning platform provides previously disparate datasets to the 33 metropolitan councils across Sydney so they can measure and understand how the local community is contributing to carbon emissions, using energy and water and generating waste. By providing councils with a standardised, metropolitan-wide process for measuring and reporting on environmental performance, the Platform supports more strategic and evidence based planning and decision making.

In September 2019, the Resilient Sydney Platform was acknowledged as an important innovation to support collaboration, joint action and advocacy across the Sydney area, receiving two awards at the Smart City Awards 2019: the 'Data as an Enabler' category award and the overall award for the Best Smart City Project.

This is the first time a robust, accessible, environmental data platform has been available for every local government area (LGA) of Sydney.

Over 200 strategic planners, environmental managers and general managers representing all the 33 councils of metropolitan Sydney are now using the platform in their Local Strategic Planning Statements.

03

A regenerative and inclusive city

A regenerative city

A city that is future-proof and resilient contributes to regenerating the natural resources it consumes. This starts with pursuing efficient use of resources and local circular initiatives, and minimising the pressure the city is placing on global ecological and social systems.

Our citizens' jury, run during the Sustainable Sydney 2050 consultation, identified the concept of the city as a 'regenerative ecosystem'. The jury recognised that there are finite natural and financial resources, and that air and water pollution, and water scarcity, must all be addressed if we are to achieve a healthy city. Buildings must not contribute to the degradation of the city, and waste must be transformed to feed back into the economy. Over the next four years, the City will explore how to bring this concept to life.

Globally, we need to stop burning carbon as much as possible, as soon as possible. We also need to draw down carbon from the atmosphere in significant quantities. This is achieved through reforestation, agroforestry, garden cities, regenerative agriculture, blue carbon (kelp and other seaweed growth), and direct CO2 capture from the air.

Nature-based climate solutions reduce emissions from the atmosphere while restoring the biosphere – the land, air and water. It is estimated that conservation, restoration, and management of forests, grasslands and wetlands can deliver a third of the emission reductions needed globally by 2030. [42]

Identifying solutions

Increasingly, councils are recognising that the knowledge and cultural practices of Aboriginal and Torres Strait Islander people can make an important contribution in this area, playing a central part in strengthening the sustainability of our cities.

Environmental action will need to include establishing a strong circular economy to reduce and manage waste, regenerating natural resources such as waterways, and using nature-based solutions to reduce emissions.

Image (Previous page): The South Eveleigh community building rooftop garden. © Community Rooftop Garden, Mirvac. (This page): St Helens community garden provides locals the ability to grow their own fresh produce © City of Sydney, Katherine Griffiths

42 https://www.nature.org/en-us/what-we-do/our-insights/perspectives/natural-climate-solutions/

Indigenous land management practices have enormous potential to reduce emissions and sequester carbon. Sustainable funding models, such as carbon credits, can help support Indigenous businesses and communities to expand their traditional practices, including cultural burns.

Local and state governments share responsibility for regenerating the waterways within our city. We are working with other councils on catchment management plans for the Cooks River and Sydney Harbour. These include plans to protect and enhance biodiversity, preserve Aboriginal and Torres Strait Islander culture and artefacts, improve water quality and adapt to climate change.

Sydney Park delivers for the environment and for the community

For nearly 100 years, there was no wildlife to speak of on the site that is now Sydney Park. A former brick pit and rubbish tip have given way to a regenerative oasis of thriving wetlands and green open space, with the help of stormwater harvesting and multi-award-winning design.

The 44-hectare park has four wetland areas that not only clean stormwater, manage floods and reduce urban heat but also attract wildlife to this urban area. The plantings of native grasses surrounding the wetlands form bioretention swales, which help filter stormwater runoff and reduce contaminants flowing downstream into Botany Bay.

The wetlands are also an important habitat for native wildlife during dry periods. A wide variety of birds, frogs and turtles are attracted to the area, including migratory birds that visit the park.

Before the City established stormwater harvesting in the park, the wetlands did not have enough water to regenerate fully on their own. Each year, the park harvests 850 million litres of stormwater, which is used to top up the wetlands, for irrigation and to supply the nearby City of Sydney depot. In 2021, the park received the Jury Award in the Architecture +Water category of the 2020 Architizer A+Awards in New York.

Harvesting stormwater in this way helps the City achieve our 2030 target to reduce sediments and nutrients from stormwater runoff and will also help us meet 10 per cent of water demand through local water capture and reuse.

The park is also home to Sydney City Farm, a place for people to learn about urban agriculture and sustainable food production. The farm uses organic growing principles to produce nearly half a tonne of fresh food annually, and is run with the help of more than 300 volunteers. It donates produce to local food banks.

Image: © City of Sydney

Our city is on Gadigal land

The City acknowledges that this place we now call Sydney is, was and always will be an Aboriginal place. We also acknowledge the importance of the living cultural practice of caring for Country. The Gadigal of the Eora Nation have used resilient land management practices for thousands of generations. Aboriginal people know that if we care for Country, it will care for us.

'Eora' means 'the people' in the Gadigal language, so the City's Eora Journey is 'the people's journey', We're working with Aboriginal and Torres Strait Islander artists to create seven major public art projects symbolising the Eora Journey. We currently provide support for a range of events that celebrate Aboriginal and Torres Strait Islander arts and culture, from the Yabun festival held on 26 January in Victoria Park each year to local NAIDOC Week events. We have developed our first economic action plan to focus on Aboriginal and Torres Strait Islander communities, and in 2018 we purchased the former Redfern Post Office for use as a local Aboriginal and Torres Strait Islander culture and knowledge centre.

A body of work is evolving around the country to increase cities' involvement of Aboriginal and Torres Strait Islander people and cultural knowledge in urban planning and decision-making, to improve sustainability and resilience.

Research by the Clean Air and Urban Landscapes Hub explores the concept of cities as Indigenous places.[43] It reinforces the importance of giving Aboriginal and Torres Strait Islander people meaningful roles at all levels of decision-making that relates to our cities.

The NSW Government Architect has published the Connecting with Country Draft Framework to inform the planning, design and delivery of built environment projects in NSW.[44] It provides guidance for the community, government and developers on how to support the wellbeing of Country; value and respect Aboriginal and Torres Strait Islander knowledge; and ultimately reduce the impact of natural disasters through sustainable land and water management practices.

The City will enhance its environmental program by working with Aboriginal and Torres Strait Islander groups and investing in knowledge and practices that restore natural equilibrium by caring for Country.

Image: Aunty Margaret Campbell starts her educational walking tours at these large fig trees in Circular Quay which she refers to as great grandmother trees. © City of Sydney, Katherine Griffiths

43 https://nespurban.edu.au/wp-content/uploads/2020/11/Cities-for-People-and-Nature.pdf

44 https://www.governmentarchitect.nsw.gov.au/projects/designing-with-country

Inclusive environmental action

People already marginalised in our city are likely to suffer disproportionate impacts from climate change and urban hazards. As we create solutions to our challenges, we need to be inclusive. We must look at which groups are most affected by climate change, who benefits from our environmental programs, and how we can diversify the voices heard when shaping our environmental future.

Our research to establish an Equality Indicator Framework revealed serious inequalities within our community. Aboriginal and Torres Strait Islander people, those on low incomes and people with disability experience clear inequalities in relation to employment, skills and education, housing, health, transport, and access to and involvement in public life.

Climate impacts can worsen these inequalities. For people with disability, it can be difficult to get around during floods or storms, or to find information about extreme weather events. While some homeowners can afford solar panels and other energy-efficient measures, people on low incomes can struggle to pay electricity bills, going cold in winter and sweltering in summer.

Many people in these disadvantaged groups are among the 75 per cent of those who rent in the city. When it comes to managing the impacts of climate change, renters are disadvantaged; for example, they can't install insulation to protect against extreme heat.

Access to affordable clean energy remains a key issue. Low-income and disadvantaged households pay a higher proportion of their incomes on essential services, and have less choice and control to reduce costs. Currently, GreenPower is more expensive than standard grid electricity, putting access to clean energy out of reach for many residents.

The City's Draft Greening Sydney Strategy acknowledges the importance of equity. Having access to cool green spaces close to home contributes to residents' ability to deal with extreme heat and to their mental wellbeing. While our overall canopy cover has increased, it is not evenly distributed. We will analyse its distribution as we plan future investment in greening, to improve access for everyone.

Reducing embodied carbon

Embodied carbon refers to the GHG emissions produced during the extraction, manufacture and transport of materials used day to day and in buildings and streetscapes. Reducing embodied carbon would significantly cut global emissions.

The City is part of the Materials Embodied Carbon Leaders' Alliance, which is working to grow the local market for low-emissions concrete, and green steel and aluminium.

The embodied carbon of materials is not counted in the current carbon footprint of a local area because these emissions are difficult to quantify and are attributed to the areas where they originate. However, University of New South Wales (UNSW) research has found that the carbon footprint of Greater Sydney would be approximately double if the supply-side emissions of goods and services consumed were taken into account.

Reusing materials and using recycled materials, avoiding the demolition of buildings (by reusing and retrofitting buildings) and other circular economy principles are the simplest and most cost-effective way to reduce embodied carbon. Meeting the Paris Agreement targets will require new zero- and negative-emissions products made using renewable energy, and many jurisdictions and businesses are working on this.

Urban heat mitigation

The urban heat island effect exacerbates warming in cities. Materials such as pavements and buildings absorb and radiate significant amounts of heat, raising temperatures significantly.

The Resilient Sydney Strategy identifies extreme heat as a big challenge for Greater Sydney.[45] More frequent hot days and nights – and longer and hotter days and nights – have a significant impact on human health and the liveability of our city. Addressing this requires collaborative action and policy.

In 2019, the City commissioned UNSW to develop an urban heat reduction guideline: the Cooling Sydney Strategy.[46] Its recommendations have the potential to decrease peak ambient temperatures by 2–3°C, which would cut energy demand for cooling and reduce heat-related mortality and morbidity.

Increasing the canopy cover and other forms of greening in our city is one of the most effective mechanisms to reduce urban heat. Our revised Greening Sydney Strategy reaffirms our commitment to initiatives that will help achieve a greener, cooler, calmer and more resilient Sydney.

Other techniques for cooling the urban environment include:

– cool pavements

– water features and evaporative cooling

– external shade structures

– integrated shading devices

– heat refuges.

Image: Sustainable building design curbs the effects of urban heat. © Stable Group

45 https://www.cityofsydney.nsw.gov.au/governance-decision-making/resilient-sydney

46 http://www.lowcarbonlivingcrc.com.au/resources/crc-publications/crclcl-project-reports/sp0012u3-cooling-sydney-strategy

Monitoring air quality

In addition to GHG emissions, communities are increasingly concerned about the effect of air pollution on health. Vehicles that run on fossil fuels are a significant source of air pollution in Sydney.

The NSW Government is largely responsible for measuring and regulating air quality in Sydney. It is developing the NSW Clean Air Strategy 2021–30 to reduce the effects of air pollution, especially during extreme events like the 2019–20 bushfires.

The NSW Strategy targets better preparedness for pollution events, cleaner industry, transport, engines and fuels, and healthier households and places. The NSW Government also plans to electrify the state's bus fleet.

Within the City of Sydney area, the NSW Government has installed ambient air quality monitoring at Cook & Phillip Park with plans to expand to other sites in our area. This station measures ozone, nitrogen dioxide, visibility, carbon monoxide, sulfur dioxide and airborne particles.

People can access real time air quality classifications from the NSW Government website. The site in the City is consistently classified as 'good' which means there are no changes needed to normal outdoor activities, even for sensitive groups.

The City is focused on local monitoring, and communicating information about air pollution to increase community support for zero-emissions transport and greening. It is deploying 21 low-cost sensors in the local area to measure air quality as well as noise and temperature. These sensors will complement NSW Government monitoring efforts.

A water-sensitive city

A water-sensitive city meets water needs and enhances liveability and resilience, including through biodiversity, public green spaces, healthy waterways and connected communities. [47] As the City of Sydney local area grows and the climate changes, more water will be needed for consumption, to green the city and combat the effects of climate change.

Greater Sydney's water storage dams have experienced severe drought in recent years, which is predicted to occur with growing frequency and longer duration because of climate change.

Since 2005–06, water use in our local area has increased 15 per cent while overall floorspace has grown 11 per cent. This is partly due to growth in high-water-use sectors (for example, apartments) and reduction of low-water-use sectors (such as industrial production).

Existing recycled water schemes are estimated to supply 0.2 per cent of total water demand across the local area. This low rate is largely attributed to:

– the low cost of water compared to other building costs, meaning that the low financial return from reducing consumption doesn't justify the capital expenditure required for water efficiency or reuse

– an unsupportive regulatory framework for recycled water

– higher fees imposed on utilities by the Independent Pricing and Regulatory Tribunal, which have challenged the financial viability of recycled water schemes in urban renewal locations.

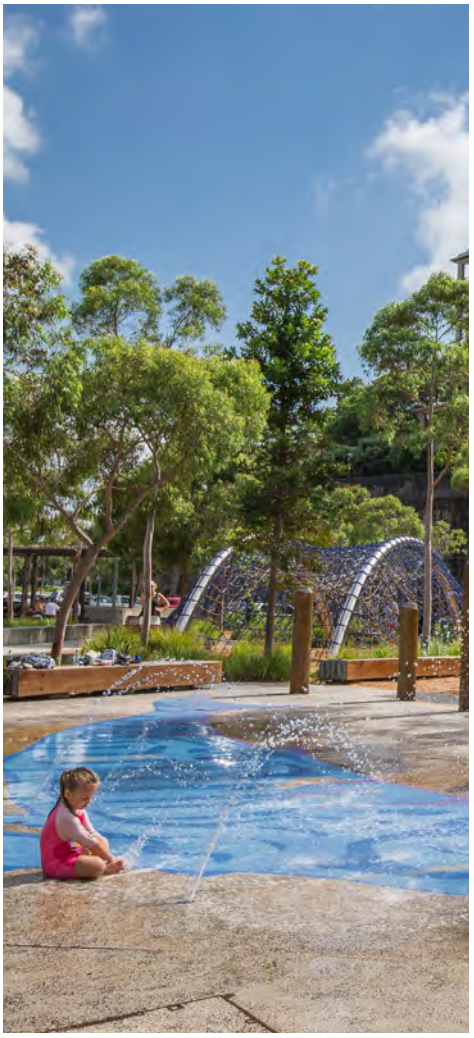


Chart 7: Local area potable water usage history

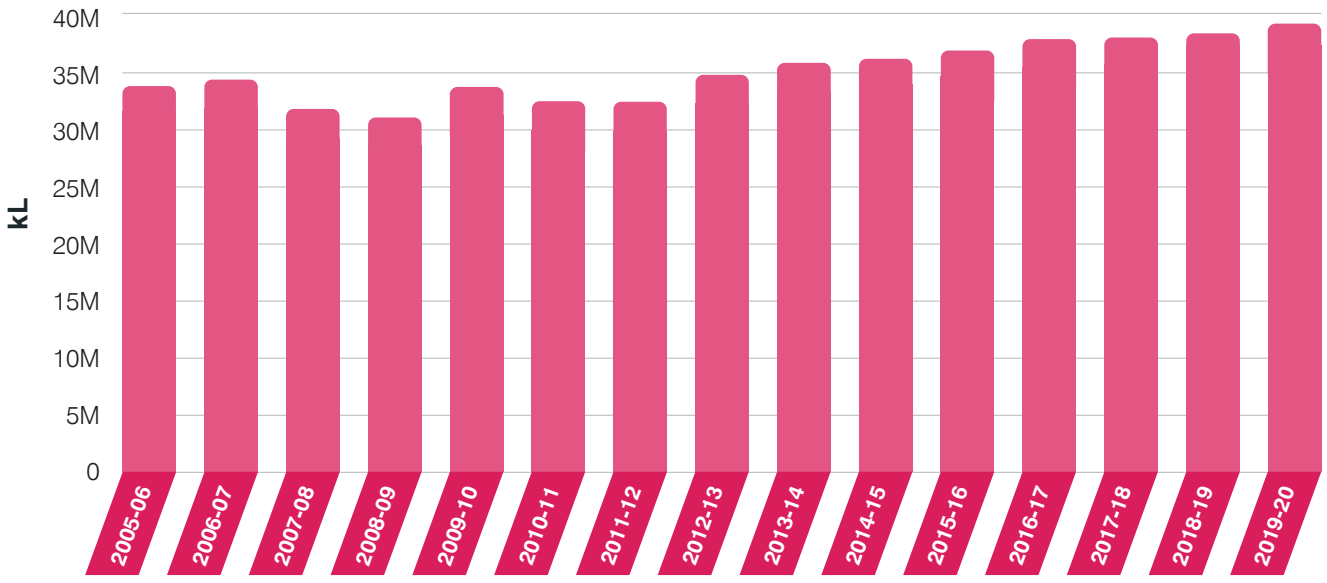


Image: Pirrama Park © City of Sydney

47 https://watersensitivecities.org.au/wp-content/uploads/2016/05/TMR_A4-1_MovingTowardWSC.pdf

The NSW Government is developing a 20-year statewide water strategy to improve the resilience of water resources, including in response to climate change. [48] It is also working on the Greater Sydney Water Strategy which is due for public exhibition in late 2021. Sydney Water is developing the Eastern Sydney Regional Master Plan. The Masterplan, anticpated to be made public in mid-2021, will present options for the future drinking water balance including how reliant the Eastern Region will be on desalinated water and recycled water.

The City recognises that decentralised recycled water schemes can contribute to managing the impacts of climate change and keeping the city green and cool. Such schemes will have a role to play in the future, but the delivery model may change. If the NSW Government introduces recycled water for drinking into Sydney's potable water supply, local recycled water systems will become less important for a resilient and drought-proof water supply.

Over the next four years, the City will continue working to deliver a greater mix of recycled water to the network. Interventions at the planning stage will ensure new developments use water efficiently. The George Street recycled water pipeline will facilitate use of recycled water in new developments along the corridor, retrofitting cooling towers and delivering drought-proof water to key public open spaces across the local area.

The City is establishing two new targets to track the local area's water use:

– Reduce residential potable water use to 170 litres per person per day person by 2030

– 10% reduction in non-residential potable water use per m2 by 2030, from 2019 baseline

Water-saving program helps businesses cut water bills

The Water Savings Partnership program started in June 2019 in collaboration with Sydney Water to help businesses use water more efficiently, with water savings measured over two years.

Despite building access restrictions due to the COVID-19 pandemic, the program is delivering well against targets. This demonstrates the demand and opportunities for water savings in the business sector.

As part of the program, a water efficiency assessment for a major shopping centre identified opportunities to save 63 kilolitres of water each day. The centre has so far implemented changes to save an estimated 22 kilolitres each day.

The program is currently focusing on helping small to medium-sized businesses such as cafes, restaurants, childcare centres and gyms reduce their water bills. Forty-seven participants involved to date have identified 567 kilolitres of water savings, and have achieved 110 kilolitres to date.

Image: © City of Sydney

48 https://www.industry.nsw.gov.au/water/plans-programs/strategy/about

Food scraps recycling trial diverts tonnes of waste from landfill

The largest single waste stream in City residents' red-lid rubbish bin is food waste. It typically accounts for one-third or more of a bin's contents. Recycling food waste saves landfill space, reduces greenhouse gas emissions, creates compost and fertiliser, and with the right processing can generate green energy.

We committed to investigating solutions to the food waste problem by starting a food waste collection and recycling trial for residents in July 2019, with support from the NSW Government. The trial now covers 1,019 houses and 132 apartment buildings across the city, comprising almost 11,000 households. Preliminary results are very encouraging, with good participation from those who have signed up for collections. We are recovering a high percentage of food waste from households, with very low rates of contamination.

The food scraps are collected by the City's Cleansing Operations team and checked for contamination. They are then processed at the EarthPower anaerobic digestion facility, which produces green electricity and fertiliser. By the end of March 2021, more than 460 tonnes of food scraps had been collected for recycling, with a contamination rate of just 1 per cent.

Phase II of the trial is now underway and will see the availability of the service increase to around 21,000 households by the end of September 2021.

Image: Residential food waste trial
© City of Sydney, Katherine Griffiths

Managing waste and resources

Managing waste and resources from residences, parks, public spaces, neighbourhood centres and our own operations is one of our core services.

The City of Sydney area produces more than 5,500 tonnes of waste every day and contributes to approximately 8 per cent of the city's total GHG emissions. This is made up of waste generated at home, at work, by the city's many venues and events, and during the construction of new buildings and transport infrastructure. Around 69 per cent of this waste is already recycled, but more than 2,000 tonnes still goes to landfill each day.

Residential and City buildings waste

Each year, the City collects and manages around 65,000 tonnes of waste from more than 120,000 households, and about 11,000 tonnes from our own assets, parks and public places. By 2030, this is forecast to grow to more than 100,000 tonnes of waste.

Commercial and industrial waste

Commercial and industrial waste is all non-residential waste produced by businesses and institutions. It is largely organic or biodegradable, and accounts for around 700,000 tonnes – more than 90 per cent of the city's total waste – each year. By 2030, this is forecast to grow to more than 800,000 tonnes a year. [49]

It also generates a significant proportion of the emissions created by landfill. And although the City does not collect or manage this waste, we need to identify ways to reduce it.

49 Edge Environment Pty Ltd. City of Sydney Commercial Waste Data Review. Sydney: (unpublished), 2017.

Construction and demolition waste

Each year, construction and demolition of new buildings and major infrastructure such as roads creates more than 1 million tonnes of waste in the city.[50] This waste is largely inorganic or inert, meaning it does not decompose or generate GHGs. Recovering and reusing this waste would reduce GHG emissions by cutting back on the extraction of resources.

Challenges

Residential apartments account for more than 75 per cent of households in the city, and this number is predicted to rise to 80 per cent by 2036.[51] Many of these households have competing demands for space, particularly for storing waste and recycling, which contributes to illegal dumping on footpaths and in public spaces. Where no storage is available, bins are also often left on footpaths. These both cause obstructions, create bad odours and feed perceptions of an area as being unclean or unsafe. Putting non recyclable rubbish in recycling bins causes contamination leading to recyclable materials being sent to landfill.

During community engagement for the City's Sustainable Sydney 2050 strategic plan, 86 per cent of residents said they want to preference recycling over landfill.[52] However, our residential recycling rate has remained at below 28 per cent since 2016. Reasons for this include confusion about what can be recycled, lack of access to recycling infrastructure in buildings and more complex packaging materials. Increasing demand for electronic and electrical items that are hard to repair or quickly become obsolete has added to the amount and types of waste.

China's ban on importing waste

In 2017, China notified the World Trade Organization that it was banning imports of 24 kinds of solid waste, including plastics from household sources, unsorted scrap paper, discarded textiles and mixed paper.[53] In 2016–17, Australia exported 1.4 million tonnes of paper and cardboard to other countries for recycling, and 63 per cent of that went to China. Of the 182,000 tonnes of plastics exported for recycling, 68 per cent also went to China. The ban has affected the City because about half of the recycling we collect is paper and plastics.

Image: Recycle It Saturday - free recycling dropoff event © City of Sydney

50 Edge Environment Pty Ltd. City of Sydney Commercial Waste Data Review. Sydney: (unpublished), 2017.

51 https://www.cityofsydney.nsw.gov.au/strategic-land-use-plans/local-housing-strategy

52 https://www.cityofsydney.nsw.gov.au/vision-setting/planning-sydney-2050-what-we-heard

53 https://www.wto.org/english/news_e/news17_e/impl_03oct17_e.htm

Waste data

It is difficult to track and accurately report on waste quantities and recycling rates once waste is moved, particularly if it is sent interstate or overseas. Waste from the commercial and industrial sectors is especially hard to track because it is managed by many different independent operators.

Textiles

Textiles, which make up around 6 per cent of waste in red bins in the City of Sydney, are a growing issue. Only about 1 per cent of textiles are recycled in Australia, while clothing consumption has approximately doubled in the last 15 years. [54] Globally, the textiles and clothing industry accounted for 92 million tons of waste (in addition to using 79 billion cubic metres of water and generating 1,715 million tons of CO2 emissions) in 2015. It is estimated this figure will increase by at least 50 per cent by 2030. [55]

Food

Significant opportunities exist to separate and treat food waste, especially through anaerobic digestion facilities that can produce biofertiliser and biogas, a renewable energy source. But councils would need to invest heavily in new collection services and bins, and educate residents about separating food waste. This outcome would need to be supported by NSW Government as part of a metropolitan wide plan for waste treatment facilities.

State and Commonwealth Government action

– National Waste Policy Action Plan - The Commonwealth Government published its National Waste Policy Action Plan in 2019. It set targets for reducing and recovering waste, increasing the use of recycled content and improving data. It also banned the export of waste materials.

– National Plastics Plan - The plan addresses Target 5 of the National Waste Policy Action Plan. It focuses on five key areas: phasing out problem plastics; increasing recycling; educating consumers; reducing plastics in oceans and waterways; and researching plastics recycling technology.

– 20-Year Waste Strategy for NSW - This is designed to be a whole-of-government initiative that provides a long-term strategic direction for communities, industry and all levels of government to work together to build resilient services and markets for waste resources. The City is advocating for a strategy that will provide regulatory and investment certainty, and appropriate levels of funding. The draft strategy is expected to be released in 2021.

Implications for the City

Our residents understand the need to better manage our resources through waste avoidance and increased recycling. They willingly participate in initiatives such as a food scraps trial and e-waste collections. But continuing changes to products and packaging make it difficult for us to provide the infrastructure for collecting and processing waste. We struggle to get our kerbside recycling rate above 28 per cent, which is short of our 35 per cent target. The recycling industry's inconsistent information about what is and isn't recyclable has also resulted in confusion for residents and businesses. Ongoing engagement and education is needed to rebuild the community's confidence in waste and resource management.

Collaboration at the federal, state and regional levels is needed to overcome challenges and create opportunities to improve the management of waste and recycled materials. Industry support and investment in innovation is needed across the entire materials supply chain.

The City already supports innovation through our environmental grants to incubators. At the commercial level, our procurement processes send appropriate demand signals to the market. And we will continue to engage with businesses and our communities on the circular economy and waste avoidance.

54 https://www.ellenmacarthurfoundation.org/assets/downloads/publications/A-New-Textiles-Economy_Full-Report.pdf

55 https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/633143/EPRS_BRI(2019)633143_EN.pdf

A circular economy

The current economic system is linear: take, make, waste. Resources are extracted to be transformed into products, which are used and then discarded. Our approach to consumption must change.

The circular economy has three principles: designing out waste and pollution; keeping products and materials at their highest value for as long as possible; and regenerating natural and social systems.

Raw material use must be minimised through design, use of recycled materials, share-economy initiatives, and changes in consumer behaviour and producer responsibility. This will extend product lifecycles and keep disposal to an absolute minimum.

To change behaviour, it is important that the full environmental impact of all products is clear, including embodied emissions.

Although the circular economy is rapidly gaining traction globally, there isn't a blueprint for this transition. It is an emerging concept that requires learning by doing. City governments are interpreting and advancing a circular economy in different ways, depending on their unique strengths, challenges and aspirations.

The NSW Government released its Circular Economy Policy Statement in 2019[56]. It focuses on seven key principles: sustainable management of resources; valuing resource productivity; designing out waste and pollution; maintaining the value of products and materials; innovative new solutions for resource efficiency; creating new circular economy jobs; and fostering behaviour change through education and engagement. The policy is also to form the basis of the forthcoming NSW 20-Year Waste Strategy.

The City supports this approach and has advocated for change in government organisation and levels of funding, and for the establishment of a new coordination body and strong governance frameworks.

We have already undertaken initiatives that align with the circular economy; however, these are often isolated and have been motivated by objectives such as better waste management or social outcomes. To achieve a fully circular approach, we will need to move from reactive and isolated initiatives towards deliberate and scalable implementation of the circular economy.

This will also allow us to capitalise on the significant economic opportunities it will bring. New jobs and businesses can be created that are regenerative by design and decouple growth from the consumption of finite resources.

Image: Sustainable commercial interiors use resources many times over © Profile of Design

56 https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/recycling/19p1379-circular-economy-policy-final.pdf?la=en&hash=F80151EA9C2C3E27BA889D15D18041CDF7A4D25A

Actions

Action 14

Incorporate the perspectives of Aboriginal and Torres Strait Islander people in environmental action

The City will work with Aboriginal and Torres Strait Islander groups and invest in knowledge and practices that restore natural equilibrium by caring for country. We can use our partnership networks to raise awareness of reconciliation objectives. We will explore ways to celebrate Aboriginal and Torres Strait Islander peoples' living culture in our designs and management of places in the city.

Action 15

Address equity issues related to climate change

We will engage with vulnerable groups in the community to gain a clearer understanding of how climate-related issues are affecting them. The City will also collaborate with other organisations to advocate for more equitable access to clean energy and resilient housing. As part of our emergency preparedness work, we will look at how we can provide more options for respite for vulnerable community members during extreme weather events.

Action 16

Build community resilience and momentum on climate action

Our collaboration with other local governments to push for national action on climate change will continue via Climate Emergency Australia. We will advocate on key climate emergency issues, including the need for an inclusive economic diversification plan for a zero-carbon economy, driven by a national carbon price and an emissions target that aligns with the Paris Agreement.

The City will also further embed the directions of our Resilient Sydney Strategy[57] in our local area.

Image: Crete Reserve Playground, Rosebery. © City of Sydney, Katherine Griffiths

57 https://www.cityofsydney.nsw.gov.au/-/media/corporate/files/focus/governance-decision-making/resilient-city/resilient-sydney-a-strategy-for-city-resilience-2018-part-3.pdf?download=true

Action 17

Support the development of circular economy systems

We will partner with the NSW Government, other local governments and industry on circular economy initiatives and on creating a local market for low-embodied-energy materials.

Action 18

Drought-proof the city by facilitating water recycling

The City will deliver the CBD recycled water network, establishing an alternative source of non-potable water that can help keep the city green. We will continue to advocate for policies and regulations that support a water-sensitive city.

Action 19

Regenerate polluted waterways, air and land

In partnership with other councils and the NSW Government, the City will develop catchment management plans for the Cooks River and Greater Sydney Harbour. We will strengthen water quality measurement and reporting, and our approach to stormwater asset management. We will also look at how we can strengthen our planning controls to improve water-sensitive urban designs.

We will finish installing our low-cost air quality sensor network, and continue working with the NSW Government to establish additional Environment Protection Authority air quality monitoring stations across the city.

Action 20

Reduce the amount of residential waste sent to landfill through avoidance and resource recovery

The City will increase its focus on reducing waste, improving kerbside resource recovery through education, collecting a wider range of items for recycling, and promoting the City's waste services. We will expand the current food scraps recycling trial so the service is available to all our residents.

We will need to collaborate with other councils and the NSW Government to address the longer-term challenges relating to waste data, regional infrastructure and treatment solutions.

Image: Glebe.© City of Sydney, Katherine Griffiths

04

Strong foundations for delivery

Actions

Background

We aspire to outstanding environmental performance in our operations and local area. The City wants to be a leader globally in tackling climate change with ambitious, focused and collaborative approaches.

This Strategy sets out the specific directions and actions we aim to achieve. However, strong organisational foundations are needed to succeed.

COVID-19 has had a significant financial impact on the City. We anticipate having tighter financial constraints for the term of the Strategy, and we will need to make sure we have strong key organisational processes and systems to ensure we meet our goals. We will need to prioritise our actions and use our financial and human resources efficiently.

Consideration of the climate emergency needs to be integrated into key decision-making processes in the City. This includes strategy development, major projects and tenders, delivery of services, asset management, investment and the establishment of new programs and services. Engagement with staff has told us that our people are highly motivated to take environmental action and make a difference.

Action 21

Build staff capability to deliver environmental outcomes

We will retain a cohort of environment experts and we will continue to strengthen the environmental competencies of a broader range of staff.

Action 22

Deliver high-quality internal and external environmental reporting and communications

Develop a robust internal communications program to help to increase staff capability. We will leverage the City's powerful network of external communications channels to ensure members of our community understand our goals and actions, and how they can play their part. We will continue to provide a annual environmental report to Council and the community and benchmark the City's performance through the CDP-C40 global reporting program. The City will also use our improved data analytics capability to provide better reporting on progress against environmental targets and goals.

Action 23

Employ efficient and effective decision-making processes

Consideration of the climate emergency will be integrated into key decision-making processes, and we will review our current governance model to ensure there is appropriate oversight on the actions in this Strategy.

Image: (Previous page): Pirrama Park © City of Sydney. (Above): Victoria Park © City of Sydney

Implementing the Strategy

Multiple City departments will help to implement this Strategy. The City will report outcomes against all targets annually, both to Council and to our community.

Climate science, climate change impacts, economic circumstances and responses to the COVID-19 pandemic are continually evolving. Developments in national and state policy can also allow us to take advantage of new initiatives, or respond with further advocacy and collaboration when change is not fast enough.

Implementing an effective response that addresses the environmental challenges faced by our city requires collaboration from all parts of our community. We look forward to implementing this Strategy in partnership with our residents, the business community, and the NSW and Commonwealth governments.

Image: © City of Sydney

Strategy context

A holistic approach

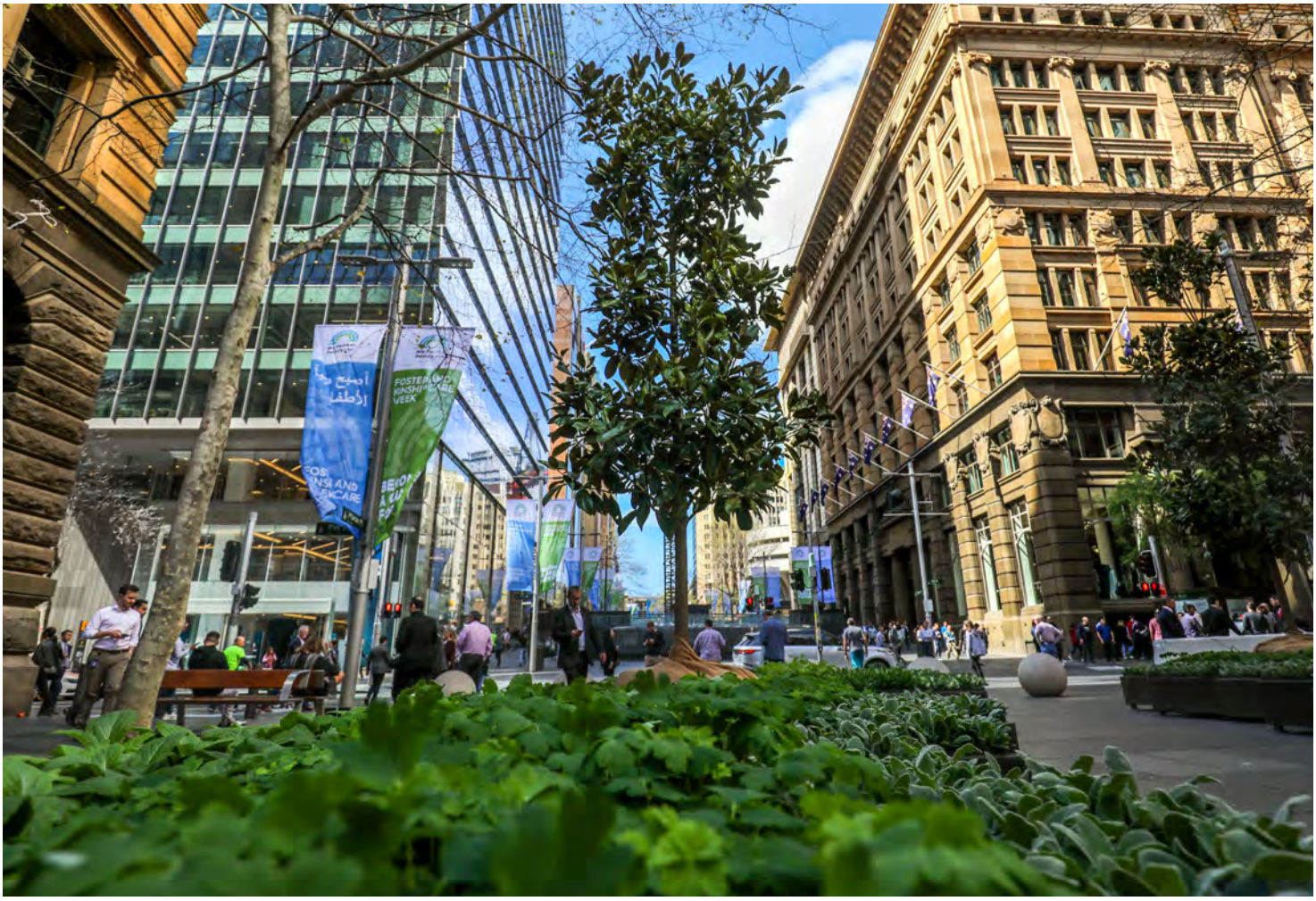
The City has a range of strategies and initiatives to promote a green and liveable city, and to mitigate or adapt to the effects of climate change.

Sustainable Sydney 2030

After more than 10 years of implementing Sustainable Sydney 2030 – our vision and strategic plan for making our city green, global and connected – we are reviewing our progress and targets. At the same time, we are preparing for our 2050 vision, consulting with people who live, work, study, do business and seek entertainment in our local area. Like our first plan, Sustainable Sydney 2050 will be a long-term strategy, with measurable targets for a more sustainable, prosperous and liveable city.

Local Strategic Planning Statement

Our Local Strategic Planning Statement sets out a 20-year land use vision, balancing the need for housing and economic activities with protecting and enhancing local character, heritage, public places and spaces. It links state and local strategic plans with our planning controls to guide development, and includes measures to protect and enhance the natural environment. This is achieved by maximising the efficient use and reuse of water, energy and waste in new buildings and precincts, and improving the resilience of our natural and built environment to protect people from natural and urban hazards. It also outlines the key transport system changes to facilitate high quality growth and a connected community, with increased use of public transport, walking and cycling.



Environmental Policy

Our Environmental Policy is key to reducing our environmental footprint in response to the climate emergency. It lays out our commitments for transforming our own operations and establishes expectations for our environmental performance and that of our stakeholders – from employees and volunteers to service providers and customers.

Climate Emergency Response

The City of Sydney is taking bold steps to reduce our environmental footprint and promote fair and inclusive energy production, resource consumption, water use and climate adaptation.

We set science-based targets to reduce our own operational carbon emissions, and to support and empower our communities to reduce their carbon impacts, water use and waste.

Adapting for Climate Change

Adapting for Climate Change addresses the effects of climate change on our city, and what the City of Sydney, businesses and residents must do in response, while maintaining wellbeing and prosperity for all.

Leave Nothing to Waste

Our strategy is designed to manage Sydney's resources to 2030. This includes achieving our zero-waste target by focusing on waste avoidance and reuse, and improved recycling.

Residential Apartments Sustainability Plan

This plan includes practical actions for increasing sustainability and resilience in new and existing apartment buildings by reducing carbon emissions, water and waste.

Sydney's Sustainable Office Buildings Plan

This plan helps commercial building owners and tenants to reduce their environmental impact by achieving environmental ratings, adopting renewable energy, reducing water consumption and waste.

Making Sydney a Sustainable Destination Plan

The entertainment and accommodation sector has significant scope for saving resources and reducing waste. This plan focuses on environmental sustainability to reduce costs, attract more customers and engage employees throughout the sector.

Image: Living colour display City of Sydney.

Whether it is for managing heat – or for addressing mental health issues, happiness levels, physical activity, or reduced incidence of disease and illness – an increase in canopy cover, green space and nature provides many benefits for the community.

Image: Green Square © City of Sydney

Greening Sydney Strategy

Research shows that green infrastructure is vital for human health and for tackling climate challenges. We developed our first Greening Sydney Plan in 2012, which included programs and measures to increase canopy cover, biodiversity and nature in our city, and to expand and improve our open spaces and streetscapes. Our key achievements include increasing canopy cover from 15.5 per cent in 2008 to 19.2 per cent in 2020.

Our revised Greening Sydney Strategy reaffirms our commitment to initiatives that will help achieve a greener, cooler, calmer and more resilient Sydney.

Based on the latest research, we aim to increase overall green cover to 40 per cent of the local area, including at least 27 per cent tree canopy, by 2050.

We have exhausted most of the opportunities for easy greening and tree planting. So we will need to use a more focused, multidisciplinary approach that involves the entire Council and the community. We also need to continue to address the complex challenges posed by climate change and the growing population. These include competition for space for new developments; growing pressure on transport infrastructure; the effects of heat, drought and air pollution on the health and biodiversity of our local ecosystem; and collaboration with government and other agency stakeholders, as well as residents and business owners.

To achieve our vision, for a cool, calm and resilient city, the revised Greening Sydney Strategy outlines six directions, and 20 supporting actions through to 2050. It will be next reviewed in 2031.

Direction 1 – Turn grey to green
Direction 2 – Greening for all
Direction 3 – Cool and calm spaces
Direction 4 – Greener buildings
Direction 5 – Nature in the city
Direction 6 - Greening together

Attachment B

Environmental Sustainability Policy

Environmental Sustainability Policy

Purpose

The City of Sydney declared a climate emergency in June 2019, stating that climate change is a risk to the people of Sydney. The declaration followed a decade where we demonstrated environmental leadership through strong and effective action in response to climate change.

We respond to the climate emergency by taking bold steps to reduce our environmental footprint and promote an ethical and equitable transition to a zero-carbon and regenerative economy. We plan for the sustainable growth of our city. We promote the move to clean energy and transport and reduce resource consumption in an equitable and inclusive way with no-one being left behind or bearing an unfair burden because of long-term structural change to jobs and industries. This policy supports the implementation of the forthcoming Environmental Strategy 2021-2025.

Scope

The policy applies to City employees, contractors, service providers, suppliers, leasers, customers, grant recipients and volunteers working with us or on our land.

This policy is to be implemented across all council functions, activities and decision making.

Definitions

Term	Meaning
Circular economy	Economic activity that is decoupled from the consumption of finite resources. A circular economy aims to keep resources in the economic system for as long as possible and phase waste out of the system. Circular economy initiatives can protect natural resources, clean the air that citizens breathe and the water they drink, whilst also making cities more efficient, prosperous and competitive.
City employees	Any person engaged in work for the City of Sydney in any of the following capacities: full-time, part-time, casual, temporary and fixed term employees, agency staff, volunteers, students on placement, and for the purposes of this policy, Councillors
Net zero	Carbon emissions are balanced by an equivalent amount of carbon offsets from projects that reduce emissions or draw down emissions from the atmosphere through sequestration. The priority is to reduce emissions first through efficiency, use of renewable energy and avoiding pollution. Any residual emissions should be offset through projects with multiple co-benefits like bush and land regeneration.
Regenerative economy	Designed so development increases the size, health and resilience of natural systems, while improving human health and life quality.
Sustainability	Meeting the social, environmental and economic needs of the present without compromising the ability of future generations to meet their own needs, through robust governance.
Sustainability impacts	Include: • climate change impacts • depletion of natural resources • land health • biodiversity • water quality • air quality

Term	Meaning
	• social inclusion • diversity and equality • economic or social benefits for our communities

Policy statement

We respond to the climate emergency within our own operations by:

- ensuring City actions are inclusive, ethical and equitable in the transition to a zero-carbon and regenerative economy
- working with Aboriginal and Torres Strait Islander groups and investing in knowledge and practices that restore natural equilibrium by caring for Country
- integrating climate emergency assessment into our decision making to build resilience into our functions, activities and asset management
- minimising environmental lifecycle impacts through procurement including prioritising low or zero carbon products, services and assets
- ongoing commitment to remain a carbon neutral organisation certified by the Climate Active program
- ensuring everyone who works for or with the City has a strong awareness of this policy and are empowered to act on these commitments.

We embed climate emergency principles into our engagement with our community and our stewardship of our local area by:

- committing to a water sensitive city by increasing the use of recycled water, managing potable water use, improving the quality of waterways and reducing local flood risk
- championing a circular economy to eliminate waste, minimise raw material use and treat waste as a valuable resource to regenerate natural systems
- reducing emissions by changing the way people travel, with less private vehicle travel and more use of walking, bicycle riding, public transport and ride share. We also promote and facilitate zero emissions transport
- increasing canopy cover on public and private land to enhance greening and urban cooling
- improving the city's urban ecological value by preserving and reinstating Indigenous plants and promoting biodiversity
- respecting and caring for the natural environment, taking a no harm approach that ensures compliance with legislative requirements, demonstrates best practice and continual improvement of environmental performance
- communicating the latest reliable climate science and projections, being transparent about our environmental performance and sharing our successes to demonstrate environmental leadership
- partner with our communities, businesses, state and federal government agencies to take positive climate action.

Responsibilities

All employees will:

- comply with the policy

Managers or supervisor/team leaders will:

- be responsible for implementing this policy within their units
- ensure that employees have a strong awareness of and comply with this policy.
- ensure that appropriate activities and responsibilities are set out in the relevant position descriptions, to deliver on the policy and relevant strategies and action plans.

The Sustainability Director will:

- maintain this policy
- provide appropriate and regular training to staff to empower and support them to apply the policy
- ensure business unit managers are aware of their responsibilities

Consultation

The units consulted were:

- City Projects and Properties
- City Services
- City Life
- City Planning, Development and Transport
- People, Performance and Technology
- Finance
- Legal and Governance.

References

Laws and Standards

- Local Government Act 1993 (NSW)
- Commonwealth Procurement Rules 2012
- NSW Procurement Policy Framework (2015)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth)
- Coastal Management Act 2016 (CM Act)
- Contaminated Land Management Act 1997
- Water Management Act 2000 (NSW)
- Product Stewardship Act 2011
- Recycling and Waste Reduction Act 2020
- Waste Avoidance and Resource Recovery Act 2001 No 58
- Protection of the Environment Operations (Waste) Regulation 2014
- NSW Electricity Supply Act 1995
- NSW Electricity Supply (General) Regulation 2014
- NSW Energy Savings Scheme Rule 2009
- NSW Electricity Infrastructure Investment Act 2020
- NSW State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- NSW State Environmental Planning Policy (Design and Place)
- NSW Draft Clean Air Strategy 2021
- ISO14001 Environmental Management System

Policies and Procedures

- Environmental Strategy and Action Plan 2021-2025
- Climate Emergency Response
- Stretch Reconciliation Action Plan 2020-2023
- Sustainable Event Guidelines
- Sustainable Procurement Policy
- Sustainable Procurement Guidelines

Laws and Standards
• Sustainable Design Technical Guidelines

Review period

This policy will be reviewed every 4 years.

Approval Status

The City of Sydney Council approved this policy XX/XX/2021.

Approval History

Stage	Date	Comment	TRIM
Original Policy	[ ] May 2021	Policy developed to support the implementation of the Environmental Strategy 2021-2025.	2021/082271
Commence Review Date	[ ] September 2024		
Approval Due Date	[ ] May 2025		

Ownership and approval

Responsibility	Role
Author	Manager Environmental Projects
Owner	Sustainability Director
Endorser	City of Sydney Executive
Approver	City of Sydney Council

Attachment C

Sustainable Events Management Policy

Sustainable Events Management Policy

CONTENTS

PURPOSE

The City of Sydney runs a large number of events each year to celebrate the diverse cultural, sporting and recreational aspects of the City of Sydney Local Government Area (LGA). These include both small events and world class events, including Sydney New Year's Eve and Chinese New Year.

The City of Sydney recognises the importance of an enduring, balanced approach to event management which takes into account the city's economy, ecology, society and culture. We are committed to ensuring that all events are organised and conducted with the goal of reducing the impact of the event on the environment. This policy will achieve this outcome through encouraging, and in some cases requiring that events run by the City of Sydney are:

- minimising waste generation
- maximising recycling
- minimising energy consumption
- maximising use of renewable energy
- minimising water consumption
- conserving bio-diversity
- minimising impacts on climate change and
- promoting these principles of sustainability.

PREFACE

This Policy was developed by the Events Management team in conjunction with City Sustainability in line with the Waste and Sustainability Improvement Payment standards developed and administered by the Office of Environment and Heritage.

SCOPE

The Sustainable Event Management Policy applies to all events operated and produced by the City of Sydney.

This Policy is designed to clearly identify the minimum requirements for event organisers in relation to the planning, implementation and evaluation of events captured within the Policy scope.

This Policy must be read in conjunction with the Sustainable Events Management Guideline.

EVENT CONSIDERATIONS

Events can be high water and energy consumers. The City of Sydney considers that it is important to develop and implement measures to minimise water and energy consumption and waste to landfill and communicate these measures to participants and/or vendors. These measures should be in line with the targets of Sustainable Sydney 2030.

Event organisers should aim to produce events with minimal impact on the environment, our society and with cost restrictions in mind. Event organisers must take reasonable steps to ensure that relevant stakeholders including but not limited to; contractors, stallholders and patrons are aware of, and where appropriate, abide by the sustainability arrangements in place at the event.

Events should be developed using the Sustainable Events Management Guidelines.

SUSTAINABLE EVENT MANAGEMENT PLAN

The Policy encourages all event organisers to develop a Sustainable Event Management Plan (SEMP) for any event held in the City of Sydney LGA and should be submitted with the application for any Local Approval or Owner's Consent required.

The Sustainable Event Management Plan must demonstrate that sustainable options have been considered in line with the Events Considerations section of this policy and the associated Guidelines. In particular, in line with the City's commitment to reducing waste, printed material must be kept to a minimum.

For events produced by the City of Sydney Events team and Sydney New Year's Eve Units detailed 3 Year Plans are in place. These incorporate sustainable event management practises across the season of events, including Sydney New Year's Eve and Chinese New Year. These 3 Year Plans take the place of a Sustainable Events Management Plan for events produced by those Units.

RESPONSIBILITIES

The Executive Manager Culture is the owner of this Policy and related Guidelines.

The Creative Director-Producer, Events is responsible for the implementation of this Policy and related Guidelines for large Events other than Sydney New Year's Eve.

The Producer - Sydney New Years Eve is responsible for the implementation of this Policy and related Guidelines for Sydney New Year's Eve.

Where events are conducted or produced by other City of Sydney Business Units, the Unit Manager is responsible for the implementation of this Policy and related Guidelines.

INTENDED OUTCOMES

The intended outcome of this Policy is to ensure that all events run by the City of Sydney are produced with sustainability considerations in mind.

Further, to ensure that all events produced and run by the City of Sydney minimise waste to landfill and minimise energy and water consumption whilst conserving native flora and fauna habitat.

Event organisers should do all they can to ensure that each event is more sustainable and produced in a more ecologically sound manner to previous events of that nature.

EVALUATION

For all events conducted or produced by the City of Sydney, or where owners consent is required the preparation of a Sustainable Event Management Plan is mandatory and must be submitted with the application for any Local Approval required. These Sustainable Event Management Plans will be periodically reviewed by the Policy Owner to ensure compliance.

Further, events should be assessed against the criteria contained in this policy during post event evaluation. All recommendations should be provided to the Policy owner for consideration and will be included, where appropriate, following periodic reviews.

REFERENCES

Related Legislation & Standards

- Draft International Standard ISO 20121

Related Policies and Policies

- City of Sydney Sustainable Procurement Policy
- City of Sydney Ethical Food Guidelines

APPROVAL AND REVIEW

Review Period

The Executive Manager Culture will review this policy every 2 years.

Next Review Date

June 2013

TRIM Reference Number

Document number: 2011/213088

AUTHORISATION

Approved by the Chief Executive Officer on 15.9.11

Attachment D

Engagement Report

CITY OF SYDNEY

Engagement report – draft Environmental Strategy 2021-2025 and draft Environmental Sustainability Policy

Contents

Background

Draft Environmental Strategy 2021 - 2025

Our new draft strategy recognises and responds to the global climate emergency, builds on what we have already achieved and sets ambitious new targets.

What we're doing

It is important for cities to lead the way on climate action. This draft strategy outlines how Sydney will continue to be a global leader and create a more resilient and sustainable city.

It details how we will increase energy and water efficiency, use more renewable energy, move away from petrol-fuelled vehicles and divert waste away from landfill.

In 2019, we spoke to Aboriginal and Torres Strait Islander people, children and young people, residents, businesses, workers and visitors about their vision for the future.

People overwhelmingly want a response to climate change. They want a city with sustainable waste management and use of resources. People want to see a reduction in emissions, greater recycling and reusing of products and changes to how we use our city to reduce our impact on the environment.

We've taken insights from communities, government, and industry to develop this strategy.

It sets out 4 key directions and 23 supporting actions that we will take to achieve meaningful environmental outcomes in our city.

The draft document was on public exhibition between 19 May 2021 to 16 June 2021.

Draft Environmental Sustainability Policy

A policy statement that supports the implementation of the Strategy was also placed on public exhibition. The Policy will enable the City to strengthen the environmental management expectations of City partners including suppliers, grant and event organisers holding events in City spaces. City partners will be required to comply with specific requirements of the policy and supporting guidelines including Single-Use Guidelines and Sustainable Design Technical Guidelines.

This engagement report

This document summarises key findings and outlines activities that took place during the public exhibition of the draft environmental strategy.

All feedback captured in this report will be considered before reporting back to Council.

Engagement summary

From 19 May 2021 to 16 June 2021, we asked the community for feedback on our draft environmental strategy.

Consultation on the plan provided an opportunity for stakeholders and the community to review and comment on the draft strategy before being taken to Council for adoption.

Consultation activities included online engagement and a stakeholder briefing. The consultation was promoted on various social media channels.

This report outlines the community engagement activities that took place to support the consultation and summarises the key findings from the consultation.

Purpose of the engagement

The purpose of the engagement was to:

– gather feedback from stakeholders and the community about the draft strategy

– determine the level of satisfaction with the draft strategy

– inform the development of the final strategy.

Outcomes from the engagement

Over 100 pieces of feedback were received during the consultation. Below is a break-down of the feedback received:

- 111 surveys completed
- 10 email submissions were received
- Over 140 stakeholders attended an online briefing

Submissions received from organisations

- C40
- NSW Department of Planning, Industry and Environment Net Zero Transport Team
- Owners Corporation Network
- Pyrmont Action

Survey respondents

111 PEOPLE SURVEYED

31% AGE 20 - 40
39% AGE 41 - 60
28% AGE 61+

61% LIVE IN THE CITY OF SYDNEY AREA

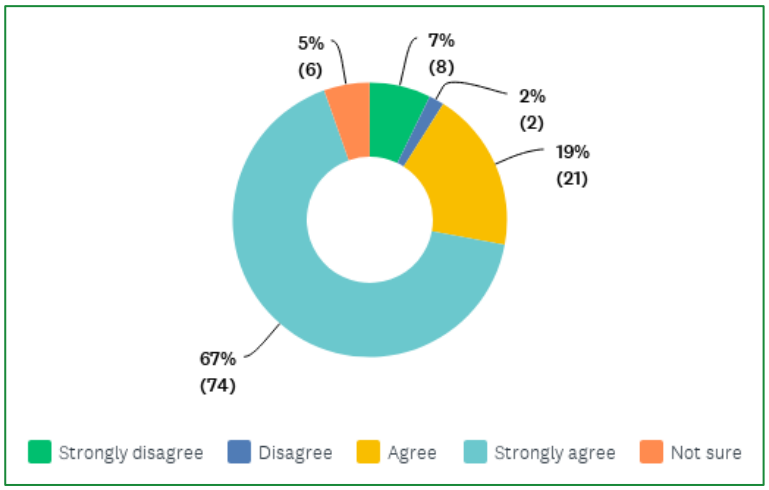
46% WORK IN THE CITY OF SYDNEY AREA

40% MALE
56% FEMALE

Key findings

Survey results indicate overall support for the draft strategy's vision and confidence in the City's ability to meet the targets and vision. It also clearly shows concern over impacts of climate change in the city, with 87% of respondents either very worried or worried about the impacts of climate change.

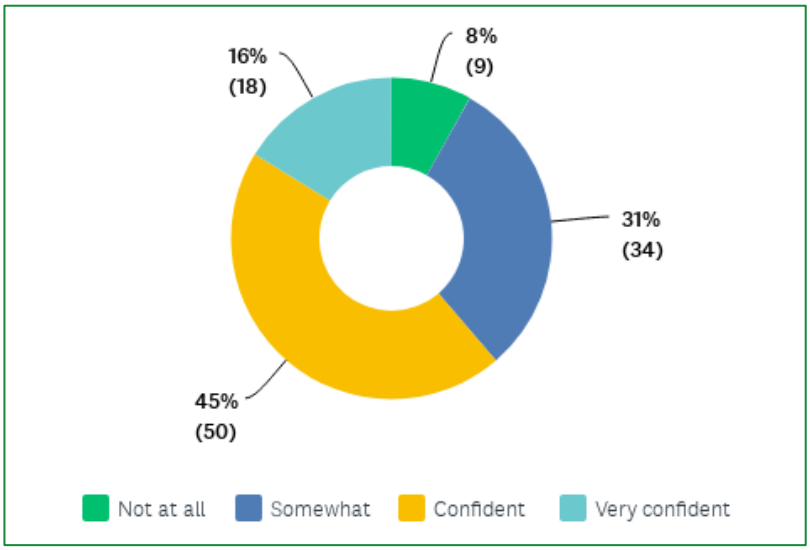
Q: How strongly do you agree or disagree with this strategy's vision for a more resilient and sustainable city?



86%
strongly agree or agree

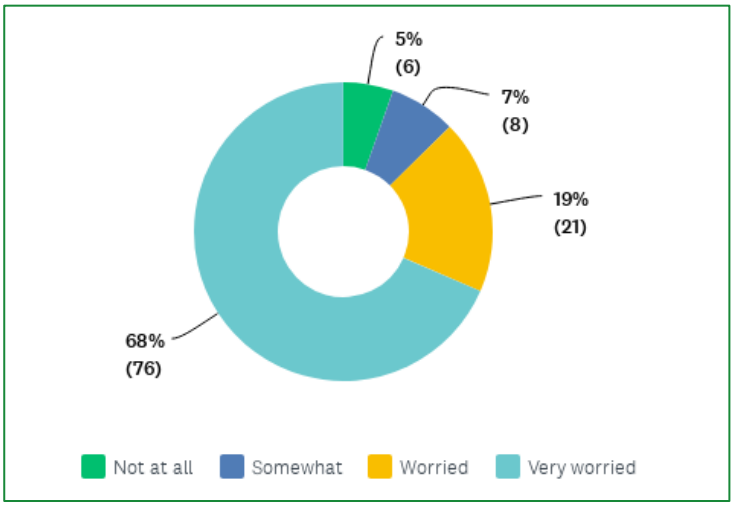
Q: How confident do you feel that the City of Sydney and the community can meet the targets set out in this strategy?

61%
confident or very confident



When asked why respondents made their selection, people who selected 'very confident' or 'confident' cited the City's strong leadership and track record, and a motivated community as key reasons. Others who were confident cited easily achievable targets as the reason for their confidence.

Q: How worried are you about the impacts of climate change including heatwaves, bushfires and storms?



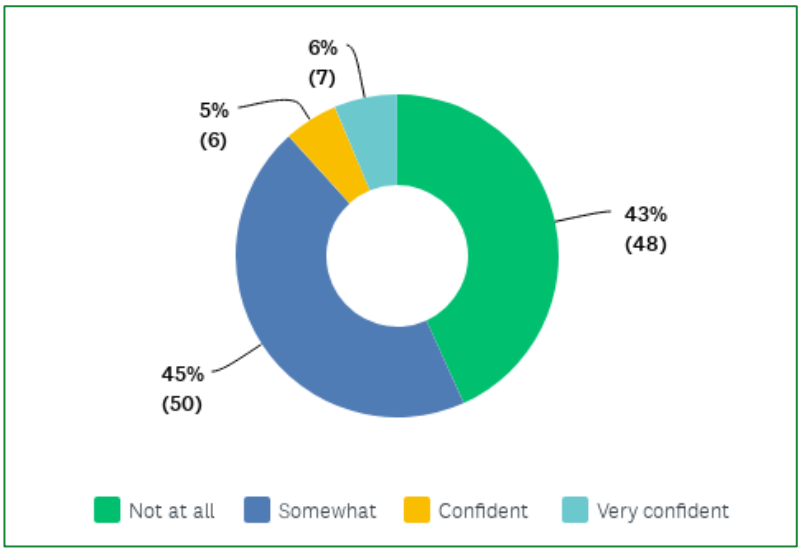
87%

very worried or worried

Q: How confident are you that action by government, business and the community is adequate to address these challenges?

88%

not at all or somewhat confident



Respondents who selected ‘somewhat’ or ‘not at all’ cited a lack of support from state and federal governments on climate action, that some of the targets impact on the liveability and vibrancy of Sydney, and bureaucratic council operations and resourcing as key reasons.

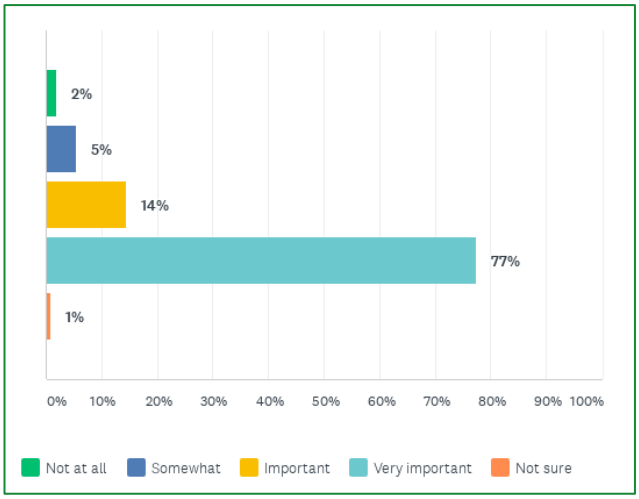
Four directions

Survey respondents were asked how important the draft strategy's four directions are. Most respondents think all four directions are either important or very important. Direction 2 was identified as 'very important' by the most respondents (79%).

Direction 1 – Smart and resilient City operations

91%

very important
or important

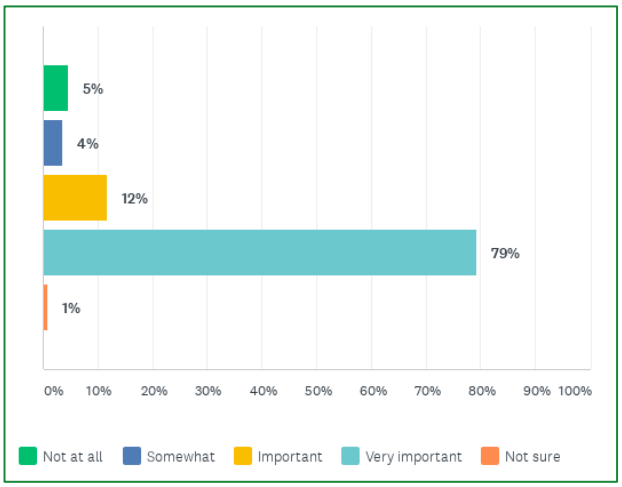


The key themes that respondents commented on most for this direction include support for circular economy and waste reduction measures, a desire for the City to continue to show strong leadership and engagement with businesses and the community, and energy and water management.

Direction 2 – Efficient, future proofed buildings and transport powered by renewable energy

91%

very important
or important

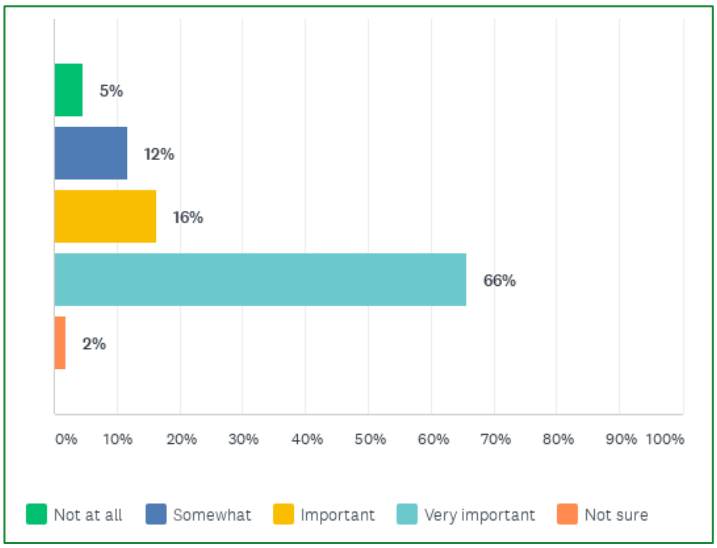


The key themes that respondents commented on most for this direction include a desire for initiatives to reduce car use in the CBD and/or to improve public transport, legislated building standards for new and existing buildings and requests for more EV charging stations for electric vehicles.

Direction 3 – Regenerative and inclusive city

82%

very important
or important

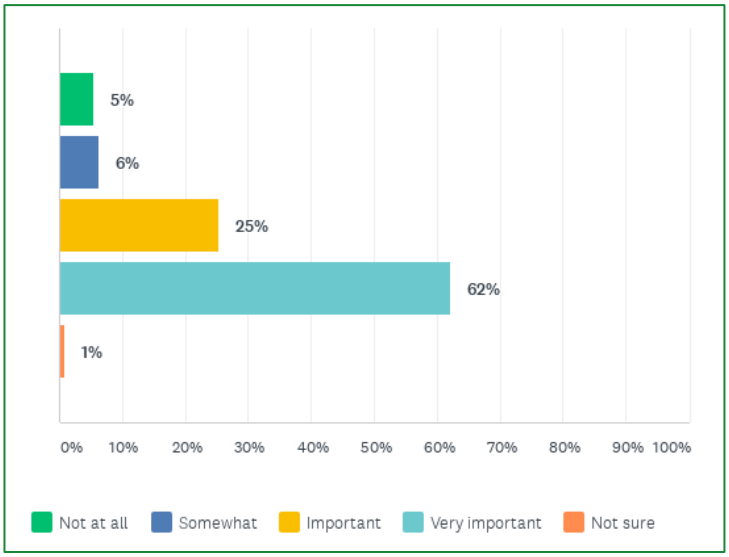


The key themes that respondents commented on most for this direction include recognition that community connection and First Nations knowledge are important to sustainable principles, and concern for water and air pollution. In addition, some respondents found this set of actions to be less clear.

Direction 4 – Strong foundations for delivery

87%

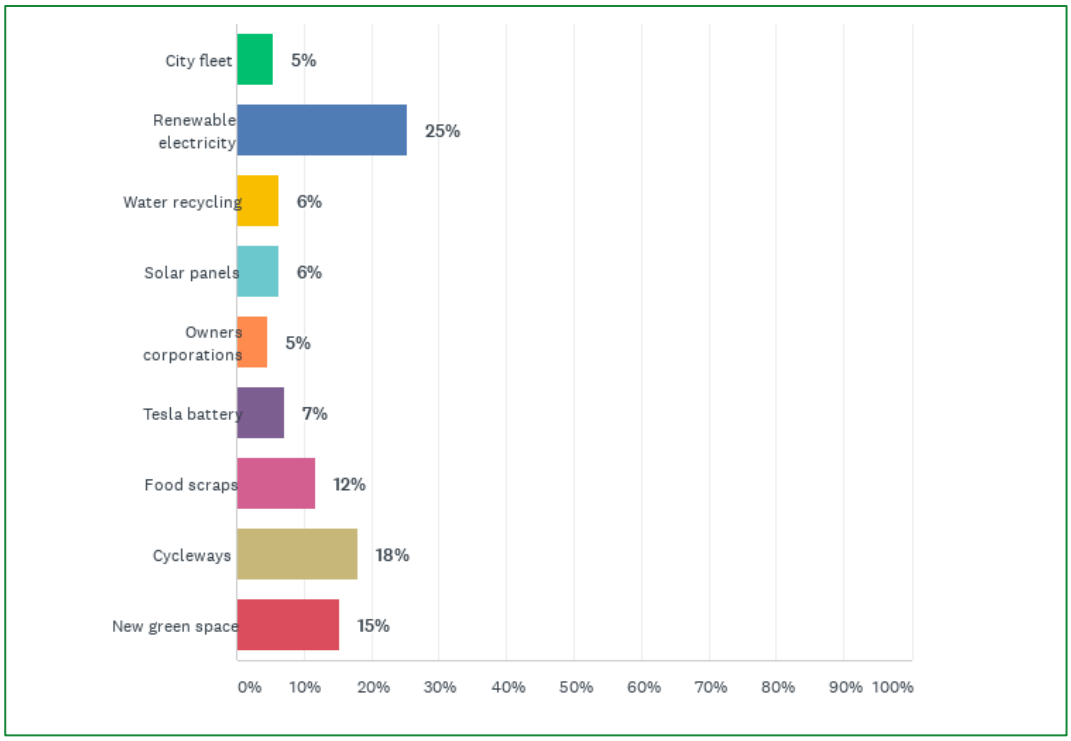
very important
or important



The key themes that respondents commented on most for this direction include that achieving the targets will take strong and dedicated leadership from the City, in the form of ongoing consultation, and engagement and capability building for City staff and for the community. Another key theme was respondents' desire for clear and transparent data used by the City of Sydney to report on environmental performance.

Achievements

We gave respondents nine examples of actions that the City has already taken and asked them to select the one that resonated most. We then asked why that achievement resonated with them. Below are the selections respondents made and some quotes about each image from survey respondents.



Renewable electricity

"It's fantastic to see City of Sydney take leadership on this and it makes me optimistic that the state and federal government will realise that smart environmental choices can go hand in hand with economic development."

Cycleways

“My extended family all cycle as our main form of transport and some of us are raising children in Sydney. These cycleways are not just "saving the environment" for us, they're saving our lives.”

New green space

“We need to have more NATURAL green spaces to reduce the urban heat island effect, cool our cities and increase tree canopy. It is important to talk about natural green space.”

“Cities need to be more than just work spaces. To bring life to a city there needs to be green spaces so people want to live in and enjoy the city.”

Food scraps

"Working close to the waste management industry and foodservice industry, I can say that having a Food scraps program will help to reduce large amount of waste from the landfill."

Tesla battery

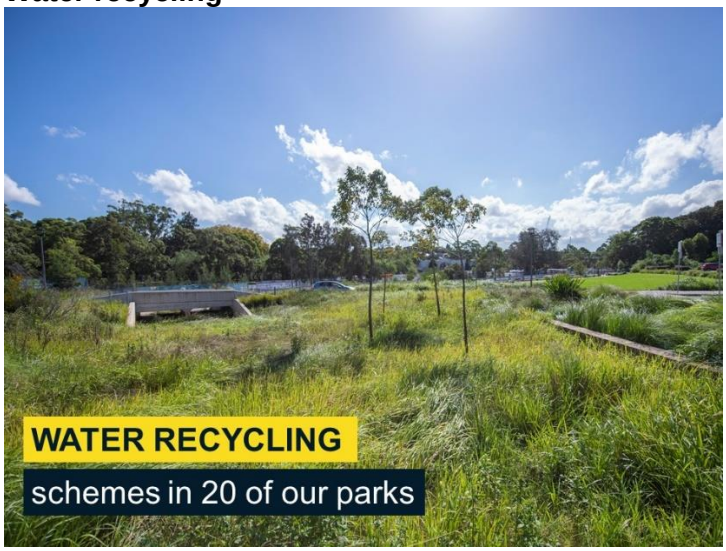
"It's important the City supports innovative technology to support renewable energies."

"I really like the batteries already installed in Alexandria. It would be great to provide incentives for home owners and businesses to install rooftop solar and private batteries/shared community batteries funded collectively."

Solar panels

"We should continue to consider the roof space on buildings in the CBD, suburbs and surrounding areas for solar installations to continue to make a positive impact on the use of renewables."

Water recycling



"The transformation at Sydney Park is acknowledged, as is the importance of changing the way we use water to be more efficient. Alternate sources of water are vital moving forward."

Owners corporations

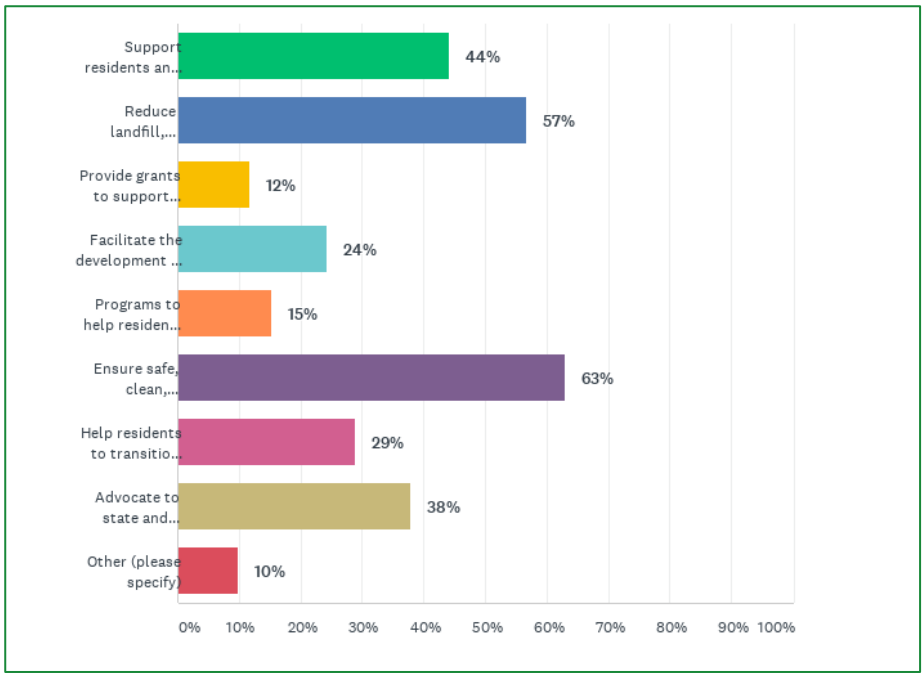
"The Owners Corporation Network (OCN) applauds the City of Sydney for their strong and ongoing advocacy and support for a Green Global and Connected Sydney. The environmental results and outcomes as summarised in the City's draft Environmental Strategy 2021-25 are impressive and we are proud to be a partner with the City in the achievement of sustainable residential apartment communities."

City fleet

"Electric vehicles for the City's fleet provides a model for businesses and citizens to follow suit. It lowers emissions and avoids roadway pollution."

Priorities

We asked respondents if we could do only three things from the list below, what are the most important things for the City to focus on? Most respondents selected 'Safe, clean, affordable and accessible options for walking, cycling and public transport' (63%), followed closely by 'Reduce landfill, improve recycling and support a circular economy' (57%) and 'Support residents and businesses to switch to renewable electricity' (44%). There were 11 'other' comments; these are captured in the submissions table below.



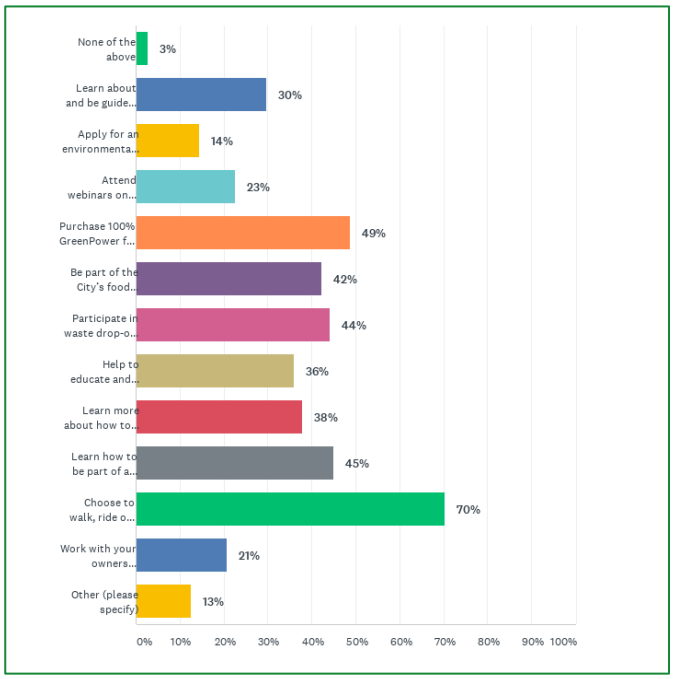
63%

Safe, clean, affordable and accessible options for walking, cycling and public transport

- Support residents and businesses to switch to renewable electricity (44%)
- Reduce landfill, improve recycling and support a circular economy (57%)
- Provide grants to support businesses and organisations deliver environmental initiatives (12%)
- Facilitate the development of more recycled water schemes (24%)
- Programs to help residents and businesses cut water and energy bills (15%)
- Ensure safe, clean, affordable, and accessible options for walking, cycling, and public transport (63%)
- Help residents to transition to electric vehicles (29%)
- Advocate to state and federal government for more action on climate change (38%)
- Other (please specify) (10%)

Working together

We asked people to select the things they are interested in being involved in. Seventy percent of respondents selected ‘Choose to walk, ride or take public transport’, followed by ‘Purchase 100% GreenPower from my electricity provider’ (49%). There were 14 ‘other’ comments; these are captured in the submissions table below.



70%

Choose to walk, ride or take public transport

49%

Purchase 100% GreenPower from my electricity retailer

- None of the above (3%)
- Learn about and be guided by Aboriginal Caring for Country principles (30%)
- Apply for an environmental grant or sponsorship program (14%)
- Attend webinars on reducing water and energy use in the home (23%)
- Purchase 100% GreenPower from my electricity retailer (49%)
- Be part of the City's food scraps program (42%)
- Participate in waste drop-off days (44%)
- Help to educate and involve my local community in sustainable initiatives (36%)
- Learn more about how to choose a bank or superannuation fund that doesn't invest in fossil fuels (38%)
- Learn how to be part of a circular economy (45%)
- Choose to walk, ride or take public transport (70%)
- Work with your owners corporation to reduce energy and water use in your apartment building (21%)
- Other (please specify) (13)

Subjects/issues raised in submissions

Several subjects/topics were raised in the feedback received. These were presented as concerns, suggestions and/or requests and are summarised below.

Action 01. Deliver energy, water and resilience outcomes through asset design and management	Total	City of Sydney Response
Electric vehicles Encourage more electric vehicle use through specifications in city contracts rather than just the city fleet.	1	The City values suppliers who share a commitment to achieving leading and innovative environmental performance. The Procurement Returnable Schedules have been developed for prospective suppliers to align their service provision to the City's objectives in relation to environmental performance and other elements that support a circular economy.
City owned buildings More effort for a robust energy demand reduction element for relevant City buildings.	1	Emissions from City operations have reduced 31% through energy efficiency and on-site renewable electricity generation. Action 1 including ongoing work on building efficiency
City owned buildings What NABERS rating will be used for City-owned buildings?	1	We are targeting a 5 star NABERS Energy and 4 Star NABERS Water ratings at relevant City-owned buildings
City owned buildings 4 Green Star is mentioned, but this is mid-level performance.	1	Noted
There is a perception that waste contractor emissions are not counted by City of Sydney.	1	The City's national carbon offset disclosure and certificate is available at https://www.cityofsydney.nsw.gov.au/surveys-case-studies-reports/green-reports. This document provides a description of the scope emissions measured by the City and includes contracted services emissions as scope three indirect emissions. They are indirect emissions because accounting for them as a direct emission sits with

		the organisation operating the vehicle. We also take care not to double count emissions where contracted service providers also undertake emissions reporting to the climate active standard.
I am not sure which scope emissions are included? This is not clear. Very keen to support the City to set ambitious targets on embodied carbon and then a Science Based Target looking at your Scope 3 emissions.		The City's national carbon offset disclosure and certificate is available at https://www.cityofsydney.nsw.gov.au/surveys-case-studies-reports/green-reports. This document provides a description of the scope emissions measured by the City.
Action 04. Ensure the City's programs and services use resources efficiently	Total	City of Sydney Response
Contractor responsibilities Request for Environmental Sustainability Policy wording be to clearer regarding responsibility of service providers, grantees and event organisers.	1	The application of the policy for external parties will be implemented through agreements that the City establishes with these parties including supplier contracts, lease, grant, venue or service agreements. In addition, the Policy will be incorporated into the City's Supplier Code of Conduct and Grant guidelines.
Contractor behaviour Make your contractors environmentally aware as well. Council trucks and "Skyline" contractors in particular need to be instructed to turn off engines when stationary. All whipper snippers, edges and lawnmowers to be electric and ban leaf blowers.	2	Noted. The City values suppliers who share a commitment to achieving leading and innovative environmental performance. The Procurement Returnable Schedules have been developed for prospective suppliers to align their service provision to the City's objectives in relation to environmental performance.
City services Regular surveys to get real feedback on how residents perceive services delivered. I see nothing here about how rate payers perceive services delivered.	1	Noted. Feedback has been passed on to services teams.
Action 06. Reduce embodied carbon in our supply chain and support circular economy outcomes	**Total**	**City of Sydney Response**
Concern over environmental impact of synthetic fields.	4	We are reviewing strategies to improve the environmental performance of synthetic fields, by looking at materials, design and operational measures.

Action 08. Improve energy efficiency, water efficiency and waste management in existing buildings	Total	City of Sydney Response
Conduct low cost environmental audit for not for profits which have houses and offices as part of their business, so they can create a cultural change around environmental practices.	1	Noted
Action 10. Support the transition to zero-emissions transport	**Total**	**City of Sydney Response**
Density and transport Would like to see detail on densifying around transit, increasing access to amenities for residents within their neighbourhoods to reduce trips/trip length, etc.	1	Land use planning is addressed in the City's City Plan 2036: https://www.cityofsydney.nsw.gov.au/strategic-land-use-plans/city-plan-2036
Zero emission zone Ideally city should advocate for a zero emission zone rather than a low emission zone	1	Noted
Vehicles		
Support reducing vehicles in the CBD	14	A comprehensive and connected bike network across the city will encourage more people to cycle locally, also reducing reliance on cars to get around.
Congestion charge and reduction in car driving.	1	Out of scope of this strategy. Comments have been passed on to our transport team
Single carriageway roads in the city, to encourage a car-free city.	1	Out of scope of this strategy. Comments have been passed on to our transport team
Lower speed limits.	2	Out of scope of this strategy. Comments have been passed on to our transport team
Action to get diesel trucks and buses off the road.		Out of scope of this strategy. Comments have been passed on to our transport team
City should not discriminate against people who drive cars. Lack of parking and high parking fees have a heavy influence on where people shop and eat out.	1	Out of scope of this strategy. Comments have been passed on to our transport team
Stop providing car-friendly short cuts through high pedestrian activity zones like Central Park.	1	Out of scope of this strategy. Comments have been passed on to our transport team
Walking and riding		
More, safe cycleways	14	Action 10 'Support the transition to zero-emissions transport' includes continuation of the City's work to improve conditions for walking and cycling in the local area
Not in support of cycleways	4	Noted
Look to other countries' cycleway models to improve safety and build positive cyclist behaviours.	2	Action 10 'Support the transition to zero-emissions transport' includes continuation of the City's work to improve conditions for walking and cycling in the local area

Comments on cycleways and safety concerns.	3	Out of this strategy's scope. Comments have been passed onto the City's cycling team
A shift away from private cars is exactly where we need to be going, so it would be great to see that walking and cycling are viable - and FAST - options in every corner of the city. For example, why does George St not have a cycleway included on it? This could be implemented very safely to be a great, direct corridor for cyclists into the middle of the city.	1	Out of this strategy's scope. Comments have been passed onto the City's cycling team
Request for clearer targets, such as including how many new cycleways installed. The city needs to set the strong targets and create urgent change the people want.	1	The City's public Green Report reports on progress to targets, including for Active Transport including walking, cycling and public transport trips in the LGA. Updates on cycleway developments are also contained in the Green Report.
Too much reliance on electric vehicles could hinder the uptake of public transport, cycling and walking. Those modes require shorter distances and less urban sprawl, but cars (even electric ones) promote urban sprawl.	1	Action 10 'Support the transition to zero-emissions transport' includes continuation of the City's work to improve conditions for walking and cycling in the local area
Public transport		
Let people take dogs on public transport.	1	Noted. Public transport is a State Government responsibility.
More support for public transport required.	1	Noted. Public transport is a State Government responsibility.
Comment that bus services should not be cut, like the minister of transport is trying to do.	1	Noted. Public transport is a State Government responsibility.
Electric vehicles (EVs)		
Electric vehicles for the City's fleet provides a model for businesses and citizens to follow suit. It lowers emissions and avoids roadway pollution.	6	Noted
Suggestions/requests for EV information resources and guidelines on electric vehicle charging.	2	The City will look to provide more information on its website
Request for clearer support of EVs, such as including how many numbers of new electric charging stations installed. The city needs to set the strong targets and create urgent change the people want.	1	The introduction of zero emissions vehicles, such as electric vehicles and buses, are also an important part of reducing emissions from the transport sector – particularly as the electricity grid becomes green. With kerbside space at a premium, on street private vehicle parking has generally decreased as the City prioritises that space for walking, cycling and public transport. Given the kerbside space limitations the City is focused on supporting electric vehicle charging in off street spaces, such as residential and commercial buildings.
Pyrmont Action calls on the City to commit to developing an EV Charging Infrastructure Plan, and to immediately establishing a stakeholder working / consultative framework. These actions will engage the energies and interests of residents and other stakeholders to accelerate the drive to electric vehicles ownership and use in the City of Sydney.	1	
Charging stations There is not enough planned for EV charging stations.	7	

Charging stations City could take responsibility for the roll out of slower, longer dwell destination and AC chargers in the LGA (in contrast to NSW Govt's focus on ultra-fast chargers along commuter corridors)	1	We are currently investigating the provision of electric vehicle charging infrastructure in all new developments.
Charging stations What support is City of Sydney looking to provide for off-street charging? Will this be for private, business, or public locations (i.e. car parks)?	1	
Car share More car share facilities in apartments and support them to switch to electric.	1	
Concern over higher cost of EVs and difficulty to charge are barriers to take up.	1	
Incentives Provide grants and/or alternative incentives to building owners/corporations to encourage transition to zero-emission fleets within apartment communities.	2	The City will consider this in the forthcoming grants program review
Incentives Are rebates/grants for installing home chargers being considered?	1	The City is not considering this at the current time.
Planning instruments Given the shift to EVs, the maximum provision of parking in the Development Control Plan should be amended to a minimum provision of parking (with EV charging) at a much higher rate. This will reduce barriers to EV, and places burden on developers, not community and Council.	1	We are currently investigating the provision of electric vehicle charging infrastructure in all new developments.
Planning instruments Require all new basement parking to have the provision of not only electricity for each car spot, but an actual charger as this will reduce barriers for owner occupiers and renters.	1	
Planning instruments The city mentions limited powers on decarbonizing transport (except re: building off-street electric charging) but planning tools can help reduce vehicle kilometres travelled and have a substantial impact on transportation-related emissions over time.	1	
Action 11. Encourage community uptake of renewable electricity and stimulate the green economy	Total	City of Sydney Response
Showing the way on renewables has direct impact and showcases leadership	21	Noted
Energy usage and costs often come out of strata fees, rather being charged directly to the individual residents, leading to no accountability and wasteful behaviour.	1	The City works with strata communities to support more effective decision making around environmental performance
Planning Call for council and government intervention and support around the following:	6	The City provides targeted information materials on climate action and renewable energy for different groups in the community,

- renters ability to access to solar, water tanks, tree planting to reduce heat effects and battery recharging for electric cars - increase in people living in apartments and many occupants lack of control to influence body corporates to address climate change		including renters and apartment dwellers: https://renewableenergy.cityofsydney.nsw.gov.au/
Planning Residential building codes to: - increase thermal homes, double glazing, solar batteries, balcony gardens, reduce energy - create incentives - ban fire pits and wood fireplaces etc	2	The City advocates for improvements to the National Construction Code, which is the responsibility of the Federal Government
Batteries We need batteries to support renewable energy	5	Noted. The City has installed a Tesla Battery at its Alexandra Canal Depot, to ensure most effective use of the solar power generated on-site.
Solar PV There is still space in the CBD that could be used for solar PV	4	The City provides targeted information materials on renewable energy for different groups in the community, including businesses: https://renewableenergy.cityofsydney.nsw.gov.au/
Renewable electricity is a symbolic milestone that means more outside our local bubble, showing strong leadership. Going 100% renewable is the quickest way to reduce emissions and it's a measurable target.	2	The Strategy supports the shift to renewable energy
Thermal power generation Shifting away from thermal power generation is the one of the key actions everyone must take to address the climate crisis.	1	The Strategy supports the shift to renewable energy
Innovation Would love to see more trials on use of innovative zero carbon projects and materials - setting of some targets as well.	1	Action 17 ‘Support the development of circular economy systems’ outlines the City’s intent to continue working in this area
Consider nuclear energy	1	Noted
Net zero energy is an environmental fallacy! Electric vehicles are not magically 'clean'. Please check out for instance the book Bright Green Lies by Derrick Jensen, Lierre Keith and Max Wilbert. Highly recommended!! Yes we must combat climate change as a priority. But that in itself does not make any of this 'sustainable'. Please don't stop or rest your thinking there.	1	Noted
Decrease use of gas The City has missed a rare opportunity to decrease the volume of gas consumed within the local area. By restricting the use of gas cooking and heating in homes, the City would be acting in the long-term health interests of resident as well as helping them save money on bills.	2	The City’s proposed planning controls for net zero energy new buildings will encourage new buildings to move away from gas use

Action 12. Support our residents to reduce utility costs and environmental impact	Total	City of Sydney Response
Smart Green Apartments Strongly encourage the City to continue the SGA program delivering proactive and successful actions.	1	The Smart Green Apartments program has had some great successes and continues as an active program.
Implementation and support across metropolitan Sydney The Owners Corporation Network (OCN) is committed to continuing our partnership with the City, and would be especially keen to discuss how we could work with the City to help expand this vital range of support across metropolitan Sydney, perhaps through the Resilient Sydney platform.	1	Noted. This information has been passed on to the Sustainability Programs team
Short term letting Concern that short term letting threatens apartment communities putting a focus on sustainability initiatives. Relevant articles provided below to support comment. OCN Policy AFR Article Additional comment that this is of particular concern to the Pyrmont area.	1	Noted. Outside the scope of this strategy
Social housing should have solar power; the blocks in Redfern (and elsewhere) where I live can be made exemplary in how to make the transition to renewables.	1	Noted. Social housing is the responsibility of the NSW State Government
It would be amazing if my apartment had a rooftop garden or solar panels, but that involves convincing the Owners Cooperation to act and spend.	1	The City works with strata communities to support more effective decision making around environmental performance
While I purchase my energy from a carbon neutral provider, Green Power costs more.	1	There is information on the City of Sydney's webpage about purchasing and negotiating Green Power. https://www.cityofsydney.nsw.gov.au/guides/climate-action-for-residents
Action 13. Help business to reduce utility bills and demonstrate environmental achievement	**Total**	**City of Sydney Response**
The city needs to assist in providing tools to workplaces and retail outlets that can achieve step changes necessary to get to the reductions in energy, water use and waste production targeted.	1	Through the City's involvement in the CitySwitch and Better Building Partnership programs, there are initiatives, tools and guidelines in use to support changes in sustainable behaviours.
Action 14. Incorporate the perspectives of Aboriginal and Torres Strait Islander people in environmental action	**Total**	**City of Sydney Response**

Community connection and Indigenous knowledge are so important to sustainable principles.	5	Action 14 reflects the City's commitment to integrating Aboriginal and Torres Strait Islander perspectives into environmental action
Why does the Aboriginal community specifically have to be separated for this aim.	4	The City perceived an opportunity to specifically draw on the traditional knowledge and perspectives of Aboriginal and Torres Strait Islander people in our community
I would love for the City of Sydney to come to the party and think about conservation, what 'caring for country' actually means (not more paved surfaces, not synthetic sports fields, not 'pocket parks'.	1	Action 14 reflects the City's commitment to integrating Aboriginal and Torres Strait Islander perspectives into environmental action
Action 17. Support the development of circular economy systems	**Total**	**City of Sydney Response**
I am confident in the City's ability to bring about a circular economy by working with stakeholders across community, business and government.	1	Noted
Look into adopting the Doughnut Economics model like Amsterdam - this would be a strong message and important demonstration	1	Noted
Should explain what 'support circular economy outcomes' means - it presumes a certain amount of knowledge, I'm not even sure what it means	1	Page 54 of the Strategy explains that: The circular economy has three principles: designing out waste and pollution; keeping products and materials at their highest value for as long as possible; and regenerating natural and social systems.
We should be designing / driving out waste in the first place through the circular economy outcomes, rather than remediating the waste that is there. I feel this needs a bigger focus.	1	Action 17 'Support the development of circular economy systems' outlines the City's intent to continue working in this area
Action 18. Drought-proof the city by facilitating water recycling	**Total**	**City of Sydney Response**
Support for water recycling	5	Noted
Effective use of storm water run-off and other water collection is vital moving forward.	1	The City captures storm water for reuse in several parks
More education and effort needed to encourage people to reduce their water use.	2	The City encourages water efficiency through its various sustainability programs targeted to residents and businesses
The transformation at Sydney Park is acknowledged as is the importance of changing the way we use water to be more efficient.	1	Noted

We cannot continue using water as we have, it doesn't make sense to use fresh and potable water for flushing toilet or irrigating gardens. It does not make sense neither to get rid of rainwater as quickly as possible and let it sluice away to the sea. Indeed, water needs to infiltrate into the soil and regenerate local water cycle. This will avoid heat island effect in city, not more concrete to let water runs away from the soil.	1	The City uses water in the landscape through a range of Water Sensitive Urban Design (WSUD) treatments, including many of the examples provided in the submission.
For water recycling, using greywater for park irrigation would be a good outcome and goal to aim for.	1	The City has developed several climate resilient water supplies which we utilise for watering in the public domain including the Sydney Park stormwater harvesting project, the precinct wide stormwater harvesting system in Green Square and our groundwater supplies. The City continues to investigate and develop new local scale projects to support greening.
It has been evident that flooding has reduced over the years. However the City needs a big new park - not strips adjacent to commercial buildings.	1	Noted
Install water efficient equipment into buildings such as tap aerators, dual flush, etc,	1	The City encourages water efficiency through its various sustainability programs targeted to residents and businesses
Action 19. Regenerate polluted waterways, air and land	**Total**	**City of Sydney Response**
Glebe island concrete plant Concern over noise, air and water pollution from concrete plant and daily port movements outlined by the State Dept of Planning and Ports Authority. - Is this consistent with the City of Sydney Strategy? - Is there anything the City of Sydney can do to stop this?	2	A State Significant Development Application (No. SSD-8544) is currently under consideration by the Independent Planning Commission (IPC) for the Glebe Island Concrete Batching Plant. The proposal relates to the construction of a concrete batching plant and a new aggregate handling facility with a shipping terminal. Noise and air quality concerns were issues continually raised by the City in submissions to the Department of Planning, Industry and Environment (DPIE) throughout the assessment of the application. The City addressed the IPC in May 2021. The Lord Mayor also sent a letter to the IPC reiterating the City's comments and providing support for the members of the Pyrmont community.

		While air quality and acoustic impact assessments were found by the NSW Environment Protection Authority (EPA) to comply with relevant regulations, the City strongly pushed for consideration of a more sustainable energy source when ships are berthed at docks (like shore to ship electrical power). This would dramatically reduce the noise, air and water pollution impacts that the ships would have on the environment. Additionally, the City recommended that conditions of consent be imposed to ensure air quality and noise control is regularly monitored and maintained during construction and operation of the facility, including compliance with all mitigation measures and noise policy benchmarks. In regards to compliance action, because the site is in the Inner West Council area, our compliance unit can't take any action should they find the site is not complying with any conditions of consent, this would be a matter for Inner West Council and the relevant State bodies.
Reminding the City of its commitment in its Clean Air Cities declaration template to include the following in Sustainable Sydney 2050: - Meet C40 Climate Action Plan requirements and should make reference to WHO guidelines [for air quality] - Sustainable Sydney 2050 to include reference to air quality guidelines and priority focus areas while meeting C40 Climate Action Plan requirements.	1	Noted for consideration for the Sydney 2050 review process.
Action 20. Reduce the amount of residential waste sent to landfill through avoidance and resource recovery	**Total**	**City of Sydney Response**
Particularly for people living in apartments and small spaces, food scraps helps to reduce waste destinated for landfill where there is strong desire to do so, but where there hasn't always been the ability to dispose of food scraps for composting.	11	The City's foods scraps recycling program is now available to over 11,000 households
Should be an integrated program that accepts food scraps, garden organics and compostable packaging.	4	There are two reasons why the City doesn't allow food scraps in our green lid garden organics bin at present. Firstly, our garden organics are sent to a specialised recycling facility which only accepts garden

		organics for processing into mulch, soil conditioners and composts which are used for landscaping and in parks and gardens. This facility does not accept food waste. Secondly, the majority of the City's residents live in apartments and don't generate enough garden waste to make a combined food and garden organics service viable. This is why we believe a separate food scraps recycling service is a better solution for our residents.
Suggestion to use more imagery and languages in food and garden organics campaigns to educate people with limited English literacy.	1	The City provides bi-lingual (English and Chinese) information about some of our waste and recycling services, include our food scraps recycling trial.
Include a clear strategy to reduce / ban single-use plastics.	2	The City works to reduce single-use plastics in its own operations and with our partners, and advocates for changes to these requirements, which are the responsibility of the NSW State Government
Campaign to promote compostable packaging for the food service industry. Incentivise switch to compostable packaging.	2	The City advocates for changes to these requirements, which are the responsibility of the NSW State Government
Ban on smoking in the streets.	1	Noted
Recycling hubs for hard and soft plastic, electronics/ batteries, timber and cardboard packaging.	1	The City hosts Recycle It Saturdays as a quarterly event. In addition to electronic waste, residents can recycle soft plastics, used textiles and shoes, expanded polystyrene, large cardboard, garden organics, paint and gas bottles. The City also hosts an annual Household Chemical Cleanout DropOff.
Definitely need to do something more about recycling landfill content.	1	Noted
Education and reporting programs to reduce waste and build community capacity to implement themselves. It's up to the community to implement to the change but Council needs to drive it and have initiatives available to the community to participate in.	1	The City runs regular programs across the community about waste avoidance delivered by our waste avoidance education team.
Strategy context (comments referencing other key strategies)	**Total**	**City of Sydney Response**
Greening Sydney strategy	20+	Beyond the scope of this strategy.

There were various comments on biodiversity, habitat for wildlife, greening the city to mitigate heat, creating different range/character of green and natural spaces, supporting more native planting, planting for food production, resilience and water management. Consider the relationship between ensuring the city is green and how that relates to the way our indigenous ancestry would see our city. Green is not always the preferred option if you are seeking more resilient vegetation that may change its colour depending on the season		The City plants a mixture of native, exotic, evergreen and deciduous species. Species selection involves many complex considerations, which broadly fit into three main categories: environmental, functional and aesthetic. We appreciate that there may be various views on the types of trees planted, and that it is hard to always achieve a tree species that everyone supports. Refer to the City's Greening Sydney strategy for more information.
Targets	**Total**	**City of Sydney Response**
Targets should be more ambitious or are unclear	23	The City's targets are measurable wherever possible and are reported in the City's annual Green Report. There are specific, measurable targets for energy, water and waste performance for our own operations and the local area, and also for sustainable goals and initiatives such as active transport. The City uses a third party platform to aggregate local (non operations) data for reporting to the Green Report.
It is important that stakeholders be kept informed on performance against these KPIs and milestones.	1	
Implement a non-biased reporting system on how council is tracking. Include aggregate data for experts to scrutinise and provide meaningful feedback.	2	
Some targets are dependent on state and/or federal governments which are not supportive of climate action	5	The City maintains a variety of advocacy programs to work with state and federal governments, as well as with other council areas to seek continually developing environmental performance standards. These programs are reported on in the annual Green Report.
I think the targets are great, but there are things that we're not doing that we could be doing (e.g. having buildings used for multiple purposes, more vertical/roof gardens and financial incentives for this) and how the targets will be achieved is not clear enough.	1	Noted. The City's targets are measurable wherever possible and are reported in the City's annual Green Report.
This will have a powerful impact on reducing the city's footprint; would be good to have some targets developed for the diversion to landfill and circular economy and in particular embodied carbon - Actions 5 and 6	1	These targets are provided on pages 11 and 12 for City operations and for the local government area.
Hard to understand how significant these achievements may be, e.g. 19 electric cars, but out of how many? 20? or 200?	1	The City has a total of 330 fleet vehicles.
Other comments	**Total**	**City of Sydney Response**

Comments in support of strategy	30+	Noted
Communications Communication to the community (eg: in the form of advertising or billboards) to build awareness, desire and capability to act sustainably.	6	The City uses multiple communication channels to engage with the community on environmental action
Education The City should provide education to people about climate change in order to gain support for action. It is important to start these messages in schools, universities, workplaces so that every resident including NES can understand the message so visual as well as words. Involve residents in regeneration. Programs that help people understand the natural environment of where they live and help to heal it.	5	Noted. The City provides a range of community activity designed to promote awareness and action on climate change. Sydney City Farm, City Talks and Cycling courses are some of these. We also engage with the residential and business sectors through our Smart Green Apartments, Sustainable Office and Sydney as a Sustainable Destination programs. We also maintain strong engagement via our community consultation networks with local schools and community groups. Our print media, on finalisation is also produced to reader accessibility requirements. Noted
Focus on business and city building and not enough to address day to day behaviours	1	
Education Facilitate Climate Collage workshops to educate people, including children on Climate Change.	1	
Independent voices should be given avenues to express their needs for a fair and sustainable economy that is not dictated to by big corporations.	1	The City's Community Engagement strategy outlines our approach to engaging the community in decision making processes.
Promote plant based and vegan lifestyles and businesses	2	Our Sustainable Event Guidelines contain a reference to provide sustainably sourced menu items including vegetarian options.
Development Reduce developments in backyards of already tiny properties. This development reduces green space and increases population density, putting further pressure on environment.	3	Land use planning is addressed in the City's City Plan 2036: https://www.cityofsydney.nsw.gov.au/strategic-land-use-plans/city-plan-2036
Development Concern that progress will be outstripped by increasing development and population density. Fish markets and Wentworth Park were raised as examples of areas of concern.	6	
Consultation process Perception that consultation process is not genuine. Criticism that it is not conducive to honest feedback and more about marketing the achievements of the City.	1	Noted. This draft strategy was informed by extensive community consultation in 2019 as part of the development of the City's new Community Strategic Plan. The consultation program included engagement with children, young people, culturally and linguistically diverse communities, Aboriginal and Torres Strait Islander communities,
Consultation process Strategy document is too long / dense and this made it difficult to answer some questions. Concern that this doesn't encourage culturally	1	

and linguistically diverse and low literacy communities to participate.		business, industry, and the broader community. The public exhibition of this draft document is one step in an ongoing dialogue we have with our community about their aspirations for the future of Sydney and how we should be taking action on climate change.
Staff capacity is a major problem. The separate contracting out of services means no one has overall perspectives - they all work on a tiny part of the picture.	1	We measure and monitor performance of our operations using data obtained from our own buildings and facilities (eg: utility energy consumption), as well as collecting, measuring and monitoring data from our service providers. Through our SMART environmental performance system we maintain an overall picture of the City's operational and environmental performance.
It is not the City's role to lobby for climate change at state and federal level.	1	We work closely with state and federal governments through our advocacy programs. When we declared a climate emergency, we were one of 85 councils, representing 7.4 million people, declaring a climate emergency at time of publishing. Our councils are among over 1300 jurisdictions in more than 25 countries to take this step..An e-petition submitted to the Australian Parliament in October 2019 is another example of the groundswell of support for action on climate change. It called on the Australian Government to declare a climate emergency. More than 400,000 people signed the petition, making it the biggest parliamentary e-petition in Australian history. In an emergency, we must all act.
Eliminate the City Strategy. Follow the State & Federal strategies	1	
It is very progressive strategy that has a challenge to match its ambition with its demographics	1	Noted
If the City and community work together, then I believe we can achieve these goals. If the City side with commerce, I have doubts about its success and commerce tends to favour themselves over what is good for the community.	1	Action 6 'Reduce embodied carbon in our supply chain and support circular economy outcomes ' and Action 11 ' Encourage community uptake of renewable electricity and stimulate the green economy' both work to decouple economic growth from finite resources.

The City of Sydney needs to set an example for smaller Councils who have less resources to implement change	1	The City of Sydney works with many other local Councils including Resilience Sydney. We also volunteer and collaborate with other councils in times of emergency. For example, to provide City staff to support after major bushfire and flooding events.
Request that the strategy directly address pollution with direct local impact on quality of life. In particular, (1) noise pollution and (2) runoff into the harbour that makes it unappealing for swimming. Notes that EVs and building design will contribute to this, but only if noise pollution is recognized as a design goal and design target.	1	Our requirement to avoid and address pollution is specified in the Environmental Sustainability Policy. This policy will be incorporated in to our operational and procurement guidelines and procedures.
Community involvement Please implement a climate assembly so residents continue to come together on this important issue.	1	Noted. The City engages the community throughout our strategy development and implementation and will continue to look at innovative ways to involve the community.
Community involvement Please remember the whole community - I am totally for action against climate change and live my life like that, but am deeply concerned that the strategy is for one sector of the community and has not looked at ways to satisfy city living.	1	Direction 3 focuses on a regenerative and inclusive city. Action 16 'Build community resilience and momentum on climate change supports working together for city work, life and play.
Affordability While I strongly agree that we need to move towards being more sustainable, I think being sustainable also needs to economical so that residents and business will take it up (eg. incentivise public transport over private vehicle usage, dedicated cycle paths). A more environmentally friendly lifestyle should not just be for those who can afford it.	1	Action 10 'Support the transition to zero-emissions transport' includes continuation of the City's work to improve conditions for walking and cycling in the local area, also supported by Action 12 which supports our residents to reduce utility costs and environmental impact
Concern over bureaucratic council process.	1	Noted

Activities

Engagement and marketing activities undertaken to support the consultation included:

Sydney Your Say webpage

A Sydney Your Say webpage was created. The page included the draft strategy and online survey. There were 923 unique pageviews of the Sydney Your Say page and 287 downloads of the draft strategy.

Stakeholder briefing

An email was sent to 1,946 stakeholders inviting them to attend with information about the consultation and inviting feedback (see Appendix B). There were approximately 160 attendees at the meeting and 61 people downloaded the presentation from the briefing.

Aboriginal and Torres Strait Islander Advisory Panel

The draft strategy was presented to the City's Aboriginal and Torres Strait Islander Advisory Panel in May 2021.

Media activity

An exclusive ran with the Sydney Morning Herald, followed by a broad release. There were 159 media mentions, including syndication, with a total reach of 4.7m.

The story was syndicated multiple times and was given broad play on radio as well as in bespoke environmental and industry publications.

Digital marketing

A two-phase digital marketing campaign was rolled out to promote and support the consultation. Details can be found in Appendix A.

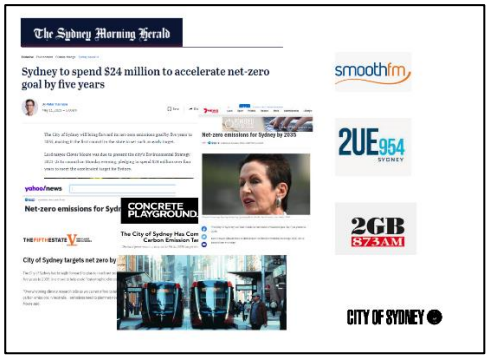
Appendix

Appendix A: digital media and marketing activities

Phase 1: awareness raising

An exclusive ran with the Sydney Morning Herald, followed by a broad release. There were 159 media mentions, including syndication, with a total reach of 4.7m.

A news article was created for the City of Sydney news site and featured in the City of Sydney News e-newsletter and shared on Facebook and LinkedIn. There were 752 unique pageviews of the news article.



Snapshot of media activity

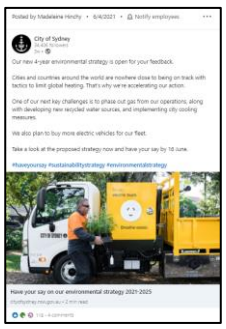
City News article

LinkedIn

Facebook

Phase 2: drive traffic to consultation page via social media

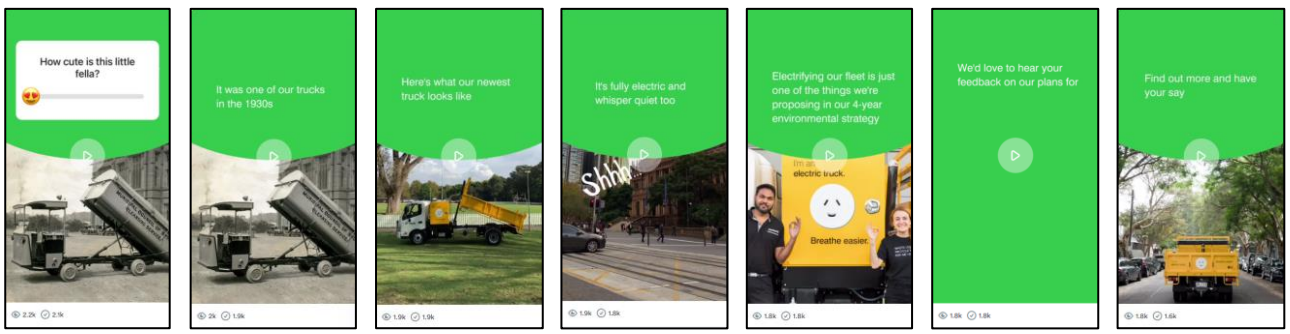
Paid posts were created across LinkedIn, Facebook, Twitter and Instagram to drive people to the consultation page. Below are some examples of posts across different social platforms.



LinkedIn

Facebook

Twitter



Instagram story

Appendix B: invitation to stakeholders

An email was sent to 1,946 stakeholders inviting them to attend an online briefing and asking for feedback on the draft strategy.

CITY OF SYDNEY

Event meeting link

Dear Patricia

A reminder to attend the online **Environmental Strategy Briefing** tomorrow, Thursday 3 June 2021, 10.30am–11.30am.

To join the meeting please click on the link below.

Webinar link

Join webinar: https://us02web.zoom.us/s/85967817865

Device requirements

- Ensure your device has working speakers or headphones. We recommend testing them prior to the session.
- The webinar will drain your device battery very quickly, so please ensure you are plugged into power before you join.

Meeting tips

- Audience questions will be taken during panel discussion. Type your question into comments box at the bottom of your screen.

If you are no longer able to attend please let us know by replying to this email. **This registration is not transferable.**

If you have any technical issues on the day please email the City Engagement team.

We look forward to having you join us for the event.

Yours sincerely

Clover Moore

Lord Mayor
Clover Moore

Attachment E

Letter from C40

TUESDAY 29TH JUNE, 2021

Dear Lord Mayor Clover Moore
RE: APPROVAL OF THE SYDNEY CLIMATE ACTION PLAN

Firstly, please accept my sincere wishes of good health to you and your team in the ongoing global COVID-19 crisis. I am delighted to inform you that at the recent meeting of the C40 Deadline 2020 Board, Sydney's climate action plan was approved as having met the requirements of the C40 Deadline 2020 framework, recognizing the high level of climate ambition set out by the Plan, including the 'Caring for Country' theme, which takes into consideration perspectives of the Aboriginal and Torres Strait islander peoples for sustaining ecological, spiritual and human health.

I congratulate you and your officials for achieving this important milestone on your journey towards addressing the climate emergency. I would like to acknowledge your enduring leadership for a sustainable Sydney, and the commitment of your officials in putting together this plan. The Board recognized the continued commitment in Sydney to exceeding the goals of the Paris Agreement and implementing strategies towards net zero emissions by 2035, especially in the areas of urban greening, sustainable buildings and partnering with industry for a green economy. C40 will continue to support the City of Sydney team in furthering climate ambition, facilitating implementation and advocacy at the national, regional and global levels.

Going forward, we look forward to the launch of your climate action plan and hope that you will use this achievement to inspire other cities to emulate what your city has done. We are on standby to support you with the media outreach related to the launch and any other possible support you may require. I look forward to continued collaboration between Sydney and C40.

Sincerely,

Mark Watts
Executive Director
C40 Cities
C40 Cities Climate Leadership Group Inc.
120 Park Avenue, 23rd Floor, New York, NY 10017, United States

C40.org
@c40cities

Item 3.

Post Exhibition - Greening Sydney Strategy

File No: X025479

Summary

This report recommends that Council adopt the draft Greening Sydney Strategy. The draft Greening Sydney Strategy (the Strategy) sets the directions, targets, and actions for all aspects of greening within the City of Sydney. A copy of the Strategy is available at Attachment A.

The Strategy aims for a greener Sydney that will help improve our health and wellbeing, reduce urban heat impacts, and bring nature into the city. The commitment to green living focuses on providing all of the community with equitable access to quality green spaces.

On 29 March 2021, Council resolved for the Strategy to be placed on public exhibition for a period of four weeks (19 April to 24 May 2021).

Consultation activities included online engagement, a school activity kit and discussion guide. The consultation was promoted on various social media channels. The draft Strategy was presented to the City's Aboriginal and Torres Strait Islander Advisory Panel and an email was sent to 111 stakeholders. A two-phase digital marketing campaign was rolled out and attracted strong interest.

Members of the public were also able to comment through Sydney Your Say with the page attracting strong interest from the community during the public exhibition period. An engagement report is available at Attachment B.

The City received over 200 pieces of feedback, and the consultation identified strong support for the Strategy's directions and associated actions. A full summary and analysis of the submissions is available at Attachment B. In addition, organisations welcomed the opportunity to collaborate with the City on delivery of the Strategy.

Following analysis of the public exhibition consultation, all direct comments regarding the Strategy were addressed and minor amendments were incorporated.

Adoption of the Greening Sydney Strategy will allow the City to continue its focus, greening efforts and activities to make Sydney a cool, calm, resilient city and be a truly green City by 2050.

Recommendation

It is resolved that:

(A) Council note the results and responses to the public exhibition of the Greening Sydney Strategy, as shown at Attachment B to the subject report;

(B) Council adopt the Greening Sydney Strategy, as shown at Attachment A to the subject report; and

(C) authority be delegated to the Chief Executive Officer to undertake minor editorial amendments to the Greening Sydney Strategy.

Attachments

Attachment A. Draft Greening Sydney Strategy

Attachment B. Engagement Report

Background

1. support system, essential for all functions. It provides multiple social, environmental and economic benefits. Our society relies on these benefits every day, making green infrastructure essential infrastructure.

2. Cities around the world, including the City of Sydney, are embracing tree canopy and urban greening as a solution to address the climate and health challenges that our cities are facing. There is growing research and community recognition that trees and greening are essential infrastructure.

3. Community health, climate change and urban heat, and biodiversity and nature have been identified as the key risks to our city. Green infrastructure mitigates these risks. Whether it is for managing heat or mental health issues, happiness, physical activity or reduced incidence of disease, illness and loneliness, an increase in our canopy cover, green space, and nature provides multiple benefits to the community.

4. As Sydney's density increases and the climate changes, increased and equitably accessible greening is essential to the liveability and efficient functioning of the city. The Sustainable Sydney 2030 strategy commits the City to becoming green, global and connected. Our targets are to increase our overall canopy cover to 23 per cent by 2030 and to 27 per cent by 2050 (from the 2008 baseline of 15.5 per cent).

5. This Strategy builds on the progress made over the last eight years and keeps us moving toward this target. The City is one of only a few councils in Australia that has consistently increased canopy cover since 2008.

6. The Strategy also responds to the community's expressed need for more greening across the city, especially greener buildings. In the Sustainable Sydney 2050 community survey, 85 per cent of respondents said they want buildings covered with plants and that incorporate nature into their design. In addition, 77 per cent of respondents want a green city with parks, trees and nature.

7. Further, the survey undertaken as part of the City's Recovery Plan indicated an increase in the community's need for greening to be prioritised. Greening, and the health benefits it brings, is now well understood, recognised and highly valued across the community.

8. This Strategy updates and will supersede the City's Greening Sydney Plan, adopted by Council in May 2012. The implementation of this earlier Plan has led to significant greening achievements including a 24 per cent increase in canopy cover since 2008, a 13 per cent increase in parks and green spaces since 2009, a 180 per cent increase in the expansion and restoration of native bushland since 2014 and the establishment of 20 community gardens.

Greening Sydney Strategy 2030

9. The Strategy outlines the benefits, opportunities and obstacles to greening in our city and how we plan to implement and provide a cool, calm, beautiful and resilient place to live, work and visit.

10. The Strategy outlines six directions, and 20 supporting actions, to make Sydney greener:

    (a) Direction 1 – Turn grey to green. Our target is to increase overall green cover to 40 per cent across the local area, including a minimum of 27 per cent tree canopy by 2050.

    (b) Direction 2 – Greening for all. In a just and fair city, it is vital that we distribute quality greening fairly across the city so that everyone shares the benefits provided by greening.

    (c) Direction 3 – Cool and calm spaces. Addresses the two key issues facing most of the city's residents relating to high urban heat and impacts to physical and mental health.

    (d) Direction 4 – Greener buildings. Outlines three actions to ensure properties, which represent the largest proportion of land use across the local government area, provide their share of the greening and canopy cover required. This includes the development of a new Green Factor Score, which evaluates and quantifies the amount and quality of urban greening that a project provides.

    (e) Direction 5 – Nature in the city. Outlines actions on how we will recognise and support Indigenous knowledge, and design and implement our greening strategies to maximise habitat potential and nature in the city.

    (f) Direction 6 - Greening together. The community is one of the greatest resources for greening Sydney. The Strategy outlines how we will continue to provide, and increase, opportunities for active participation in greening activities. It includes the development of a new Greening Sydney Fund, where the City uses compensation received from the removal of our tree assets (during development works) towards a community grants program.

11. The Strategy includes a number of actions under each of the strategic directions, designed to collectively create the conditions to progress towards the vision and targets. The City will prioritise greening initiatives to address any inequities, to provide the greatest benefit, and to assist our most vulnerable communities.

12. The Strategy is to be delivered by the City in partnership with residents, local businesses, developers and volunteer groups. This will be achieved through services and projects delivered by the City, support provided to resident and community groups and new policies which will facilitate greening on private property by numerous stakeholders.

13. The Strategy has been developed by City staff, with input from all divisions that have an opportunity to influence or physically green the City's urban environment. Cross divisional teams will implement and promote the Strategy to ensure the City's greening efforts and activities make Sydney a truly green City by 2050.

Key Implications

Strategic Alignment - Sustainable Sydney 2030

14. Sustainable Sydney 2030 is a vision for the sustainable development of the City to 2030. It includes 10 strategic directions to guide the future of the City, as well as 10 targets against which to measure progress. The Greening Sydney Strategy is aligned with the following strategic directions and objectives:

    (a) Direction 1 - A Globally Competitive and Innovative City - Globally competitive cities are attractive places to live and are easy to get around in, to help businesses attract mobile global talent, and to increase opportunities for direct face-to-face connections. Sydney has consistently performed strongly in global rankings over the past decade. A challenge for the future is providing sufficient high quality greening to manage heat and health impacts.

    (b) Direction 2 - A Leading Environmental Performer - the Strategy builds on the existing canopy cover targets (23 per cent by 2030, and 27 per cent by 2050) and includes a new greening target. The new target is to increase overall green cover to 40 per cent across the local government area, including a minimum of 27 per cent tree canopy by 2050. The City is currently on track to meet these targets, with consistent increases in canopy cover since 2008 rising from 15.5 per cent to 19.2 per cent in 2020.

    (c) Direction 4 - A City for Walking and Cycling - the Strategy supports this Direction by ensuring the City's network of streets and open spaces are shaded to provide thermal comfort and support active transport all year round.

    (d) Direction 5 - A Lively and Engaging City Centre - successful cities are alive and inviting during both day and night. They offer art, design, culture and entertainment, attractive public spaces and workplaces, great shopping experiences and easy access. A greener city is part of creating a better environment, that is visually appealing and encouraging exploration of the city and its diverse retail and entertainment offerings. Research has found that greener places result in higher commercial returns, as people spend more time, and money, in green spaces.

    (e) Direction 6 - Vibrant Local Communities and Economies - recognises and seeks to build on the City's diverse communities, lifestyles, interests and needs. The Strategy supports this through the ongoing recognition and support for our community and volunteer programs, such as community gardens and the City Farm. The Strategy also recommends an action to review how these programs are offered to ensure the City is able to meet the increased demand from the community wanting to connect with nature, and each other.

    (f) Direction 8 - Housing for a Diverse Population - reviewing how the city prioritises space for vehicles, instead of greening, can make housing more affordable for the 39 per cent of City of Sydney households that are car free. A greener city, combined with active and public transport, enables more households to become car free, making them able to redirect around an extra fifth of their income to rent or mortgage repayments.

(g) Direction 9 - Sustainable Development, Renewal and Design - responds to sustainability and environmental imperatives facing our cities. How well a dense area functions depends on the availability and efficiency of a range of infrastructure, including green infrastructure. The Strategy aims to better capture the potential of laneways, streets and parks in public life and improve design excellence in buildings and properties overall. Greater dedication of space for greening and community uses improves the amenity, liveability, and health of the city.

(h) Direction 10 - Implementation through Effective Governance and Partnerships - by taking an evidence-based approach to strategy development and actions, the City shows leadership and is able to influence other councils and agencies to be more successful at achieving access, health and environmental outcomes.

15. The development of Sustainable Sydney 2050 is progressing, and greening continues to be reflected as a key priority for action. The Strategy will support the delivery of the Sustainable Sydney 2050 vision.

Organisational Impact

16. In developing the Strategy, consultation was undertaken with relevant City staff. Actions and projects are being proposed in the budgets and business plans of responsible units.

17. Implementing the Strategy will require a multi-disciplinary approach to ensure each portfolio (streets, parks, and properties), delivers their allocated share of the greening and canopy targets.

18. The time frame for implementing the majority of the Strategy will largely occur over a 10-year period and be completed by 2031.

Social / Cultural / Community

19. The Strategy will have significant benefits for the community, including providing substantial physical and mental health benefits. Compelling research proves that:

(a) in neighbourhoods with a tree canopy of 30 per cent or more, adults had a lower likelihood of developing:

(i) psychological distress (by 31 per cent);

(ii) diabetes (by 31 per cent);

(iii) cardiovascular disease (by 21 per cent); and

(iv) cardio hypertension (by 21 per cent).

(b) adults in neighbourhoods where at least 30 per cent of nearby land was parks and reserves had 26 per cent lower odds of becoming lonely compared to their peers in areas with less than 10 per cent green space. For people living on their own, the associations were even greater in areas with 30 per cent or more green space, where the odds of becoming lonely halved.

(c) connecting with nature for as little as a couple of hours can reduce blood pressure, lower stress, improve cardio vascular and metabolic health, improve concentration, memory and attentiveness, lift feelings of depression, improve pain thresholds, improve feelings of energy, boost immune systems by increasing the count of the body's natural killer cells, increase anti-cancer protein production and help people lose weight.

20. The Strategy also provides opportunities for building social capital through community empowerment projects, such as community gardens, LandCare groups, planting days and specific projects, such as the City Farm.

Environmental

21. The United Nations describes climate change as the defining issue of our time. In June 2019, the City of Sydney declared that climate change poses a serious risk to the people of Sydney and should be treated as a national emergency. Our city must adapt to the changing climate and increase its resilience to the likely impacts.

22. Heatwaves are Australia's deadliest natural hazard. They now arrive earlier, are hotter, and last longer. Urban temperature extremes can present us with life-or-death situations. Urban heat mitigation through greening can significantly reduce human heat related morbidity and mortality. Research has found that:

(a) Individual trees can make a valuable difference to air temperatures, by as much as 10°C.

(b) At the local scale, temperatures at ground level also vary significantly. One study showed the difference was 10°C cooler in the street that had 30 percent canopy cover, compared to a street with just 10 percent canopy cover.

(c) At the precinct scale, groups of trees that combine to provide greater than 40 per cent canopy cover at the scale of a city block have been found to reduce local ambient air temperature by more than 1.3°C.

23. The Strategy outlines the opportunities to accelerate our action in the areas of canopy cover, greening and biodiversity. These actions help us in cooling local streets, reducing heat absorption, reducing energy needs, improving storm water quality, reducing storm water runoff, reducing dust and air pollution, sequestering carbon, and improving the diversity of the City's urban ecology.

24. The Strategy's responses to urban ecology – greening to provide habitat and enhance biodiversity in our urban area - will be critical in addressing research that has found Australia's urban areas contain disproportionately more threatened species than non-urban areas. Recent research shows that 30 per cent of Australia's threatened species (370 species) come from within our cities and towns. This reinforces the significance of planning and managing our landscapes to conserve and enhance biodiversity.

Economic

25. The Strategy will deliver economic benefits to the city. Research in other cities has shown that green urban environments increase property values, improve commercial activity in retail centres and are an attraction for employers to recruit and retain quality staff.

26. Greening, in particular canopy cover, is the most cost-efficient method of addressing urban heat. As greening also provides a multitude of environmental, social and economic benefits, every dollar invested provides a higher return.

Financial Implications

27. The Strategy includes actions that have capital and operational funding implications. A number of these actions are already incorporated into the City's approved Long Term Financial Plan. This includes the City's ongoing street, park and in road tree planting projects, as well as the public domain landscaping program.

28. However, the delivery of all of the City's actions in the Strategy requires additional capital works and operational expenditure funds to be allocated within future iterations of the 10-year Long Term Financial Plan. The quantum of future funding requests are subject to the finalisation of individual project scopes and Council approval. Additional funding will also be required outside the current 10-year financial planning horizon.

29. The City will also continue to apply for grant funding for the delivery of the Greening Sydney Strategy. The City has been successful in obtaining $3M for tree planting programs in the past three years. This includes a recent grant of $1.3M, from the NSW Government, to focus on planting trees in parks by October 2022.

Relevant Legislation

30. Local Government Act 1993.

31. Environmental Planning and Assessment Act 1979.

32. State Environment Planning Policy (SEPP) Vegetation in Non-Rural Areas 2017.

33. Sydney Local Environmental Plan 2012.

34. Sydney Development Control Plan 2012.

Critical Dates / Time Frames

35. The Strategy will be reviewed within 10 years of its adoption.

Public Consultation

36. Following Council endorsement, the Strategy was subject to a public exhibition period of four weeks from 19 April to 24 May 2021.

37. A strategic approach to public exhibition ensured that a range of methods and activities were used to invite feedback from stakeholders. The consultation included online engagement, media releases, and direct letters to stakeholders.

38. Letters were sent to 111 stakeholders on 26 April 2021 inviting participation in the consultation. This included community and industry groups and associations, and other relevant government organisations.

39. The consultation was promoted via a social media campaign. The campaign attracted strong interest from the community with results as follows:

    (a) 43,090 total reach (people);

    (b) 52,800 total impressions (how many people saw our ads);

    (c) 8,862 people saw our Instagram story (which is above average); and

    (d) 692 total social actions (likes, comments and shares).

40. A project page on Sydney Your Say was set up which included an electronic copy of the Strategy, a story map, a schools pack and a link to other key information about the consultation. It received a high level of interest and a significant number of people engaged over the consultation period, with 1,230 unique pageviews of the Sydney Your Say page.

41. The Sydney Your Say page received over 200 pieces of feedback, with the breakdown as follows;

    (a) 158 surveys;

    (b) 24 email submissions were received; and

    (c) 173 pieces of feedback were received from 54 people on an interactive map.

42. Overall feedback received during the exhibition period was positive and demonstrated strong endorsement for the Strategy, its directions and actions. Responses were received from various stakeholders including the following organisations;

    (a) Sydney Water;

    (b) Urban Taskforce;

    (c) Far West Redfern Dwellers; and

    (d) Friends of Fernhill and Mulgoa Valley

43. Feedback obtained during the public exhibition period has informed finalisation of the Strategy, which is now being presented to Council for adoption. The changes made to the Strategy include an amended Acknowledgement of Country, the inclusion of two new points relating to working with Sydney Water to improve access to climate resilient water supplies, like recycled water, to support greening, and minor wording changes that do not affect the intent of the Strategy.

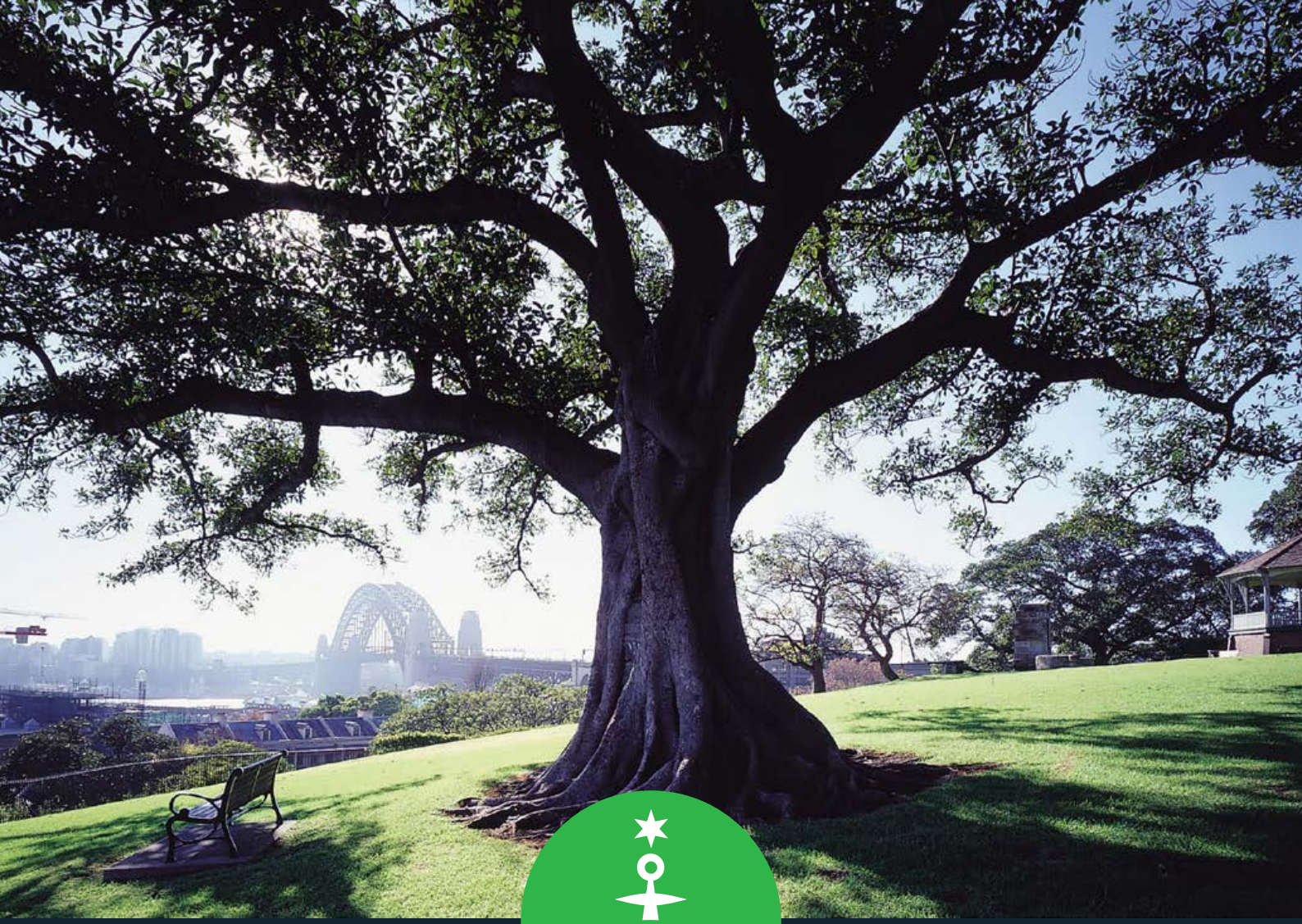
VERONICA LEE

Director City Services

Karen Sweeney, Urban Forest Manager

Attachment A

Greening Sydney Strategy (Draft)



Strategy
July 2021

Greening Sydney Strategy

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Acknowledgement of Country

The City acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of this place we now call Sydney, and we acknowledge their continued connection to Country. We pay respect to Aboriginal and Torres Strait Islander Elders past, present and emerging.

Announcement of a major artwork to honour the First Peoples of Sydney and recognise the traditional custodians of Gadigal country. Photo: Joseph Mayers

Community and place

These are the principles that support our plans to green Sydney. They were developed by listening to our communities – Aboriginal and Torres Strait Islander peoples, local residents, school children, city workers and visitors. And they reflect their values.

These principles are guided by the world view of Aboriginal peoples. They reframe our systemic relationship with the land. Since invasion, the relationship between people and land has been disrupted with little respect for the land, animals, waterways, and First Peoples. We've seen the extinction of plants and animals and damage to waterways and land. Aboriginal lives have been lost in trying to protect country. By challenging our approach in this way, we hope to cause no further harm and begin to heal. The City of Sydney has an important role as caretaker of many of these places. We will consciously consider these principles in the decisions we make for the land we are responsible for. This includes how we maintain, change, and manage land.

Aboriginal world view of Country – First Nations workshop participant 'Country is our identity; spiritually, culturally, physically, and socially. We refer to Country as part of the family. We speak to Country; we sing to Country; and we dance for Country. Increasingly we worry for Country and seek greater protection measures to carry out our cultural obligations to the land and waterways. These are our fundamental rights and cultural responsibilities in protecting country as First Nations People.'

We are on Gadigal Country

These principles are founded in the understanding of Country in the worldview of the Aboriginal and Torres Strait Islander peoples. This understanding of Country includes the landscape – land, water and sky, the plants and animals, and the relationship between these. Aboriginal and Torres Strait Islander peoples are responsible for care of Country and the continuation of these relationships. Country has existed in this place for thousands of generations and precedes colonial boundaries.We acknowledge the responsibility that First Nations Peoples have in the carriage of their living cultures including access to land for practising culture to bring social, spiritual, and economic benefit to First Nations People.

We commit to truth-telling and decolonisation

Gadigal Country was never ceded. We recognise the significance of Gadigal land as the site of invasion. We work towards telling the history of these places with honesty and acknowledge the negative impacts caused to Country and to the people. We endeavour to cause no further harm to Aboriginal peoples and the relationship they hold to the land.

We value how important green places are to people's wellbeing

Parks and open spaces are a place of refuge and respite in an intensely urban environment. These places have cultural and community significance to many people. They are places of shared identity and pride, of community connection and celebration, and of protest and social transformation. They must be welcoming to all people and will provide equity of access to all to enjoy. We strengthen the connections between and within these places.

We are guided by Country and strive to heal and care for it

We learn about how this Country has been cared for thousands of generations. We respect the natural landforms, waterways, and endemic species. We work to heal places that have suffered degradation. We support these places to play their role in the health of the whole environment. We protect these places for future generations and we accept our role as caretakers of these places. These places must benefit the community now and in the future. As we face a changing climate and growing population, we make decisions that prepare these places and ensure their continued health into the future.

Guiding documents

– UN Declaration on the Rights of Indigenous Peoples

– Principles of Co-operation with Metropolitan Local Aboriginal Land Council

– City of Sydney Aboriginal and Torres Strait Islander Protocols.

Message from the Lord Mayor

We have been working towards a greener city since 2004 – creating new and enhancing existing parks, planting thousands of trees, increasing nature and wildlife and supporting community efforts.

We have created 24 hectares of new parkland, upgraded 200 parks and playgrounds, planted over 15,000 trees and completed over 100,000 square metres of landscaping with 800,000 new plants.

Despite the major urban renewal in our area, we have increased tree cover by 23%. That makes us one of the few councils in Australia to consistently increase canopy over the past decade.

Greening Sydney 2030 will guide this vital work, with ambitious targets and innovative solutions – practical ways to green roofs and walls and our 383-kilometre network of laneways, as well as new planning tools and data analysis to ensure we're protecting trees and greening equitably across the City.

We are aiming to increase our tree canopy to 27 per cent cover by the year 2050. We've earmarked $377 million to invest in parks, green roofs and walls, streetscape gardening and improved urban forests across the whole Local Government Area, including the planting of at least 700 trees a year.

We are already experiencing the impacts of climate change. By 2050, urban heating is predicted to increase temperatures between 1 point 5 and 3 degrees, so it's vital we plan, invest and adapt. We see trees and green spaces as essential infrastructure, as effective and extensive canopy cover can help reduce temperatures on the ground by up to 10 degrees.

A greener Sydney will improve our health and wellbeing, reduce the impact of heat, and bring nature into the city. Our greening work will be underpinned by climate science and collaboration with First Nations communities, who successfully cared for this land for millennia.

Achieving a greener city will require commitment and action from us all. Together, guided by innovation, partnership and our ambitious targets, we can create a cooler, calmer and more resilient city.

Clover Moore.

Executive Summary

This Greening Sydney Strategy outlines how we will be a cool, calm and resilient city. We will increase greening and share its benefits with the entire community.

Cool, calm and resilient

Our vision is for a greener Sydney that will help improve our health and wellbeing, reduce urban heat impacts, and bring nature into the city.

Our commitment to green living focuses on providing all of the community with equitable access to quality green spaces.

The City of Sydney, like other cities around the world, are embracing tree canopy and urban greening as a solution to address the climate and health challenges that our cities are facing.

In 2012, we released the first Greening Sydney Plan, which set our fundamental groundwork. We began measuring the city's canopy cover and identified important targets to increase our overall canopy cover to 22 per cent by 2030 and to 27 per cent by 2050.

We have made substantial gains in our urban greening and developing policies and programs to meet those commitments. These include:

– developing an urban forest strategy, an urban ecology strategic action plan, a green roof and walls policy, a streetscape gardening policy, and a landscape code.

– increasing canopy cover from the 2008 baseline of 15.5 per cent to 18.1 per cent in 2019.

– increasing our parks and open space network managed by the City from 190ha in 2012 to 211.9 ha in 2020.

– creating the Sydney City Farm and supporting the establishment of over 20 community gardens

– restoring and expanding native bushland areas from a baseline of 4.6 hectares in 2012 to 12.9 hectares in 2020.

– planting thousands of lower level gardens and shrubs within our parks and streets.

While we have achieved the goals above, providing healthy green infrastructure in urban environments is challenging. Streets are highly used and contested spaces. Parks and open spaces need to fulfil many roles, such as providing for active and passive recreation. Similarly, urban development patterns, characterised by increasing density and infill developments, reduce the space available for trees and other greening on private land.

However, there is growing research and community recognition that trees and greening is essential infrastructure.

Sydney is always changing. We must look forward to determine and actively plan the type of city we need.

There are many opportunities to harness future changes to provide these benefits. A decrease in vehicle ownership and use is one major area that supports redistribution of space to create more inclusive, active and healthy spaces.

Our focus for action

To achieve our vision, for a cool, calm and resilient city, this strategy outlines six directions, and 20 supporting actions.

1. Direction 1 – Turn grey to green
2. Direction 2 – Greening for all
3. Direction 3 – Cool and calm spaces
4. Direction 4 – Greener buildings
5. Direction 5 – Nature in the city
6. Direction 6 – Greening together

The City of Sydney will prioritise greening initiatives to address any inequities, to provide the greatest benefit, and to assist our most vulnerable communities. An implementation program is outlined in Attachment 1.

This strategy outlines the benefits, opportunities and obstacles to greening in our city and how we plan to implement and provide a cool, calm, beautiful and resilient place to live, work and visit.

Redfern Park, Redfern June 2014

Direction 1 – Turn grey to green

To meet all the future challenges we face, we need to set and achieve ambitious greening and canopy cover targets across the city, for our street, park and property portfolios.

The research indicates we ideally need to provide 30–40 per cent canopy cover for heat, and 30 per cent canopy cover for community health.

Our target is to increase overall green cover to **40 per cent** across the local area, including a minimum of **27 per cent** tree canopy by 2050.

Action 1 – Achieve the targets

We will develop policies, programs and projects to help each portfolio to achieve the targets. It is vital that everyone works together to meet these targets.

Green cover is all of the trees, plants, ground covers and turf throughout the city. Canopy cover relates solely to trees over three metres tall.

Action 2 – Green our laneways

Space in the city is highly contested. It is no longer considered appropriate that laneways, as underused public spaces, are not better designed to become a valued green network for the entire community.

We will transform laneways into greener shared spaces as we transition to a more sustainable city, with fewer private cars. This will include the development of new design solutions for laneways, that challenges the requirement for private vehicle use of laneways.

Action 3 – Harness innovation, technology and inspiration

The increasing momentum in the green infrastructure market continues to encourage cities to implement green policies. We will use, encourage and support the latest research, technology and innovation opportunities to transition our greening.

Direction 2 – Greening for all

In a just and fair city, it is vital that we distribute quality greening fairly across the city so that everyone shares the benefits provided by greening.

Action 4 – Distribute greening equitably

Research outlines 30 per cent canopy cover, within an area of around 1.6 kilometres, provides key heat and health benefits. To ensure greening is shared, we will make informed and data driven decisions about greening in our future projects and developments, making this information accessible where possible.

Action 5 – Provide fair access to quality green space

We need to ensure our green spaces accommodate a wide range of uses to meet our diverse community's needs. We will develop a parks design code and provide standardised maintenance services for robust and sustainable designs, and consistently well maintained open spaces across the city.

Action 6 – Adapt for climate

It is important that we provide mature, thriving and healthy landscapes for future generations. We will review the latest climate science, and available research to assist us to design green spaces and plant new species that will thrive under the changed climate conditions.

Action 7 – Grow food locally

Access to fruit and vegetables is a critical ingredient for our mental and physical health. We will continue to support the community to grow more food locally through our Sydney City Farm programs and community garden network, and increasingly look at opportunities for increased food production on private land.

Direction 3 – Cool and calm spaces

Two key issues facing most of the city's residents relate to high urban heat and impacts on physical and mental health.

Action 8 – Cool the hot spots

Cool streets improve the walkability and liveability of our city. To cool Sydney through greening we will provide programs that support tree planting, shading and using water in the landscape. We will prioritise programs areas and community groups that are particularly exposed to urban heat and other health related issues.

Action 9 – Calm green spaces

Substantial and meaningful greening provides refuge in a busy city, creating calm and healthy spaces that improve our mental health and wellbeing. We will identify and map the calm spaces, share information to assist with usage and wayfinding, consider calm spaces in future design and prioritise programs that provide the greening health benefits to those who most need it.

Action 10 – Celebrate water

Water sustains life and all living things depend on it. Sydney has a special connection with water. The harbour has shaped Sydney and its people for many thousands of years, from the First Nations through to new immigrants today. There are many water bodies across the city that provide us with a place that helps to restore and invigorate us in equal measure.

We will care for and celebrate water by recognising and communicating the importance of water in our lives. We will help ensure water is used efficiently as a natural resource and its role as a habitat for wildlife is understood and protected.

Direction 4 – Greener buildings

Property represents the largest proportion of land use at 61 per cent of the local government area.

To achieve the 40 per cent green cover target, including the 27 per cent canopy cover target, properties have to provide at least 28 per cent greening, including at least 20 per cent of that as tree canopy cover.

The community has also expressed their need for greener buildings. In the Sustainable Sydney 2050 community survey, 85 per cent of respondents want buildings covered with plants and that incorporate nature into their design.

Action 11 – Develop a green factor score

A green factor score is a tool that evaluates and quantifies the amount and quality of urban greening that a project provides.

We will develop a score, or equivalent planning controls, that will assist us to meet the green and canopy cover targets. We will embed the score into updated planning controls, including development control plans, to ensure greening is planned for and provided on private land.

Action 12 – Increase green roofs and walls

To increase the quantity and quality of green roofs and walls, we will review and update our green roofs and walls policy and landscape code. We will also gradually amend the planning controls to increase green roofs in new developments, and allow for retrofitting of existing buildings, where appropriate to do so.

Action 13 – Planning ahead

Greening is essential infrastructure and we need to give it sufficient space to thrive. Space in our city is contested and every square metre is valuable. We need to make informed decisions about how each square metre is used, understanding that we can't have it all and there will be trade-offs.

To plan for a greener future, we will develop minimum requirements within the planning controls to achieve the new greening property targets. We will also consider future land use and trends, such as studios and car ownership, that impact on the retention of or ability to increase greening.

Compliance will also be a focus to ensure long-term greening outcomes.

Central Park, Sydney 2020. Robert Smart

Direction 5 – Nature in the city

When designing and implementing our greening strategies we will be looking for ways to maximise habitat potential and nature in the city.

Action 14 – Recognise and support Indigenous ecological knowledge

The Gadigal of the Eora Nation managed their land resiliently for thousands of years. There is much we can learn to better care for this Country.

To achieve this, we wish to work with the local Aboriginal community to explore and identify opportunities to celebrate, promote and educate about Aboriginal ecological knowledge and principles.

Action 15 – Strengthen urban nature protection measures

As Sydney continues to grow, it is essential we have the necessary mechanisms in place to protect, and increase, nature in the city. To achieve this, we will identify and implement strong urban nature protection measures and include these into our planning controls. We will also develop targets to increase biodiversity, habitats, and ecosystem health, and implement best practice ecological connectivity approaches to allow for the safe movement of priority native fauna.

Action 16 – Perform an urban ecology health check

We will collect information about our existing urban biodiversity status to determine our progress, and to consolidate existing data to determine potential habitat measures, reassess priority works and to define performance targets.

Action 17 – Reconnect with nature

It is important for the community to reconnect with nature and seek to enhance the nature in the city. To achieve this, we will support more citizen science programs and participatory events, and develop a coordinated communication program on urban nature focused programs and achievements.

Direction 6 – Greening together

The community is one of the greatest resources for greening Sydney. Our communities continue to show a strong interest and are passionate about participating in greening the urban landscape.

Action 18 – Support community participation

We encourage the community to have a sense of ownership and acceptance of the community greening initiatives. We will continue to provide, and increase, opportunities for active participation in greening activities, including ongoing education and awareness of the importance of greening the urban environment, and hands-on activities and volunteering.

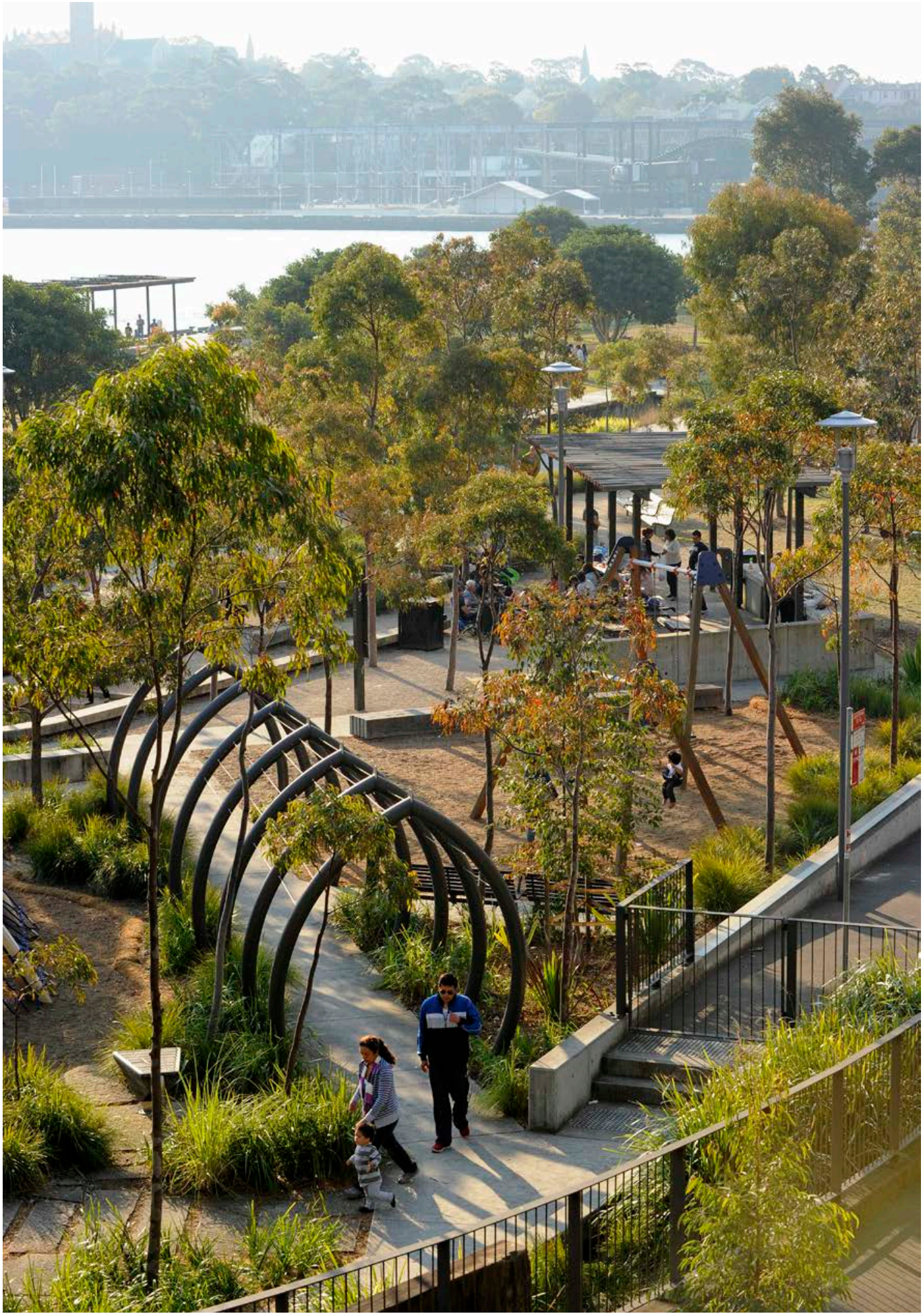
Action 19 – Develop a greening Sydney fund

The City uses extensive resources to plant and maintain public trees. When a tree is removed, the benefits from the tree are lost for many years until any replacement tree matures. In some instances, the benefits are permanently lost when a tree cannot be replaced. We will continue to place tree removal as a last resort. However, when removal of a public tree is required to facilitate a development / project, we will investigate ways to ensure the City is appropriately compensated for the loss and identify how any compensation received can be used to create the greening Sydney fund.

The City would manage any fund to provide a grants program aimed at improving greening outcomes on private land in line with this strategy. This may include programs such as matching grants programs for residents and landowners to undertake new tree planting, nature plantings or install green roofs.

Action 20 – Increase our community engagement

We will review our community engagement approaches, including our online presence, to maximise engagement with a wider audience. We will also develop a green volunteer network to allow for community knowledge sharing, networking and learning across the city at both an online and face-to-face levels.



Pirrama Park, Pyrmont 2014. Adam Hollingworth

Why we need to green our city

Benefits of greening

Green infrastructure is a city's natural life support system, essential for all functions. It provides multiple social, environmental and economic benefits. Our society relies on these benefits every day; making green infrastructure essential infrastructure.

We have identified community health, climate change and urban heat, and biodiversity and nature as the key risks to our city. Green infrastructure plays a vital role in mitigating these risks.

For millennia humans have had a relationship with forests. The sounds of the forest, the scent of the trees, the sunlight playing through the leaves, the fresh clean air. These things give us a sense of comfort, ease stress and worry, help us relax and think more clearly. Being in contact with nature can restore our mood, give us back our energy and vitality, refresh and rejuvenate us.

The concept that humans have a biological need to connect to nature is called biophilia. American biologist E O Wilson summarised in 1984 that we are 'hardwired' to affiliate with the natural world and just as our health improves when we are in it, so our health suffers when we are divorced from it.

Whether it is for managing heat or mental health issues, happiness, physical activity or reduced incidences of disease and illness, an increase in our canopy cover, green space, and nature provides multiple benefits to the community.

Bourke Street Surry Hills, 2020.
City of Sydney

THE BENEFITS OF URBAN GREENING

Cooler roofs as a result of green roofs increase photovoltaic collector efficiency.

Green roofs extend the opportunity for habitat, increase building insulation, store and slow rainfall runoff and drastically reduce urban heat build up during the day and night.

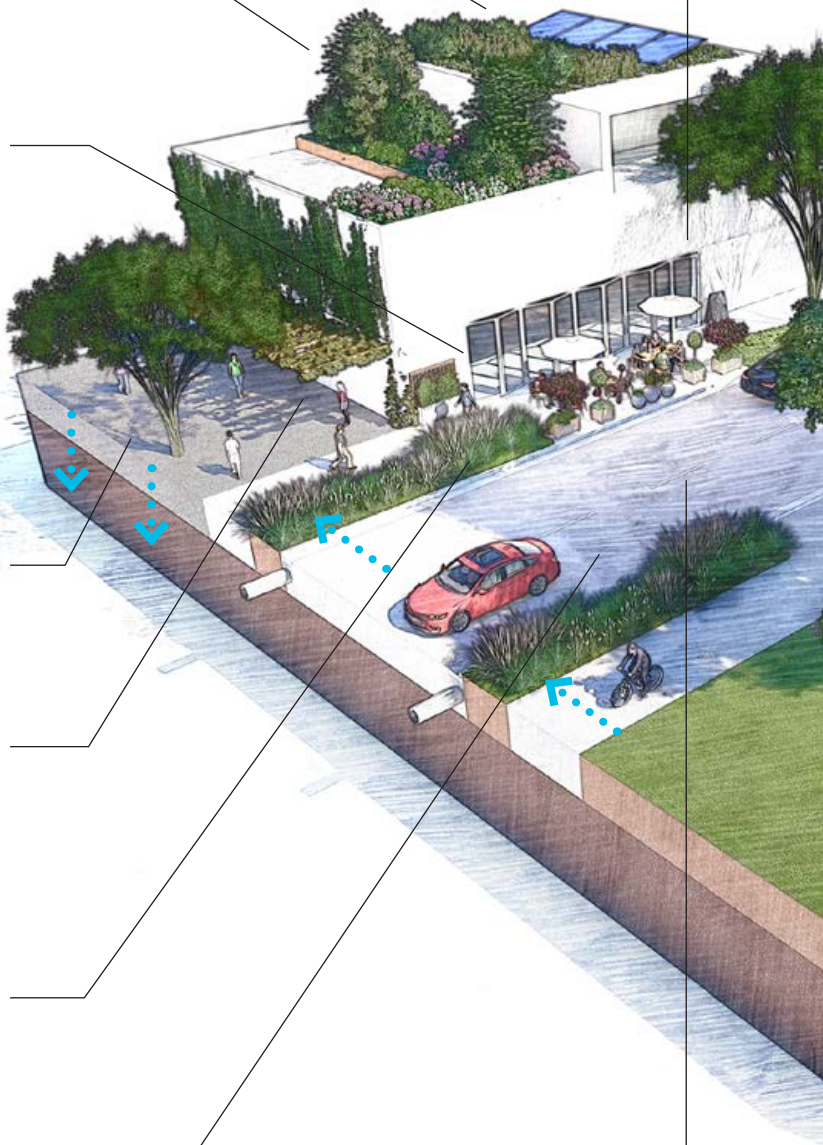
People tend to shop, dine and linger longer in attractive green environments improving commercial returns.

Permeable pavements and raingardens slow and collect rain water that can then support urban greening and remove pollutants.

Vine covered shade structures and green fascades provide shade to buildings, reduce urban heat, increase visual appeal and privacy. They can also be used where spaces don't allow tree planting.

Views of trees and lower level greenery increases the value of residential and commercial property.

Shading of road and other pavements increases their longevity and drastically reduces ambient heat buildup and radiation at night.



Shade provided by trees helps reduce air conditioning costs.

Canopy coverage of at least 30% reduces mental health issues and leads to better perceptions of overall health. It also reduces employee sick leave, improves employee and student concentration.

Trees and other greenery increase habitat, shelter and food for animals.

Leaves and foliage provide shade, filter and absorb pollutants and capture and slow rainfall. They also release scents and aromas that can create a positive emotional response.

Leaves and timber from pruned and removed trees can be recycled as mulch to improve soil, nutrients and water holding of soils.

Tree and vegetation roots retain soil, preventing erosion and absorb water.

Quality green spaces and tree canopy cover create a greater sense of community and increase opportunities for physical activity, socialisation and connections to nature. They generally improve mood and restore our minds from stress and fatigue.

Irrigated lawns and gardens reduce urban heat and increase infiltration of rainwater.

Trees provide shade that reduces overall urban heat, improves the walkability of streets and reduces incidences of skin cancer. Use of deciduous trees can also allow winter sun and thereby reduce heating costs in winter and facilitate use of parks in cooler months.

Trees and greenery and other permeable pavements help decrease stormwater runoff and recharge groundwater supplies and provide passive irrigation to make more resilient and longer lived trees.

Climate emergency

The United Nations describes climate change as the defining issue of our time. In June 2019, the City of Sydney declared that climate change poses a serious risk to the people of Sydney and should be treated as a national emergency.

The City's Climate Emergency Response is very clear on the impacts to the city and its community, and how the City will respond to this emergency.

Average global temperatures are approaching a 1.2°C increase above pre-industrial levels, with significant consequences and impacts.

Any rise above 2°C would have devastating impacts on Australia, including:

– more extreme weather events

– reduced rainfall

– longer, hotter and more frequent heatwaves

– water scarcity

– more extreme bushfires

– increased risks to food production

– reduced biodiversity

– inundation of coastal areas.

We are already seeing the effects of global heating.

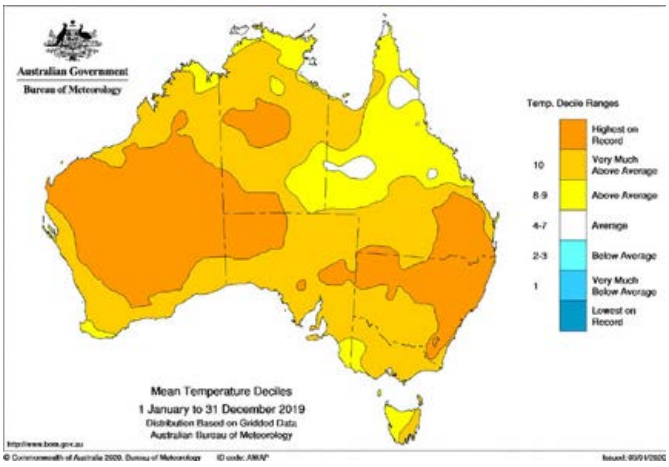
Australia's climate has warmed on average by 1.44 ± 0.24 °C since national records began in 1910. In 2019, Australia experienced its warmest year on record. It was also our driest year on record[1], and one of the worst bushfire seasons experienced.

We are experiencing the impacts of climate change in our urban areas.

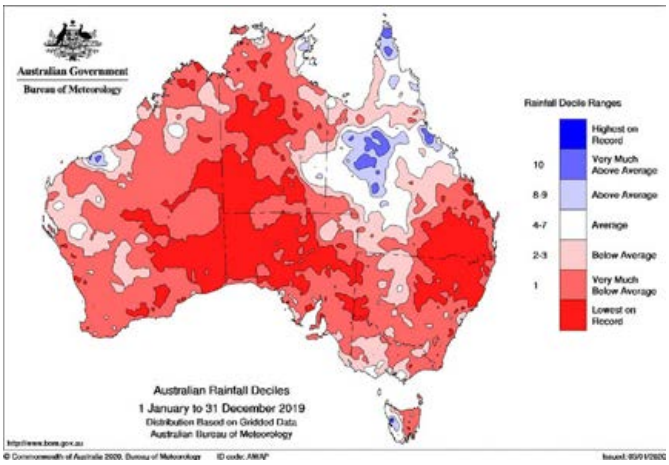
Heat records have continued to be broken, with Sydney reaching its highest ever recorded temperature, and Penrith reaching a staggering 48.9°C during the heatwave of 4 January 2020.

Sydney had many months with below-average rainfall, but also some wet months but still its annual total rainfall was in the driest 15 per cent of years.

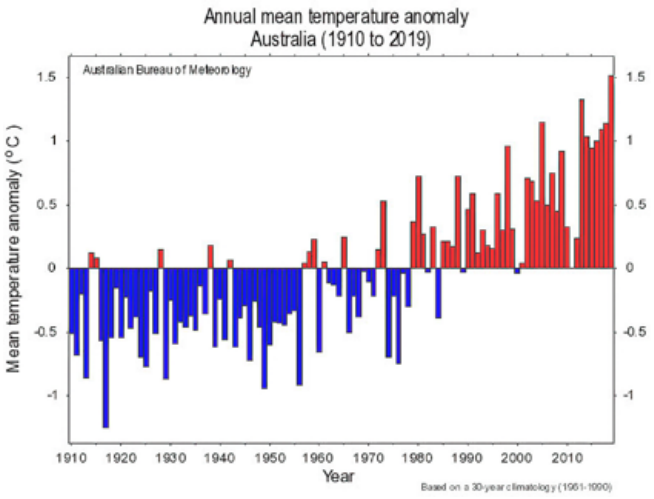
In NSW the Air Quality Index (AQI) reached the hazardous category (with an AQI greater than 200) on a total of 115 days[2].



Australian Mean Temperature Decile Map – 2019
[Source : Australian Bureau of Meteorology – 30/1/2020]

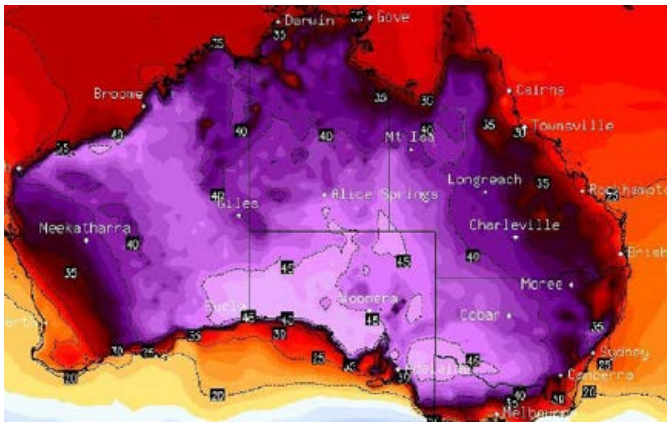


Australian Rainfall Decile Map – 2019
[Source : Australian Bureau of Meteorology – 30/1/2020]



Australian Mean Temperature Anomaly – 1910–2019
[Source: Australian Bureau of Meteorology – 30/1/2020]

1 Bureau of Meteorology: Annual climate statement 2019. bom.gov.au/climate/current/annual/aus/
2 NSW Planning, Industry and Environment. environment.nsw.gov.au/topics/air/air-quality-statementp



Images from top: Sydney storm front 2014, Cassie Trotter/Getty Images. Sydney smoky with poor air quality 2019, James D. Morgan/Getty Images. Centennial Park ponds dry, 2019 Cole Bennetts. Australian temperature map 2019, news.com.

In coming decades our city will see further:

– increases in sea and air temperatures, with many more hot days and marine heatwaves, and fewer cool extremes.

– sea level rises and ocean acidification.

– decreases in rainfall across southern Australia with more time in drought, but an increase in intense and heavy rainfall events throughout Australia.

– rainfall extremes that are becoming more intense. These short-duration rain extremes are often associated with flash flooding.

– temperature increases with the number of days over 35°C each year expected to rise from 4 days in 2015 to over 15 days by 2070.

Every year that passes without action will increase the scale and severity of the response Australia will need to undertake to mitigate the impacts of global heating.

Our city must adapt to the changing climate and increase its resilience to the likely impacts. There are opportunities to accelerate our action in the areas of canopy cover, greening and biodiversity, as these actions help us mitigate, and adapt, to the impacts of climate change.

Urban heat mitigation

Heatwaves are Australia's deadliest natural hazard. They now arrive earlier, are hotter, and last longer. Urban temperature extremes can present us with life-or-death situations.

In Sydney, the heatwave of February 2011 resulted in 595 people needing treatment in hospital emergency departments, and it killed 96 people.

In 2009, the Black Saturday bushfires killed 173 people, but the heatwave at his time killed 374 people in Melbourne alone.

Urban areas create 'heat islands', as the built materials, such as buildings, roads, and footpaths, absorb heat during the day, and release it at night.

Urban heat mitigation through greening can significantly reduce human heat related morbidity and mortality.

Canopy trees facilitates the cooling of our homes and streets and parklands via evapotranspiration, shading and providing cooler surfaces to reduce mean radiant temperature. It can result in substantially decreased demand for energy due to reduced air conditioning use as well as lower water consumption. (Low Carbon Living, 2017)

Reducing paved surfaces also helps to reduce heat that is absorbed and radiated into the air. Extreme heat is moderated most effectively where there is more canopy cover and less hard paved surfaces.

Numerous research studies outline the benefits that trees and canopy cover provide, measured at the individual tree, street level and on a precinct scale.

Individual trees can make a valuable difference to air temperatures, by as much as 10°C.

Groups of trees that combine to provide greater than 40 per cent canopy cover at the scale of a city block have been found to reduce local ambient air temperature by more than 1.3°C (Ziter, C. et al 2019).

At the local scale, recent research from Western Sydney University found that temperatures at ground level could vary significantly. In some areas the difference was more than 10°C. The research compared two streets located 1km apart that had the same microclimate and other site factors.

The key difference was the extent of canopy cover; one street had 30 per cent cover and the other 10 per cent. The street with the higher canopy cover was 10°C cooler.

At the precinct scale, 2017 Australian research found that "a lack of tree canopy correlates to higher intensity of the urban heat island effect in temperate climates. Urban trees provide local shade and evaporative cooling. Increased urban greenery reaching the ideal ratio of 30 per cent combined with water sensitive urban design can provide up to 2°C cooler urban climates compared to business as usual scenario and assist achieving cooler and healthier urban environments in the context of climate change."

When addressing the impacts of urban heat, research confirms we need canopy at both the local and precinct scale – ideally with **a minimum of 30 per cent canopy cover.**

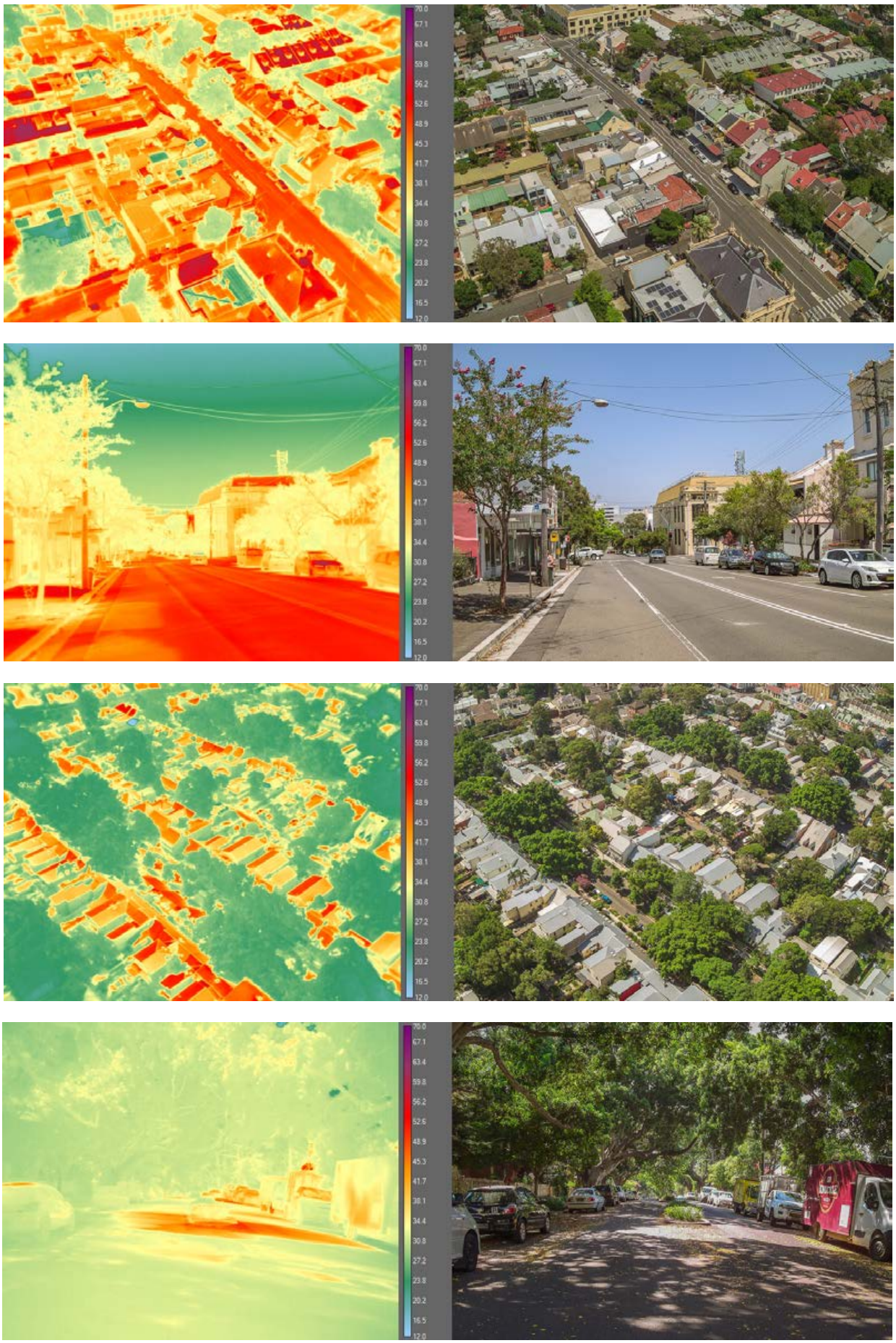
Why is heat an issue for me?

Heat creates physical stressors on humans. You start by getting overly hot, sweaty and uncomfortable. As the temperature rises it starts to affect your concentration and decision-making. You might do things that are more dangerous.

At the threshold of 41 degrees Celsius, critical internal organs – the heart, liver, kidneys and so on – start to function more poorly. Once past that critical threshold, they can actually start to fail and death is more likely to occur.

Going about your daily activities, both at home and work, would become increasingly difficult and this would have a ripple effect across the economy. In addition, hospital admission rates already rise dramatically during heatwave events because heat exacerbates underlying health condition. Sick, young and older patients are particularly vulnerable. But as we move forward, that demographic could expand to include groups currently otherwise considered healthy – individuals from 15 to 55. So, heat and heatwaves increase the burden on the health system.

Prof Dominey-Howes, University of Sydney



Images from top: Aerial view and street views of St Johns Road Glebe, followed by Westmoreland Street Glebe, 25 January 2019 showing the temperature difference as a result of tree canopy.

Community health and wellbeing

There is growing realisation, backed by a rapidly increasing body of research, that green infrastructure also sustains and enhances our health and wellbeing. Compelling data proves connecting with nature for as little as a couple of hours provides a multitude of benefits.

There is no greater good that can be done for health promotion than the protection of greenery on which all humans depend. (Coutts, C. and Hahn M. 2015)

During the Covid-19 pandemic people flocked to nature to help them stay strong – physically and mentally. Access to quality green space is vital, and not just in times of emergencies.

Mental health and wellbeing

The Word Health Organisation has called stress a health epidemic of the twenty first century. One in four people worldwide will suffer a significant mental health episode in their lives. Mental ill health and suicide are costing Australia up to $180 billion a year (the Productivity Commission found in October 2019). Anxiety and depression are estimated to cost the European Union €170 billion a year and in the USA over $210 billion.

Finding a way to manage this is critical to our health and wellbeing. Trees, nature and other greenery can help immensely.

Simply being in, nearby, or with a view of green spaces may help build mental health capacity, contribute to our ability to restore depleted cognitive capacities, enhance recovery from stress and increase our optimism. Exposure to nature, including sensory elements such as bird song, also has beneficial outcomes for our mental health.

A 2019 Australian study 'Association of Urban Green Space with Mental Health and General Health Among Adults in Australia' by Prof Astell-Burt and Dr Feng found that urban communities with a healthy amount of tree cover – not just grass and green space – were psychologically healthier than those that didn't.

In neighbourhoods with a tree canopy of 30 per cent or more, adults had lower odds of developing;

– psychological distress by 31 per cent

– diabetes by 31 per cent

– cardiovascular disease by 21 per cent

– cardio hypertension by 21 per cent

– rating their general health as fair or poor over six years by 33 per cent.

Urban green spaces with open grass rather than a tree canopy did not provide the same benefits.

This research, which focused on Sydney, Newcastle and Wollongong, helps provide a solid target to work towards to provide the community with tangible health outcomes.

Physical health

Greening also helps to address urban air quality. In most cities, the most damaging air pollutant is particulate matter. Fine particulate matter (less than 2.5 micrograms in diameter) can be deeply inhaled into the lungs and is estimated to cause 3.2 million deaths per year primarily from strokes and heart disease. It also contributes to chronic and acute respiratory diseases, including asthma. One study forecast that by 2050, fine particulate matter could kill 6.2 million people per year world-wide. (The Nature Conservancy, 2016).

It is estimated that air pollution from vehicle emissions causes 60 per cent more than the number of deaths from motor vehicle crashes in NSW (The Electric Vehicle Council and Asthma Australia report 2019). In addition to cars, cities are increasingly exposed to air pollution from distant bushfires as experienced by most Australian cities in the 2019/20 bushfire season.

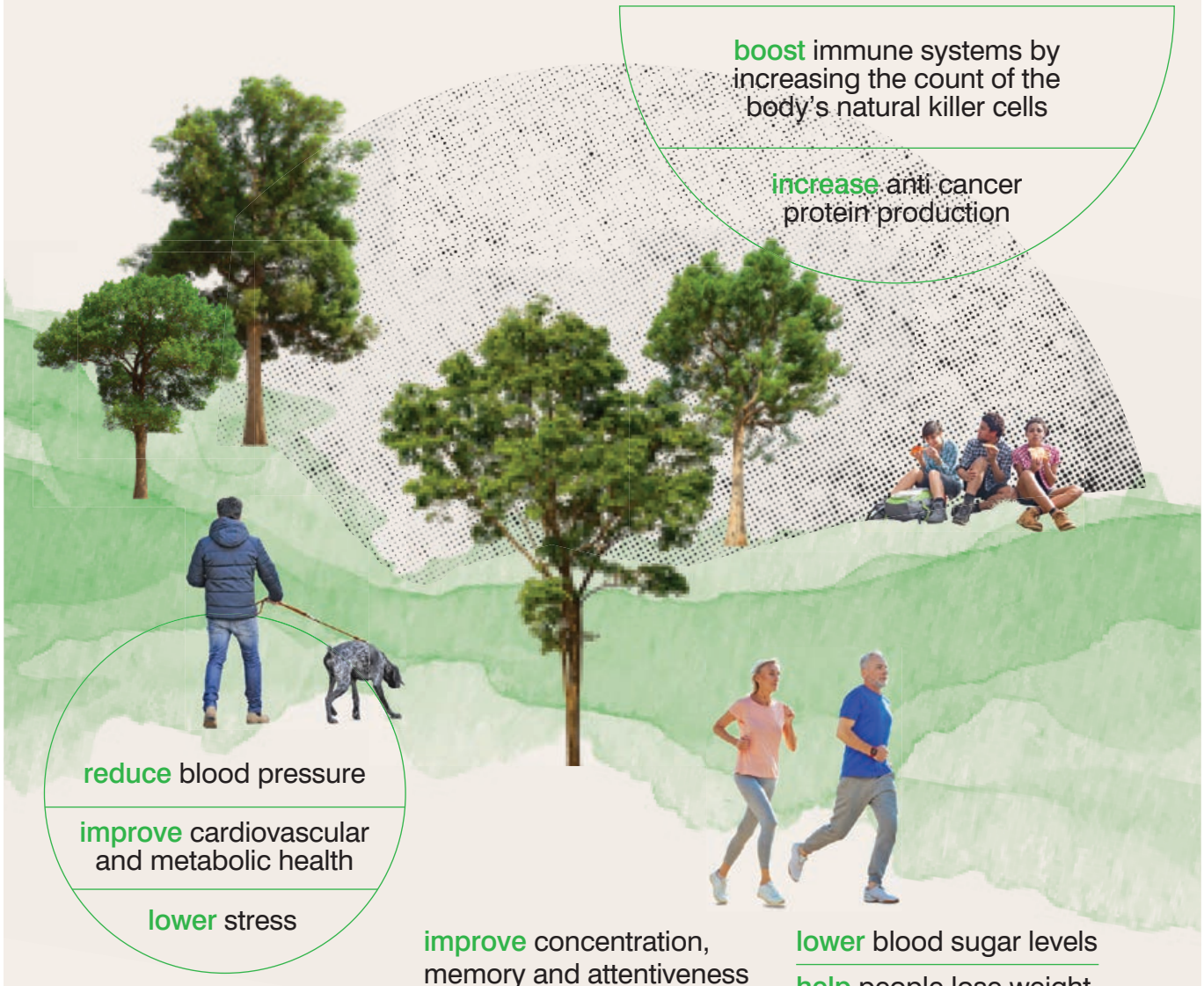
Local trees will therefore play an important role in making our local air healthier, too. Dozens of studies now show that the tree leaves filter out particulate matter from the atmosphere, along with absorbing many other air pollutants.

Quality shade provision can also reduce exposure to damaging UV by up to 75 per cent. This can be provided by built structures or trees, but trees also produce numerous other benefits.

Greening also has massive benefits for our city's connectivity and walkability. Walking and cycling are important benchmarks for a liveable city. High levels of walking mean a city is safe, vibrant and easily accessible by everyone.

Health Benefits

Compelling data now proves that connecting with nature for as little as a couple of hours can:



boost immune systems by increasing the count of the body's natural killer cells

increase anti cancer protein production

reduce blood pressure

improve cardiovascular and metabolic health

lower stress

improve concentration, memory and attentiveness

lift feelings of depression

improve pain thresholds

improve feelings of energy

lower blood sugar levels

help people lose weight

Biodiversity and habitat

Sydney's natural landscape has changed dramatically and is nearly unrecognisable from its state before colonisation more than two centuries ago.

Ecosystem health and biodiversity is important for a sustainable world. Protecting and improving urban biodiversity, while also reclaiming and managing functional ecosystem health and function in the city, can play a role in improving the health of its residents and the liveability of the city.

Biodiversity and habitat can be enhanced by providing environmental conditions and supporting functional ecosystems that will support a diversity of plant species and then in turn these plant communities may provide habitat for wildlife. (Rowe, B., 2019).

Australia's urban areas contain disproportionately more threatened species than non-urban areas. Recent research shows that 30 per cent of Australia's threatened species (370 species) come from within our cities and towns. This reinforces the significance of planning and managing our landscapes to conserve and enhance biodiversity.

> We can learn from Indigenous culture and "ways of viewing, interacting with and respecting nature". (Martin, C. 2019)

There is an opportunity to reimagine spaces to create steppingstones and biodiversity corridors for our urban wildlife. Even small patches of biodiverse nature can re-invite and support an incredibly diverse population of plant and animal species. From pocket parks, to backyards, to balcony gardens and to formal partnerships with larger landowners.

Creating and fostering a healthy and diverse nature is fundamental for our environment but also our own health and wellbeing. Creating this nature, an effort to rewild across public and private property will not only increase greenery in these spaces but will help boost efforts to reclaim ecosystem function and health, increase canopy cover and wildlife habitat.

Bioblitz Sydney Park 2018

The City understands and acknowledges how interrelated all the components of our natural and urban environment can be.

By increasing the greening in our city, implementing water sensitive designs and naturalising our storm water collection and storage we are also creating numerous opportunities for worthwhile and co-dependant habitat creation.

> Ecological systems do not discern between public and private and no one government agency, private corporation or professional discipline can deal with this complexity. (Martin, C. 2019)

There are numerous threats to our biodiversity and our efforts in restoring nature in the city that is common to most urban areas, particularly inner-city locations, including:

– limited habitat availability
– lack of habitat connectivity
– destruction and fragmentation of remaining habitat
– low genetic diversity
– weed invasion
– use of chemical herbicides and pesticides
– soil degradation
– introduced fauna, diseases and pathogens
– poor water quality and inappropriate hydrological regimes
– light, noise, traffic, and other disturbance, and
– climate change.

A zero carbon city

The NSW Government and the Greater Sydney Commission both aspire NSW and metropolitan Sydney to achieving net-zero emissions by 2050 and to help NSW become more resilient to a changing climate.

The City of Sydney target is for net zero emissions across the local government area by 2040.

Achieving a carbon neutral city largely relies on our government and community's adoption of renewable energy sources, changes in building design and construction, changes to transport infrastructure and fossil fuel use.

While it is essential we reduce emissions and build better buildings and deal with waste, it is also advantageous to capture and sequester the carbon already in the atmosphere. Studies have shown urban trees contribute to this process, and young and rapidly growing trees can capture carbon at higher rates than more mature and slower-growing counterparts. (Coutts, C. and Hahn M. 2015)

Greening initiatives, therefore, have a large role to play to helping our city achieve this aspirational outcome.

– Reduce energy consumption by shading buildings and streets.
– Reduce car and transport reliance by establishing and making active transport more desirable through 'Cool' and desirable streets and expanding our Liveable Green Networks.
– Green roofs can insulate buildings and lower ambient temperatures.
– Green roofs and other greening can drastically increase rooftop solar panel efficiency by lowering ambient temperatures.
– Plants take up and use carbon dioxide and trees can sequester carbon within their timber and roots.

Cool city streets, Arterra 2020.

Our City

THE CITY TODAY

Workers (2019)
637,651

Residential population
259,273

Dwellings (2019)
131,293

Densest local government area in NSW **9212 persons/km²**

6th largest
LGA in Sydney Metropolitan area

Economic activity
$130 billion

18.1%
Canopy cover (2019)

WE'VE CHANGED A LOT

30,000
homes built over last 10 years

One of the fastest growing LGAs in Australia

67,000
more people over last 10 years

Cost of new Green Square community facilities **$450 million**

30%
jobs growth over last 10 years

2.6% increase
Canopy cover (2006-2019)

Office space down
20%
per worker (2007-2017)

MORE CHANGE TO COME

115,000
additional people by 2036

New dwelling by 2036
56,000

1.7 million
people in the LGA each day

Most housing will be in high density apartments **80% by 2036**

5+ new
Metro stations

200,000 more jobs by 2036

Net zero emissions
City target by 2050

Greening in the City

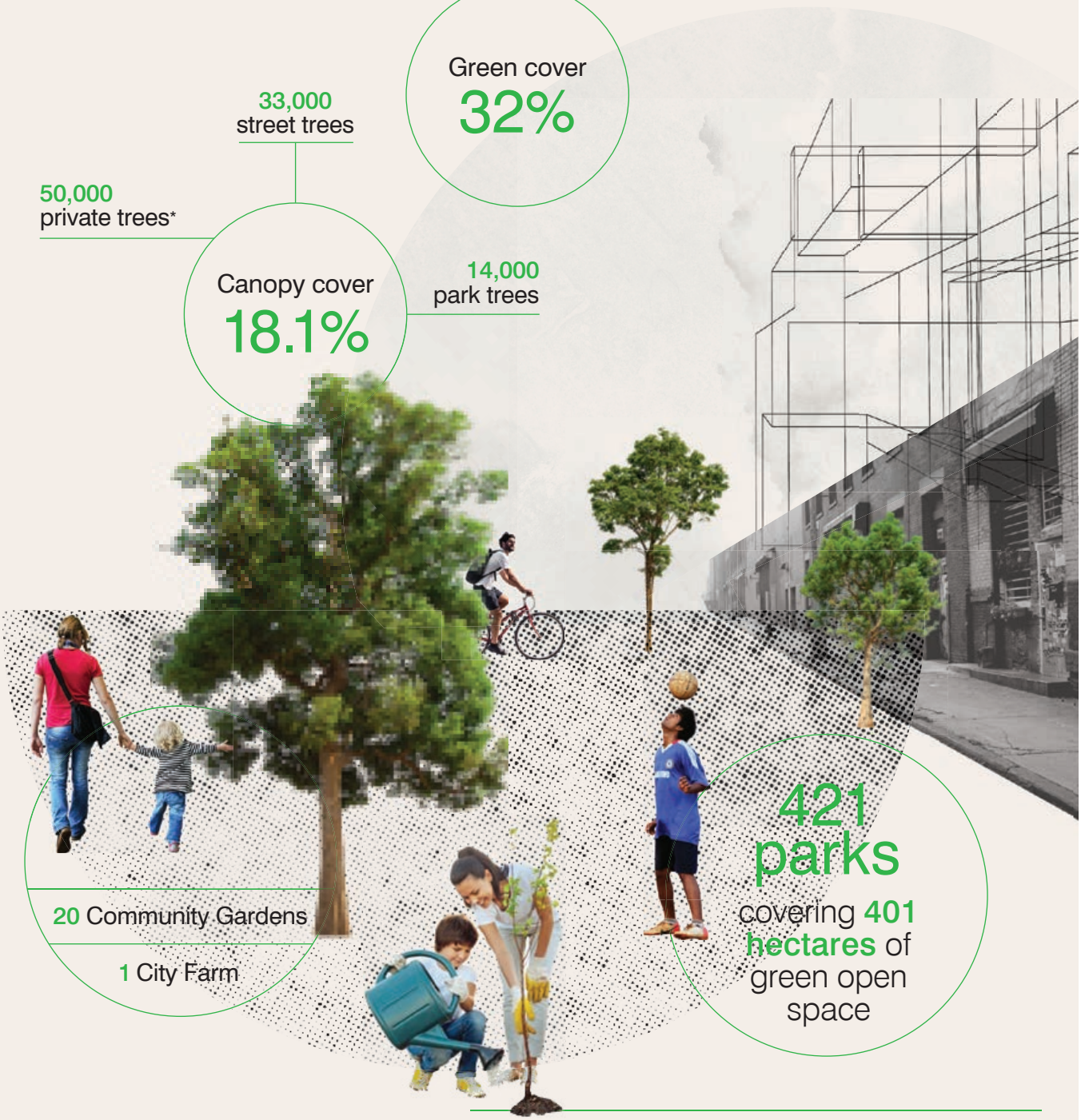
Green cover
32%

33,000
street trees

50,000
private trees*

Canopy cover
18.1%

14,000
park trees



20 Community Gardens

1 City Farm

421
parks
covering **401 hectares** of green open space

212 hectares of parkland is managed by the City of Sydney, consisting of **345 parks**, including:

- **22** iconic parks
- **38** neighbourhood parks
- **285** pocket parks
- **32** civic parks
- **14** sports fields

There are also **2114** traffic bed gardens and **2853** streetscape gardens.

*(estimated)

Sustainable Sydney 2050

The City is reviewing Sustainable Sydney 2030, a set of goals we set our city to help make it as green, global and connected as possible by 2030.

We are creating a plan for our local area to 2050, with everyone who has an interest in our city.

You spoke and we listened. For Sustainable Sydney 2050, you want:

– A city for **people**

– A city that **moves**

– A city that is **environmentally responsive**

– A **lively, cultural and creative** city

– A city with a **future focussed economy**

From the community engagement undertaken for our Sydney 2050 plans we heard:

– People need a city that is **green with trees, plants**, **gardens and urban farming** has quality public spaces and different types of housing that is affordable.

– People need to be using public transport, **walking and bikes** to move around. They want a reduction of cars. They want streets and public spaces that are easily accessible to people.

– People overwhelmingly want a **response to climate change**. They want a city with sustainable use of resources. People want to see a reduction in emissions and changes to how we use our city to reduce our impact on the environment.

People surveyed for the City's community recovery plan have also identified lack of parks, trees, green and recreation spaces within their top ten concerns for the future.

"Sydney is a big city and so it needs to compensate for reduced air quality with more trees and parks, which are necessary for living a healthier and better life."

Spanish community session

77% of respondents want a green city with parks, trees and nature.

85% of respondents want buildings covered with plants and that incorporate nature into their design.

Our community have also 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.

We are developing Sydney 2050 to meet these needs. 2050 sounds a long way off, and in many respects, it is. But when it comes to the work of transforming cities to perform in the face of mounting local and global challenges, the next 30 years will be critical.

Sydney 2050 will outline the need for a green and cool city. We will:

– increase our **overall vegetation cover**, including all trees, shrubs and groundcovers

– increase our **tree canopy cover**

– put **blue and green infrastructure** at the heart of our city-making

– **connect** our green and blue infrastructure into a wider and valuable city-wide network

– live with and adapt to our **changing climate**

– provide greenery at **every doorstep**

– provide greenery in a **fair and equitable** way and prioritise the way we implement and expand our greening to assist those that are most vulnerable.

"I want underground cars and green up top."

Primary school students survey

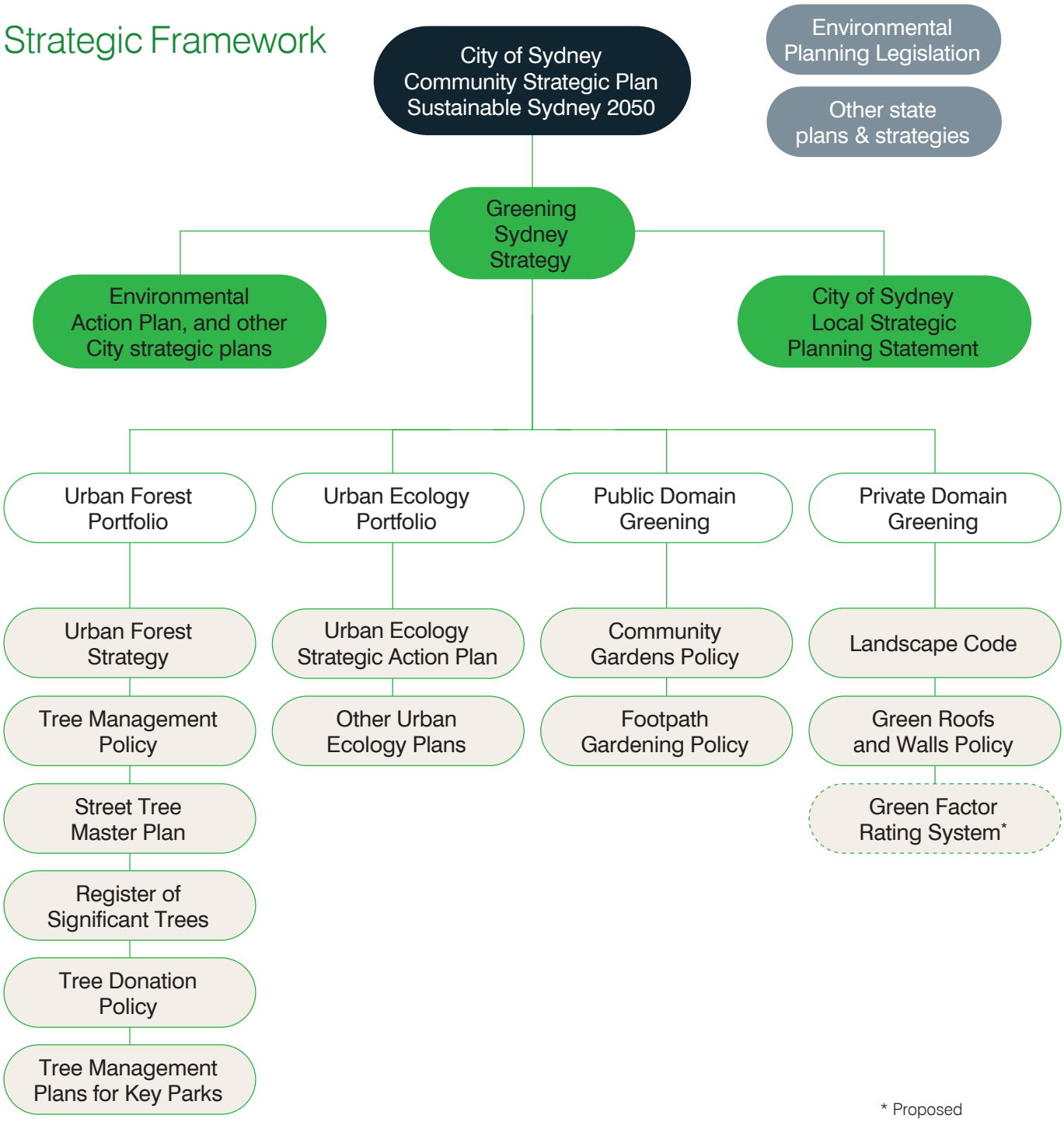
Policy context

We have a comprehensive suite of greening strategies, policies and plans across various portfolios to meet our greening aims and objectives.

This Greening Sydney Strategy will be a key document outlining Sydney's commitment to becoming a green, cool and resilient city by 2050.

The commitment to green living must be implemented at both the city-wide scale and the micro scale of individual businesses and homes. It must involve the public domain, parks, streets and the privately managed domains of buildings, open spaces and gardens.

Strategic Framework



* Proposed

Our green achievements

The City has long valued the important environmental, social and economic benefits that greening and canopy cover provide our community.

We have been actively adapting to climate change. We have ensured our streets, parks and private open spaces have more greening, which is critical as our city's density increases.

In 2012, we developed our first Greening Sydney Plan, and we have many programs and measures to increase canopy cover, biodiversity and nature in our city, and to expand and improve our open spaces and streetscapes. Our key achievements since 2012 are the;

Development and implementation of our:

– urban forest strategy

– urban ecology strategic action plan

– green roof and walls policy

– landscape code

– streetscape gardening policy

Development and support of these programs:

– community gardens – established 20 gardens, two community footpath gardens and one community composting group.

– Sydney City Farm – established in Sydney Park. Volunteer sessions and education programs.

– bushcare groups – established five groups who play a vital role in restoring bushland areas.

– biodiversity engagement programs – participation in numerous programs such as BioBlitz, Birdlife Australia programs, Wildlife Watch etc.

And the following outcomes:

– increased canopy cover across the entire city, from the 2008 baseline of 15.5%, to 18.1% in 2019.

– planted 14,692 new street trees since 2005.

– increased our parks and open space network, with 17 new parks contributing an additional 21.9 hectares.

– upgraded 52 parks.

– increased bush restoration sites by 300% from the baseline of 4.3ha, and planted thousands of native plants and increased habitat across the city.

– installed 78,219 square metres of landscaping throughout the city's streets.

– installed 574,133 new shrubs and grasses installed in City parks and streets.

– continued the popular annual floral displays and hanging baskets in areas with limitations for permanent landscaping.

– installed 249 raingardens.

– facilitated volunteer and educational sessions at the City Farm with seasonal produce harvested donated to local charities.

– installed provision for future collection and distribution of recycled water within the George Street upgrade.

– installed green roof projects at Surry Hills Library, Prince Alfred Park Pool, and Beare Park amenities block. Currently the city has at least 155,319 square metres of green roofs and walls. 2019 saw an additional 4212 square metres provided on eight new properties.

We are one of only a handful of councils across all of Australia that has managed to increase its canopy over recent years. Most have a decline in measured canopy due to increased development pressure and tree removals.

The easiest opportunities for greening and tree planting have now largely been exhausted. To increase greening from now on needs a more focused, multi-disciplinary and entire council approach.

Challenges and opportunities

We must understand and address the key risks, challenges and opportunities to green infrastructure to provide this strategy and make our greening resilient.

The challenges and opportunities for our greening include:

– water and the green-blue connection

– competition with other infrastructure and services and resulting lack of space for greening

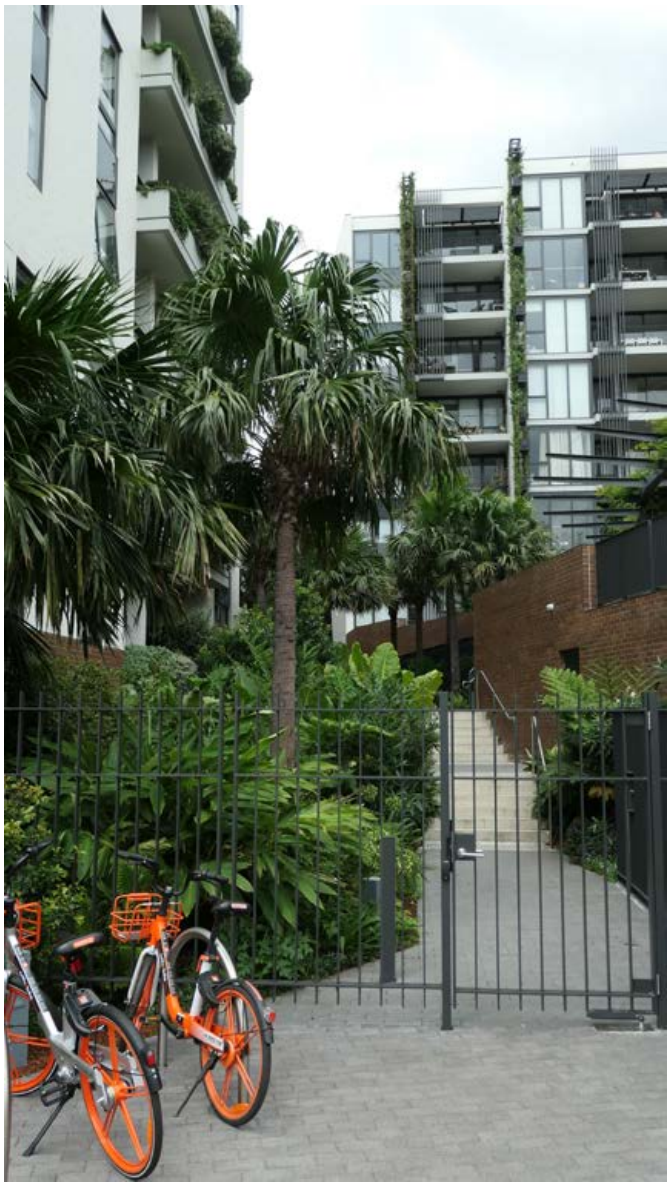
– climate change and its impact on existing and proposed plant species

– pest and diseases

– maintenance and funding

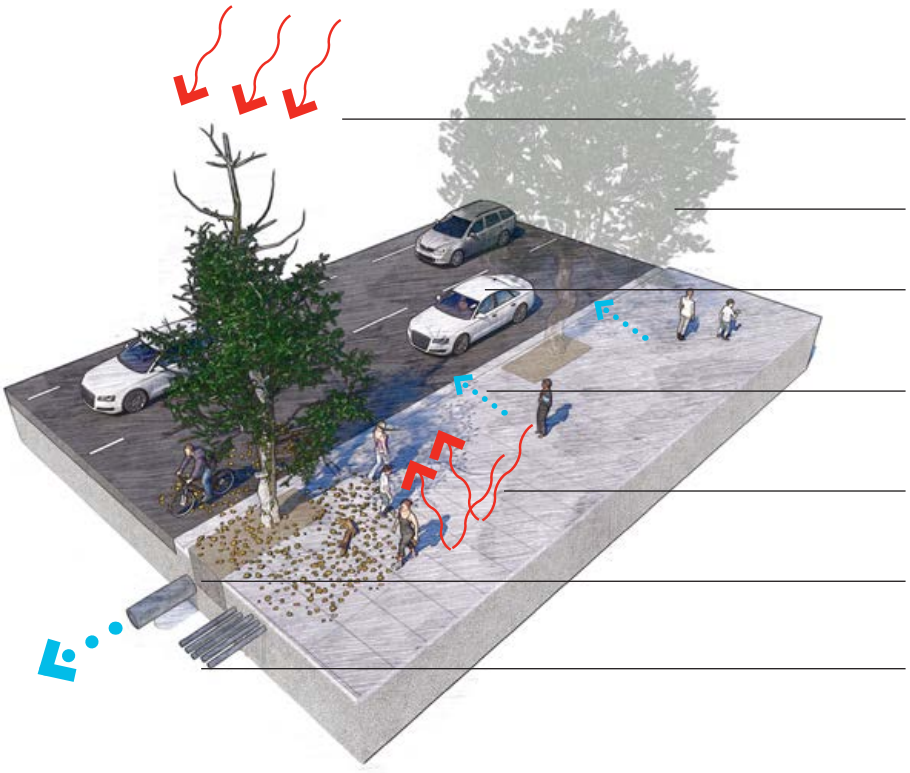
– removing inter-governmental and other authority roadblocks and impediments to greening

Our plan to address these threats, to build a resilient and sustainable city, and meet our targets, is highlighted in the diagrams below.



Greener buildings, Harold Park 2020. Robert Smart.

KEY THREATS TO GREENING OUR CITY



Insufficient resources to maintain and increase urban green

Loss of habitat and connectivity

Impacts from climate change

Trees and vegetation subject to excessive and extreme heat leading to death or poor health

Loss of existing trees and vegetation due to infill and other development

Continued reliance on cars as it is too hot to walk or cycle

Water not collected for the benefit of greening and leading to flooding and erosion and downstream problems

Heat absorbed and radiated from exposed and dark pavements and buildings affecting vegetation and human health

Insufficient space and soil quantity and quality to sustain resilient trees and other vegetation

Competition for space where services, power lines and other elements are given priority over trees and other greening

IMPROVING OUR CITY'S RESILIENCE

Ensure community engagement and education

Undertake continuous monitoring, perform trials and consider new and worthy innovations

Strong habitat protection, with improved connectivity for a diverse range of wildlife

Strong tree management controls and enforcement. Largest trees possible used in all planting situations

Diversity of species, ages and sizes throughout the City with dependable, proven and hardy species capable of dealing with changing climate

More greenery at ground level and reductions in hard paved surfaces

Cool and shaded streets to improve human health and liveability, less reliance on cars

Increased use of light coloured pavement to reduce heat absorption

Greater use of permeable pavements to allow water infiltration

Soil volumes and conditions are well designed to sustain trees and vegetation for the long term

Water is recycled and used well for greening

Water – The blue green connection

Water and plants are natural partners. Many natural systems rely on the connection between plants and water. Plants require water for photosynthesis and growth, and without adequate water plants will die. Plants also contribute to the natural cycle of water through the landscape, as their roots absorb moisture from the soil and transpire it into the atmosphere. In doing so, they effect local humidity and temperature.

Challenges

City landscapes often disrupt the natural connections between water and plants. Conventional roads, roofs and other hard surfaces prevent rainwater soaking into the soil, and typical storm water pipes drain rainwater directly into the harbour before any plants can use it. However, it does not need to be this way. More sustainable designs and approaches are available to mimic and reconnect these natural systems in urban landscapes.

Water is a valuable resource in cities. Changes to our climate are likely to cause increasingly variable and unpredictable supplies of water as we experience droughts and floods. Securing a reliable supply of adequate water for parks and other greening is a challenge we must overcome.

The alignment of both our greening and water strategies and initiatives will be key in addressing this challenge and realising the benefits of a reconnected blue-green urban landscape.

Opportunities

Mutual benefits are gained from a more sustainable and integrated approach to water management. Recent stormwater studies conducted in Melbourne reveal that the integration of trees within rain gardens has the potential to markedly increase the evapotranspiration of water from the rain gardens and therefore further reduce the volume of stormwater runoff (Thom, Jasmine K. 2020).

Potential opportunities to enhance and reconnect our blue and green infrastructure exist at all scales, from large public infrastructure projects to small private developments, and include:

– Diverting storm water from engineered piped solutions to deep soil, landscaped green areas and trees whenever possible;

– The use of permeable pavements and timber decks (where hard surfaces are necessary) to allow water to recharge ground water storage;

– The local collection and storage of storm water for reuse in efficient landscape irrigation;

– The local treatment of waste / grey water and distribution for use in private and public greening;

– Promoting the greening of previously hard surfaces, including available space within roadways and rooftops;

– The selection of plant species that suit the available water whilst maximising the benefits they provide.

– Working with Sydney Water to improve access to climate resilient water supplies, like recycled water, to support greening.

Images from top: Green Square Water Treatment Plant 2018, Sydney Park water reuse wetlands 2015.

Competition for space

A significant impediment to urban greening is the lack of space and the conflict with services.

Cities are congested and contested places. They are always under pressure with competition for space above and below ground and subject to constant change and development.

By 2051, over 2 million people are expected within the city.

This Greening Sydney Strategy considers many competing functions and interests. Our buildings, houses, roads, services and open spaces need to co-exist and function together. We are also a very diverse community with many different views and aspirations as to how green Sydney should be.

Challenges

Our challenge is to give greening the priority it deserves while still accommodating all the other necessary city functions and services.

The key greening challenges are the;

– **Increasing population** placing additional pressure on the provision of transport infrastructure, parks and recreation facilities and providing enough space on our footpaths for a steadily increasing pedestrian load.

– **Reliance on vehicles as the** major means of accessing and servicing the city, dominating street use, and increasing backyards for off street parking. This limits greening and other use options.

– Desire to **maximise private land use** for financial or recreation pursuits, such as extensions, rear studios, off street parking, plunge pools, and 'low maintenance' lifestyles.

– **Overhead and underground services and other infrastructure** continue to affect existing vegetation, and limit options for future greening increases.

– Managing the **increased usage of parks** whilst balancing the wide range of park user needs (from organised sport, passive play and contemplative spaces).

– Ensuring **safety, visibility and accessibility across the city** through sensitive and sympathetic green infrastructure design.

– Increasing **connectivity** is important for a healthy and resilient urban landscape, yet a continuous vegetated corridor requires numerous landowner's commitment and investment.

– Increasing **nature in the city** and protecting wildlife with minimal human impact.

Opportunities

– Increase the priority that we give to our green infrastructure and particularly to tree planting.

– Encourage and demand that development provides appropriate and efficient ways to include greening and water sensitive urban design solutions into all developments while still providing the other functional needs.

– Investigate all available opportunities to achieve multiple and space efficient uses within our streets and other public areas, while facilitating greening through innovative design solutions.

– Consider and promote a future where there may be fewer cars, particularly within the city centre, and thereby accommodate additional spaces for tree planting and lower level greening.

– Integrate green infrastructure into all pedestrian, cycling and public transport solutions.

– Increase our collaboration with service authorities to minimise, relocate or remove impediments to effective and longer term greening.

Changing climate, and pests and disease

As Australia's climate changes over the next 50 to 100 years, the species of trees and plants used in our city today may not be suited to the range of conditions presented by the new climate.

Research has found that Sydney's climate would be more like Grafton by 2050.

Climate shift by 2050

Sydney currently has an average annual temperature of 22.7C, average summer of 26.7C, average winter of 18.1C.

Grafton's average annual temperature of 25.5C, average summer of 29.4C, average winter of 20.9C

Our average number of days above 35C goes from 4.9 currently to 10.9 days.

CSIRO Climate Analogue Explorer. https://www.climatechangeinaustralia.gov.au/en/climate-projections/climate-analogues/analogues-explorer/

Some species are more vulnerable than others. It will also depend greatly on microclimatic influences and the amount of soil and water that is available to the plants.

For example, in Canberra, experts believe that around 27 per cent of tree species are becoming unsuitable for Canberra's new summer normal.

A nationwide study that examined 2.5 million Australian herbaria specimens found that 47 per cent of the country's native vegetation is potentially at risk from rising temperatures by 2070. Gallagher et al. 2019.

As we implement our greening strategies we will continually monitor and update our underlying policies and plans to cater for updated information on different species. When we review our urban forestry policy, street tree master plan and urban ecology strategic action plan we will consider species selections that can survive potential heat waves and prolonged dry spells in the coming decades. Particular relevance will be placed on species with:

– proven heat resilience

– tolerance to droughts and prolonged dry periods

– contribution to urban cooling via its transpiration and shade provision

– tolerance to pollution

– the ability to trap air pollutants and minimised contribution to photochemical smog via its own emissions of volatile organic compounds.

As the species change, so too will the look, and in some cases feel, of our cultural landscapes. We will increase our stakeholder engagement relating to this change, as we transition from the landscapes we know and love, to new landscapes that will grow on us over time.

Which Plant Where

The City will use the latest research when selecting the species that will cope, and thrive, under the emerging conditions.

Which Plant Where is a five-year industry collaborate research project that will provide information on how species respond, adapt and survive heatwaves and drought events. Additionally, the project will provide information in regard to how different cooling benefits provided by the plant species influence insect biodiversity.

Some plants can cope with adverse weather conditions better than others. It is important to understand just how much heat and drought stress each of our existing and proposed species can tolerate.

This will be critical for a sustainable, robust and thriving green Sydney for future generations.

Land tenure and change

We have a wide and varied population of residents - living in apartments, terrace houses, small and large lot suburban housing. Each resident will have a different perspective and interaction with public and private trees and the wider urban forest. The community also includes business owners and employees who may visit and engage with the area and its vegetation every day. As such, our city encompasses many people with an extremely diverse range of interests and attitudes towards trees and vegetation.

2016 Australian Bureau Statistics census data found that 72% of all households within the City of Sydney moved from their previous location to another location within only 5 years (between 2011 and 2016).

Further extrapolating this information, nearly all residents will only occupy their houses for a maximum of 10–15 years before moving on.

In contrast the trees selected for our streets, parks and even private properties may occupy their sites for between 50 to 150 years, or even longer.

This illustrates that our trees must be increasingly viewed as longer term assets that will outlive numerous owners of the same property. We should merely consider ourselves as temporary custodians of the landscapes that we occupy.

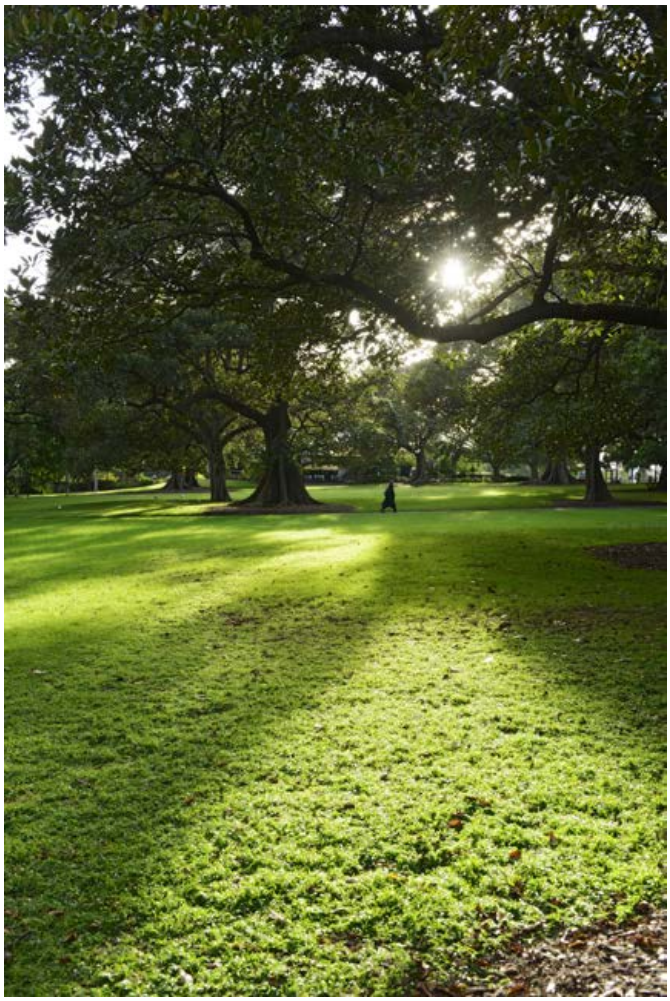
Likewise, landscapes and tree planting are often a product of short term 'fashion' and current societal objectives that can easily change over time. What we do now may not reflect what we did in the past, and likewise in the future we may do things differently.

Consider, for instance, 20 years ago solar panels on private dwellings were a rarity. Today it's common place and even expected that most new houses will include solar panels. Likewise, in another 20–30 years, green roofs and private yards dominated by large trees may be the norm rather than a rarity.

Therefore, if we currently have a large tree, let us consider its overall life span and its contribution to the wider urban forest and community, ahead of shorter term or personal outcomes.

Trees can last for well over 100 years, yet most people occupy their houses for less than 10 years. We must consider ourselves as custodians rather than masters, and nurture and improve our greenery for the benefit of following generations.

We need to consider ourselves merely as custodians of the surroundings under our control. Rather than looking for reasons to remove trees and other nature from within our city, we should instead try to maintain it past our own short tenure and secure a better future for our children and their children beyond them.



The Domain, 2013, Adam Hollingworth

Management and funding

Green infrastructure can provide incredible returns on investment as well as many other far less tangible benefits. We need to commit to the ongoing management and funding of our greening, just as we do with any other asset.

We recognise that there will be different levels of investment required. Numerous small-scale initiatives and simple changes can be just as important as larger capital projects. Greening Sydney needs to be multi-faceted, both micro and macro scales and both public and private.

Challenges

Maintaining and increasing greening requires expenditure by Council and the private sector to provide the greening targets that are both essential for, and desired by, the community.

Perceptions and attitudes may also need adjustment. Greening is an essential service and can no longer be viewed as a 'nice to have' or solely as an amenity product.

The funding and maintenance of greening can be susceptible to various external shocks and crisis. These can be natural factors, such as extreme weather events, or unexpected global incidents resulting in financial market volatility, affecting the efforts to fund greening initiatives.

This Greening Sydney Strategy is an important component of responding to such shocks. A resilient and healthy society is better placed to deal with such stresses. A resilient, green and healthy city is at the core of our greening policies.

Opportunities

The opportunities available include to;

– Strengthen our acknowledgment that greening is an essential asset that supplies numerous public benefits.

– Communicate to stakeholders how they benefit from the City's initiatives and that it is equitable that in some instances they share the costs.

– Where reasonable and effective to do so, partner with and assist property owners where it can have a demonstrated benefit to the City's greening and community outcomes.

– Work proactively with other stakeholders to find opportunities and streamlined ways to provide greening initiatives, and to access funding from other private and public sources to support the City's greening outcomes.

Investments made in trees has a definite return on investment, with one study finding that every dollar invested in planting, cities can see an average US$2.25 return on that investment each and every year. (Dr David Nowak)

Collaboration with government and other agency stakeholders

There is a ground-swell of support for urban greening and we aim to be at the forefront of this movement. Substantial opportunities now exist with this growing recognition and we must capitalise and act.

Importantly, we cannot green Sydney alone.

There are many stakeholders who benefit from our greening. There are also many stakeholders that have an impact on our current green assets, and our ability to increase greening across the city.

We are actively listening to and engaging with our community and higher level agencies, governments and other key stakeholders such as the NSW Government, Greater Sydney Commission, NSW Government Architect, adjoining local government authorities and Resilient Sydney.

We will work with all stakeholders to ensure they are aware of the greening benefits they receive, and to also ensure they are aware of their impact to greening.

It is vital that every stakeholder understands their impact so that they can make informed decisions and be accountable for their policies and action impact on a greener Sydney.

Our greening strategy

Direction 1
Turn grey to green

Our green targets

To meet all the future challenges we face, we need to set and achieve ambitious greening and canopy cover targets.

The research indicates we ideally need to provide 30–40 percent canopy cover for heat, and 30 per cent canopy cover for community health.

We also need to consider the city's context and capacity to meet these research guides.

To develop our targets, significant detailed analysis was undertaken of the extent of existing greening and the capacity to provide increased greening across the city. This included all of our streets, parks and our largest land use – property.

Our target is to increase our overall green cover to **40 per cent** across the local area, including a minimum of **27 per cent** tree canopy by 2050.

Two targets – green and canopy cover

The two principal and inter-related targets have been developed to ensure that all our greening efforts are measured, valued, protected and enhanced. The first being the overall greening cover and the second being the canopy over. Both are equally important.

Green cover target – based on all trees, plants, ground covers and turf located throughout the local government area.

Canopy cover target – based solely on trees over 3 metres in height. As trees provide exponentially more benefit than other plants, we need to ensure they are prioritised ahead of other greenery.

How we developed the targets

Detailed analysis and careful consideration have been given to the various types of streets, parks and property. The attributes of each area were measured and assessed, using precise data from the City's corporate systems. Attachment 2 has a more detail on the methodology.

We have undertaken extensive analysis and modelling to:

– determine the current extent of greening and canopy across streets, parks and property

– determine the current and future capacity available for further greening and canopy (based on public and private space configurations)

– confirm and commit to our greening targets for 2050.

Action 1 – Achieve the green and canopy cover targets

The green and canopy cover targets recognise the important benefits the physical greenery in our streets, parks and property provides.

As trees provide exponentially more benefits than other types of greening, the City has a specific target for canopy cover.

The community's need for an increase in greening, especially on buildings and as part of development, is measured through this target.

The minimum overall green target for the city is 40 per cent, including an overall canopy target of 27 per cent.

This is based on the provision of greening and canopy cover being shared between all our streets, our parks and all property.

To achieve the target, we will ensure that across their portfolio:

– streets provide 39 per cent green cover with a minimum 34 per cent canopy cover

– parks provide 86 per cent green cover with a minimum of 46 per cent canopy cover

– property areas provide 28 per cent green cover with a minimum of 20 per cent canopy cover.

Importantly, each portfolio needs to provide their share, as there is limited capacity for others to make up any difference. It is vital that all everyone works together to provide the targets.

The City will develop policies, programs and projects to help all parties to achieve the targets in each portfolio, including in;

– **Streets** by increasing the number and type of street gardens and inroad plantings, and planting more street trees, including a comprehensive review to ensure the largest tree species appropriate for the space is planted.

– **Parks** by planting more trees in parks, to meet the individual parks capacity for canopy trees, and through minimising hard surfaces in the parks, where appropriate to do so.

– **Property** through developing planning tools and programs like the green space factor and greening Sydney fund. This will assist the increasing of canopy, greening, trees in deep soil and the number of green roofs, walls and façades, and ensuring every development application provides its minimal greening target.

We will also work with other authorities and agencies, such as Ausgrid and Transport for NSW, to ensure they understand their impact, make informed decisions and are accountable for their actions on greening Sydney.

The City will review the targets as new research becomes available, technology (especially for the aerial canopy / greening measurement) improves and as the city develops and changes over time.

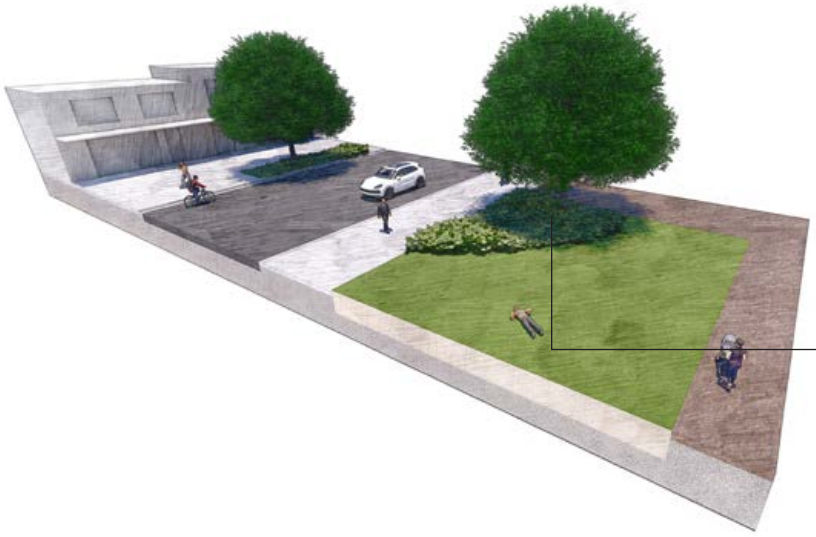
Figure 1: Green cover targets

Property Type	Existing Green Cover 2019	Proposed Green Cover 2050
Streets	33%	39%
Parks	80%	86%
Property	20%	28%
TOTAL	**32%**	**40%**

Figure 2: Canopy cover targets

Property Type	Existing Canopy Cover 2019	Proposed Canopy Cover 2050
Streets	25%	34%
Parks	31%	46%
Property	12%	20%
TOTAL	**18%**	**27%**

WHERE WE ARE NOW
2020

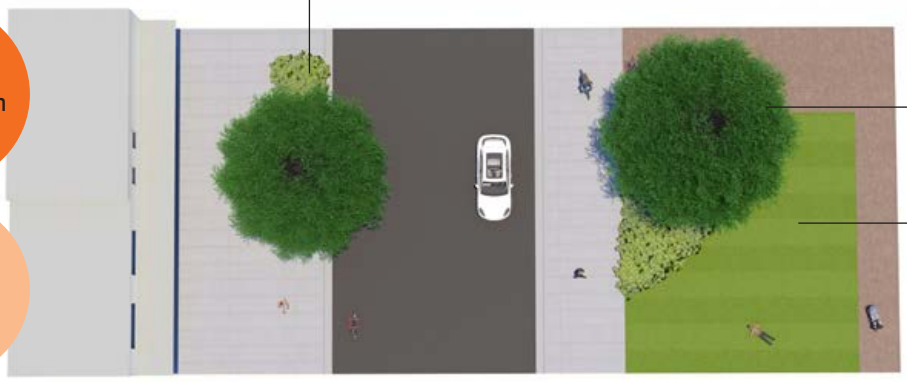


Greening and canopy is measured by looking down from above. Shrubs and lawns under canopy is not counted only the canopy above is measured.

Shrubs and other low planting counts towards overall greening when not under canopy.

33% Overall Green Cover

18% Canopy Cover



Tree canopy is counted towards overall greening even when over paving and roads.

Grass is counted towards overall greening when not under trees.

40% Overall Green Cover

27% Canopy Cover

New trees will expand our canopy and overall greening cover.

Growth in the canopy of existing trees will help expand our canopy cover.

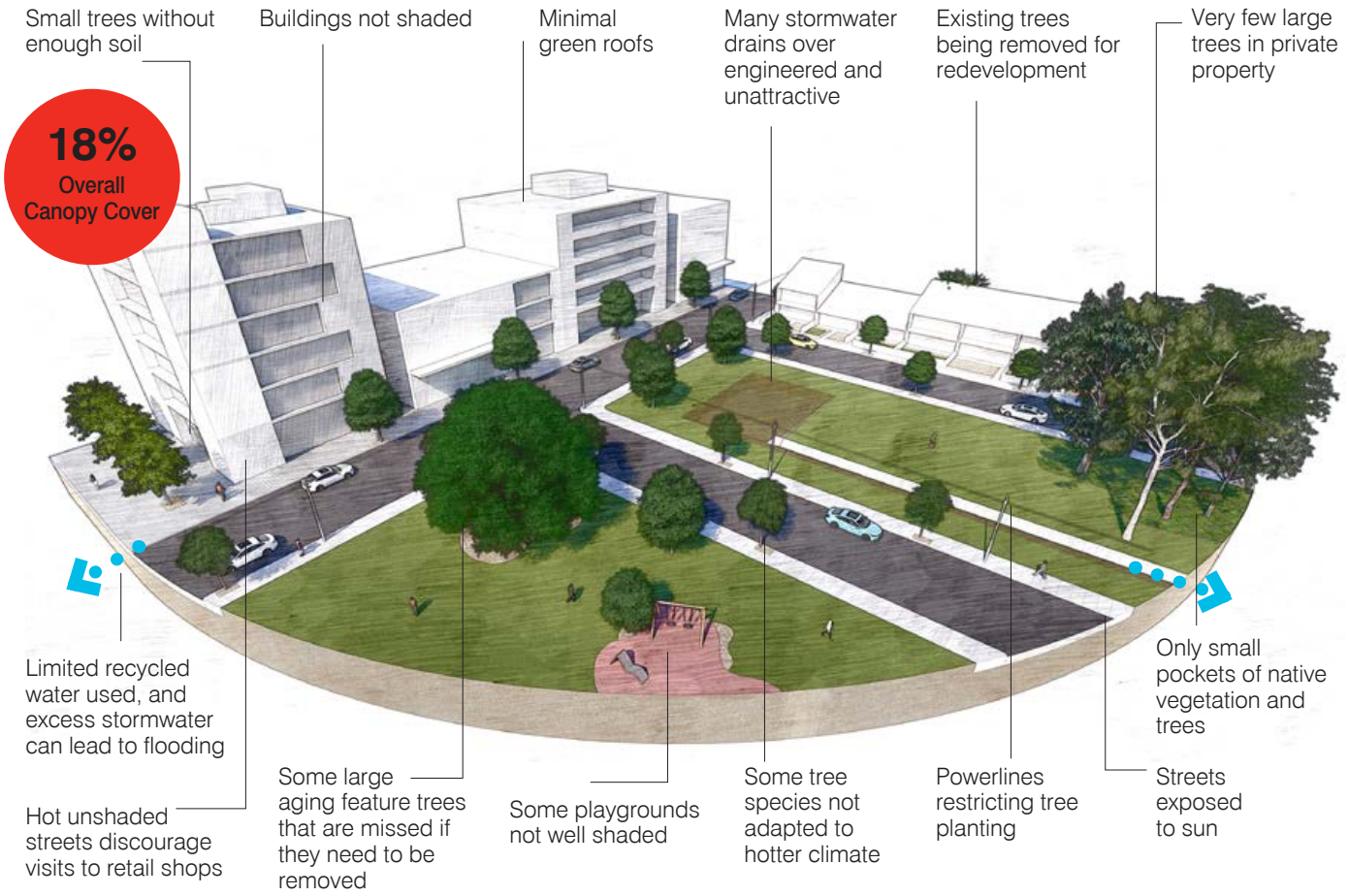
Grass will count towards overall greening when not under trees.

WHERE WE NEED TO BE
2050

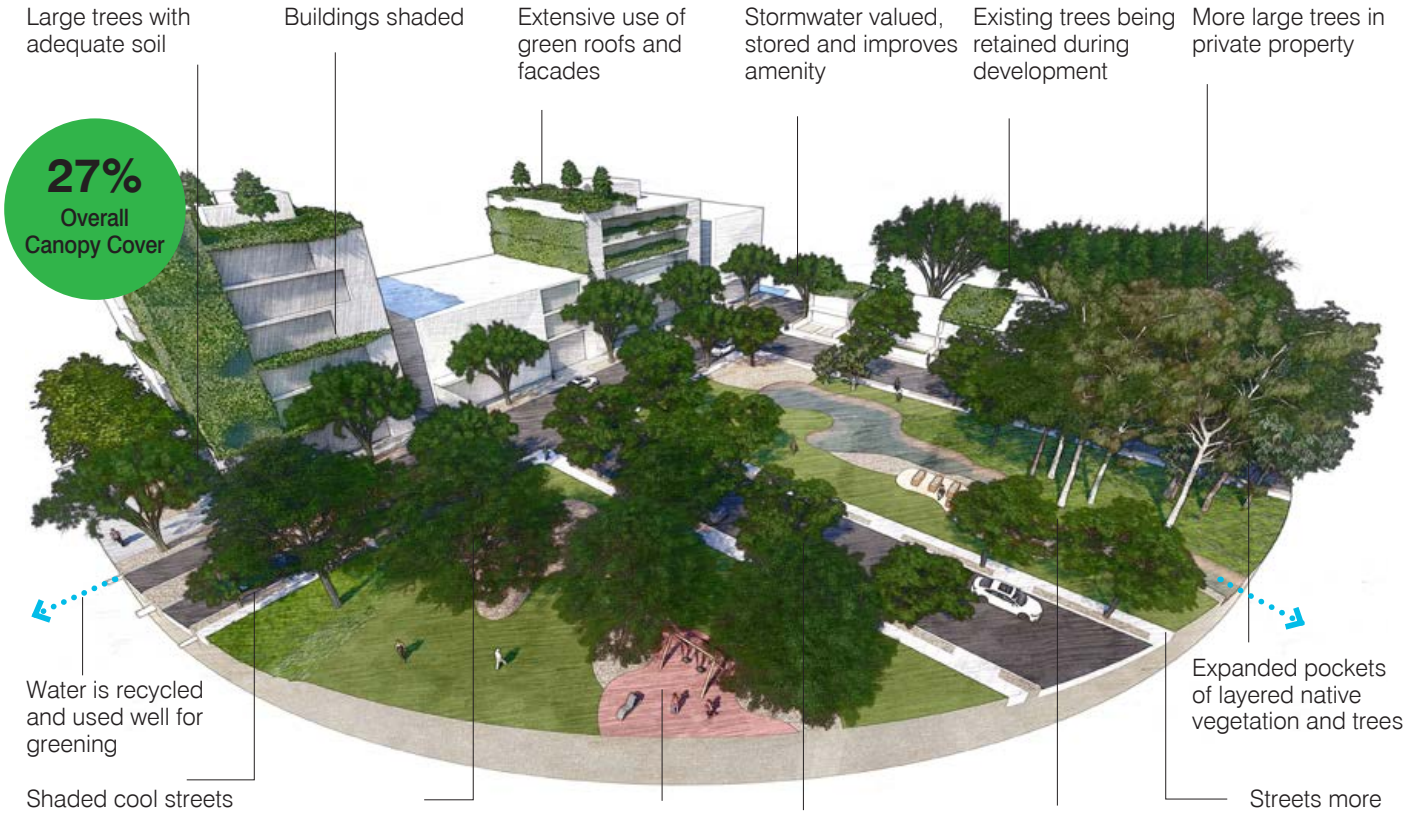
Green roof and additional shrub and ground covers, when not under tree canopy will expand our overall greening.

Greening and canopy is measured by looking down from above. Shrubs and lawns under canopy is not counted only the canopy above is measured.

WHERE ARE WE NOW – 2020

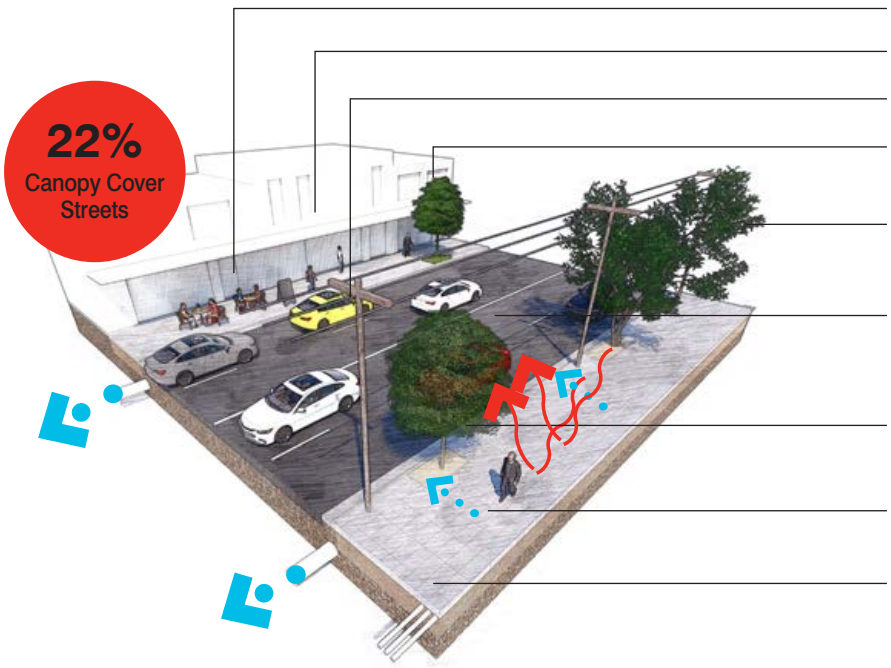


WHERE WE NEED TO BE – 2050



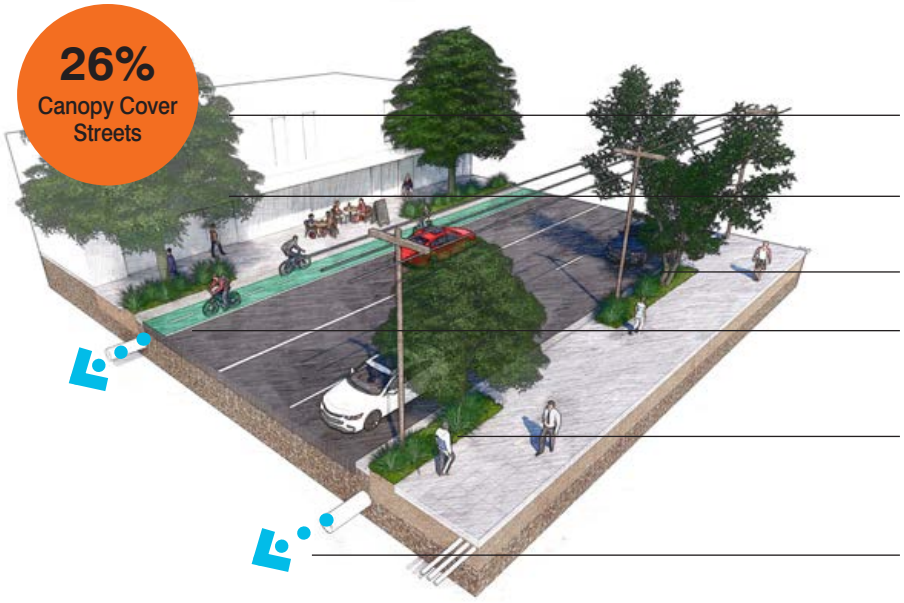
PUBLIC DOMAIN – STREETS

WHERE WE WERE – 2008



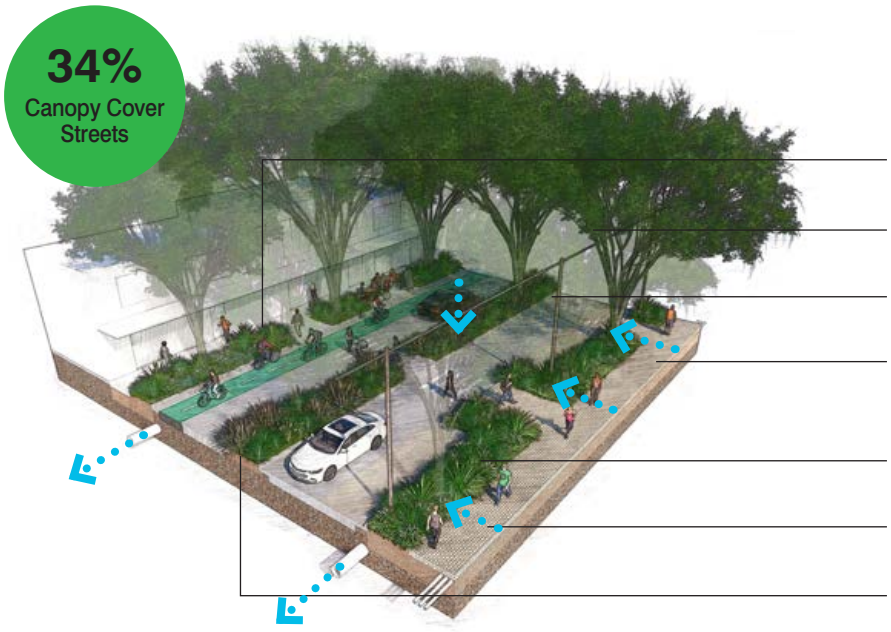
- Outdoor dining uncomfortable
- Building facades exposed to heat and sun
- Parked cars unshaded
- Small trees in small tree pits close to road
- Trees excessively pruned for powerline clearance
- Wide streets not optimised for walking and cycling
- Small and ineffective trees under powerlines
- Water not collected for greening and leading to flooding and downstream problems
- Heat absorbed and radiated from exposed and dark pavements

WHERE WE ARE NOW – 2020



- Some buildings shaded, outdoor dining experience improved in some locations
- Larger and new trees planted with roadside gardens incorporated
- Trees still impacted by power lines
- Dedicated and shaded cycleways rolled out across City
- Small trees still installed under power lines. Slightly expanded tree pits but still close to road
- Improvement in water collected for greening and reduced downstream problems

WHERE WE NEED TO BE – 2050



- More greenery at ground levels and reductions in hard paved surfaces
- Cool and shaded streets to improve human health and liveability, less reliance on cars
- Impacts from utilities minimised
- Greater use of permeable pavements. Increased use of light coloured pavements to reduce heat absorption
- Soil volumes and conditions are well designed to sustain trees and vegetation for the long term
- Water is recycled and used well for greening
- Median tree planting to increase shading of roads

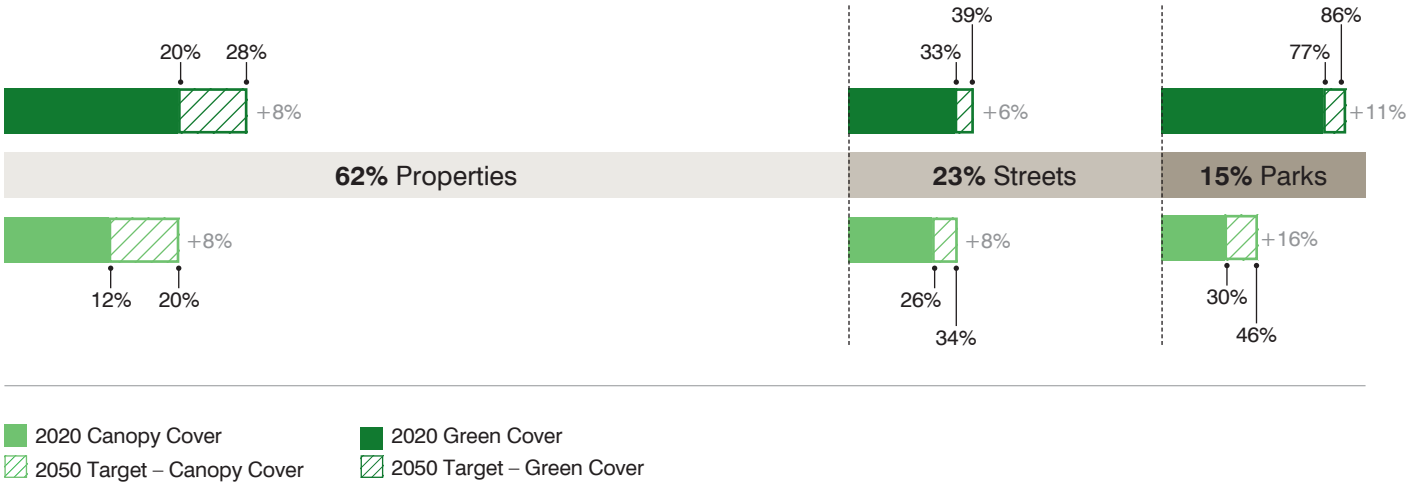


Figure 3 – Land use relative to existing cover and future targets for greening and canopy cover.

Action 2 – Green our laneways

Across the city, there is 383,000m^2 (38.3 hectares) of narrow streets classified as laneways. That is a considerable amount of space, and community owned land, that could be harnessed for greening.

Laneways are often under used and unappreciated. Often they are only infrequently used by very local traffic to access off-street parking, or by waste management teams for waste collection.

Where other space is so contested, it is considered appropriate that these underused spaces are looked at in more detail and better designed to become a valued green network, for the entire community.

Opportunities to increase laneway greening, however, is limited by their size, which is generally only sufficient widths for passenger and service vehicles.

Transforming laneways into greener shared spaces can be achieved as we transition to a more sustainable city, with fewer private cars and more innovative design solutions for other constraints such as waste collection.

To realise this vision, we will:

– review the various design and usage issues to identify laneway greening projects or programs that are most easily provided.

– review the impacts and the need for new development and site usage that requires private vehicle use of laneways.

– collaborate with waste management experts to identify opportunities for innovative waste storage and collection systems, to reduce service vehicle usage of laneways.

Laneways in Green Square and Alexandria, 2020 City of Sydney.

Action 3 – Harness innovation, technology and inspiration

The increasing momentum in the green infrastructure market continues to drive cities to implement green policies, which in turn help stimulate innovation and job growth in the green building sectors.

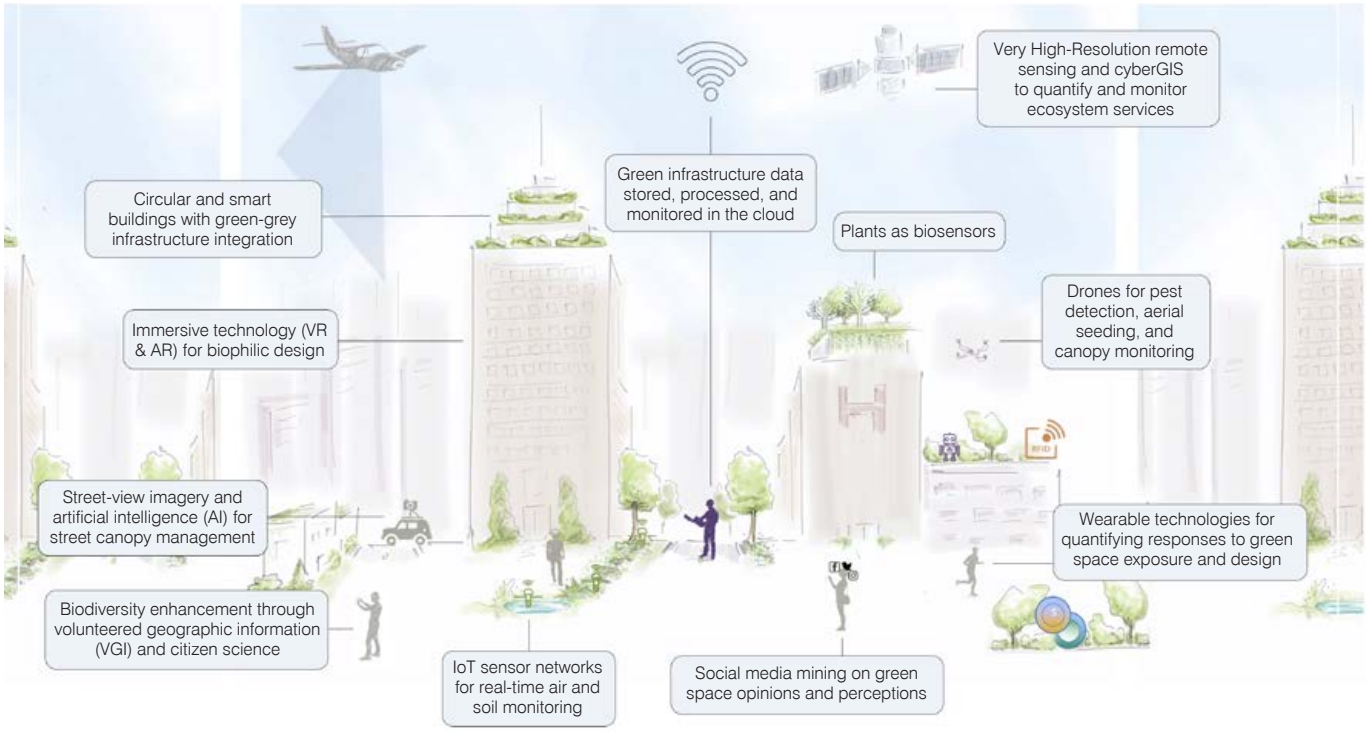
Research on the benefits of greening has exponentially increased. This research guides improved policy development, which helps drive innovation, and innovation can drive economic development and environmental outcomes.

The City understands the various roles it plays within this process. We use the latest research to inform the policy and strategic levers for city governance. Further, we encourage and support continuous improvement and innovation, including through leading by example for our own projects, operations and services.

One of the City's key advantages is our extensive asset and operational data. We are also planning for digital transformation, as 5G and new technology becomes available. This will be a key focus area over the next decade.

To transition our greening, we will

- share insights from our data analysis and visualisations with relevant stakeholders.
- encourage, and where appropriate support, new business models and products that will assist us achieve a greener Sydney.
- investigate innovative solutions for addressing key challenges, such as:
  - Reducing heat through movable planters, misters and vines where canopy trees cannot be installed.
  - Increasing green moments through pop-up parks and green spaces where permanent greening is not achievable.
- continue to review the opportunities for improved management of our green and blue assets through technology improvements.
- work with Sydney Water to improve access to climate resilient water supplies, like recycled water, to support greening.



The Internet of Nature: Examples and applications for urban forestry and green infrastructure management. From The Internet of Nature.

Jubilee Park foreshore, Glebe 2014. Adam Hollingworth

Direction 2
Greening for all

A just and fair city

The City needs to provide sufficient and quality greening across our streets, park and other council land under our control.

It is also imperative that the community has equitable access to the greening benefits.

Trees and plants help cool the city, create more liveable places, support our well-being and support urban biodiversity. Improved mechanisms to equitably green the city will be needed.

In a just and fair city, we need to ensure:

– All of the community contributes and has access to the benefits of trees, canopy cover, greenery and open spaces.

– All land use types (streets, parks and properties) to contribute to achieve the precinct and city wide cover.

Greening must not be concentrated in specific areas. We must remember that residents in Rosebery will require as much canopy cover as residents in Potts Point.

With the expected increase in the number of hot days, one group of residents should not experience temperatures 10°C hotter than other groups due to tree and green cover not being prioritised for our most vulnerable and impacted areas.

It is not all just about quantity of greening. Access to quality green space is also important. Well designed and maintained green spaces and assets provide our community a tool for maintaining their health and wellbeing. Quality green spaces enhance our sense of place and belonging, and demonstrates our recognition and care for the natural world.

Action 4 – Distribute greening equitably

It is vital that we distribute greening fairly across the local government area so that everyone shares the benefits provided by greening.

Research outlines 30 per cent canopy cover, within an area of around 1.6 kilometres, provides key heat and health benefits.

Analysis of each individual site (street, park and property) has been undertaken to confirm the extent of greening and canopy cover distribution across the city.

As shown on both images below, an increase is required across most of the city, especially in the southern suburbs of Alexandria, St Peters, and Rosebery, and the northern suburb of Pyrmont.

To ensure greening is shared and each community member has access, we will;

– Make informed and data driven decisions regarding greening in our future projects and developments, including through the comparison of the individual site extent of greening provided against its greening / canopy cover capacity.

– Regularly review and update the data to ensure we respond to the latest site conditions or research available.

– Make the information accessible, where appropriate, to assist stakeholders to engage and provide equitable greening.

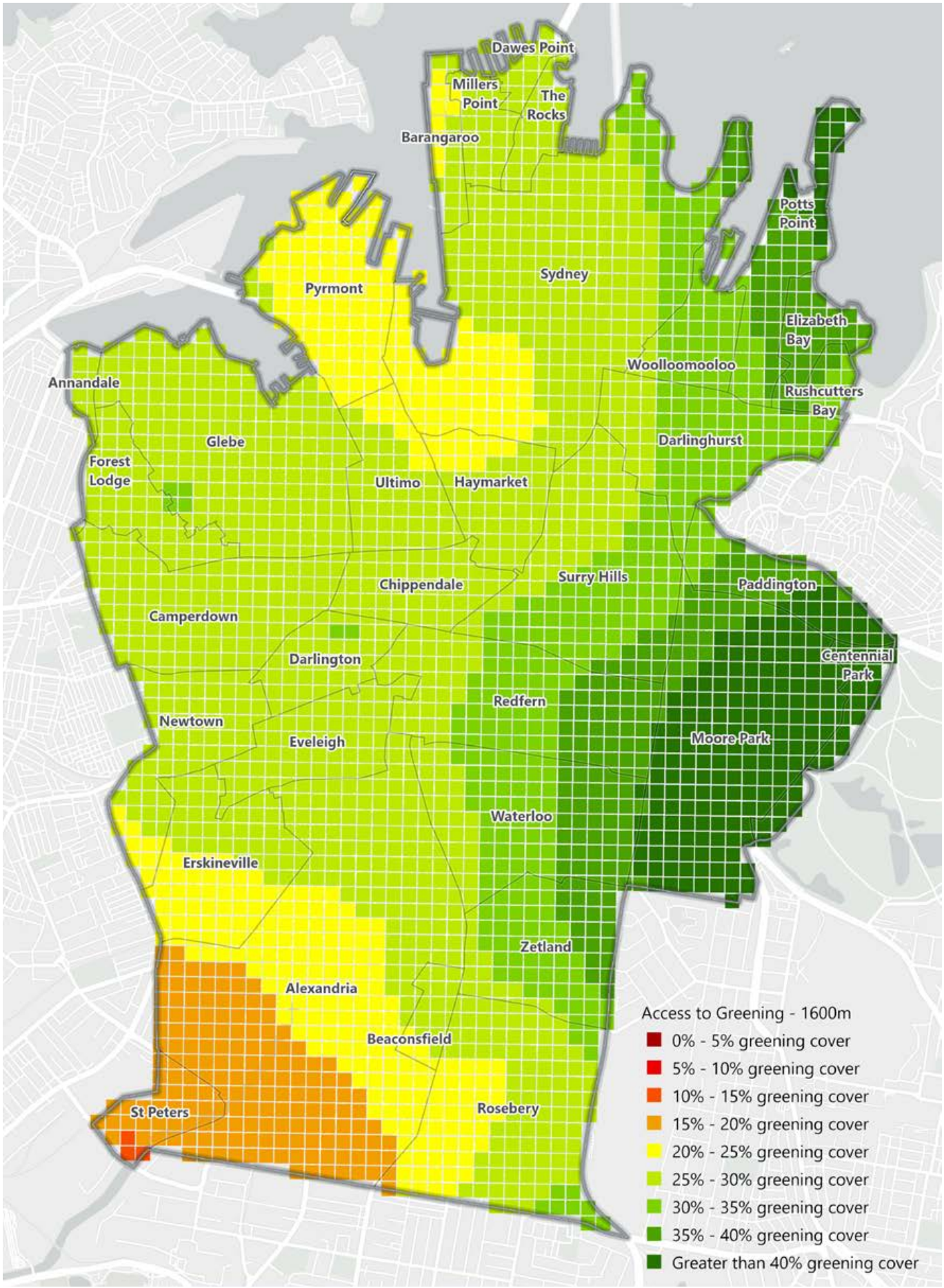


Figure 4 – The community's current access to **greening** across the local government area. Each coloured point measures the amount of greening, in streets, parks and private land, within a 1.6 kilometre radius of that point (including surrounding council areas).

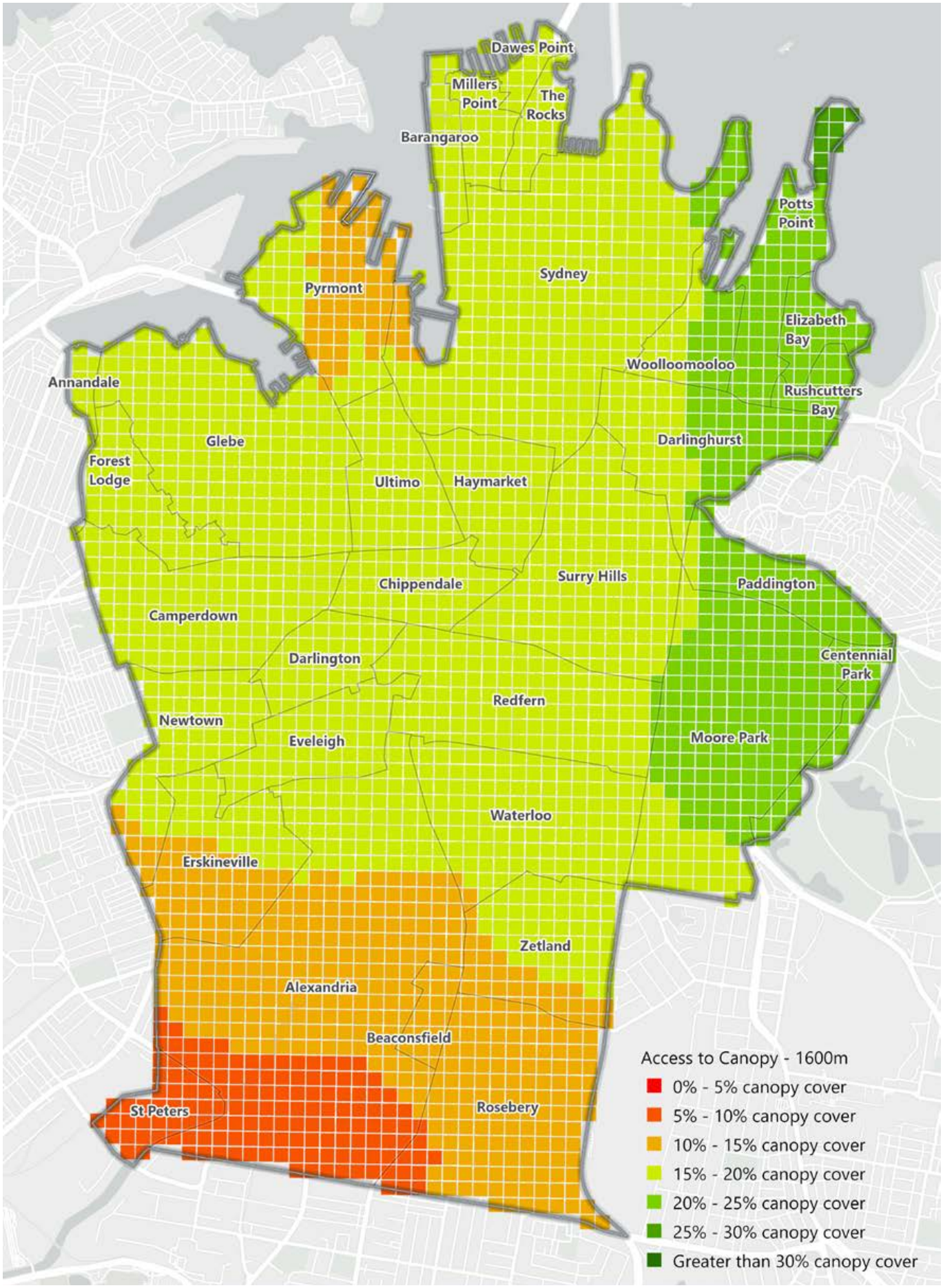


Figure 5 – The community's current access to **canopy cover** across the local government area. Each coloured point measures the amount of canopy, in streets, parks and private land, within a 1.6 kilometre radius of that point (including surrounding council areas).

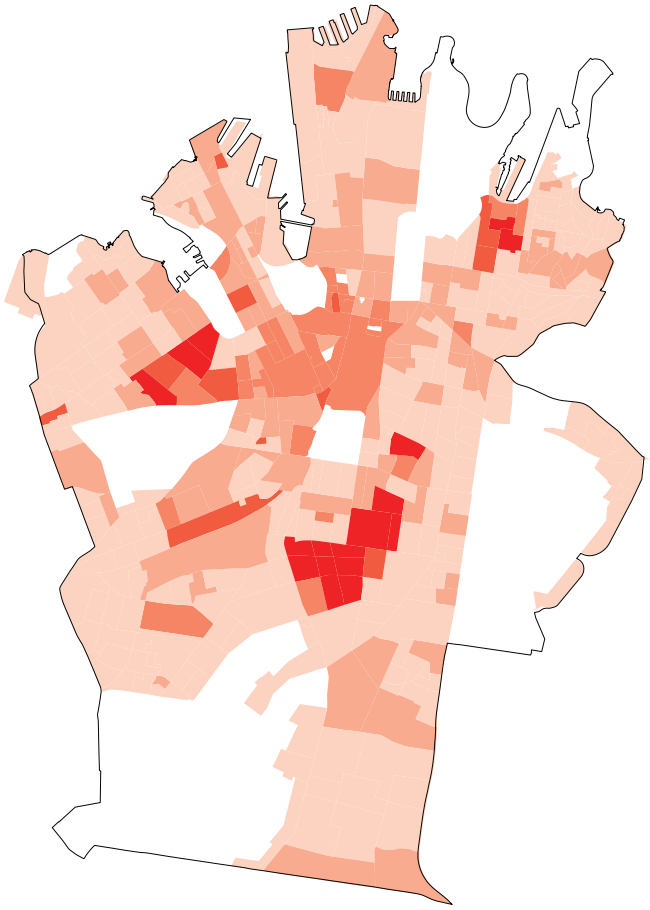


Figure 6 – The community's vulnerability to heatwaves.
Source: Australian Bureau of Statistics (ABS)

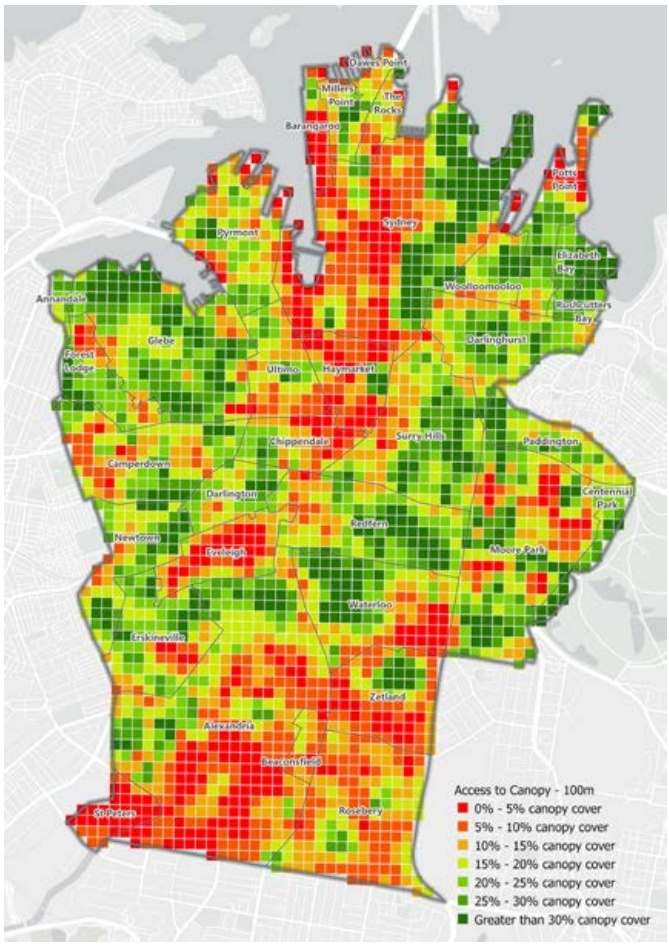


Figure 7 – the community's current access to **canopy cover** across the local government area. Each coloured point measures the amount of canopy, in streets, parks and private land, within 100 metre radius of that point (including surrounding council areas).

Action 5 – Provide fair access to quality green spaces

The City's green spaces need to accommodate a wide range of uses to meet our diverse community's needs.

Our green space network, consisting of over 420 parks, caters for active sports, passive play and contemplative places, for people and their companion animals, and for wildlife.

With competition for space so high, and our population increasing, the City needs to balance the competing uses and desires.

In some instances, this will require a considerable change in materials. For example, to meet the demand for sport fields, synthetic sportsfield will be used in some parks to provide equitable access for the number of people, the various sporting groups, and the different sport types (e.g. AFL, Hockey, soccer etc.).

To achieve equitable access to greening, we will;

– Develop a Parks Design Code to ensure consistent robust designs and application of materials are used across the parks network.

– Continue to look for opportunities to adapt the green space network, where appropriate, to cater for community needs.

– Continue to implement the standardised maintenance service levels throughout the city – to ensure park types are maintained to the same levels across the entire local government area.

– Make informed and data driven decisions regarding our parks and open spaces, and make the information accessible, where appropriate, to communicate issues to stakeholders.

Action 6 – Adapt for climate

Greening for all includes providing for future generations. We have been fortunate. We inherited many beautifully established parks, with significant trees that are more than a hundred and fifty years old.

It is important that we provide such mature, thriving and healthy landscapes to future generations.

To do so requires us to understand the impacts of climate change on our existing plant species and green spaces. We now have to design green spaces and plant new species that will thrive under the changed climate conditions.

Importantly, we will need to communicate these changes well, as we prepare for our much loved landscapes to change overtime.

To provide greening for future generations and climate adaptation, we will:

– Review the existing tree and plant species used across our public spaces, and plant appropriate species to suit changing environmental conditions.

– Keep up to date with the latest climate science, and available research on species adaptability / tolerance for Sydney's future climate conditions.

– Continually monitor and update our underlying policies and plans to cater for updated information on different species.

– Ensure new landscapes are designed to be adaptable, resilient spaces that accommodate people and environmental requirements.

– Manage the change in our cultural landscapes over time, with comprehensive community engagement, ensuring future generations inherit healthy, mature parks and trees.

Action 7 – Grow food locally

Access to fruit and vegetables is a critical ingredient for our mental and physical health. Food insecurity is also increasing. There are many reasons to increase the food we grow locally.

For many people, growing food restores a connection to nature, and the ability to nurture themselves, their friends and family through food. There is much joy in watching fruit and vegetables grow, the anticipation and patience waiting for the right time to harvest a crop, and then sharing recipes and produce with friends, family and even the wider community.

Unfortunately, an increasing number of people struggle to afford fresh food. Access to locally grown food from friends, neighbours or through community gardens, increases the opportunities for those who need it most.

We will continue to support the community to grow more food locally through;

– Our Sydney City Farm programs and community garden network.

– Encouraging proposals that support increased food production on private land. This includes the potential for dedicated large green roofs for food production.

– Encouraging innovative solutions for urban food production, including integrated community, food and gardening spaces.

Images above: Yerrabingin Rooftop Farm, A world-first Indigenous rooftop farm in the heart of Sydney. The farm grows over 2,000 edible, medicinal or cultural plants, using the principles of Indigenous knowledge and permaculture. Credit Destination NSW and Mirvac

Direction 3
Cool and calm spaces

Two key issues facing most of the city's residents relate to high urban heat and impacts on physical and mental health.

Heatwaves are Australia's deadliest natural hazard. They now arrive earlier, are hotter, and last longer.

As outlined earlier, research indicates that we ideally need a minimum of 30 per cent canopy cover. This canopy cover can reduce temperatures at ground level by more than 10°C.

During the COVID 19 pandemic, people flocked to nature to help them stay strong – physically and mentally. Access to quality green space is vital, and not just in times of emergencies. We all need to make sure green space is not taken for granted.

"In times of crisis, the natural world is a source of both joy and solace. The natural world produces comfort that can come from nothing else".

David Attenborough

Trees and plants are nature's air conditioners

The natural process of photosynthesis requires that trees and plants use energy and transpire. This transpiration is what cools the air around the green spaces and reduces ambient temperatures.

Greening also facilitates the cooling of our homes, streets and parklands by shading and providing cooler surfaces to reduce mean radiant temperature.

Trees improve our health

Professor Astell-Burt and Professor Feng found that the residents of neighbourhoods with a higher amount of tree canopy had better mental and general health, but didn't find the same correlation when the type of green space was open, grassed areas.

They advise the shapes, colours, smells and sounds of rustling leaves also provide a natural distraction from our thoughts (particularly stressful ones) and attractive spaces for social and physical recreation.[1] [2]

Does sleep grow on trees?

Professor Astell-Burt and Professor Feng also investigated whether people with more green space had lower odds of developing insufficient sleep over about six years.

They found 13% lower odds of developing insufficient sleep among people in areas where 30% or more of land cover within 1.6km had tree canopy, compared to people in areas with less than 10%. These results were consistent after taking into account factors that can influence both our sleep and access to neighbourhoods with more tree cover. These factors included age, sex, education, work status, marital status and household income.[3]

1 Astell-Burt, T. and Feng, X., 2019 Association of urban green space with mental health and general health among adults in Australia
2 Astell-Burt, T. and Feng, X., 2020. Urban green space, tree canopy and prevention of cardiometabolic diseases: a multilevel longitudinal study of 46 786 Australians. International journal of epidemiology, 49(3), pp.926-933.
3 Astell-Burt, T. and Feng, X., 2020. Does sleep grow on trees?

Action 8 – Cool the hot spots

Cool streets improve the walkability and liveability of our city. To cool Sydney through greening we will:

– Increase the shade provided by trees, and select species to help channel cooling breezes to where they are most needed.

– Reduce absorbed and radiated heat from buildings, roads and paving, including reducing the amount of paving.

– Celebrate water in our landscape, by providing a range of opportunities for people and our vegetation to access water. This includes increasing passive irrigation, the storage and re-use of water to support vegetation and facilitate the cooling effects of evapotranspiration.

– Increase the provision of shaded and appropriately spaced seating and rest stops

– Include other suitable vine covered or artificial shade structures and misters where trees are not possible.

The City's priorities will be based on vulnerability analysis. We will analyse and map socio economic indicators to identify vulnerable groups, and combine that with our greening data to establish areas that are particularly exposed to urban heat and other health related issues. These areas will benefit most from our greening efforts.

What is a cool street or park?

Cool streets and parks have these elements in common:

– Greater than 30 per cent canopy cover

– Provides sun protection

– Contain the largest trees possible (ideally large to medium trees)

– Reduced amounts of paving, particularly dark paving

– Provide comfortable, shady and safe rest stops

– Lower level greening is combined with trees

– Good access to water and passive irrigation to support vegetation health and growth

Action 9 – Calm green spaces

Provision of substantial and meaningful greening can provide refuge from a busy city, creating calm and healthy spaces that improve our mental health and wellbeing. To calm Sydney through greening we will:

– Identify the calm spaces located throughout the city.

– Map these spaces and identify any areas that require intervention to provide a calm space network. Further, we will share this mapping with the community to assist in calm space usage and wayfinding.

– Identify the community most in need of greening, and prioritise our programs to provide the greening health benefits.

– Consider how future green space design can further accommodate calm spaces, whilst managing the range of other open space use requirements.

– Investigate opportunities to use temporary and 'pop-up' parks and green spaces that provide new calming or respite in areas where permanent greening is not available.

What is a calm space?

Calm spaces have these elements;

– Well maintained and balanced mix of tree canopy, biodiverse gardens and open turf areas.

– Access to water bodies, including the harbour, lakes or water features.

– Low traffic noise and visual screening from busy streets.

– Seating and rest stops as opportunities for tranquil 'time-outs'.

Action 10 – Celebrate water

The City is fortunate that our northern boundary adjoins Sydney harbour. The harbour has shaped Sydney and its people for many thousands of years, from the First Nations through to new immigrants today. It's is a place that helps to restore and invigorate us in equal measure. Importantly, it is also precious habitat for wildlife.

There are also many natural and created wetlands, lakes, canals and other water features across the city that provide us with the opportunity to enjoy and connect with water.

We understand that water has particular importance for our Indigenous community. The depth and strength of this connection is vast, and vital.

We also acknowledge that water plays both special and everyday parts in all of our lives.

Water sustains life and all living things depend on it. Therefore, we must care for and celebrate water.

To do this, we will;

– Identify opportunities to celebrate water in our landscapes.

– Recognise and communicate the importance of water in our lives, particularly for keeping us cool.

– Ensure the efficient and effective use of water as a natural resource.

– Ensure that water as a habitat for wildlife is understood and protected.

– Look for alternative water sources to assist us to adapt to changing climate and sustainably keep our green spaces green.

Images from top: Archibald Fountain Hyde Park, Sydney Park wetlands, Pirrama Park, Pyrmont

Direction 4
Greener buildings

Greener buildings are designed to promote, encourage and foster significant greening as part of all new developments.

Our appreciation of having access to and outlook or views to greening has recently been heightened as the community stayed at home and spatially isolated during the COVID19 pandemic response. We recognised during that time that the research was right, people need greening for physical and mental health and wellbeing. Further, we need to plan that everyone can see and have access to greenery from their property.

Property represents the largest proportion of land use at 61 per cent of the local government area.

To achieve the 40 per cent green cover target, including the 27 per cent canopy cover target, property has to provide at least 28 per cent greening, including at least 20 per cent of that as tree canopy cover.

To meet these targets, in addition to trees, other forms of greening is going to be an important and integral design consideration for all new buildings. As will considering ways to enable nature to be integrated into the design. Most of these new buildings will occur on property.

Policy changes will be required, and these policies will build on the earlier Directions, by providing quality greening equitably across the city.

85 per cent
of respondents want buildings covered with plants and that incorporate nature into their design.

Sustainable Sydney 2050 community survey.

Action 11 – Develop a green factor score

A Green Factor Score is a planning tool that evaluates and quantifies the **amount** and **quality** of **urban greening** a project provides.

It is designed to promote, encourage and foster significant greening as part of all new developments. Its focus is to assist all parties to green property and achieve wider community outcomes.

A Green Factor Score is embedded into the relevant planning controls to help designers, developers and homeowners to informed decisions about good design to achieve appropriate levels of greening in any new development.

Most importantly, a green factor score takes into account that not all greening is equal.

Medium to large canopy trees provide the largest benefit to the city and lawn grass providing the least. For example, a green factor tool applied in Seattle equates one large tree to 39 shrubs, or 6 smaller trees, or 3 medium trees or a roof top garden 33 square metres in size.

The tool therefore allows architects, planners and other experts to determine how they plan to green their property and meet the City's requirements and planning controls.

Equivalent green factor tools have been in place in many international cities for years, including Berlin, London, Seattle and Helsinki. There is also Columbia's 'Flexible Green Area Ratio Policy', 'Portland Eco-roof Requirement' and the 'Denver's Green Roof Initiative'. The City of Melbourne is also developing a web-based tool.

To develop a new green tool, City will;

– Review the various green factor scores currently being implemented.

– Develop an appropriate Green Factor Score, or equivalent planning controls that facilitates the assessment of greening features (quantity and quality), for the City that will assist us to meet the green and canopy cover targets.

– Embed the Green Factor Score into updated planning controls, including the Development Control Plan to ensure greening is planned for and provided on private land.

How does it work?

The Green Factor Score assigns an overall greening score, based on the extent of greening on the site, compared to the overall property area.

The required score can be based on the development type (e.g. commercial or residential), its geographic location (e.g. CBD, suburban) or other site considerations (e.g. heritage, storm water management).

A bias has been placed on the ability to retain and protect existing trees on private land in deep soil. The score favours the re-establishment of medium and larger trees. Where retention and tree planting cannot be achieved, only then are other greening options considered in the scoring. As a guide to designers, hierarchy of greening alternatives and benefits is provided on a sliding scale. These include installing green roofs, walls and permeable pavements amongst many other types of greening. The ranking is commensurate with the greening benefits provide, and the relative ongoing maintenance costs, together with its effective lifespan.

For example, trees in natural ground have significantly greater benefits than shrubs. Shrubs have greater greening and habitat benefits over turf and grasses. Green roofs are also valuable, but due to their shorter lifespans and higher maintenance costs they score less than trees. Typically, green walls or facades have far fewer benefits than these other forms of greening and are ranked accordingly.

Like the BASIX tool, the Green Factor Score is a minimum score-based system to assist developers and Council to determine the appropriate type of greening (trees, ground covers, turf etc.) and the required quantity to ensure green infrastructure benefits are provided.

Action 12 – Increase green roofs and walls

Imagine a building designed and constructed to function elegantly and efficiently. Imagine a building that responds to the climatic region and native plants in which it belongs. Imagine a building that generates its own renewable energy, captures and treats its own water and the building is beautiful. All of this is possible now, and green roofs, green walls and green facades are an essential part of that puzzle.

Green roofs and walls are becoming increasingly common in new developments, as developers seek to make the most of rooftop spaces and provide attractive offerings for residents and workers.

Rooftop, communal open spaces and podium gardens have great potential to improve our urban environments and can be incorporated into higher density residential, mixed use and commercial buildings. They can be retrofitted to some existing buildings. They can also be achieved without taking up additional space because they are part of the building footprint.

We understand that not all our buildings can incorporate green roofs or walls. However, we increasingly expect, and in time will insist, that all new buildings contribute to urban greening and biodiversity. Further, we will look for opportunities and innovations for retrofitting urban greening on existing buildings.

To increase the quantity and quality of green roofs and walls, we will;

- **Review and update our Green Roofs and Walls Policy**, **Sydney Landscape Code** and technical details to demonstrate how such greening can be done in a sustainable way with suitable consideration to energy, maintenance inputs, water use and life span.
- Gradually amend the City's planning controls to increase the adoption and use of green roofs **in new developments**, particularly where green cover is currently limited, such as in the CBD, commercial and industrial areas.
- Gradually amend the planning controls for the **retrofitting of existing buildings**, where possible and appropriate, with suitable low-weight extensive green roofs when applications for alterations or additions are received.
- Assess any **potential or perceived barriers** for installation or ongoing maintenance. Adapt our policy, controls and conditions to address such issues, in an effort to ensure the benefits of green roofs are realised and their longevity ensured.
- Continue to **provide knowledge and skills** to the community about creating domestic scale green walls and roofs through Sydney City Farm education programs.

Benefits of green roofs

Green roofs can:

- Store and treat rainwater, slow water discharge and use captured stormwater for irrigated reuse. In similar cities, green roofs can retain between 86–92% of annual stormwater runoff, depending on rainfall patterns and intensity. Rainfall retention is enhanced by deeper substrates with greater water-holding capacity.
- Use captured and stored greywater from the building for irrigation.
- Provide cooling and improved insulation to reduce energy costs.
- Greatly reduce urban heat island effects by removing surfaces that absorb and then radiate heat at night.
- Improve efficiency of solar panels by reducing the ambient temperatures around the panels when they are installed with surrounding greenery.
- Provide significant gains in aesthetics and recreation, even if only for the neighbours who overlook them.
- Provide valuable locations for social and business activities.
- Facilitate installation of community gardens, orchards, bee hives and urban food production.
- Improve biodiversity and habitat for wildlife, and contribute to connectivity across the urban landscape.
- Improve financial returns and increases in property values.

Action 13 – Planning ahead

Sydney is always changing. We must look forward to determine and actively plan the type of city we need.

With greening recognised as essential infrastructure for addressing urban heat and improving our health and wellbeing, we need to ensure we give greening sufficient space to grow and thrive.

Space is contested. Every square metre above and below ground is valuable. In developing our plans for the future, we need to make informed decisions about how every square metre should be used. Understanding that, we can't have it all, there will be trade-offs.

For example, if we prioritise standalone studios over backyards, we may increase small housing and short term visitor accommodation, but our suburbs will be hotter and our health and wellbeing will diminish.

For off-street above ground parking, do we start planning now for the expected extensive reduction in car ownership, so that we maintain that space for greening?

How do we increase our population and density, whilst maintaining the greening and overall character of the area?

The City has an important role to play, through our planning controls and processes, in ensuring we make these informed decisions, and ensure the community contributes to the greening on their land.

To plan for a greener future, we will:

– Amend the planning controls to include the key initiatives developed from this Strategy.

– Develop minimum requirements within the planning controls to achieve the new greening and canopy cover targets on property.

– Consider future land use and trends, such as building studios, basements and car ownership, that impact on the retention or ability to increase greening. Adopt a position that ensures greening and the environment is a key priority through the informed decision making.

– Consider the use of incentives, where appropriate, to provide sustainable greening outcomes where they would otherwise be considered unachievable.

– Ensure compliance of greening outcomes is achieved, including the retention and protection of greening throughout the development process and long term greening maintenance outcomes.

Central Park, R. Smart 2020 and Bosco Verticale, Italy https://commons.wikimedia.org/wiki/File:Bosco_verticale.jpg

Direction 5
Nature in the city

Urban ecology has a wide scope of applications from the building scale to the whole city including streetscapes, private space and public open space.

When designing and implementing our greening strategies we will be looking for ways to maximise habitat potential and nature in the city. The key elements that we will focus on include:

– providing a wide diversity of plants, with preference for species, particularly locally native where appropriate, that will contribute to habitat and food sources for native wildlife

– considering all sizes and types of native wildlife, small mammals, bats, reptiles and even insects. Ecosystems require a complex 'food web' and without smaller animals such as insects, other animals can't survive and prosper either

– continuing the restoration of urban bushland and seek opportunities to rewild where nature and ecosystems have the opportunity to recover from degradation

– strengthen biodiversity corridors to facilitate the safe movement of species between places of refuge and food sources

– support healthy natural aquatic systems such as creeks and wetlands

– seeking opportunities to translate research into relevant on ground actions to improve how we manage and restore urban nature and healthy ecosystems

– developing opportunities for the community to reconnect with nature and seek to enhance the natural values of the city

– continuing to improve knowledge, skills and resources to enhance urban nature in the city.

The City of Sydney expresses deep respect for the traditional custodians and seeks to draw on the sophisticated, resilient and continuous culture of this place. The City acknowledges we all stand on sacred land.

City of Sydney Reconciliation Action Plan 2015

Action 14 – Recognise and support Aboriginal ecological knowledge

The Gadigal of the Eora Nation managed their land resiliently for thousands of years. Aboriginal people know that if we care for Country, it will care for us. There is much we can learn to better care for this Country.

To achieve this, we wish to work with the local Aboriginal community to explore and identify opportunities to celebrate, promote and educate about Aboriginal ecological knowledge and principles.

The City will engage with the local Aboriginal community to identify the cultural and practical principles that should be considered when designing new spaces or that may contribute to help integrate people with nature.

Working together, we will listen first and explore opportunities to expand greening within the Eora Journey, and emerging approaches such as the Government Architect of NSW 'Designing with Country'.




Images from top: Bio Blitz 2018, Moorhen in Sydney Park wetlands, Seawall pots installation 2016.

Action 15 – Strengthen urban nature protection measures

As Sydney continues to grow, it is essential we have the necessary mechanisms in place to protect, and increase, nature in the city. To achieve this, we will;

– Identify and implement strong urban nature protection measures.

– Develop stronger biodiversity planning controls and assessment checklists for planners and proponents.

– Set targets by 2023 to provide net increase in biodiversity, habitats, and ecosystem health and provide by 2033.

– Strengthen urban nature protection through the inclusion of urban habitat targets in the City's planning controls.

– Identify and refine the biodiversity corridors and embed in planning controls.

– Identify and implement best practice ecological connectivity approaches to enhance biodiversity and allow for the safe movement of priority native fauna.

– Increase the contribution of the private realm in supporting biodiversity conservation and ecosystem health.

Glebe bush care group in Forest Lodge, 2018.

Action 16 – Perform an urban ecology health check

Works will be undertaken to collect information about our existing urban biodiversity status to determine the progress the City has made since the baseline data was collected. This will be combined with other data sources to not only contribute to the surveys but also to consolidate existing data to determine potential habitat measures, reassess priority works and to define performance targets.

Action 17 – Reconnect with nature

It is important for the community to reconnect with nature and seek to enhance the urban natural values of the city. To achieve this, we will;

– Support more citizen science programs and participatory events. These events play a major role for the success of urban nature focused programs

– Increase community engagement through urban nature volunteering and grant opportunities.

– Develop a coordinated communication program on urban nature focused programs and achievements.

Direction 6
Greening together

The community is one of the greatest resources for greening Sydney. Our community continue to show a strong interest and are passionate to participate in greening the urban landscape.

One of the most important things the community can do is to green their own property.

They can also assist greening efforts on City land, and ideally assist others in the community with gardening on their property.

There are social capital benefits to this work. For example, the Sydney City Farm involves the community in meaningful volunteer opportunities while learning about urban agriculture and sustainable food production.

The ongoing participation in nature focused programs, such as National Tree Day, show community desire to not only green the city but to work together to achieve this goal.

Communications that raise awareness about the importance of greening and nature is essential in developing a cue to care.

Further, communication and support with volunteer groups, which work independently from the City, are important to nurture to provide community empowerment. They provide people with the responsibility and autonomy to undertake greening projects in partnership with the City without directing resources away from the core City business.

The City will also look at opportunities to assist the community to green their property. The establishment of a fund and grants program is being considered to assist the community to provide resilient greening initiatives on property.

National Tree Day 2014, Sydney Park

Action 18 – Support community participation

We encourage the community to have a sense of ownership and acceptance of the community greening initiatives.

Further, we understand it is crucial to provide opportunities for active participation in greening activities throughout the city, including ongoing education and awareness of the importance of greening the urban environment, citizen science programs and participatory events, and hands-on activities and volunteering.

To achieve this, we will continue to support:

– our community gardens and their members. We will also assist new groups to develop gardens.

– Sydney City Farm volunteering and the provision of high quality educational programs for the farm members and wider community.

– bushcare and landcare groups in restoring bushland areas in line with the Bushland Restoration Management Plan.

– footpath gardening projects undertaken by community members in line with the City's Footpath Gardening Policy.

– donation of trees, to commemorate a special event or loved one, as outlined in the Tree Donation Policy.

– wide-ranging annual greening events, such as Free Tree Giveaway, National Tree Day, community planting days, Bioblitz, fauna counts and many other events that support the aims of this strategy.

We will also undertake a comprehensive review of our current policies and programs, including the Community Gardens Policy, Urban Ecology Strategic Action Plan, and Sydney City Farm.

Opportunities for programs that assist the community to help others green and garden their property will also be investigated.

The reviews will help us explore innovative potential models and frameworks that will assist us to meet the increase community involvement.

Images from top: Sydney City Farm 2017, Beaconsfield Community Garden Group 2017, Reconciliation Park Community Garden 2018, City Farm Indigenous talk 2015.

Action 19 – Develop a greening Sydney fund

Cities are congested and contested places, above and below ground. They are always under pressure and subject to constant change and development. There are many competing social, and economic demands to be considered. This places our urban trees at risk.

The City uses extensive resources to plant and maintain public trees. Tree removal is always considered as a last resort. When a tree is removed, the environmental, social and economic benefits are lost for many years until any replacement tree matures. In some instances, those benefits are permanently lost when a tree cannot be replaced.

With appreciation that trees are essential urban assets, and the community correctly places a high value on their retention and management, it is considered appropriate that the City seeks appropriate compensation for their removal.

The City will continue to place tree removal as a last resort. However, when removal of a Council-owned tree is required to facilitate a development / project the City will investigate ways to ensure it is appropriately compensated for the loss and identify how any compensation received can be used to create the greening Sydney fund.

Any fund would be managed by the City to provide a grants program aimed at improving greening outcomes on private land in line with this strategy. This may include programs such as matching grants programs for residents and landowners to undertake new tree planting, new habitat / nature plantings, or install green roofs, green walls and façades.

In investigating options for the fund, we will:

– review how the program can be developed within the existing statutory framework and develop any necessary policies to support the program

– have a balanced approach in establishing the tree removal compensation values – a value will be based on various tree attributes, but not of too high a value that is a major financial hardship

– ensure any grants program developed achieves the key greening objectives of this strategy

Action 20 – Increase our community engagement

Community engagement is key to developing green initiatives that the community wish to see and want to participate in.

Better solutions often appear when a diverse set of people participate and embrace the problems and potential solutions. Collecting diverse opinions, knowledge and perspectives from within the community will help to provide a more balanced, and inclusive solution.

To achieve this, we will:

– review our community engagement approaches to maximise engagement with a wider audience.

– increase our online presence, including providing more resources, data and information on our greening initiatives, programs and assets.

– develop Green Volunteer Network to allow for community knowledge sharing, networking and learning across the city at both an online and face-to-face levels.

Images from top: James Street community Garden, 2011, Sydney City Farm Workshop 2017.

Our green future

We have developed this strategy to re-ignite and affirm our commitment to provide a greener, cooler, calmer and resilient Sydney to all of our community.

Trees and other urban greenery are a vital and integral part of our urban lives. It is as important as roads and broadband internet, and significantly more beautiful than either. More and more studies are revealing that there can be no greater good for human health than to protect and enhance the green infrastructure within and around our cities.

Trees remove thousands of tonnes of pollution from our air, store carbon and help mitigate extreme weather. Their roots and leaves absorb water and help slow down and deal with excess rainfall. They provide respite and relief from noise and dirt, boost our immune systems and relieve stress, depression and anxiety.

As trees are lost to development, buildings and roads, to disease and storms there is an ever-pressing need for us to value everything that the broader urban forest and greenery can do for us.

In 2015 the World Economic Forum made increasing green cover one of its top 10 urban initiatives. Across the entire world there are movements to encourage cities to plant more trees and increase their green spaces. Analysis reveals that much of our green cover is located in private land, on golf course and on railway and other utility corridors. This shows that individual contributions and intergovernmental approaches to urban greening is vital. Every tree counts, even it is only a small tree in your back garden.

Singapore, already the greenest city in the world, is aiming to make itself even greener. Its goal is to have 85 per cent of all its residents to live within only 400 metres of a green space. Sydney must strive for such outcomes as well.

As cities become more crowded, they also have to become more innovative about how to create more green space. Inspiring projects such as New York's High Line railway and the Promenade Plantee in Paris, illustrate how cities across the world are turning disused railways and motorways into parks and green space. The Skygarden in Seoul has been built on an abandoned motorway flyover. The former concrete overpass has been planted with 24,000 shrubs and trees and is open 24 hours a day.

It is vital that we share knowledge on lessons learned. We must regularly review and update polices, plans and planning controls, using data to make informed decisions, in order to continue producing innovative technologies to meet the climate change challenge and support green building initiatives.

The City has developed this strategy to drive everything we do. We need to encompass both small and large actions. We need to address our streets, our parks and buildings and new development on both public and private lands.

We need to look after our future. We are the only ones that can. The time for action is now. Please help and support us in our efforts to green our city.

Attachment 1 – Review, implementation and action plan

We will implement this Greening Sydney Strategy over the next ten years.

As greening is located across streets, parks and property, several departments will be involved in leading the specific actions, as outlined below.

A review of this strategy will be done by 2031. The review will include an assessment of the new research, technology and how the city has developed and changed during that time. This will include a comprehensive review of the greening and canopy targets, and all other actions required to provide a cool, calm and resilient city.

Images from the top: 100 Joynton Ave, Zetland, 2015 credit Adam Hollingworth, Turruwul Park, Sydney Park 2015.

Strategic Direction	Action	Lead Responsibility	Implementation (years)			
			1–2	3–5	5+	On-going
Direction 1 – Turn grey to green	Action 1 – Achieve the targets	City Services				✓
	Action 2 – Greener laneways	City Planning, Development and Transport		✓	✓	✓
	Action 3 – Harness innovation, technology and inspiration	All departments			✓	✓
Direction 2 – Greening for all	Action 4 – Equitable greening distribution	City Services				✓
	Action 5 – Fair access to quality green spaces	City Services		✓		✓
	Action 6 – Adapting for climate	City Services		✓	✓	✓
	Action 7 – Growing food locally	City Services				✓
Direction 3 – Cool and calm spaces	Action 8 – Cool the hot spots	City Services			✓	✓
	Action 9 – Calm green spaces	City Services		✓	✓	✓
	Action 10 – Celebrate water	All departments			✓	✓
Direction 4 – Greener buildings	Action 11 – Green Factor Score	City Planning, Development and Transport	✓			✓
	Action 12 – Increase green roofs & walls	City Planning, Development and Transport		✓		✓
	Action 13 – Planning ahead	City Planning, Development and Transport		✓		✓
Direction 5 – Nature in the City	Action 14 – Recognise and support Indigenous ecological knowledge	City Services		✓	✓	✓
	Action 15 – Strengthen urban nature protection measures	City Services		✓		
	Action 16 – Urban ecology health check	City Services	✓			
	Action 17 – Reconnecting with nature	City Services				✓
Direction 6 – Greening Together	Action 18 – Support community participation	City Services				✓
	Action 19 – Greening Sydney Fund	City Services		✓	✓	✓
	Action 20 – Increase our community engagement	City Services	✓			✓

Attachment 2 – Target methods

Introduction

Urban local government areas differ in their capacity to accommodate tree canopy and greening. The relative proportions of streets, parks, and other built or open spaces is a major influence on this capacity. The City of Sydney has endeavoured to develop targets for greening and canopy that are ambitious, yet also achievable and relative to the current and future opportunities provided by the specific composition of land uses within our local government area. Consideration was also given to research that suggests minimum amounts of canopy or green cover is required for community health or cooling outcomes.

In the process of setting targets for greening and canopy, all land within the City of Sydney local government boundary (the city) was considered and assessed, including all public and private land regardless of ownership or accessibility.

The capacity and opportunity for greening and canopy was quantified and assessed at the scale of individual land parcels using techniques specific to their land use type. Analysis at such a fine scale allows for the data to be aggregated in many different ways, but for the purpose of setting greening and canopy targets it was summarised under three broad land-use themes; being Streets, Parks, and Properties. Overall targets for greening and canopy for the entire city were produced as a sum of these parts.

Our stratified approach to the development of targets provides a rich dataset that may be used to guide site-specific actions towards their achievement. This approach also promotes accountability within each of the three land-use themes, encouraging land managers to strive to meet the targets specific to the land or site that are managing.

To allow the targets to be directly compared and assessed against current or future aerial measurement of vegetation areas, the analysis of land parcels included only those that are visible from the air. Road tunnels and street segments beneath bridges or viaducts were not assessed. Similarly, parcels of property that exist above or below the surface (e.g. private basements beneath roads etc.) were also excluded from the analysis.

Figure 1: Example of street, park, and property land parcels, each with a unique site code identifier, overlayed on aerial image and aerial acquisition of vegetation height strata.

Street method

The city's road network is a sum of 4915 individual road segments, covering a total of 608.8 hectares (or 23%) of the city's land area.

Most street segments follow a conventional layout, with road pavement areas allowing movement of heavy traffic and roadside verge or nature strip areas between the road pavement and other land parcels being the space for typical street tree planting.

Attributes and measurements of these street segments were used as inputs to formulas to calculate the capacity of each street segment to host tree canopy.

The aim was to quantify the potential canopy area that may be achieved within the boundary of each street segment under real world conditions, and model the potential for additional canopy based on specific scenarios.

Data used

The following road segment attributes and measurements were compiled or calculated from existing City datasets:

– Segment code, name, location, suburb

– Street Segment Type (Street Section or Street Intersection)

– Street Classification (State, Regional, Local, Laneway, Motorway)

– Street segment area (m^2)

– Street segment length (m)

– Street segment width (m, derived from area and length)

– Road pavement width (m)

– Street verge width (m, derived from road segment width and road pavement width)

– Percentage of existing trees impacted by overhead power lines

The optimal mature size of tree suitable for planting in each street segment was determined based on the available street verge width in accordance with the City's Street Tree Master Plan guidelines.

Street Verge Width	Mature Tree Size	Mature Tree Canopy Diameter
Less than 1.3m	Unable to Plant	-
1.3m – 1.8m	Small	5m
1.8m – 3m	Medium	8m
Greater than 3m	Large	12m

The number of trees able to be planted within each street segment was calculated using the following formula:

$$Tree\ Quantity = 2(P - V)\left[\left(\frac{L - 10}{S}\right) + 1\right]$$

Where:

P = Planting Optimisation Rate (expressed as a decimal)

V = Panting Site Vacancy Rate (expressed as a decimal)

L = Street Segment Length (m)

S = Tree Spacing (m)

The formula assumes typical street segments have two single rows of trees and a 10m tree setback on approach to intersections. Tree spacing is proportional to the size of tree suitable for the street segment, and was equal to mature tree canopy diameter.

The planting optimisation rate is an indication of the reduced proportion of trees able to exist due to conflicts within the streetscape (e.g. driveways, poles, shop awnings etc.). The general rate applied in the city was 0.8 (or 80%), however a lower rate (0.7) was applied in the central business district due to a greater prevalence of awnings and below ground utility conflicts.

The vacancy rate is the proportion of planting sites that may be expected to be vacant at any point in time. The rate used by the City, based on historical data, is 0.015 (or 1.5%).

Street intersection segments were treated in a similar way but assumed one row of trees only and a reduced optimisation rate of 0.5. All street segments defined as motorways were assigned a tree quantity of zero to reflect the inability to plant trees within roads of this type in the city.

Age diversity in trees

Not all trees in the City's streets are mature. Therefore, a diversity of tree ages was factored into the analysis before the quantity of trees was used to calculate the canopy area.

A percentage age class distribution was used to represent the expected distribution of age classes for the entire population of street trees. For the city this was determined to be 60% mature (including over-mature), 30% semi-mature, and 10% juvenile, based on the current age distribution of the City's tree assets and expected future removal and planting rates. The canopy diameter for semi-mature and juvenile trees were defined as 75% and 25% of the mature canopy diameter respectively.

These relative proportions and size parameters were applied to the quantity of trees in each street segment to calculate a realistic and sustainable total canopy area produced by trees located within each street segment.

Infrastructure impacts

Data on the proportion of existing street trees within each street segment impacted by overhead power lines was used as a factor in the analysis to reflect the reduced potential of trees beneath such infrastructure.

Within relevant street segments, the proportion of impacted large, medium, and small sized trees were assumed to achieve 60%, 50%, and 80% of their respective potential canopy area. This analysis enabled the modelling of reduced impact scenarios, such as exposed low voltage power lines being converted to insulated bundled cables or the complete removal of overhead wires.

Canopy calculations

The total canopy capacity for each street segment was calculated as the sum of each tree canopy area, factoring in the above considerations, using simple formula for the area of a circle. Since canopy cover is measured and aggregated according to boundaries between land use types it was necessary to calculate the areas of canopy overhanging other land parcels adjacent to the road segment and subtracted these from the total canopy capacity area. This was done by applying a trigonometric formula for the area of a circle segment, where the known parameters are the circle segment height and circle radius. The circle segment height was derived from the width of the road verge and the typical tree setback from the road kerb for each tree size.

In-road planting scenarios

The planting of trees within the road pavement area is an opportunity to increase tree canopy within the street network above that provided by typical planting within the verge. Three different in-road tree planting scenarios were modelled and added to the base canopy capacity calculation for relevant sites, as listed below.

1. Tree planting within parking lanes. Within local road segments wider than 12m, every third tree located within the verge is replaced with a large sized tree planted within the parking lane.
2. Tree planting within laneways. Within local road segments or laneways wider than 6m, having narrow verges unable to accommodate conventional tree planting, a single row of trees is planted within the parking lane at the side of the road. If the road pavement width was wider than 10m the tree size was large. If less than 10m it was medium.
3. Tree planting within medians. In local roads wider than 15m, an additional row of large sized trees is planted in a median island.

If more than one modelled scenario applied to any single street segment, the scenario that produced the highest canopy amount was used.

Overall street targets

The canopy capacity areas overhanging each street segment were summed to provide an overall capacity for the entire street network. This total canopy area was divided by the total area of the street network to give a percentage canopy target for the city's streets. Since the overall target is an aggregate of individual site analyses, the overall target is a summary and cannot be applied to any specific site. Each individual street segment has a site-specific canopy target equal to its calculated capacity.

Targets for green cover were recommended for each street type classification and aggregated to an overall target for the street network. They were based on the existing green cover and a consideration of the potential increase in green cover realistically able to be achieved within each street type in addition to the increase in tree canopy cover.

Park method

Parks are parcels of land dedicated for public open space and recreation.

A total of 421 parks covering a total of 401.7 hectares were assessed in this analysis, representing 15% of the city land area. They are owned and managed by a number of government agencies, including the City, the Royal Botanic Gardens and Domain Trust, Centennial Parklands, and Property NSW.

Parks must provide for a range of competing uses and may serve a variety of functions, including active and passive recreation, heritage conservation, wildlife habitat, and other environmental services. The expected uses and functions of a park influence the amount of greening or tree canopy cover that is appropriate for the space, and therefore parks with similar uses and functions are assumed to have similar potential for canopy and green cover.

An analysis of the parks was undertaken, with the aim being to determine the most appropriate amount of tree canopy and green cover for each park type.

Park classifications

All parks were grouped into one of the following park types; iconic, neighbourhood, pocket, civic, sports field, or golf course. These park types were existing functional categories used by the City for park asset management.

Within each category, parks were ranked by their existing canopy cover percentages (2019 aerial canopy measurement). The median and per centiles above and below the median (15%, 25%, 75%, and 85%) were plotted over the ranked distribution of parks.

This analysis was then used to identify and select five examples within each of the park types, each having different levels of canopy cover. Consideration was given to the age of the parks and maturity of trees when selecting each of the examples.

Qualitative survey

A survey was developed asking respondents to score each of the examples on a scale on 1 (least appropriate) to 5 (most appropriate) in terms of the amount of canopy cover being appropriate for the type of park. Aerial images were used to present the examples within the survey.

Professional staff of the City familiar with park management issues were invited to participate, including professionals in park and tree management, landscape architecture and city design. Staff less involved with parks management also participated, including strategic planning and engineering. 46 responses to the survey were received.

The survey results were used to consider and identify the most appropriate target for canopy cover for each park type.

Overall park targets

Target percentages were also identified for green cover for each park type based on the function and design expectations for their spaces. The relevant target percentages were applied to each park, with target canopy and greening areas calculated and summed to determine an overall target amount of canopy and greening area and percentage canopy and greening cover for the entire park land-use area of the city

Property method

For the purposes of this analysis, property was considered to be any land parcel not classified as a street or a park. It included 26,527 individual parcels of land covering 1,651 hectares (or 62%) of the city land area.

A wide variety of uses, ownership arrangements, and controls apply to this large group of land parcels. They range from small single lot private residences through to large commercial CBD properties and large tracts of government owned land used for transport infrastructure or education.

Estimating private open space

Analysis was undertaken to estimate the amount of open space potentially available for tree planting within these land parcels. Data gathered from the City's floor space and employment survey was used to calculate an approximate building footprint area per land parcel, with the remaining unbuilt portion of each land parcel then used to assess the potential for tree canopy.

The area of private open space required to accommodate trees was determined to be 20–25m^2 for a small sized tree, 25–60m^2 for a medium sized tree, and >60m^2 for a large sized tree. Areas of private open space less than 20m^2 were considered as inadequate spaces for any tree. If a land parcel had greater than 200m^2 of open space, multiple large trees were assigned to the parcel with each requiring at least 200m^2 of space.

A consideration of age diversity was factored into the analysis (using the same method as for the street tree analysis) to estimate the potential canopy area for each private land parcel.

The potential canopy areas for each land parcel, along with the measured amount of existing tree canopy and greening per parcel, were aggregated by the City of Sydney Local Environment Plan land zonings to assess and consider potential targets for tree canopy cover and green cover for each zoning and the private land use overall.

Assumptions and limitations

The above analysis for private land is based on a number of assumptions that make it less reliable than the capacity analysis used for the street land area. The analysis inaccurately assumes that any open space not occupied by a building is available for tree planting, and that tree canopy is unable to overhand buildings. It is also based on existing land development only, with no consideration for how properties may change or be developed in future.

Overall property targets

For the reasons outlined above, the analysis was used as a guide to indicate existing potential only, and to compare and contrast the existing potential between different zonings and specific areas such as heritage conservation areas, urban renewal areas, and the city centre.

The future development and potential for canopy and greening, along with the City's ambition for greener development of private open spaces were important considerations when setting overall targets for properties.

Achieving these targets

Analysis at the scale of individual land parcels has resulted in a detailed comparison of existing and targets for greening and canopy cover.

The analysis highlights sites that are over or under achieving, and provides insight to drive site-specific projects and programs aimed towards the achievement of targets. It will also help to highlight specific land where the removal of greening or canopy will compromise the ability to achieve targets.

Combining the site-specific analysis with the City's asset management data will provide further opportunity to better manage the City's park and tree assets within roads and parks.

Future analysis will be undertaken to determine the best method to express the target for property, and the controls required to promote its future achievement.

Within a ten year period, a comprehensive review of these greening and canopy targets will be undertaken as new research, technology and other tools become available. This will include improved technology for the acquisition of aerial greening and canopy cover data.

Further, as the city develops and changes over time, we will closely review any land use changes over time – such as new park, streets and changes to planning controls for properties.

These targets are based on current land use. As these change over time, so too will the potential extent of greening and canopy cover. We will need to ensure that greening and canopy is a key consideration in those changes, to provide a cool, calm and resilient Sydney.

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Bosco Image - Marco Sala [CC BY-SA (https://creativecommons.org/licenses/by-sa/4.0)] [accessed 14/2/20] The Bosco Verticale in Milan in spring, West side. Building by Boeri Studio, Milan.

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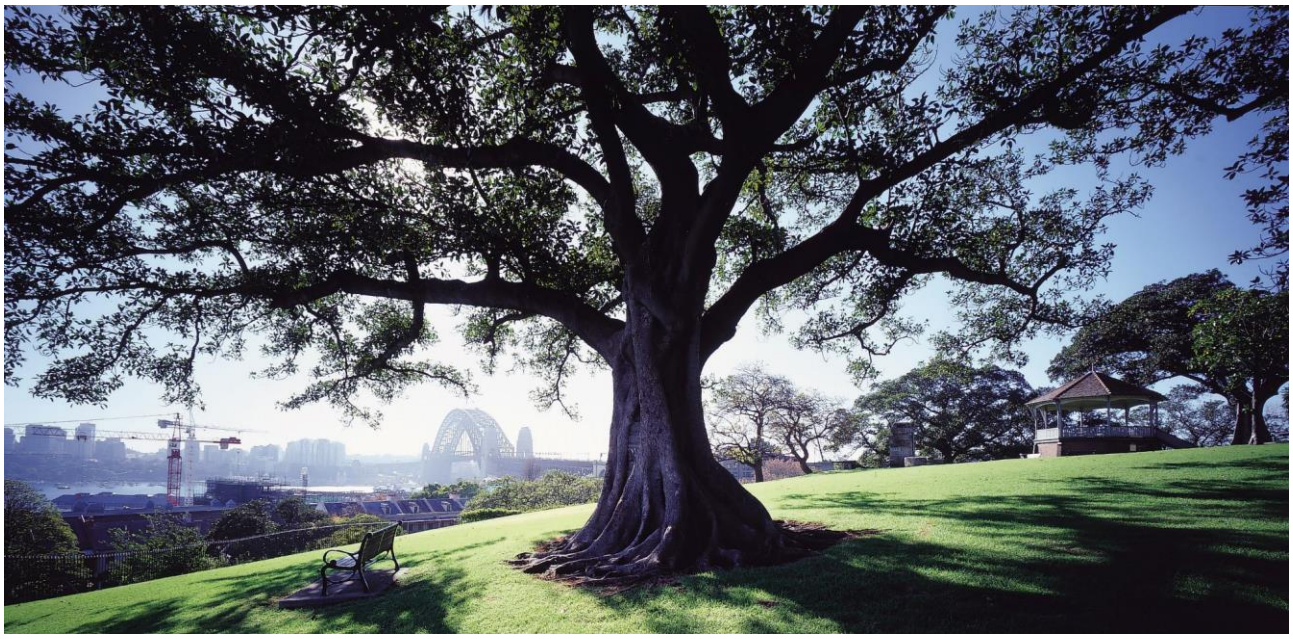
Green Square urban renewel project, Zetland 2015. Adam Hollingworth

Attachment B

Engagement Report

CITY OF SYDNEY

Engagement report – draft greening Sydney strategy



Contents

Background

Draft greening Sydney strategy

Trees, plants and the natural environment are a city's life support system. A greener Sydney will improve our health and wellbeing, reduce the impact of heat, and bring nature into the city.

This proposed strategy outlines how we'll be a cool, calm and resilient city by increasing greening and sharing its benefits with our communities.

In 2019, we spoke to Aboriginal and Torres Strait Islander peoples, children and young people, residents, businesses, workers and visitors about their vision for the future.

A city that is environmentally responsive and green with trees and plants were key priorities.

We've taken insights from communities, government, and industry to develop this strategy. It outlines 6 directions, 20 supporting actions, builds on what we have already achieved and sets ambitious new targets to green our city.

The draft document was on public exhibition between 19 April and 24 May 2021.

This engagement report

This document summarises key findings and outlines activities that took place during the public exhibition of the draft greening Sydney strategy.

All feedback captured in this report will be considered before reporting back to Council.

Engagement summary

From 19 April 2021 to 24 May 2021, we asked the community for feedback on our draft greening Sydney strategy.

Consultation on the plan provided an opportunity for stakeholders and the community to review and comment on the draft strategy before being taken to Council for adoption.

Consultation activities included online engagement, a school activity kit, and discussion guide. The consultation was promoted on various social media channels.

This report outlines the community engagement activities that took place to support the consultation and summarises the key findings from the consultation.

Purpose of the engagement

The purpose of the engagement was to:

– gather feedback from stakeholders and the community about the draft strategy

– determine the level of satisfaction with the draft strategy

– inform the development of the final strategy.

Outcomes from the engagement

Over 200 pieces of feedback were received during the consultation. Below is a break-down of the feedback received:

- 158 surveys
- 24 email submissions were received
- 173 pieces of feedback were received from 54 people on an interactive map

Submissions received from organisations

- Sydney Water
- Urban Taskforce
- Far West Redfern Dwellers
- Friends of Fernhill and Mulgoa Valley

Issues raised in submissions from organisations have been captured in the submissions table below.

Survey respondents

158 PEOPLE SURVEYED

32% AGE 20 - 40
44% AGE 41 - 60
24% AGE 61+

78% LIVE IN THE AREA

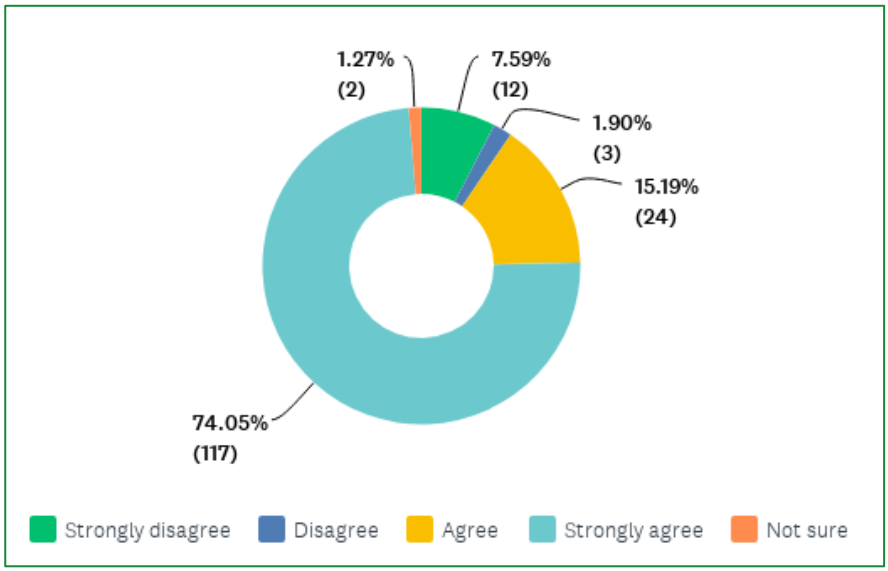
47% WORK IN THE AREA

48% MALE
47% FEMALE

Key findings

Survey results indicate overall support for the draft strategy's vision and confidence in the City's ability to meet the targets and vision. It also clearly shows concern over increasing heat impacts in the city, with 83% of respondents either very concerned or concerned about increasing heat.

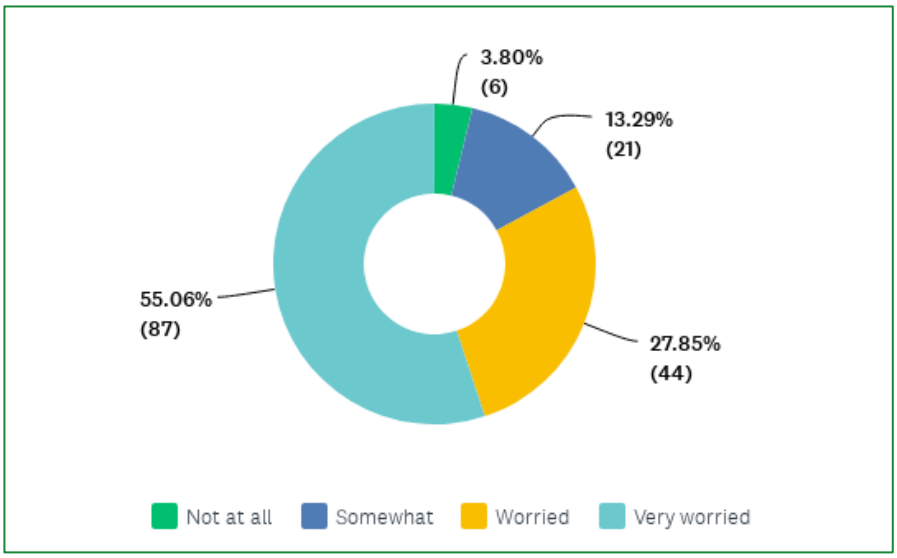
Q: How strongly do you agree or disagree with this strategy's vision for a cool, calm and resilient city, with increased greening?



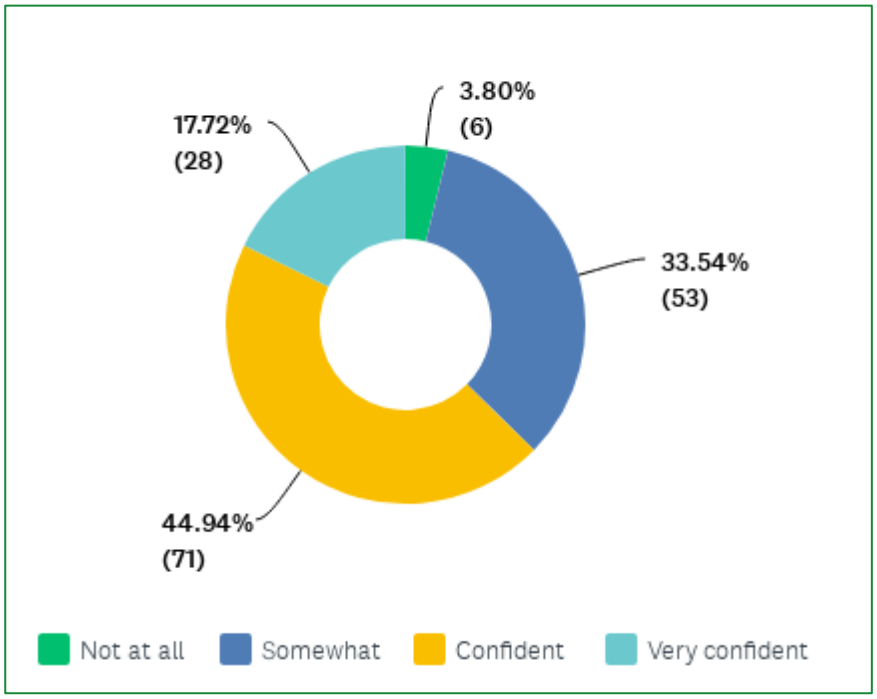
89%
strongly agree or agree

Q: How worried are you about the impacts of increasing heat in the city?

83%
very worried or worried



Q: How confident do you feel that the City can meet the targets and vision set out in this strategy?



63%

confident or very confident

When asked why respondents made their selection, people who selected ‘very confident’ or ‘confident’ cited the City’s leadership and track record as key reasons. Others who were confident cited low targets as the reason for their confidence.

Respondents who selected ‘somewhat’ or ‘not at all’ cited red tape, resourcing, maintenance, politics, planning laws and overdevelopment as key reasons.

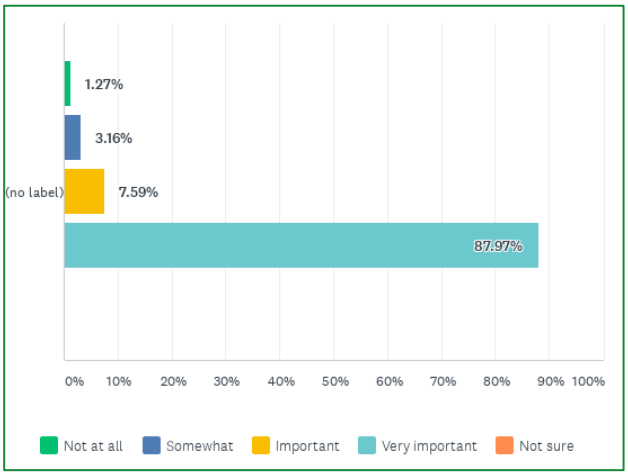
6 directions

Survey respondents were asked how important the draft strategy's 6 directions are. Most respondents think all 6 directions are either important or very important. Direction 1 was identified as 'very important' the most respondents (88%).

Direction 1 – Turn grey to green

96%

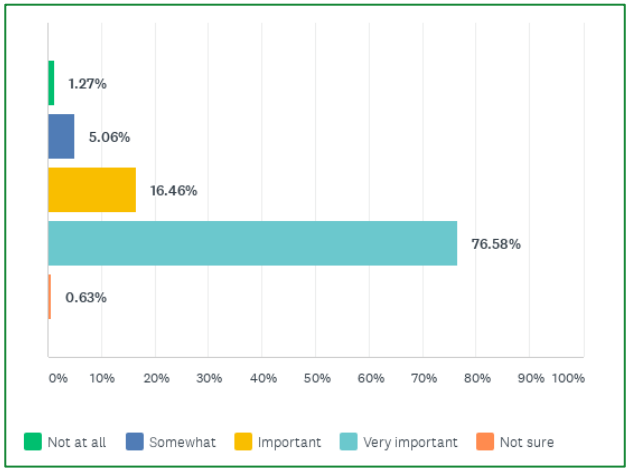
very important
or important



Direction 2 – Greening for all

93%

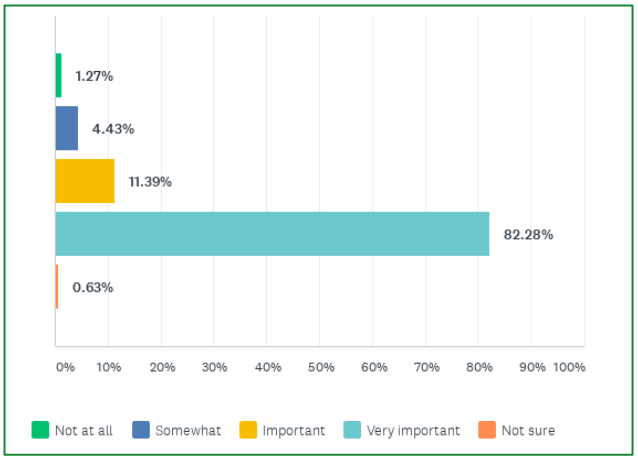
very important
or important



Direction 3 – Cool, calm spaces

94%

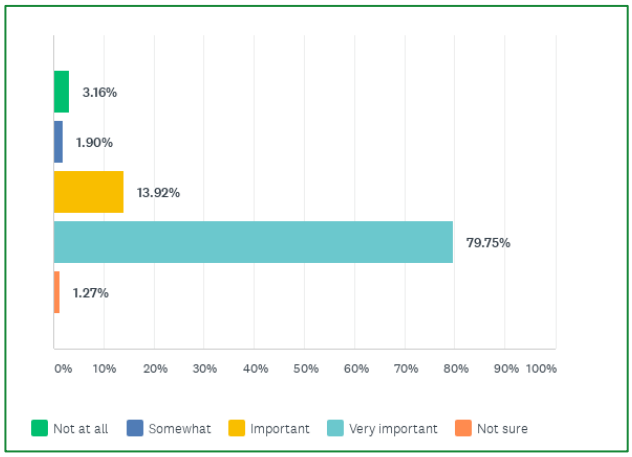
very important
or important



Direction 4 – Greener buildings

94%

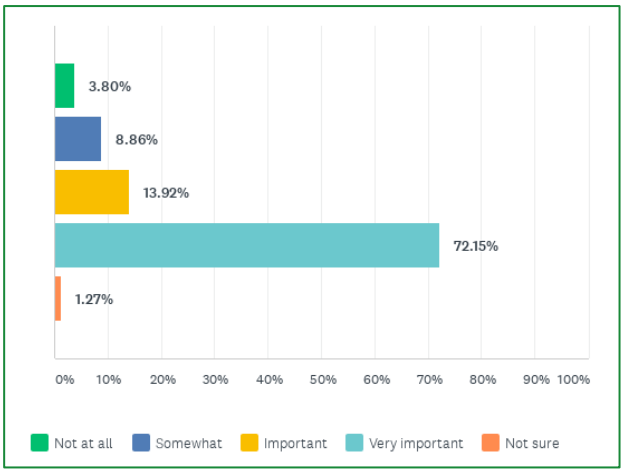
very important
or important



Direction 5 – Nature in the city

86%

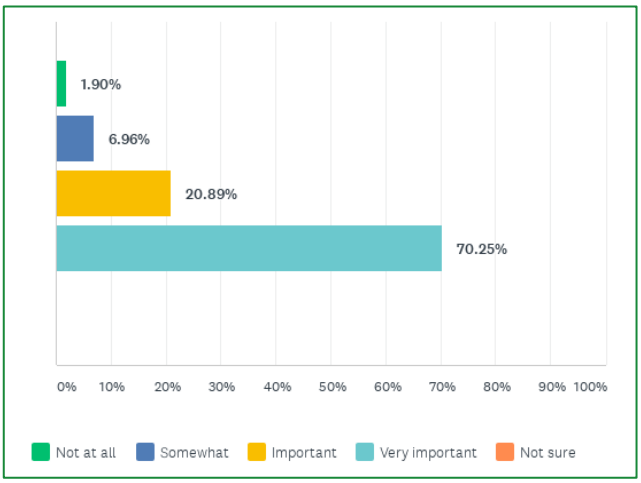
very important
or important



Direction 6 – Greening together

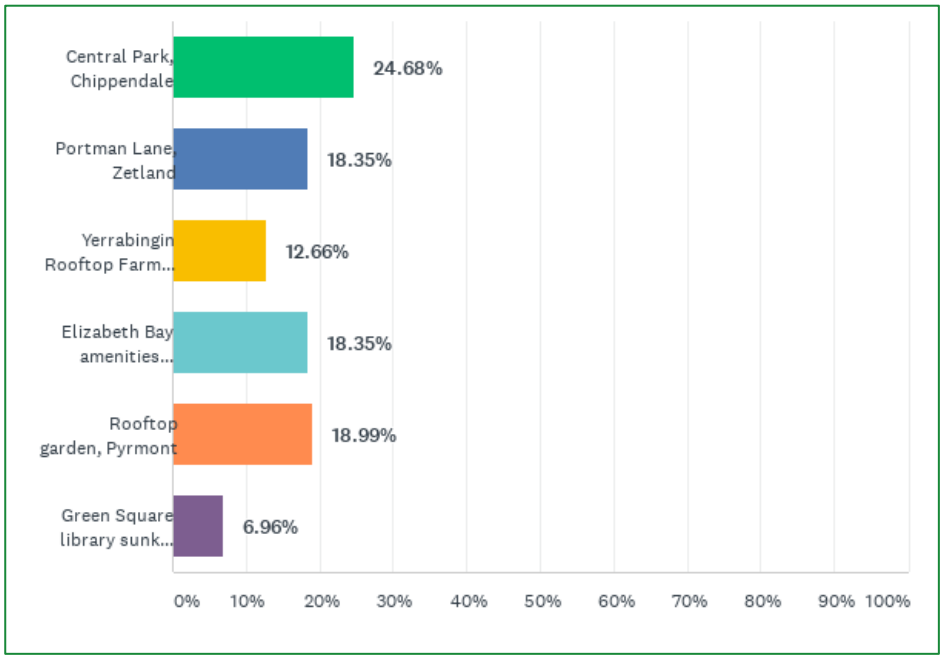
91%

very important
or important



Green buildings and laneways

We gave respondents six examples of green buildings and laneways in the local area and asked them to select their favourite image. We then asked why that image resonated with them. Below are the selections respondents made and some quotes about each image from survey respondents.



Central Park, Chippendale

“Because it makes my heart sing to see something that’s generally ugly as a garden in the sky.”

“I see it every day and it gives me hope that we will do better.”

“It clearly demonstrates how high-density developments can actually increase green cover.”

Rooftop garden, Pyrmont

“Provides a peaceful place to be rather than a hot rooftop nobody wants to use”

“Rooftops can be developed to support insect life and provide a calming space to inner city residents”

“Nice wildness to it, giving life to a usually blank roof.”

Portman Lane, Zetland

“The other examples are fantastic, but this image of Portman Lane represents something that can be done to a lot of lanes and streets in Sydney.”

“Because it is simple: a laneway with vegetation, like a country lane but in the city.”

“More human scale, provides public amenity, not private space.”

Elizabeth Bay amenities building

“I like that an ugly building and look like part of the landscape.”

“There's a lot of ugliness in our city; greening them turns them into things of natural beauty”

“The building disappears behind the greenery”

Yerrabingin Rooftop Farm, Eveleigh

“Aboriginal knowledge and native plants, growing bush tuckerbush.com.au and educating people on plants that are appropriate for our environment. 80,000+ yrs of survival deserves a lot more respect. We have to learn how to survive on this continent from those who obviously know better.”

“Creative use of space, creative image of future possibilities”

“It combines solar power with natural cooling from the rooftop garden, and I guess allow actual growing food too!”

Green Square library sunken garden

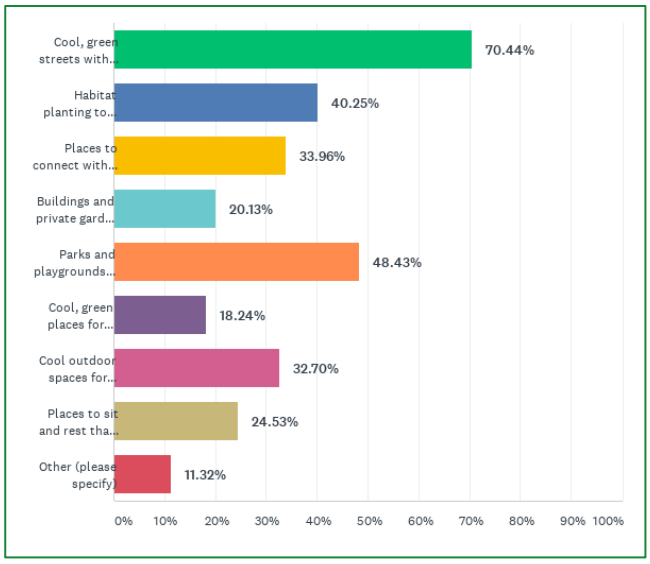
“it looks like a haven of community, coolness and tranquillity.”

“Beautifully designed constructed and maintained, as are the rooftop farm and gardens! There needs to be a lot more of all of these!”

“public access to a quieter retreat and reflection. Less noise pollution.”

A cool, calm city

We asked respondents to select the three most important things that contribute to a cool, calm city. Most respondents selected ‘cool, green streets with shade’ (70%), followed by ‘Parks and playgrounds with trees and shade’ (48%) and ‘Habitat planting to encourage nature in the city’ (40%). There were 18 ‘other’ comments; these are captured in the submissions table below.

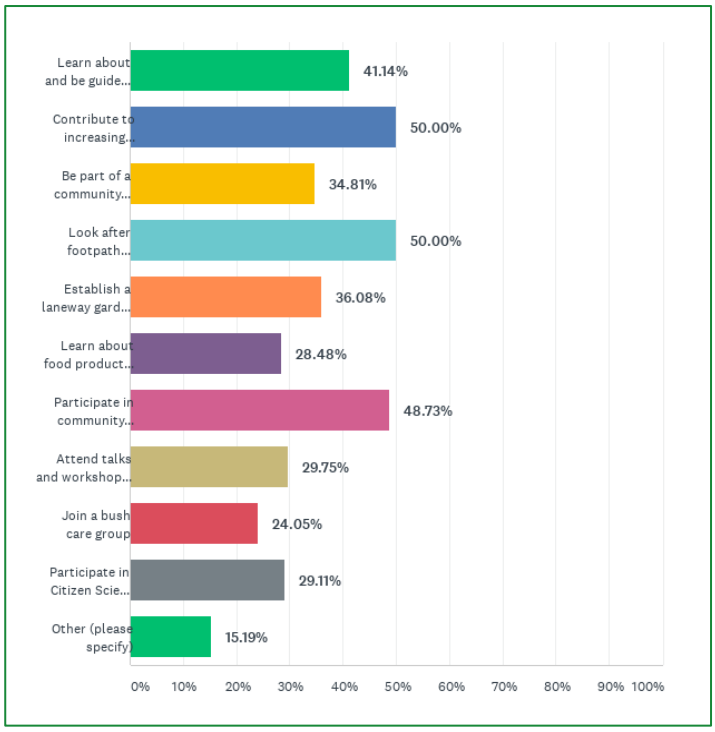


70%

Cool, green streets with trees

Working together

We asked people to select the things they are interested in being involved in. Fifty percent of respondents chose ‘Contribute to increasing habitat in my area’ and ‘Look after footpath gardens in my street’, followed closely by ‘Participate in community planting days’ (49%). There were 24 ‘other’ comments; these are captured in the submissions table below.



50%

Increase habitat and look after footpath gardens in my area

49%

Be part of community planting days

Subjects/issues raised in submissions

Subjects/topics raised in submissions

Several subjects/topics were raised in the feedback received. These were presented as concerns, suggestions and/or requests and are summarised below.

Streets, cycleways, railways & walkways	Total	City of Sydney Response
Shady, cool walkways (e.g. Utlimo pedestrian network), and green cycleways	5	The Greening Sydney Strategy (the Strategy) has several actions focused on increasing greening and providing cool and calm connected public space across the city.
Reducing cars, noise and pollution, decrease car parking space on streets to cater for more greening and cycleways.	3	To achieve the Strategy's targets, the planting of more trees and greening within roads is required. Further, a comprehensive and connected bike network across the city will encourage more people to cycle locally, also reducing reliance on cars to get around. Sydney is changing. With an estimated 115,000 more residents, 56,000 new dwellings and 200,000 more jobs by 2036, existing open space and transport connection will be put under considerable strain if we don't act. We will need more space for people and public life. As our climate changes, urban temperatures will also increase and we will need more connected tree canopy to cool the City and protect the public domain, to ensure the health and wellbeing of our communities.
Traffic calmed green spaces	2	Noted, refer above.
Green rail corridors and make public open green space (e.g. connect North and South Eveleigh across the railway line to/from Carriageworks)	2	Noted. Beyond the scope of this Strategy, however the City continually advocates for better connected, open and green spaces as part of major urban renewals.
Covered walkways (e.g. in Italy)	1	Noted
More focus on main roads and highways – a serious contributor to heat. Partner with TfNSW to deliver (especially outside	1	The City's 'green avenue' project (which includes Broadway) aims to deliver more space and more trees. It relies, however, on successful delivery of current and

hospitals, schools, malls where vulnerable communities gather on street).		planned mass public transport infrastructure such as metro, by the NSW Government – to reduce reliance on road networks across the city, to make more room for buses, service vehicles and freight, and more room for bicycle lanes. The vision for Broadway reduces the road width to two lanes in each direction or four lanes in total.
Concerned about the planned Greening of Sydney / green avenues and removal of vehicle lanes and loading zones all over the city. Impact to truck drivers who need to (not want to) drive into the city to service the people and businesses of Sydney will be affected by the changes in road use.	1	Servicing and access requirements for the city centre is a key consideration for both the City and Transport for NSW. The City engages widely with stakeholders when developing project ideas. Refer to comments above regarding green avenue projects. Further, as such projects progress into design development, comprehensive traffic and access studies will be undertaken to ensure our city can be serviced and remains productive.
Micro-misting to cool streets, parks and plazas	2	The City appreciates that we will not be able to use greening in all instances, and where required, will use other approaches to help cool Sydney. The use of misters and other water focused cooling approaches are included in the Strategy within Action 8, Cool the Hot Spots and also Action 10, Celebrate Water.
Need more planting of trees in the road.	1	As outlined above, to achieve the Strategy's targets, the planting of more trees and greening within roads is required.
Concern that greening will narrow footpath widths and adversely affect access (e.g. Reservoir Street in Surry Hills)	1	Noted. Careful site selection for streetscape greening and tree species selection is an important consideration. The City has policies to help guide this, including the Footpath Gardening Policy and Street Tree Master Plan. These policies are due for review in the coming two years and will include community consultation.
Connect parks and green spaces with green corridors.	1	Three actions will work together to connect parks and green spaces with green corridors; Action 4, to distribute greening equitably, Action 8 to cool the hot spots and Action 9, calm green spaces.
Transform back of house working streets and laneways of Sydney.	1	Action 2, to green our laneways, identifies the opportunity, and challenges involved, to green these public spaces.

Consider using one side of the road for a verge garden and the other for through pedestrian access.	1	Noted. All properties require pedestrian access.
The light rail should be green like the one in Antalya, Turkey.	1	The City recommended a green track during design development and construction phases; however, it was ruled out by Transport for NSW (TfNSW) and ALTRAC, the consortium delivering the light rail, due to implications from the associated costs and operational matters. Under section 144B of the Roads Act, TfNSW is the Road Authority for the Permanent Light rail Corridor which includes the light rail tracks. Transdev as TfNSW's light rail operator, maintains the tracks. The City of Sydney does not have the jurisdiction to make changes and retrofit green tracks along the light rail corridor. Any greening of the light rail now would require demolition of the existing track-form, installation of a new track-form type that facilitates green tracks, and a cessation of light rail services for a significant amount of time to construct the green tracks. It is not a feasible option post-construction, given the costs of such an exercise and the impact to light rail operations. Light rail is now an essential piece of public transport infrastructure that needs to keep operating.
Reducing the paved area of wide local streets is not specifically addressed e.g. under Public Domain Greening (page 25), Where We Need To Be 2050 (page 39), reducing the amount of paving (page 50), and the Directions & Actions in Attachment 1.	1	The Strategic Framework (page 25) summarises the City's overall current and future strategies, policies and master plans. Reducing the paved area of wide streets is an action within these documents, such as the Urban Forest Strategy, Street Tree Master Plan and Footpath gardening Policy. The diagram on page 39 includes the wording 'More greenery at ground levels and reductions in hard surfaces', which is a broader term for all paved surfaces. The Directions and Actions within the Attachment 1 are an overall summary of the Strategy's implementation and does not need to detail associated works (removal paved surfaces).
Prioritise the use of pale or off-white road and footpaths in narrow streets where the options for canopy cover are limited.	1	The City has undertaken trial of use of white footpaths. The City has noted glare issues and is trying to establish a general position moving forward.

I travel often, and judge places on the vibe I get from the locals. There's a correlation between happiness, smiling faces and the amount of green in a city where people can go to relax, or play. Green Space is more than aesthetics, it's vital, as you point out.	1	Noted
Trees and planting	**Total**	**City of Sydney Response**
Support/ more native planting	10	The City plants a mixture of native, exotic, evergreen and deciduous species. Species selection involves many complex considerations, which broadly fit into three main categories: environmental, functional and aesthetic. We appreciate that there may be various views on the types of trees planted, and that it is hard to always achieve a tree species that everyone supports.
Only native planting	4	Refer to response above.
Do not support London Plane Trees	5	A review the Street Tree Master Plan in planned the next two years, which will include a review of the species planted in each street across the City. The review will also include community consultation, providing all residents an opportunity to make comment on species selection at that time.
Tree types – more deciduous trees for Autumn colour and more sun during winter	4	Refer to responses above. Further, with an increase in canopy cover required in many parks, an increase in deciduous trees will be planted to ensure shade in summer and sun in winter, with the added benefits of the beautiful autumn colours.
Comment that trees are currently damaging footpaths, causing tripping hazards and access issues. Concern that this will only increase.	4	The City has a comprehensive asset management approach in managing all of its assets, including trees, parks, footways, roads etc. The maintenance of assets is based on a number of factors, including the current condition and overall lifecycle. The process to select species has been outlined above. Further, we also try to select for the largest tree suitable for the site, as research has confirmed that larger trees provide more benefits. For example, a larger tree's canopy cover shades more area from urban heat, reducing temperatures by as much as 10 degrees Celsius in the immediate area.

The strategy should directly inform the 2011 Street Tree Master Plan to integrate the current mono-culture planting along streets with new trees of diverse species to increase biodiversity. A new Street Tree Master Plan should not feature mono-culture planting along streets.	1	The Greening Sydney Strategy will inform its urban forest, tree and greening related policies. Refer comments above regarding the Street Tree Master Plan review.
Non-native trees/plants continue to be planted in parks such as Bamboo in Daniel Dawson Reserve. Gardens are not planned or installed to be low maintenance, a major example of this being Sydney Park, also Daniel Dawson Reserve.	1	Noted
We believe tree pruning carried out by utility companies takes a toll on the trees affected, with some trees in our areas permanently stifled by excessive pruning. The City should actively advocate for the relocation of cables underground to limit the ongoing damage to mature trees and this should be enshrined in the strategy.	2	The City continually advocates for our tree assets to be considered essential infrastructure. We work with utilities to reduce the impact of their assets, including alternative technology options and maintenance approaches such as bundled or undergrounding cabling.
More strategic thought to planting is needed in terms of what are the right trees/ plants for the area. More consultation with residents required when selecting species.	2	Noted. Refer to comments above re species selection.
Planting should include a mix of endemic and exotic plants and trees (comment that Jacarandas have successfully formed canopies in Sydney. Respondent would like to see liquidambars, maples, lombardy poplars, birch, beechwood and oak trees in our parks and nature strips).	1	Noted. Refer to responses above regarding the City's species selection and Street Tree Master Plan.
Do not support planting more jacaranda trees	1	Noted. Refer to responses above regarding the City's species selection and Street Tree Master Plan.
Request that when plants are chosen, the ones that many have allergies to, such as the plane trees that line our streets, are avoided. Paper barks also add to respiratory problems.	1	Noted. Refer to responses above regarding the City's species selection and Street Tree Master Plan.
Concern that eucalypts don't provide enough canopy cover (eg. Harold Park in summer).	1	A review of the canopy cover within the park has been undertaken, with additional tree planting to occur.
Concern over cold, dark houses if too much shade	1	As outlined in comments above, the City plants a mixture of native, exotic, evergreen and deciduous species. With an increase in canopy cover required in many streets, careful selection of deciduous trees will undertaken to provide shade in summer and sun in winter.
Respectfully ask that Council consider those residents who have made a very significant investment purchasing a	1	The City's tree management policies are clear in that trees are not pruned or removed for views, and replacement trees

property solely on the basis of the view it enjoys (e.g. Blackwattle bay). We wholeheartedly support the tree planting initiative, but their placement needs careful consideration. Ill considered plantings should not come at the expense of those who's amenity will be obscured.		will be planted where trees have been planted before. Our qualified staff consider a range of site constraints and issues prior to selecting new planting locations for large canopy trees, and a significant obstruction of long-standing iconic view is one such consideration.
Suggest using native grasses, shrubs and ground covers under tall trees instead of regular grass.	1	Noted
Importance of understorey planting and 'green drains'.	1	Noted. The target to increase greening will assist in delivering more under story planting, which may also incorporate water sensitive design elements.
Why do you plant trees in the street so far apart? Why do you strip all the low branches of trees and remove low bushes?	1	Street trees are planted at distances to allow their mature canopy to develop and are also spaced for sightlines and for other infrastructure considerations. Lower branches are removed to provide clearances for footpaths, roads and buildings.
Change the law and protect trees by making them citizens	1	Noted. Beyond the scope of the Strategy.
We need to water mature trees, understand impact of shade, nutrients and soil compaction.	1	Noted
Are trees in the city only rain-fed?	1	The majority of the City's street trees are watered from rain. Where appropriate, water sensitive urban design elements are implemented to increase the passive watering of the trees. Trees in the City's parks are watered from rain and irrigation systems. The selection of species that thrive in the site conditions is a key factor in maintaining a healthy urban forest.
Question regarding the porous sponge surrounding street trees. Would like to know whether this is best practice, and if it affects heat levels.	1	The porous paving allows for water to penetrate through to the trees root system and is therefore beneficial for the tree. The heat from these tree bases is not significantly different compared to other non-irrigated tree base materials used.
Comment that the street side planting seems very successful (e.g. Abercrombie St Darlington and others). This seems like a relatively fast and high return approach.	1	Noted
Consideration should be given to previous landowners planting mistakes and allow new owners to plant in more suitable locations/ species.	1	Noted. The City's Tree Management Policy outlines our approach to the various tree issues. This includes when trees will be removed and under what circumstances. This Policy is being reviewed within the next year and will include community consultation.

Council should rectify historic and more recent mistakes in street trees if it is serious about greening the city between now and 2050.	1	The City has a comprehensive tree maintenance program in place, with our qualified arborists inspecting each street and park tree every year to assess its health and structural stability and to identify any maintenance works required. In addition to this tree management program, an urban forest approach is required. This includes managing canopy cover, including the replacement of historic / legacy issues, where appropriate. Further, the City has an Urban Forest Strategy, Tree Management Policy and Street Tree Master Plan that outline our approach to the various tree issues. This includes when trees will be removed and under what circumstances
Concerned about the trees that seem to be very sick right now. I see they are drilled into, weeping, leaning over and have signs of disease (tree canker etc). We definitely need more trees in general but the severe amount of trees I see that are diseased this all makes no sense to me when the existing trees are not treated well.	1	The City has a comprehensive tree maintenance program in place, with our qualified arborists inspecting each street and park tree every year to assess its health and structural stability and to identify any maintenance works required. These inspections indicate that 83% of the City's trees are in good health and condition.
Caring for Country and Aboriginal involvement	**Total**	**City of Sydney Response**
Implement Aboriginal Caring for Country principles	2	Action 14 of the Strategy, recognise and support Aboriginal ecological knowledge covers this comment.
Work more with Indigenous Australians	1	Noted, refer to comment above.
While we support wholeheartedly the strategy, we are particularly looking forward to the implementation of Action 9 - "Calm green spaces", Action 14 - "Recognise and support Indigenous ecological knowledge" and Action 20 - "Increase our community engagement"	1	Noted
Green roofs and walls	Total	City of Sydney Response
Where greening isn't possible on rooftops, encourage: 1. solar panels 2. white rooftops to reflect heat	1	Noted. The City will consider this in the upcoming Development Control Plan review.
Planting on parti walls in terraces should not be allowed. It causes damage to the older buildings and mould to neighbours houses.	1	Noted
Adding rooftop gardens is good but it is far more efficient from a sustainability perspective to have plants on the ground.	1	Roof gardens provide an increase in greening where ground level (and deep soil) canopy cannot always be sufficiently achieved (e.g. CBD).

Support, encourage and research retrofitting green walls and roofs for use on old housing stock in limited space areas.	1	Generally supported at the sides and rear of properties in conservation areas.
Water	**Total**	**City of Sydney Response**
Use of water in the environment (eg. use of wetlands and mangroves for filtration) Bring water back to streetscapes	3	Water is critical for a healthy and resilient city. Action 10, Celebrate water, recognises the importance of water and how we can best increase and manage this vital resource.
Water collection and storage is also a priority to keep the city green.	2	The City has developed several climate resilient water supplies which we utilise for watering in the public domain including the Sydney Park stormwater harvesting project, the precinct wide stormwater harvesting system in Green Square and our groundwater supplies. The City continues to investigate and develop new local scale projects to support greening.
Observation that raingardens frequently in poor health/ dying. Suggestion that cafes nearby could receive rate/water rebate and water these? That may be innovation greening Sydney needs to keep plants alive e.g. Palmer Burton Sts raingarden.	2	Noted. Requests were sent to the relevant maintenance teams for action. Water rebates are beyond the scope of this Strategy and the City's jurisdiction. They would need to be requested from Sydney Water.
More interactive water play features, pocket fountains in parks	1	Noted
Are there opportunities to connect to Sydney's existing bodies of water? Are there plans to build an ambitious man-made body of water?	1	The City of Sydney is fortunate to have its northern edge of the local government area bounded by Sydney Harbour. With the competition for space so high across all land uses, such as buildings, roads, parks etc there are no plans to build a significant man-made water body within the council area.
Design to retain rainwater in the green spaces in addition to redirection of storm water and grey water - this is easily done via buried ag pipes on periphery, rain gardens, dry creek beds and other mechanisms to soak rainwater deep into the soil and preventing pollution of storm water systems.	1	The City uses water in the landscape through a range of Water Sensitive Urban Design (WSUD) treatments, including many of the examples provided in the submission.
Sydney Water strongly supports the intent of the draft Strategy. We especially welcome the draft Strategy acknowledging the intrinsic need for water to help deliver urban cooling and quality open space. We agree that water should be efficiently used to achieve canopy and tree targets and mitigate heat extremes.	1	The City looks forwards to collaborating with Sydney Water, with the shared aim of improving the health and wellbeing of our community and numerous environmental improvements. We agree that climate resilient water supplies need to be developed to support greening during the dry, hot periods predicted in the future. The City has developed several climate resilient water supplies which we utilise for

Sydney Water is in the process of planning education and engagement activities. We would welcome the opportunity to collaborate with Council to understand how Sydney Water might support the execution of this action (Action 10) and help deliver on these important outcomes for our customers and communities. Further, we would support the Strategy raising potential water constraints during extended dry periods and the potential need for additional water under standard operating conditions in future changing climates. We would welcome partnering with the Council to support greening objectives and the use of water efficiently in the landscape. The draft Strategy also could provide guidance on sustainable irrigation and water management so that green spaces are resilient during droughts or periods of high rainfall. The draft Strategy should look beyond passive irrigation to mitigate weather conditions on plant survival. Guidance may be given to use active irrigation to maximise both the growth and development of green infrastructure.		watering in the public domain including the Sydney Park stormwater harvesting project, the precinct wide stormwater harvesting system in Green Square and our groundwater supplies. The City continues to investigate and develop new local scale projects to support greening. Further, we have a water monitoring and control system in place for our active irrigation areas and we are currently running a Smart Watering proof of concept to test the use of soil moisture data, weather data and consumptions data to make better watering decisions. The City also has several stormwater harvesting and groundwater systems that provide climate resilient water supplies for irrigation. The City would welcome development of recycled water supplies at a district or regional level to future proof water supplies across Sydney through the Eastern Sydney sub regional plan. We look forward working with Sydney Water to improve access to climate resilient water supplies, like recycled water, to support greening.
Planning	**Total**	**City of Sydney Response**
Planning – all developers should be made to underground cables to increase tree canopy.	3	Noted. The City works with developers and utilities to improve the public domain during their works, including greening and alternative technology options and maintenance approaches such as bundled or undergrounding cabling.
Planning measures to encourage strata and developers to be involved.	2	Noted. Direction 4, Greener buildings, contains several actions to help facilitate increased greening through the development process. This includes the development of a green factor score or similar, to help architects, planners and other experts plan how they can green the property and meet the City's planning controls. This tool can also provide engagement and visualisations that assist strata and other parties understand the various types of greening and benefits they provide.
Limit development and incorporate the rights of nature into planning decisions, stop allowing developers to the edges of	2	Noted, refer to response above.

every block and encourage better planting plans, not just pebbles and cactus.		Further, the City is reviewing its planning controls to include updated provisions for greening.
Council to make it mandatory for new developments to have 1 external vertical wall, trees/shrubs between building and street, and any unused rooftop space to have greenery.	1	Noted
Urban Taskforce recommends that development incentives be included in accompanying planning instruments to offset the cost of additional greening requirements.	1	The planning system has a complex set of incentives that are finely balanced. The cost of provision to developers will be offset by lower land costs. No incentive is proposed.
Modify heritage restrictions which might prevent the sympathetic greening of a façade in heritage conservation area.	1	Sympathetic greening is permitted where the heritage values of the streetscape are not reduced.
Make and enforce rules/policies requiring landscaping in asphalted area of more than 1000 square metres.	1	The City will consider this in the upcoming Development Control Plan review.
Food production and waste	**Total**	**City of Sydney Response**
Local food production: - Look at from a scale perspective with targets around local food production and circular economy. - Look at new forms of protein that could replace unsustainable big agriculture and global supply chains, how can it become a commercial operation within the city to serve the wider area?	2	Noted. Action 7 – grow food locally outlines the City's actions proposed under the Strategy. Beyond the scope of the Strategy.
Redirect food waste from households and local cafes to inground composting systems that would deliver nutrients to the soil and reduce the carbon emissions from transport of food waste.	1	Noted. Beyond the scope of this Strategy.
Other ideas for working together	**Total**	**City of Sydney Response**
Strata involvement: - Green roofs - Establish and maintain green spaces - Encourage green balconies - Training for strata communities to increase their capacity and get their community involved - Learn about gardening in shade in high-rise areas	6	Noted. The City will consider including greening as part of its programs focused on strata and other environmental programs.
Volunteering	2	Two actions from the Strategy, Action 18 to support community participation and Action 20 to increase our community engagement, support volunteering for greening.
Petitions, letter writing, promote work on social media	2	Noted

Comments that greening should be the City's responsibility, not the community's	2	The City owns and manages just 38% of the Local Government Areas land in its streets and parks. The remaining 62% is private owned / managed. Further, the increase of the greening is 38% higher for the City, than for private greening. In a just and fair city, everyone should contribute, and share the benefits from greening.
More trees and planting on private property	2	As outlined above, the City supports and will require any increase of trees on private property. The upcoming review of the Development Control Plan will include tree canopy / replenishment rates required on private property during the development process.
Would like to be able to collect native plants in the local area to assist with WIRES volunteering.	1	Noted
Community involvement with tree asset register valuation.	1	The City's qualified arborists update the tree asset register daily, as are inspected and works performed. Street and park tree data is available via the City of Sydney Data Hub. See here: https://cityofsydney.maps.arcgis.com/apps/instant/minimalist/index.html?appid=d33a3376158a4135a9028619420857a6
Community involvement in tree selection	1	As outlined above, a review of the Street Tree Master Plan in planned the next two years, which will include a review of the species planted in each street across the City. The review will also include community consultation, providing all residents an opportunity to make comment on species selection at that time.
Events in parks other than sports	1	The Strategy notes the importance of providing equitable access to parklands, and the differing park uses.
Encourage residents to participate in community-led greening of small streets and laneways, and to engage with, plant and look after their streets.	1	Three actions from the Strategy, Action 18 to support community participation and Action 20 to increase our community engagement, support volunteering for greening and Action 2, Green our laneways will collectively assist the City and the community to green and care for their streets.
Suggestion to implement lots of mini milestones; plenty of publicity to rouse up continual interest and participation; and progressive community and stakeholder consultation.	1	Noted. Increasing community and stakeholder engagement and focus will be a key component of achieving the Strategy. Action 20, Increase our community engagement, is included in the Strategy to assist.
Cost implications	**Total**	**City of Sydney Response**
Urban Taskforce recommends that in finalising the draft Strategy the anticipated	1	The relative burden of canopy cover is shown in Figure 3. The growth burden to

financial costings of implementation be clearly identified both in terms of how much and who pays.		property that represents 62% of land area and is predominantly privately owned is 7%. The growth burden to streets and parks that represent 38% of land and is predominantly Council owned is 11%. The relative burden to land area is 36% higher for Council than private land. The direct cost of planting is relatively low, the higher cost is a notional opportunity cost if it is assumed that development yield were lost which is not proposed.
Concerns about the costs of trees from reduction in solar access (e.g. increased electricity bills) and from damage to property (e.g. sewer system, building damage) needing to be taken into account by Council.	1	Noted. Refer comments above re selection of appropriate species (i.e. deciduous trees for winter sun and summer shade) and comments regarding the City's proactive tree maintenance program. In regard to property damage, the City has procedures in place to inspect and maintain its assets, including street trees. Property owners are responsible for the care and maintenance of their own property. Further, the responsibility to repair or replace old or worn infrastructure rests with the private property owner. For example, many properties have undergone bathroom and/or kitchen renovations however the original sewer and stormwater system and pipes remain in place. It is reasonable to assume that pipes can deteriorate with the passage of time so upgrading essential infrastructure is an important part of owning a property. The City cannot be held to be legally liable in situations where evidence suggests the property is not damaged as a direct result of a City owned asset.
Targets and what should be measured	**Total**	**City of Sydney Response**
Targets should be more ambitious	6	The City's new targets have been informed by the latest scientific research available, and developed based on comprehensive data and analysis, for every street, park and private property. This methodology is robust, ambitious, and sets a clear pathway for the City to increase canopy cover – noting we are one of the few Australian councils to consistently do so since 2008.
City should be as ambitious as Melbourne, with a tree canopy target of 40%	1	Every city is different and direct comparisons of a numerical target cannot be easily made.

		In terms of target methodology, the City of Melbourne target of 40% was not developed following this level of granular and comprehensive analysis. Further, their target of 40% solely applies to council owned land in the public realm (streets and parks) – which is about 30% of their local government area. They currently have no target for the other 70% of privately owned land. Therefore, in effect, the City is almost doubling canopy across all land, whereas Melbourne is almost doubling canopy on about 30% of the land.
'Action 15 – Strengthen urban nature protection measures'. Would have liked to see more power and importance given to strategies around biodiversity, habitats, ecological connectivity and ecosystem health as well as a strong commitment towards diverse native species.	1	The City endorsed its Urban Ecology Strategic Action Plan (UESAP) in 2014. This plan outlines the City's objectives and targets in relation to restoring and conserving resilient urban ecosystems that support a diverse range of locally indigenous flora and fauna species. The plan can be found at https://www.cityofsydney.nsw.gov.au/strategies-action-plans/urban-ecology-strategic-action-plan. Key targets include: - Habitat sites in the city are protected and the area of bush restoration sites is increased by 100 per cent by 2023 from a 2012 baseline of 4.2 hectares - Indigenous fauna species diversity, abundance and distribution is maintained or increased by 2023 based on a 2012 baseline - A progressive increase in the number of habitat features for priority fauna species is established along potential habitat linkages by 2023 The City's UESAP is due for review in 2022/23.
Need targets for 2025, 2030, 2035, 2040 as well	1	Noted. The City has published targets for 2030 (23% canopy cover). As we acquire and analysis the data, we may consider including an interim 2040 target.
Would like to see an ambitious goal like being in the top 10 greenest cities worldwide.	1	The City aspires to be a leader and provide a green international city. Importantly, every city is different with regards to their climate, land use and governance structures. Direct comparisons cannot be easily made. For example, city scales are different and may be based on a local council area (City

		of Sydney) compared a metropolitan area (Greater Sydney). A city may contain forests or national parks that are included in their targets / measurables, which skews the figures when other cities only have urban greening. The City has developed its ambitious targets on what we can achieve, if we collectively strive for them. A 75% increase in canopy, from our 2008 baseline canopy cover will be a significant achievement.
Request that the City measures the carbon sink and temperature cooling improvements until 2050 and provide statistical information to business and the public.	1	Noted
Place-based comments	**Total**	**City of Sydney Response**
North end of Garden street is a fabulous opportunity for greening and calming whilst reducing rat run safety issues.	1	Noted
Oppose proposal to reclaim part of Moore Park Golf Course	1	Noted
Moore Park north – City should consider planting trees to create a canopy in this area.	1	Noted
Town Hall square adjacent to St Andrews needs to be renovated and landscaped in accordance with this directive. To sell the ideas to the public the council need to show how it should be done. Get rid of the pebblecrete and plant shade loving plants and places to sit possibly even grass? reinstate St Andrews perimeter wall and permanent planting outside town hall.	1	Noted
Request regarding any plans to improve the area at 1 Kings Cross Rd Darlinghurst where the Ken Unsworth 'Stones Against the Sky' public artwork is located. This space is extraordinarily ugly with concrete bollards, pigeon droppings and skateboarders tearing through it. It is also a high wind area. Replacing the concrete boulders with flower boxes and benches to sit on would be a vast improvement. It would also be good to have some shrubs to act as windbreaks so that alfresco dining was an option and the restaurant on the forecourt a viable option.	1	The area identified is not managed by the City. The City installs greening adjacent to the area through the living colour program with a green wall in place for 9 months a year and seasonal displays in summer and spring for 16 weeks. Permanent greening opportunities in the area are limited by services and ground conditions on the overpass. The City will investigate whether further permanent greening is feasible.
Two submissions regarding Mulgoa Valley in Western Sydney. Highlighted the rich collection of colonial buildings and diminishing original Cumberland Plains,	1	Noted. The Greening Sydney Strategy is predominantly focused on greening withing the City's local government area

and that expansion of suburbia into this valley will be a tragedy when facing an onslaught of development secondary to the nearby Aerotropolis.		and will not have an impact on the Fernhill or Mulgoa Valley.
Are there any plans to green the area above the Cross City Tunnel/Eastern Distributor at William Street/Palmer Street?	1	As this land is owned and managed by Roads and Maritime Services, it limits the City's ability to undertake the greening work. Under the draft Greening Sydney Strategy, we hope to create new opportunities for collaboration with landowners and the community to green areas like this, potentially through the proposed Greening Sydney Fund and other community based programs.
Other comments	**Total**	**City of Sydney Response**
Support for Strategy and want to see more councils adopting	18	Noted
Concern over synthetic fields	5	As our local population continues to grow there is increased demand from our communities for more sporting fields and open spaces. We know synthetic fields aren't perfect. However, we need to balance the needs of the entire community and a limited number of synthetic fields will help us do that – creating space for regular sport as we continue to protect and create new grassed parklands wherever possible. We are reviewing strategies to improve the environmental performance of synthetic fields, by looking at materials, design and operational measures. Right now, we are reviewing the feedback from consultations on proposed synthetic fields in Annandale and Rosebery. We will keep the community updated on the outcome of these consultations.
Greater equity of green space across local area	2	During the Strategy development, the City mapped the canopy and greening across the entire local government area. We measured the percentage of canopy within a 1.6km radius (based on the latest scientific research) and also a 100m radius to provide more granular detail on where to focus our efforts. This method removes the artificial boundaries of suburbs, and also council areas, as we have considered canopy from neighbouring councils, to ensure our equitable greening approach is evidence based, robust and targeted.

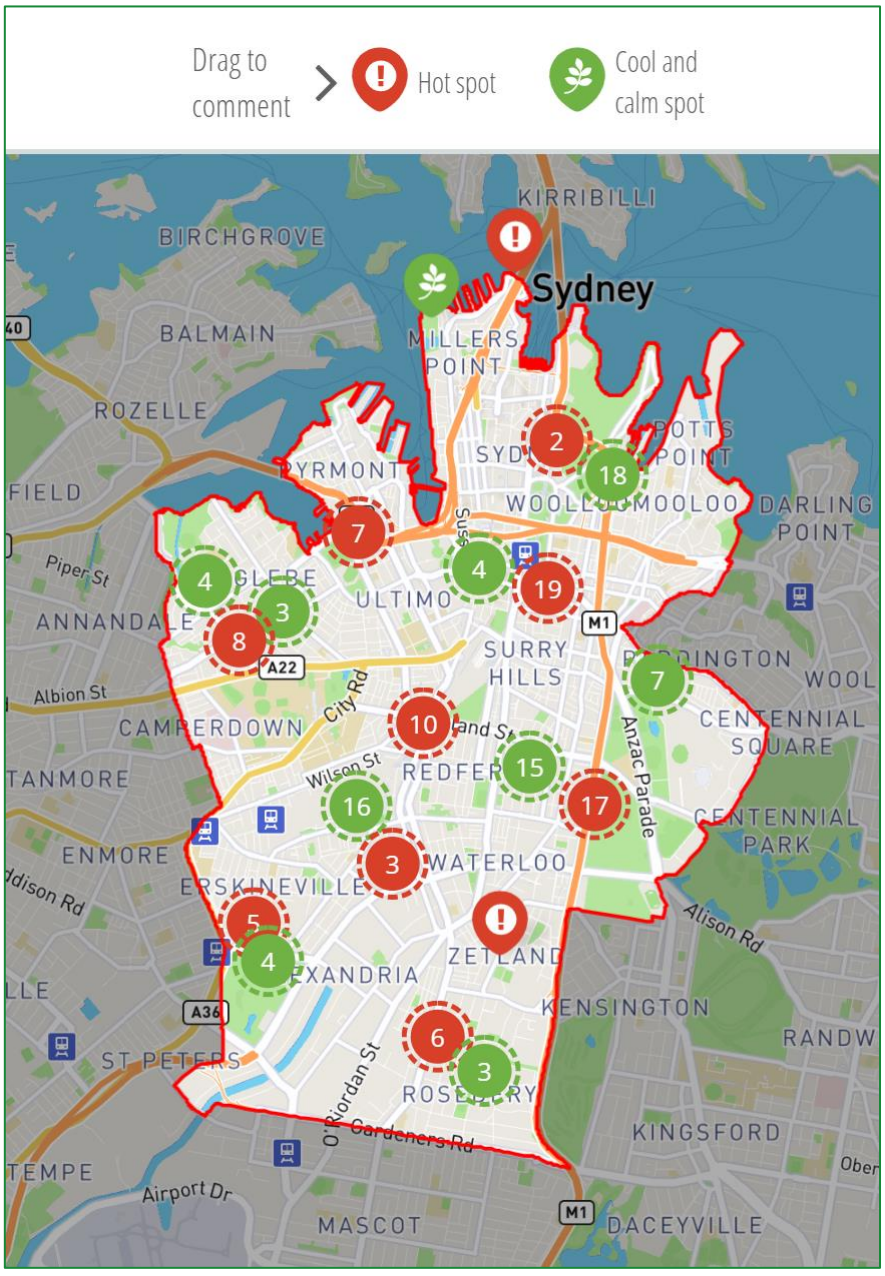
Through competitions and grants encourage greening hacks for limited space areas. For example, making a certain number of mobile gardens available to be left for a fixed time period outside resident's homes who do not own a car. Imagine a small skip with greening information on the side.	1	Noted. Action 19, to Develop a Greening Sydney Fund, is one of the key actions the City is progressing to assist with the greening on private property.
While green is important, what about playgrounds in these green spaces for kids who are older than 5. Physical challenges. The playground at Darling Harbour and kid friendly water features are fabulous.	1	The Strategy notes the importance of providing equitable access to parklands, and the differing park uses – including structured and unstructured play.
Distribute greening assets equitably within suburbs and not just between suburbs.	1	We have mapped the canopy and greening across the entire local government area. We used a 1.6km radius (based on the latest scientific research) and also 100m radius to provide more granular detail on where to focus our efforts. This method removes the artificial boundaries of suburbs, and also council areas, as we have considered canopy from neighbouring councils, to ensure our equitable greening approach is evidence based, robust and targeted.
Suggestion for an exercise park for seniors	1	Noted
Concern that planting is happening at the expense of road space for parking and cars, causing adverse effects for traffic.	1	As outlined in a response above, Sydney is changing and existing open space and transport connection will be put under considerable strain if we don't act. We will need more space for people and public life, which includes greening, to ensure the health and wellbeing of our communities. The City engages widely with the community when developing projects. We also investigate and consider local access, service vehicle and freight access, particularly during the design development phase of our streetscape projects and work closely with our Transport for NSW colleagues.
Comment that it is important to have green spaces for people living in small spaces	1	Noted
The city of Sydney should use a product called POLYTER. It's used in semi arid environment and does wonders in urban areas, pots, trees...it would definitely help.	1	Noted
Question whether the City has adequate staffing levels to look after trees in the city.	1	The City has a comprehensive tree maintenance program in place. Our qualified arborists inspect each street and

		park tree every year to assess its health and structural stability. They identify and undertake any maintenance works required.
I would also like the Harold Park lease for Greyhound racing terminated asap as it no longer represents the community and contemporary use of space outlined in the Greening strategy.	1	Noted
The sustainable use of energy and water is critical. Some provisions of the Heritage Development Control Plan DCP2006 prevent the sustainable use of energy and water resources in the City. If the Council is to truly claim it is committed to sustainable and green energy use, the use of solar hot water and photovoltaic systems must be widely encouraged and facilitated. This requires a change to heritage provisions so that these systems can be installed on all properties and, in particular, residential properties.	1	The City has recently released a guideline to facilitate installation of photo voltaic solar panels in conservation areas in most situations without requiring a development application. See the “Development application exception for solar panels in heritage conservation areas – guideline”. The City is exploring a local exempt provision to allow solar panels without any application in many situations. The City is reviewing planning controls in conservation areas including controls affecting installation of rainwater tanks.
Concern over NSW Govt plans for Waterloo	1	Noted. Beyond the scope of this Strategy.
More seating in parks	1	Noted
Will require increased gutter cleaning	1	The benefits provided by trees far outweigh the inconvenience of regular property maintenance. There are products on the market, such as leaf gutter guards, that can reduce the extent of maintenance required.
Request for council to provide individuals with the ability to see if other residents and ratepayers have similar concerns, how they have been addressed or resolved and help establish best practice within Sydney LGA.	1	The City has data publicly available on all of its trees, including the location, species etc. Improvements to our customer reporting system will also consider functionality that allow customers to see the other requests and an ability to track their progress.
Dog-friendly parks	1	Noted
More passive on-leash spaces	1	Noted
Concerns over Council’s ability to deliver on strategy.	1	The City understands the importance of greening and has been actively increasing canopy and greening for more than a decade. The City is one of few councils across Australia that has consistently increase its canopy cover since 2008. This Strategy includes the new canopy and greening targets for the streets, parks and properties portfolios. This provides greater transparency and accountability for the City to work across all land types to achieve the targets.

		The actions to achieve the targets will get harder, and therefore we require everyone to contribute to a greener Sydney.
Comment in support of incentivising Electric Vehicles, moving away from internal combustion engine vehicles and asking Council to provide leadership on this.	1	Noted. Beyond the scope of this Strategy.
We also need to think more about using our green spaces more productively. (See article in Griffith Review - creating sustainable cities) creating places where people can grow food, watch and create art and culture. Too many of our green spaces focus on having a large grassy area to kick a ball and tall trees around the perimeter.	1	The Strategy notes the importance of providing equitable access to parklands, and the differing park uses.
Request to update the two research papers cited.	1	Noted. References updated in the Strategy
The strategy seems more of a vision document than an action plan. It is hard to navigate. It should clearly show what is possible e.g. compare to results or plans of other comparable cities and detail how it will be realistic implemented.	1	The Strategy is a high-level strategic document that will inform more detailed strategies, policies and master plans.
Concern over cleanliness of streets and illegal garbage dumping.	1	Noted

Mapping our hotspots and cool, calm spaces

The knowledge and experience of our local community is crucial to this work. It supplements our existing data and provides insights we can't gain with our data collection tools. We asked respondents to tell us about the hotspots and cool, calm spaces in the city. You can visit this interactive map to see what people have told us.



Activities

Engagement and marketing activities undertaken to support the consultation included:

Sydney Your Say webpage and survey

A Sydney Your Say webpage was created. The page included the draft strategy, data story map, schools kit, discussion guide, and online survey. There were 1,230 unique pageviews of the Sydney Your Say page.

Stakeholder email

An email was sent to 111 stakeholders with information about the consultation and inviting feedback (see Appendix D).

Data story maps

A data story map was developed to support the community to explore the data behind the strategy in a visually engaging way. A range of activities were developed alongside the data story maps (see Appendix A).

School kit and discussion guide

A school kit and discussion guide were developed and sent to local schools and community groups (see Appendix B).

Aboriginal and Torres Strait Islander Advisory Panel

The draft strategy was presented to the City's Aboriginal and Torres Strait Islander Advisory Panel in May 2021.

Digital marketing

A two-phase digital marketing campaign was rolled out to promote and support the consultation. Details can be found in Appendix C.

Media

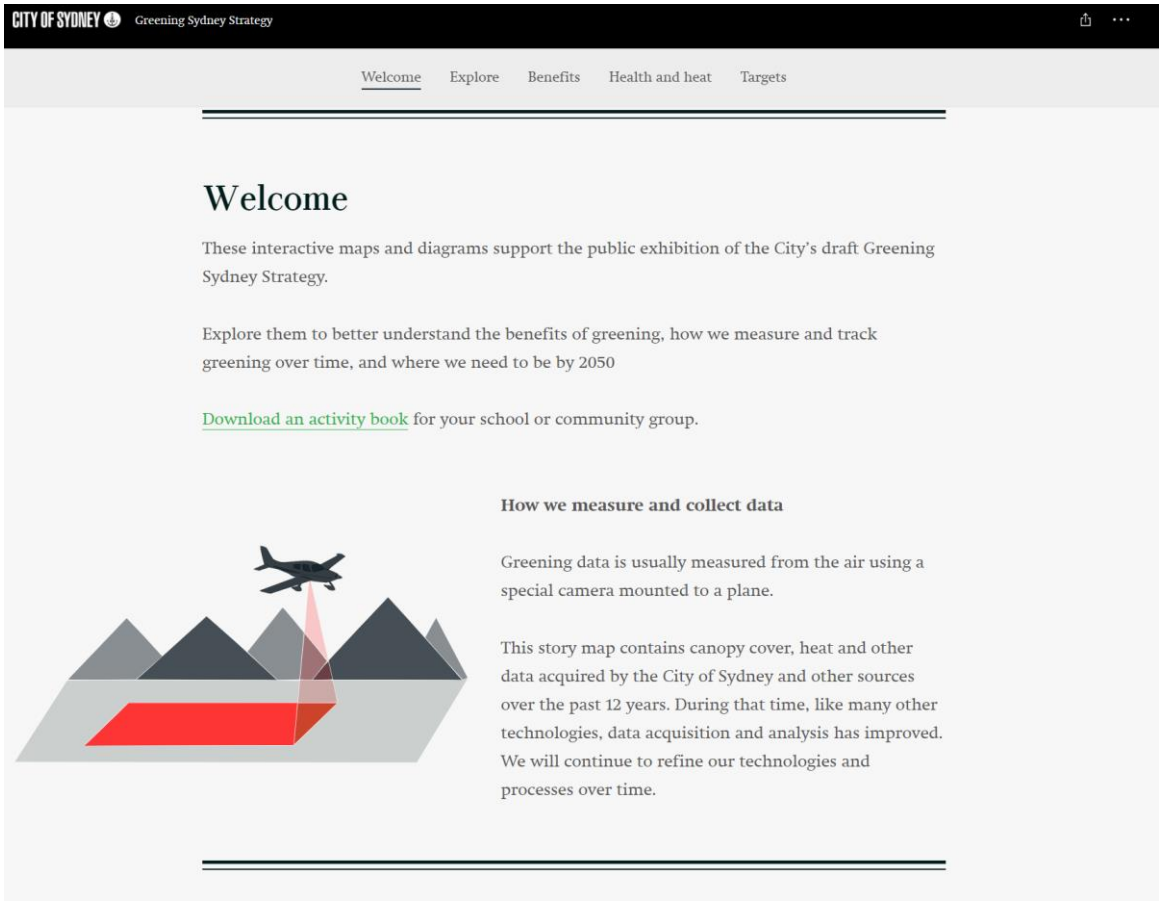
An exclusive ran with the Sydney Morning Herald, followed by a broad release which provided images and video.

The broader release was picked up and ran on Channel 7, in Concrete Playground and the Xinhua and Bloomberg news agencies as well as a number of environment and architecture related sites.

Appendix

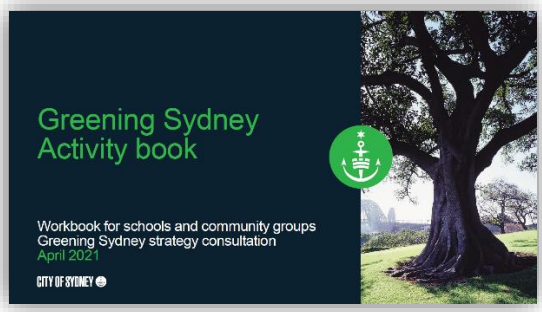
Appendix A: data story map

Interactive maps and diagrams were created to support the consultation:
https://storymaps.arcgis.com/stories/85414328c5984feb83e7f7b37b5d5270



Appendix B: school kit and discussion guide

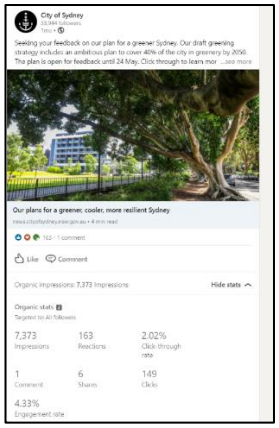
An activity kit and discussion guide were created to support community groups and teachers engage in the consultation.



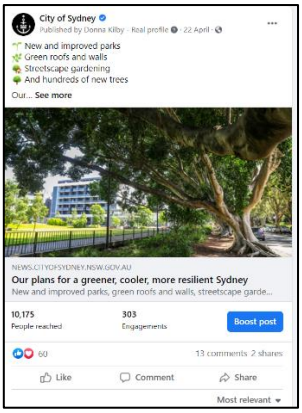
Appendix C: Digital marketing campaign

Phase 1: awareness raising

A Greening Sydney news article was created for the City of Sydney news site and featured in the City of Sydney News e-newsletter and shared on Facebook and LinkedIn. There were 1,859 unique pageviews of the Greening Sydney news article.



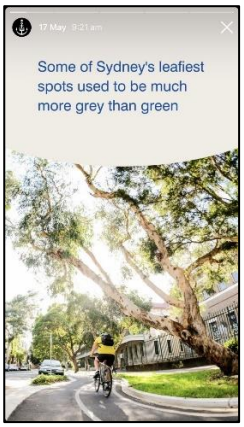
LinkedIn post

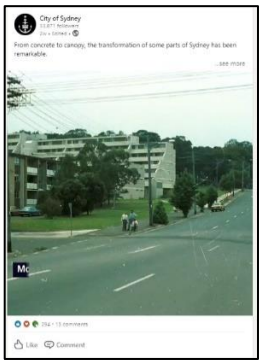


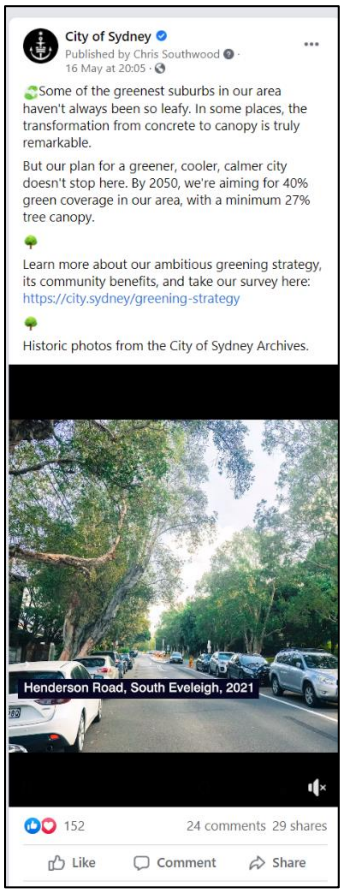
Facebook post

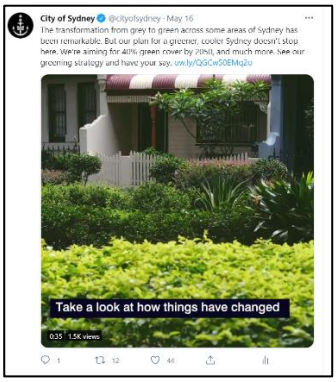
Phase 2: drive traffic to consultation page via social media

Instagram drove the most referrals to our Greening Strategy consultations page from all social activity. Our Instagram story was very popular, reaching 8,862 people. Below are some examples of posts across Instagram, Twitter and Facebook.









Appendix D: email to stakeholders

An email was sent to 111 stakeholders inviting feedback on the draft strategy.

CITY OF SYDNEY

Greening Sydney strategy

We'd like your feedback on a proposed new strategy to green Sydney and create a cool, calm and resilient city. It builds on what we have already achieved and sets ambitious new targets to green our city.

Consultation closes 5pm 24 May 2021.

Read more

Item 4.

Project Scope - Harry Noble Reserve Playground, Erskineville

File No: X038100

Summary

This report outlines the proposed improvements for Harry Noble Reserve Playground in Erskineville. Harry Noble Reserve Playground has been identified as part of the small parks and playgrounds improvement program.

The objective of the proposal is to provide an improved park and playground which supports the needs of a range of local users including individuals, informal and formal community groups, as well as wildlife.

The project brief is to refurbish the play area including; replace end of life equipment and soft fall as required, provide a range of play experiences, improve the entries and access into the park; increase the active recreation facilities, improve the open grass areas, provide additional barbeques, tables and seatings; and associated landscape improvements.

The Draft Concept Plan was on public exhibition from 18 May 2021 to 14 June 2021. A letter was distributed in the local area and the proposal was exhibited on the City's website. The proposed works are supported by the community and the responses highlighted that an upgrade of this park would increase the current use of the park.

Community feedback was broadly in support of the proposal. Community suggestions will be incorporated as part of the detailed design phase where possible and additional information has been provided as requested.

Recommendation

It is resolved that Council:

(A) endorse the scope for improvement works to Harry Noble Reserve Playground as described in the subject report and shown in the Draft Concept Plan at Attachment B to the subject report for progression to relevant approvals, landowners consent, preparation of construction documentation, tender and construction; and

(B) note the estimated project forecast as outlined in Confidential Attachment D to the subject report.

Attachments

Attachment A. Location Plan

Attachment B. Draft Concept Plan

Attachment C. Engagement Report

Attachment D. Financial Implications (Confidential)

Background

1. The City has an ongoing small parks and playgrounds improvement program. The staged program is for parks which need upgrade or enhancement works, the replacement of end-of-life equipment, and to provide appropriate facilities for local residents.

2. Harry Noble Reserve Playground is a neighbourhood park located at 1a Elliott Avenue, Erskineville. The park is bound by Swanson to the north and Fox and Elliott Avenues to the east and west. Refer Attachment A Location Plan. The Lady Gowrie Child Centre and Alexandria Erskineville Bowling Club are located on the southern boundary.

3. The 10,800sqm park is surrounded by low density residential terrace houses and medium density (3-4 storey) apartment buildings on Swanson and Copeland Streets and two-storey Department of Housing brick apartment buildings. Erskineville Oval and stadium is east of the park.

4. The area that includes Erskineville is within the traditional homelands of the Gadigal and Wangal people, two of the 29 clan groups of the Sydney metropolitan area that are collectively referred to as the Eora Nation.

5. Erskineville Oval and Harry Noble Reserve form part of Crown reserve P.500429. The care, control and management of the reserve is delegated to the City of Sydney as the appointed Crown land manager. The southern portion of the existing playground within Harry Noble Reserve is located on part Lot 2 DP 52982, owned by the NSW Land and Housing Corporation. The City is negotiating access, management and maintenance of this portion of land and has received in principle approval for the small park renewal works. The land use agreement will be formalised to enable construction works. The activities identified within the renewal works are consistent with what is proposed within the Erskineville Oval Draft Plan of Management, currently under review by Crown Lands. This is anticipated for adoption in late 2021. The park is within the Heritage Conservation Area C22 – Erskineville Estate.

6. Harry Noble Reserve and Erskineville Oval were part of a land grant to Nicholas Divine in 1794. The park is located on the low-lying western edge of Sheas Creek Swamp. The park was proclaimed Macdonaldtown Park in 1885, then changed to Erskineville Park in 1892.

7. Since establishment the park area has been incrementally reduced. In 1938 the NSW Government's Erskineville Rehousing Scheme established Elliot Avenue and built seven apartment buildings. Another part was used for the Lady Gowrie Child Centre in 1943. An informal cricket pitch and loop track is evident in the reserve in 1943. The remaining park area was returned to Council in 1955 and the bowling club was built in 1956 on Ashmore Street.

8. The reserve was named in 1960 after Harry Noble, an Alexandria Alderman and State MP for Redfern. The low sandstone wall surrounding the park was built around this period. Swanson and Copeland Streets were widened in the late 1960s between Mitchell Road and Binning Street as part of the Department of Main Roads, Inner Suburban Radial Freeway Network. The full scheme was never realised, however Swanson and Copeland Streets are still classified State Roads.

9. The large and level reserve has a relaxed open grass and treed character that reflects the neighbourhood. The reserve is surrounded by a low sandstone wall and large trees around the park edge. The park has a simple and robust materials palette which includes sandstone, asphalt and concrete paths with brick edges.

10. The three entries on Swanson Street have timber arbor or pergola structures with climbers and a series of timber shelter structures. A primary pedestrian path dissects the reserve and provides a north-west and south-eastern though link between Swanson Street and Fox Avenue. A secondary path connects Elliot and Fox Avenues along the south edge of the park.

11. The reserve has 60 trees with a mix of mature native and exotic trees including, eucalyptus, figs, jacaranda, cook pines, popular and plane trees along the street frontages. The predominant tree species are Tallowwood (Eucalyptus microcorys). The trees have been planted around the park edge around an open central grass area. As a result of the dense planting and over-shadowing there is a wide (15-20m) bare mulch under-storey area along the northern and western side of the park. Low shrub and groundcover plantings have recently been installed to improve the visual amenity of the area. Due to the poor sun (solar) access, high uses, poor drainage and shallow soils, the turf grass quality is poor.

12. Harry Noble Reserve is a designated dog off leash area and is well used. Dogs are prohibited from the playgrounds. The existing playground is fenced and provides a clearly defined space.

13. Harry Noble Reserve Playground was identified for an upgrade due to the overall condition of the reserve including the condition of the existing playground. The playground is isolated and disconnected from the main reserve space and other facilities such as barbeques, tables and open grass areas.

14. The existing playground has a series of small individual elements which focus on younger children (0-6 years) and has limited play opportunity and diversity (experience and ability range) given the size and neighbourhood scale. The gates restrict equitable access and there are limited inclusive play experiences.

15. The reserve includes some basic active recreation opportunities, with netball hoops in the turf grass area and a basketball hoop near the Fox Avenue entry and road, which is a safety and potential conflict hazard.

16. Consideration has been given to the provision of play equipment in surrounding parks within a 500 metre radius, to ensure a coordinated network of facilities that cater for a broad range of park users.

Draft Concept Plan

17. A concept plan was developed for the works and community consultation was undertaken (refer Attachment B).

18. The concept plan sets the overall layout. The key principles are:

    (a) provide an accessible, welcoming and safe park for the community and visitors;

    (b) protect the original parks elements and sensitively respond to the informal park and neighbourhood character;

(c) retain the eclectic tree mix and mature trees, and maintain the enclosed central open lawn space;

(d) increase the large shade tree plantings to improve the park amenity, provide native habitat and meet the Greening Sydney canopy targets;

(e) increase the recreation opportunities and improve usability for all park users by better arranging the park facilities;

(f) maintain the open and flexible park uses with separation and clearly defined spaces for dog off-leash and other park uses;

(g) provide inclusive playground, increase the range of active recreation and play opportunities and diversity with a range of structured equipment, imaginative and nature play elements;

(h) improve park amenity and encourage social interaction with a range of seating opportunities, tables and park furniture; and

(i) use simple, robust, high quality materials which reflect the local neighbourhood character.

19. The proposal includes the following works:

(a) a new active recreation court with two new basketball half courts, a netball half court and goal circle practice area;

(b) a fenced toddler and play equipment structure with decks and bridge, platforms, climbing, firepole, slide and servery;

(c) a covered sandpit, boulders, stepping-stones and a spinning carousal;

(d) nature play area with sandstone boulders and block, balance beams, pole course, imaginative cubby house, undulating dune mounds, tunnel and sensory precision play elements;

(e) climbing challenge and large tower with slides for older children or more advanced abilities;

(f) double swing with toddler cradle and seats, and a large basket swing and inground trampolines;

(g) a large shade structure over the play space to provide sun protection in summer;

(h) additional tables, seats, water bubblers with dog bowls, barbecue, and sheltered picnic facilities; and

(i) improve turf grass for passive area and more landscape shrub plantings.

20. In response to the public consultation, the following will be investigated and incorporated where possible in the detailed design as noted in Attachment C:

(a) A review of additional barbeques and picnic facilities will be investigated.

(b) A review to provide another dog off-leash space to share and reduce volumes in Harry Noble Reserve will be investigated.

(c) Additional investigations will be undertaken to provide more barrier walls, to increase separation between dogs and the playground

(d) Investigate if additional swings can be provided in the playground

(e) Investigate whether additional paths for trikes and scooters circuits outside the playground can be linked or implemented sooner to increase the recreation opportunities

(f) The City will contact local schools to see if there is interest and opportunity to undertake targeted consultation with school children to help develop the playground design

(g) An acoustic assessment will be undertaken to ensure the percussion play elements will not be disruptive to surrounding residents. No increase in noise is anticipated because of the playground renewal

(h) Investigate the inclusion of table tennis tables

(i) Investigate the number and location of the water bubblers

(j) Review path alignment to ensure suitable access and convenience to all park facilities

(k) Investigate staging options to enable portions of the playground to be operational during the works. Noting temporary signage will also be provided to direct people to the Renwick Street Playground which is about 200 metres or five minutes' walk away

(l) Investigate the installation of an additional mid-block pedestrian crossing or kerb extensions on Fox Avenue to link Harry Noble Reserve and Erskineville Oval

21. The following tree management and planting is proposed as part of the park works:

(a) retain and protect 57 existing trees and planting within the reserve;

(b) the removal of three small Jacaranda trees with poor habit to allow the installation of the active recreation court;

(c) the installation of 14 new mixed deciduous shade canopy and native trees to improve the park amenity and contribute to the draft Greening Sydney Strategy tree canopy targets; and

(d) preparation of an Aboricultural Impact Assessment and Tree Protection Plan to inform the detailed design and ensure appropriate construction methodology.

22. A Review of Environmental Factors (REF) will be lodged for the works in accordance with the Environmental Planning Assessment Act 1979 and the State Environmental Planning Policy Infrastructure 2007.

Key Implications

Strategic Alignment - Sustainable Sydney 2030

23. 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 is aligned with the following strategic directions and objectives:

    (a) Direction 6 - Vibrant Local Communities and Economies - this project will provide an improved open space infrastructure which meets the needs of a wide variety of user groups and provides opportunities for social interaction.

    (b) Direction 9 - Sustainable Development, Renewal and Design - this project is part of wider program of ongoing renewal of small parks across the local government area; it will provide improved quality of open space infrastructure.

24. The draft Green Sydney Strategy establishes targets to increase greening and tree canopy in the City. It includes strategic directions to ensure we distribute quality greening fairly across the city so that everyone shares the benefits provided by greening. This project aligns with the following directions and objectives:

    (a) Direction 3 – Cool and calm spaces. Two key issues facing most of the city's residents relate to high urban heat and impacts on physical and mental health.

Greening for All

    (b) Action 4 – Distribute greening equitably. The strategy target is to establish 30 per cent canopy cover, within an area of around 1.6 kilometres to provide key heat and health benefits. The target percentage cover for neighbourhood parks is 55 percent and the existing tree canopy coverage is about 40 percent. The proposal includes the installation of eleven (11) additional shade canopy trees to contribute to meeting the draft Greening Sydney Strategy canopy targets.

    (c) Action 5 – Provide fair access to quality green space. This project will improve access in the park and provides an improved open space infrastructure to meets the needs of a wide variety of users.

    (d) Action 6 – Adapt for climate. This project will provide additional landscape planting and reduces the hard surface areas to reduce heat and increase water infiltration. Furniture and materials will be refurbished or recycled were possible.

Cool Calm Spaces

    (e) Action 8 – Cool the hot spots. Cool streets improve the walkability and liveability of our city. The project will enhance and improve the amenity and usability of an important and well used small park. The tree canopy and planting has been maintained or increased.

    (f) Action 9 – Calm green spaces. The proposed refurbishment provides a range of spaces including an open turf grass area for passive recreation, bench seats and social gatherings.

Organisational Impact

25. This upgrade will provide an improved park amenity and play experience for children, their carers and other community members visiting the park. The replacement of non-compliant assets represents a removal/mitigation of risk to the City. The assets will require ongoing maintenance.

Risks

26. Risks of not implementing the scope of these works include potential failure of play infrastructure and risk to the community. Daily inspections are carried out by the City as per standard parks and playground maintenance operations.

27. Risks of not implementing this scope of works could result in failure to meet community expectations.

Social / Cultural / Community

28. Harry Noble Reserve is the primary passive park in Erskineville and is a large and flexible open and community space. The reserve is well used by families, parents and carers with young children and people with dogs. More people are moving into the area with the Ashmore Estate development nearby which increases the need for good quality open spaces, playgrounds, and facilities.

29. Improving the amenity and play offering within the park represents an investment in this community, providing opportunities for people of different ages and abilities to use the park alongside each other.

30. Indigenous cultural consultation will be undertaken to ensure that the project contributes to recognising the City's Indigenous heritage, celebrating Aboriginal and Torres Strait Islander cultures in the public domain, and enriching local knowledge about the cultural landscape.

Environmental

31. The original vegetation would have likely been Eastern Suburbs Banksia Scrub and with Estuarine and Freshwater Wetlands to the east near Mitchell Road. The park is between two potential habitat linkages and is identified as a Supporting Site in the Urban Ecology Strategy Action Plan. The proposed tree and plant mix will provide habitat and feed trees for fauna.

Financial Implications

32. There are sufficient funds in the current year capital works budget and future years forward estimates. Current cost estimates and financial implications are detailed in Confidential Attachment D.

Relevant Legislation

33. Local Government Act 1993 - Section 10A provides that a Council may close to the public so much of its meeting as comprises information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business.

34. Attachment D to the subject report contains confidential commercial information which if disclosed, would confer a commercial advantage on a person with whom Council is conducting (or proposes to conduct) business.

35. Discussion of the matter in an open meeting would, on balance, be contrary to the public interest because it would compromise Council's ability to negotiate fairly and commercially to achieve the best outcome for its rate payers.

36. Environmental Planning and Assessment Act 1979.

37. State Environmental Planning Policy Infrastructure 2007.

38. Sydney Local Environmental Plan 2012.

39. Disability Discrimination Act 1992.

40. Companion Animals Act 1998.

Critical Dates / Time Frames

41. Current Program Dates

(a)	Detailed Design	August 2021- February 2022
(b)	Tender	March 2022
(c)	Construction Start	July 2022
(d)	Completion	April 2023

Options

42. Proceed with progression of improvement works as outlined in this report including relevant approvals, preparation of construction documentation, tender and construction.

43. Project does not proceed - this option is not recommended as the current condition of the playground has a number of associated risks and compliance issues.

Public Consultation

44. Community consultation was undertaken as a two-part process: pre-consultation/early engagement and public consultation/exhibition. For a detailed description of the consultation process and findings refer to Attachment C.

45. A pre-consultation notification letter/email was issued to residents. Fifty-one (51) submissions were received during the pre-consultation period. The purpose of the early community consultation was to seek input from the community about how they use the playground and how the park could be improved. The key community comments and ideas which helped inform the draft Concept Plan are:

    (a) The existing playground has limited play value for its size. Increase the variety of play experiences for children of all ages, particularly for older (mid-advanced) abilities.

    (b) Provide a greater mix of play opportunities with natural materials, nature play (manipulative and balance), imaginative play and climbing challenges. The key requested items are:

        (i) improved play element or equipment provision (active, balance, force movement, manipulative, social and imaginative play) for children of all ability and age ranges;

        (ii) a significant tower large climbing net/ play structure with slide;

        (iii) more nature play and natural material (timber, rocks, dirt, green, ropes – tactile/ manipulative play) to explore;

        (iv) a sand play area (manipulative play);

        (v) more swings with basket, strap and bucket seats;

        (vi) accessible carousel;

        (vii) a mixture of rubber, synthetic grass and organic mulch soft-fall and natural turf grass areas; and

        (viii) inground trampoline (jumping and active play).

        (ix) a trike, bike or scooter loop for children.

    (c) Increase the basketball facilities and relocate away from the entry, pathway, road and playground and co-locate the netball hoops.

    (d) Provide more seats for children, parents and carers and increase the range of seating opportunities in shaded and sunny locations.

    (e) Maintain a fenced enclosed play area and provide or increase the shade over the play space and seatings areas. These comments respond to managing the conflicts between the dog off leash areas and children and other park users.

    (f) Improve the connection between the playground with the broader park areas and other park facilities (open grass, table and bench seat and barbeque facilities etc) with barrier separation of off leash dogs and other park users.

    (g) Increase and improve complementary parks facilities including:

        (i) improve access to public toilets;

        (ii) barbeque and shelters picnic facilities, including tables and bench seats;

(iii) water bubblers with dog bowls; and

(iv) garbage bins.

(h) Improve the visual amenity with additional shade tree plantings, landscape shrub and groundcover plantings.

(i) Improve access and circulation with more park paths.

46. The public consultation/exhibition involved the following;

(a) Letters advertising the online feedback portal were distributed to the Erskineville area (within a 500 metre radius around the site). 1133 invitations were distributed.

(b) A webpage on SydneyYourSay showed the plans for consultation from 18 May 2021 to 14 June 2021. 1142 individual users viewed the page.

(c) A pop-up consultation feedback session was held in the park from 10.00-11.30am on Saturday 29 May 2021. Council staff were available to answer questions and obtain feedback about the proposed concept plan. Respondents were also encouraged to view the plans and provide feedback on the Have You Say website. About 50 people attended the session.

47. There were 92 submissions received during the consultation period. This included 73 written comments via email and the online feedback form.

48. The proposed works were well supported by the community and the responses highlighted that an upgrade to this park would increase the current use of this park.

49. A summary of and responses to the key comments and suggestions are provided below.

Dog Management

(a) *Nineteen (19) responses requested the park be fenced or a fenced dog area be provided.* The reserve currently has a boundary wall around the park which provides a barrier to the street. The installation of a high fence and gates around the park will restrict equitable access and views (passive surveillance) into the park. Dogs must be under effective control while off leash in the park.

(b) *Two responses expressed concern the proposal takes space from dog off leash areas*. There are enough play facilities in the area. The design realigns the main path to increase the open grass area. As a result, the size of the open dog off-leash areas remains about the same.

(c) *Ensure owners pick up their dog faeces*. The City encourages people to use our parks responsibly and pick up after their dogs. The proposal will include additional garbage bins with dog waste bag dispensers and park signage.

Playground

(d) *Nine written responses like the proposal*, particularly the trampoline and play structure and climbing challenge, which cater for older children and offer active sport. The upgrade is desperately needed, the sooner the better. Consultation feedback indicates the proposal is generally well supported by the community. The proposed upgrade works will be undertaken early next year.

(e) *Six responses expressed concerns about the inclusions of a sandpit*. The inclusion of a sand pit was identified in the pre-consultation process. Manipulative play with sand, organic mulch and sticks are important play and learning experiences for young children. The City has sandpits in several of our playgrounds which are well-loved by the community. The playgrounds are inspected and cleaned daily and covers help provide protection from cats and leaf litter. No syringe needles have been found in sandpits. Dogs are not permitted within playgrounds.

(f) *Three responses requested plenty of shade be provided in the playground and seating areas.* The proposal includes a large marquee style shade structure over the playground and seats. A range of seating opportunities will be provided near shade trees and in sunny locations.

(g) *Two respondents requested more challenging play equipment with climbing and a large slide be provided for all ages and abilities*. The proposed playground will increase the variety of play experiences for children of all ages, particularly for older (mid-advanced) abilities. It also includes a greater mix of play opportunities with natural materials, nature play (manipulative and balance), imaginative play and climbing challenges. The inclusive playground area is level and has an even rubber surface to provide good access and encourage engagement, social interaction, and participation on the inclusive carousel, cubby and servery and basket swing. The area also includes percussion elements and is fenced.

(h) *Consider the inclusion of a flying fox.* Flying fox rides have a large footprint and can only be used by one child at a time. Due to space constraints the inclusion of a flying fox is not possible in this park.

(i) *Concerns about the use of organic mulch playground soft-fall due to dog faeces and litter.* The proposal includes areas of both rubber and organic soft-fall surfaces. Manipulative play with organic mulch is important play and provides learning experiences for young children. It is also much cooler than rubber and synthetic surfaces in hot weather. All playgrounds are inspected and cleaned daily. Dogs are not permitted within playgrounds.

(j) *Request water play areas be included instead of a sand pit.* The installation of a water play area is not supported in a neighbourhood scale park. Water play areas are appropriate in large regional facilities such as Gunyama Park Aquatic Centre and Pirrama Park, Pyrmont.

Active recreation

(k) *Request the active recreation areas be changed to a full basketball/ netball court to allow structured games to occur*. In response to community need, the project provides improved netball and basketball hoops for active recreation rather than formal sport facilities. A full court can be monopolised by a single group and unfortunately netball and basketball court sizes are not compatible. The aim is to provide multiple half courts and goal circles to maximise the number of people and different groups able to play at any one time.

(l) *Include a fence near the basketball court to ensure balls don't enter the bowling club or childcare.* The proposal will include a high net fence to stop balls going into the adjacent properties.

(m) *Concerns about anti-social behaviour associated with the basketball courts.* The provision of improved recreation and community facilities typically help reduce anti-social behaviour. Anti-social behaviour at basketball courts in other locations, such as Victoria Park, has not been an issue.

(n) *The proposed sports courts are completely unnecessary.* The proposed active recreation facilities were identified in the pre-consultation process. The proposed location maximises the distance from residential dwellings and the protected corner location helps minimise disturbance to other park users.

(o) *Increase the number of active sports facilities in the park including cricket nets, soccer goal, tennis, and full-size ball courts*. Harry Noble Reserve is passive open space with playground and informal active recreation facilities. The purpose of the project is to retain the relaxed neighbourhood character and increase play opportunities. Formal sport facilities are provided at Erskineville Oval, Prince Alfred, Perry and Sydney Parks nearby.

Park facility and amenity

(p) *Eleven responses requested the inclusion of public toilets in the park or refurbishment of the toilet facilities in Erskineville Oval*. Public toilets are available nearby at Erskineville Oval (about 100m or 2 minutes' walk). Therefore, the provision of additional toilets in Harry Noble Reserve is not needed. Investigations into the refurbishments of the public toilets at Erskineville Oval is currently being undertaken and will be a separate project in the future.

(q) *Six submissions requested more barbeques, tables, seats and shelters be provided*. The existing park has an old barbeque and two shelters with tables. The proposal includes a new accessible barbeque and four more picnic table sets for small and large groups, platforms, bench seats and seating walls.

(r) *Four responses suggested the upgrade include lighting to improve safety and hours of use*. New pedestrian lights will be provided on the paths around the playground and in active recreation areas to improve safety and enable use of the courts in the evening.

(s) *Request additional bike parking.* Existing bike racks are located near the Fox Avenue entry. More bike racks will be provided near the active recreation courts and playground.

Traffic management

(t) *Include a high wall around the park to reduce noise impacts from traffic* The installation of a noise attenuation wall around the park is not supported. A high wall will restrict sightlines (passive surveillance) into the park which will reduce safety and will impact visual amenity. The traffic volumes and noise on Swanson Street do not warrant a wall.

(u) *Request additional traffic measure to reduce vehicle speeds around the park, and near the school/ childcare*. *Rat running is becoming an issue with increased traffic volumes.* As part of the Ashmore and Harley Street cycleway project new footpath continuation treatments (raised crossings) are proposed at both ends of Fox Avenue at the Swanson and Ashmore street intersections. A raised pedestrian crossing is also proposed on Ashmore Street. This will slow traffic and discourage rat-running through the area.

AMIT CHANAN

Director City Projects and Property

Stephen Merchant, Senior Design Manager

Attachment A

Location Plan

Harry Noble Reserve Playground

Swanson Street, Erskineville

Site Photographs

Existing Playground – Proposed Active Recreation Court Area

Existing Basketball Hoop and Toddler Equipment near Fox Street

Existing Barbeque and Picnic Shelter – Proposed Playground Location

Open Turf Grass and Dog Off-Leash Areas

Attachment B

Draft Concept Plan

Proposed improvements

01 Open space and off-leash dog area

02 New active recreation area with a netball half court and goal circle practice area and two basketball half courts

03 New playground with fenced toddler area and shade structure

04 Future path re-alignment to increase open space and off-leash dog area

Key

- Existing trees to be retained
- New trees
- Low shrubs and groundcover planting
- Turf grass
- Concrete paving
- Brick paving
- Rubber soft-fall
- 3 trees to be removed and replaced
- Organic mulch soft fall
- Timber bench seats
- Timber table and seats
- Fenced toddler play area
- Shade structure
- Park sign
- New water fountain with dog bowl

05 Retain existing mature trees and enhance the understorey shrub plantings

06 Multi-play structure for toddlers with a tower and slides, decks, bridges, imaginative play elements, shop-front and climbing challenges

07 Trampolines

08 Inclusive spinning carousel

09 Sandpit area with sandstone boulders and stepping stones

10 Undulating rubber mounds, tunnel and balance totems

11 Open cubby house

12 Nature play area and percussion play elements

13 Large climbing frame for older children

14 Basket swing

15 Double swing set with one swing for all ages and one bucket cradle swing for toddlers

16 New picnic tables and picnic shelter

17 Relocated barbeque

18 Low seating barrier wall

19 Future new picnic area with tables and platform bench seats

Harry Noble Reserve Playground- DRAFT CONCEPT PLAN

CITY OF SYDNEY


TIM THROSBY MARCH 2021

Attachment C

Engagement Report

Engagement report

Harry Noble Reserve, Erskineville

July 2021

CITY OF SYDNEY

Contents

Background

Over the next 10 years, we're upgrading more than 60 parks across the City of Sydney area, from small pocket parks to larger local parks.

Quality green open spaces are a high priority for our residents, workers and visitors. This network of park upgrades will create better quality open spaces for everyone to enjoy, help keep our city cooler, and support biodiversity in our local areas.

Prior to finalising the designs, we are consulting the community and stakeholders on these proposed park improvements. In 2021, we consulted on our stage 16 parks, which include:

- Ethel Street Playground, Erskineville
- Blackwattle Bay Park, Glebe
- **Harry Noble Reserve, Erskineville**
- James Watkinson Reserve, Pyrmont
- Michael Kelly rest area, Newtown

Engagement summary

From 17 May to 14 June 2021, we asked the community for feedback on a concept plan to improve Harry Noble Reserve in Erskineville.

Consultation on the plan provided an opportunity for stakeholders and the community to review and comment on the design.

Consultation activities included online engagement, a letter to residents and project signage at the park.

This report outlines the community engagement activities that took place to support the consultation and summarises the key findings from the consultation.

Purpose of the engagement

The purpose of the engagement was to:

– gather feedback from stakeholders and the community about the proposed upgrade

– determine the level of satisfaction with the revised concept design.

Outcomes from the engagement

Submissions received during consultation

We received a total of 92 submissions via Survey Monkey and email during the public exhibition period. The Sydney Your Say page was visited 1142 times during the consultation period.

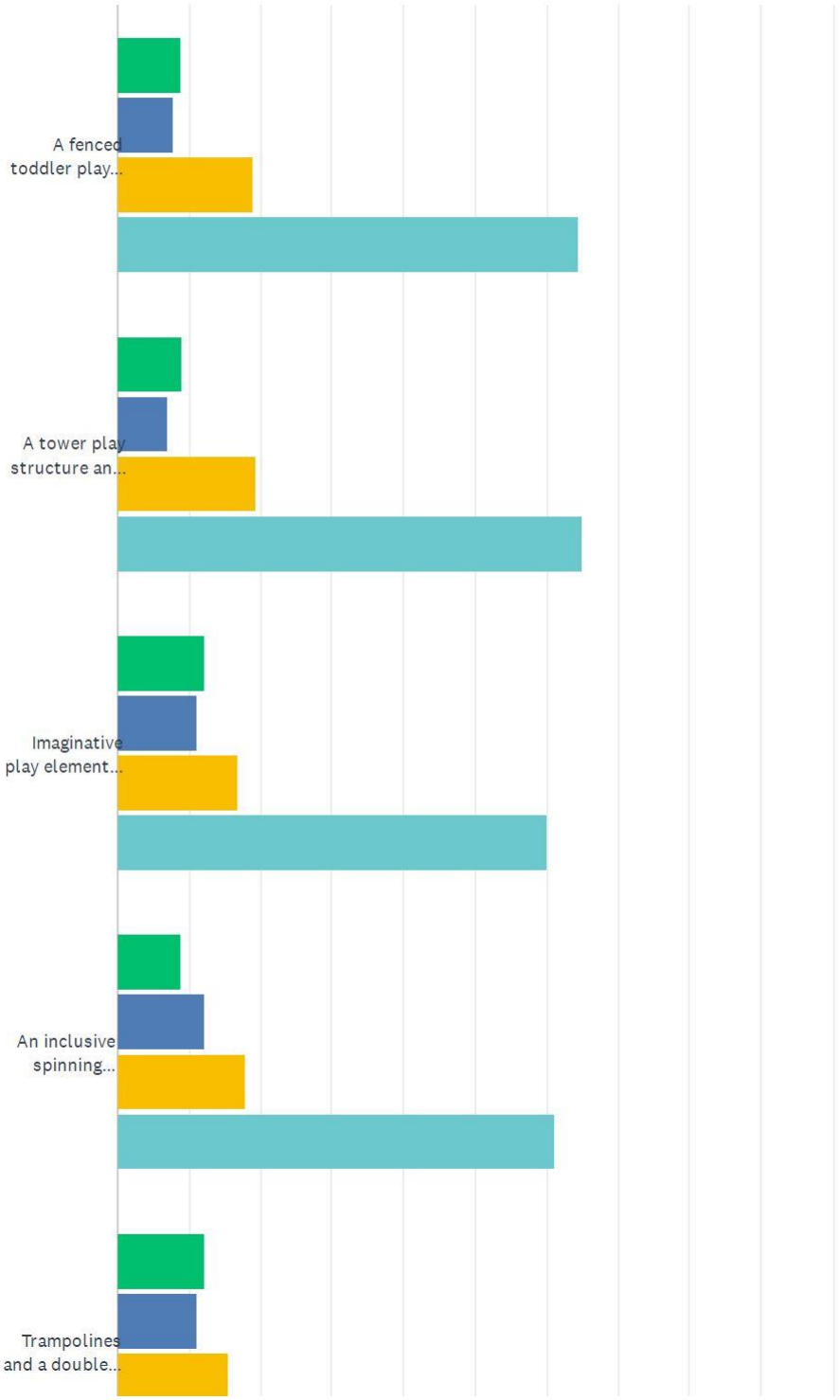
Key findings

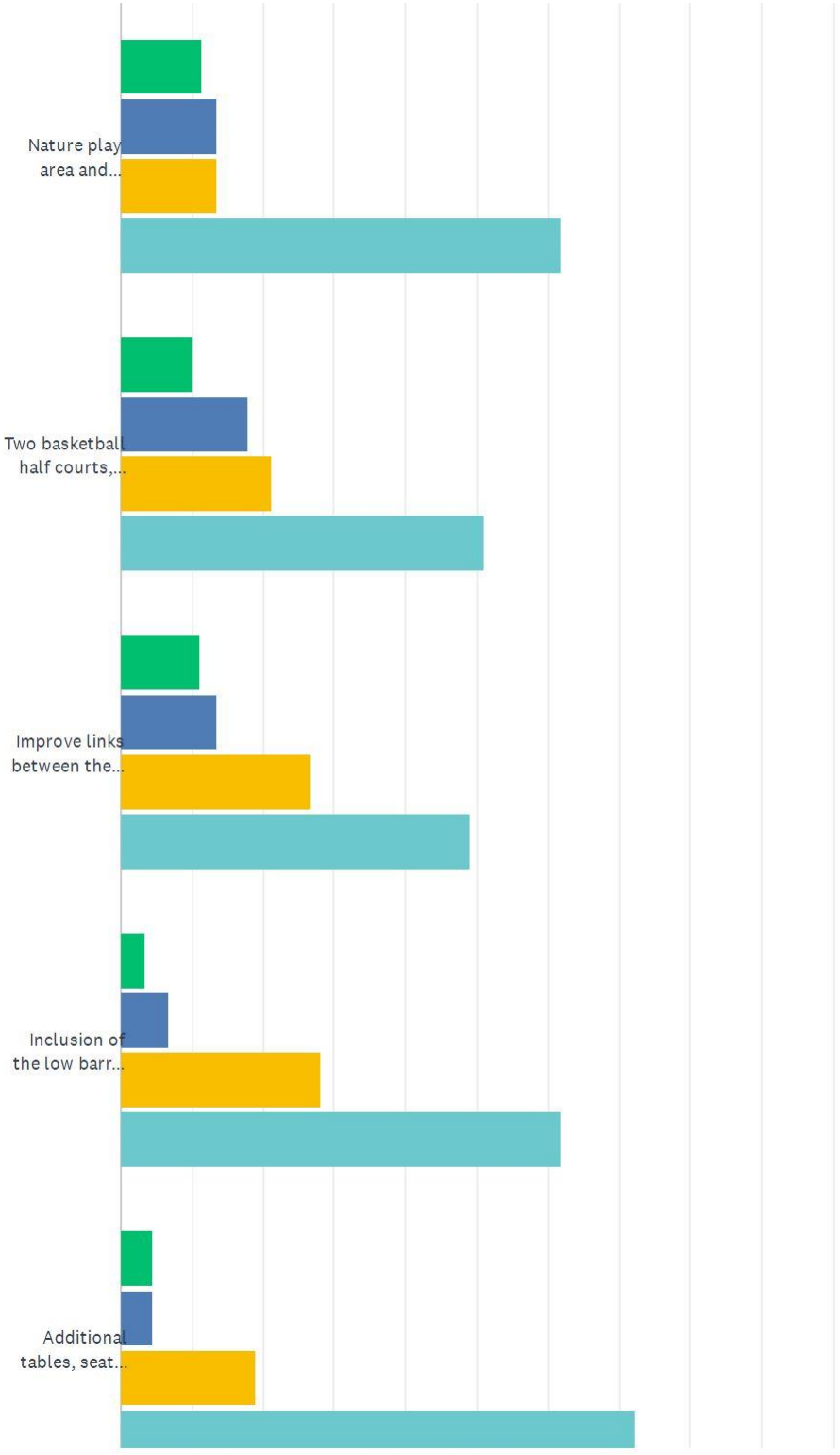
Online feedback form - rating elements of the proposed upgrade

Respondents who completed the online feedback form were asked to rate how important elements of the proposed design were to them. The results are below:

Q1 Do you support the following elements of the upgrade?

Answered: 90 Skipped: 0



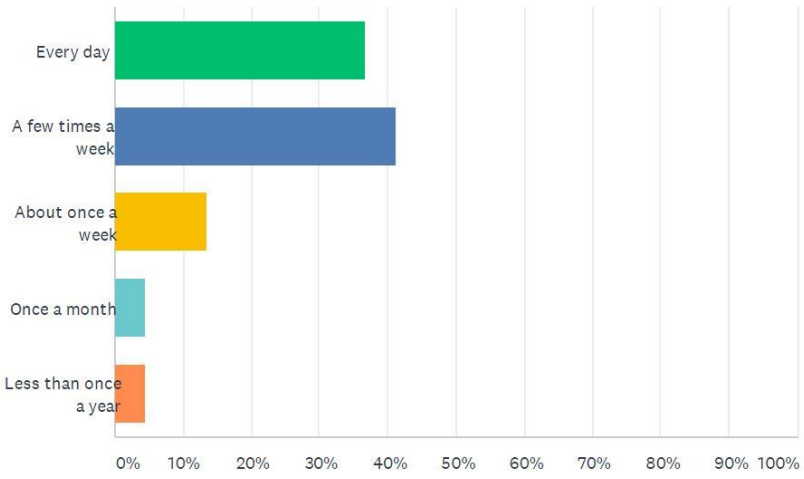

Nature play area and...
Two basketball half courts,...
Improve links between the...
Inclusion of the low barr...
Additional tables, seat...

Do not support Neutral Support Strongly support

	DO NOT SUPPORT	NEUTRAL	SUPPORT	STRONGLY SUPPORT	TOTAL
A fenced toddler play area	8.89% 8	7.78% 7	18.89% 17	64.44% 58	90
A tower play structure and slides, deck and bridges, play elements and climbing challenges	9.09% 8	6.82% 6	19.32% 17	64.77% 57	88
Imaginative play elements including sandpit (with cover), boulders, steppingstones and an open cubby house	12.22% 11	11.11% 10	16.67% 15	60.00% 54	90
An inclusive spinning carousal and a large basket swing	8.89% 8	12.22% 11	17.78% 16	61.11% 55	90
Trampolines and a double swing with toddler cradle and seats	12.22% 11	11.11% 10	15.56% 14	61.11% 55	90
Nature play area and sensory percussion play elements	11.24% 10	13.48% 12	13.48% 12	61.80% 55	89
Two basketball half courts, a netball half court and goal circle practice area	10.00% 9	17.78% 16	21.11% 19	51.11% 46	90
Improve links between the playground, picnic and open grass areas	11.11% 10	13.33% 12	26.67% 24	48.89% 44	90
Inclusion of the low barrier walls to provide separation between the playground and dog off-leash area	3.37% 3	6.74% 6	28.09% 25	61.80% 55	89
Additional tables, seats, a water bubbler, barbecue and sheltered picnic facilities for all park users	4.44% 4	4.44% 4	18.89% 17	72.22% 65	90

Q2 How often do you currently use the park?

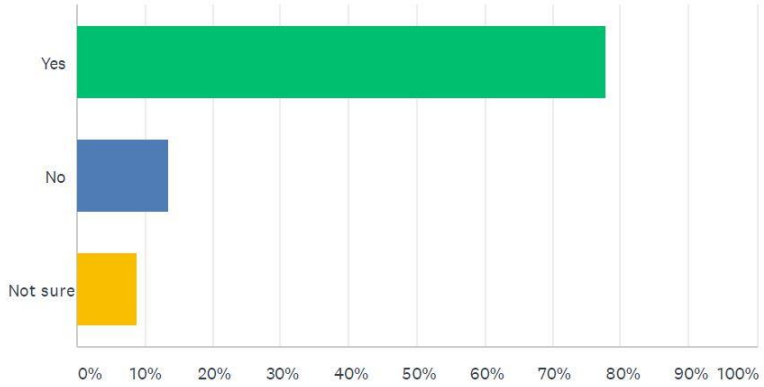
Answered: 90 Skipped: 0



ANSWER CHOICES	RESPONSES	
Every day	36.67%	33
A few times a week	41.11%	37
About once a week	13.33%	12
Once a month	4.44%	4
Less than once a year	4.44%	4
TOTAL		90

Q3 Do you think that the upgrade would change your use of the park?

Answered: 90 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	77.78%	70
No	13.33%	12
Not sure	8.89%	8
TOTAL		90

Subjects/topics raised in submissions

Several subjects/topics were raised in the feedback received. These were presented as concerns, suggestions and/or requests and are summarised below.

General		
Design	**Total**	**City of Sydney Response**
Fencing should be used around the entire playground, not just the toddler portion	13	
More tables should be included in the design for picnics	2	
Additional tables and BBQs should be installed away from the playground to keep people with dogs away from playing children	3	
The new curved path will not be used as it does not follow desire lines	1	
The playground location takes too much space away from the off-leash area	5	
More drinking fountains should be included	2	
The entrances to the park should be fenced to keep dogs in	4	
Table tennis tables should be installed	1	
Perimeter wall should be raised or have a fence placed on top so dogs cannot jump out of the park	6	
The off-leash area should be completely fenced in	9	
Dog bubbler should be located away from the BBQ area	3	
Bike parking installed	1	
More seating installed throughout the park	1	
Sports courts are unnecessary	1	
More shade structures around the picnic areas	3	
Lighting should be improved throughout park	4	

Include more bins near playground and picnic facilities	1	
One full basketball/netball court rather than two half courts	2	
Soccer nets should be placed under basketball rings	1	
Install high fencing around the courts to stop balls going over the fence into the bowling club	1	
Playspace	**Total**	**City of Sydney Response**
Do not include a sandpit as animals often use them as a toilet	6	
More swings should be included	2	
A flying fox installed	1	
More challenging equipment should be installed for older children	2	
Include waterplay elements in the playground	1	
Outside scope	**Total**	**City of Sydney Response**
Elliot Ave should be turned into a shared zone to make crossing to Erskineville Oval safer	1	
Off-leash park should be moved to Solander Park	1	
A crossing should be installed on Fox Street	2	
Toilets should be included in the park	11	

Pop-up consultation session

A pop-up consultation feedback session was held in the park from 9:30am to 11:30am on Saturday 29 May 2021.

Council staff were available to answer questions and obtain feedback about the proposed concept plan. Respondents were also encouraged view the plans and provide feedback on the Sydney You Say website. Approximately 50 people spoke to staff over the two hour period.

Overall, the feedback was positive and concepts plans are well supported. Feedback received on the day has been included in the table above.

Pre consultation feedback

Prior to undertaking general community consultation on the proposal, the City undertook some early consultation work in late 2020 to ask local residents how often they use the park and what they would like to see in the new design.

53 people responded during pre-consultation. Key takeaways from the feedback were:

- Most people (52%) visited the playground once a week with 19 respondents (37%) visited the park daily or a few times a week.
- Respondents were asked to rate the importance of key elements when upgrading the playground (1 = not important and 5 = very important). The feedback indicates a broad range of views and differing priority with most items receiving both low and high scales. However, when averaged it indicates little variance in terms of importance and priority. The items are listed in order of preference:
  - Shade provision to seating and playground
  - Barrier protection (fencing and planting)
  - Providing more nature play elements
  - Formal Play Structures (play tower, swings and slides)
  - Retain existing trees and vegetation
  - Providing seating opportunities adjacent to the playground

Engagement activities

Overview of engagement

A Sydney Your Say webpage was created, along with an online survey. 1133 letters were sent to residents in the area and key stakeholders were contacted.

A pop-up session was held in the park on 29 May from 9:30am to 11:30am. This was attended by approximately 50 people.

1. Sydney Your Say webpage

A Sydney Your Say webpage, https://www.cityofsydney.nsw.gov.au/proposed-works-maintenance/your-feedback-proposed-design-harry-noble-reserve-playground was created. The page included an electronic copy of the revised concept design, survey and other key information about the consultation.

2. Online feedback form via Survey Monkey

The community and stakeholders were able to give feedback using an online feedback form. A link to the feedback form was provided on the Sydney Your Say website.

3. Consultation letter

A letter was posted to residents, inviting them to give feedback on the proposal. 1133 letters were distributed.

4. Community meeting

A pop-up session was held in the park on 29 May from 9:30am to 11:30am. This was attended by approximately 50 people.

Document is Restricted

Item 5.

Knowledge Exchange Sponsorship - 2021 Impact X Climate Growth Sydney Summit

File No: X081463

Summary

An application from Impact X Pty Ltd has been received under the Knowledge Exchange Sponsorship program to support the 2021 Impact X Climate Growth Sydney Summit, to be held at the International Convention Centre (ICC) in Sydney on 21 and 22 September 2021.

Impact X Pty Ltd is an organisation which aims to accelerate net zero by shifting global capital and bringing together green-technology innovators and investors in the fields of food systems, energy and carbon solutions, inclusive finance, resilient cities, improved health and the circular economy.

The Impact X Climate Growth Sydney Summit is anticipated to be Australia's largest coalition of companies, government agencies, innovators and investors committed to climate action. The event is expected to be attended by over 2,500 business and government leaders with representatives from the finance, technology, research and development and professional/legal services operating in the decarbonisation space. This is the first year that the Summit will be held in Sydney.

The application has been assessed under the City's Grants and Sponsorship Policy and the criteria of the Knowledge Exchange Sponsorship program. This report recommends a $15,000 (excluding GST) cash sponsorship to support this event.

Recommendation

It is resolved that:

(A) Council approve a cash sponsorship of $15,000 (excluding GST) to Impact X Pty Ltd for the 2021 Impact X Climate Growth Summit Sydney; and

(B) authority be delegated to the Chief Executive Officer to negotiate, execute and administer a sponsorship agreement with Impact X Pty Ltd in relation to the sponsorship described in (A) above.

Attachments

Nil.

Background

1. The Impact X Climate Growth Sydney Summit will be the first global summit on accelerating pathways to zero emissions. The Summit will be jointly hosted by Business Events Sydney and Singapore-based Blue Impacts. It aims to bring Australia's most promising and exciting climate innovators to the stage and position NSW and Australia as a world leader in clean energy, decarbonisation technologies and carbon services.

2. The Summit will promote awareness of the job creation and economic growth opportunities that will come from investment into decarbonisation and climate resilience. Australian innovators including Indigenous-led carbon and climate initiatives will be presented across the agenda.

3. The Summit organisers are committed to a sustainable event that directly supports local communities. Grant funds will be used specifically for the central digital video piece to be launched and displayed at the Summit and surroundings, published on social media and produced by local disadvantaged creative film and video graphic artists.

4. As a hub for banking, finance and insurance, there are many Sydney-based businesses which will benefit directly from the event being held locally, especially in the context of a green-led recovery and in the lead up to World Zero Emissions Day and the UN General Assembly and COP26 in Glasgow.

5. Sponsorship of Impact X Summit aligns with the objectives of the City of Sydney's Environment Strategy, Economic Development Strategy and the Tech Startups Action Plan. Specifically, the Impact X Summit aligns strategically as it seeks to drive emissions reduction through the profiling of local startups supporting them to reach global markets and drive global solutions.

6. The City is committed to working with industry and government partners to strengthen the ecosystem which enables entrepreneurs to start and grow successful global businesses. Sponsoring Impact X Summit will enable the City to demonstrate this commitment.

7. This application has been assessed under the City's Grants and Sponsorship Policy and Knowledge Exchange Sponsorship program. The Knowledge Exchange Sponsorship program recognises that, for the city to thrive, we must support and create an environment that fosters collaboration and learning.

8. The application has been assessed as contributing to the following program outcomes:

    (a) adoption and implementation of best practice approaches by organisations and individuals;

    (b) strong networks where participants share resources and acquire new knowledge and skills;

    (c) improved capacity in organisations and individuals to develop and maintain sustainable business ventures; and

    (d) increased recognition of Sydney as an innovative and creative city.

9. Benefits of sponsorship to the City would be agreed with the Impact X Pty Ltd via a sponsorship agreement and would include program involvement (including keynote speaker), theme input, and promotional material.

10. Under the Knowledge Exchange Sponsorship program, not-for-profit and for-profit organisations are eligible to apply. Impact X Pty Ltd is a for-profit organisation.

Key Implications

Strategic Alignment - Sustainable Sydney 2030

11. 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 sponsorship is aligned with the following strategic directions and objectives:

    (a) Direction 1 - A Globally Competitive and Innovative City - this event will help local start-up businesses connect with investors, helping them to scale.

    (b) Direction 2 - A Leading Environmental Performer - sponsorship benefits will showcase City leadership and collaboration with other leading organisations.

    (c) Direction 9 - Sustainable Development, Renewal and Design - the Summit relates to both micro- and macro-economic opportunities for reducing emissions including sustainable development.

    (d) Direction 10 - Implementation through Effective Governance and Partnerships - the Summit is to be attended by government, business and community organisations working to a common goal.

Social / Cultural / Community

12. The event is directly engaging the local Indigenous community. Local Indigenous musical artists will perform at the evening networking event. The event is featuring Indigenous carbon and energy sector businesses. Further, food and beverages are being sourced through Indigenous suppliers.

Environmental

13. This event will provide insights into climate science impacts and opportunities to reduce and sequester carbon emissions via technology, programs, policy and good governance. It will provide an opportunity for innovators and investors to connect which will enable accelerated implementation of decarbonising technologies.

Economic

14. This event will provide insights into climate risks and opportunities for businesses operating in the local government area.

Risks

15. Due to current restrictions on public gatherings, the organisers have a Covid safety plan for the proposed event and includes contingencies for Covid-19 related restrictions. The City will work with the applicant if the event is to be postponed or converted to an online event.

Financial Implications

16. There are sufficient funds, at the level requested, to support this summit in the City's 2021/22 Grants and Sponsorship budget.

Relevant Legislation

17. Section 356 of the Local Government Act 1993 provides that a council may, in accordance with a resolution of the council, contribute money or otherwise grant financial assistance to persons for exercising its functions.

18. Section 356(3)(a) - (d) is satisfied for the purpose of providing grant funding to for-profit organisations because:

    (a) the funding is part of the Knowledge Exchange Sponsorship program;

    (b) the details of this program have been included in Council's draft operational plan for financial year 2021/22;

    (c) the program's proposed budget does not exceed five per cent of Council's proposed income from ordinary rates for financial year 2021/22; and

    (d) this program applies to a significant group of persons within the local government area.

Critical Dates / Time Frames

19. The 2021 Impact X Climate Growth Sydney Summit will be held on 21 and 22 September 2021.

EMMA RIGNEY

Director City Life

Chris Fitzpatrick, Sustainability Engagement Coordinator