Draft Strategy
March 2025

Environmental strategy 2025–2030

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area

CITY OF SYDNEY

Contents

Front cover photo: Victoria Park Parade, Zetland. Credit: Chris Southwood

The City of Sydney acknowledges the Gadigal of the Eora Nation as the traditional custodians of this place.

We acknowledge the continued care and protection that Elders and knowledge holders have provided for this place since time immemorial. These leaders are the custodians of the land, water, sky, plants, animals, stories and spirits.

This strategy explores ways we can work together to heal Country and honour the traditional ecological knowledge of Aboriginal and Torres Strait Islander people and cultures.

Kim Healey, *Jagun* (detail), 2022

Message from the Lord Mayor

The impacts of climate change are now undeniable and being felt by everyone. Nine years after the Paris Agreement was signed, the world is not on track to limit global cooling to 1.5 degrees from pre-industrial levels. 2024 was, globally, the hottest year on record. For the first time, in 2024, the Arctic emitted more carbon dioxide than it absorbed – one of our biggest carbon sinks is failing.[1] Australia, on average, has warmed by 1.51 degrees since national records began in 1910.[2] NSW's climate is changing - 6 of the 10 warmest years on record occurred in the past 10. Released in 2024, NSW and Australian Regional Climate Modelling (NARCLiM) figures show under a high emissions scenario, metropolitan Sydney will experience 10 more days a year above 35 degrees and more extreme storms and rainfall events by 2050.[3]

Across the world, more than 90% of biodiversity has been lost due to extracting and processing natural resources through mining, creating rubbish pits and over irrigating rivers and lakes. Emissions from human activities are still growing and waste is piling up. Greater Sydney is expected to run out of landfill space by 2030.

Stronger, swift collective action is needed now more than ever. Since our first environmental strategy was released in 2016, we have made substantial strides in improving the sustainability of our own operations and those of the local area. Our operational emissions have decreased by 76% from our 2006 baseline. In June 2024, 92% of our operational waste was diverted from landfill and we aim to improve even further.

Businesses and residents have worked hard to improve their environmental impact through energy reduction projects, switching to renewable electricity sources, cultivating community and balcony gardens and helping us be one of the top 10 cities in the Global Destination Sustainability Index in 2024.

As enhancing our performance becomes even more challenging, new technologies and ways of working will be needed. But we will reach our targets and continue to lead by example. Networks, industry bodies, all levels government and businesses must collaborate to maximise effectiveness and efficiency. Together, we will take firm action to combat climate change and adapt to its impacts. In doing so, we will place equality at the core of our efforts to safeguard those most affected by its impacts.

Clover Moore AO
Lord Mayor of Sydney

1 https://arctic.noaa.gov/report-card/

2 https://www.csiro.au/en/research/environmental-impacts/climate-change/state-of-the-climate/australias-changing-climate

3 https://www.climatechange.environment.nsw.gov.au/regional-climate-change-snapshots-narclim2

About this strategy

Sustainability, environmental responsibility and resilience are core to our overarching organisational strategy: Sustainable Sydney 2030-2050: Continuing the vision.

This environmental strategy focuses on **Direction 2: Leading environmental performer**. It is one of several strategies that support delivery of this direction. To avoid duplication, the following strategic areas are referenced in this strategy:

– Greening, open spaces and biodiversity – see our greening Sydney strategies

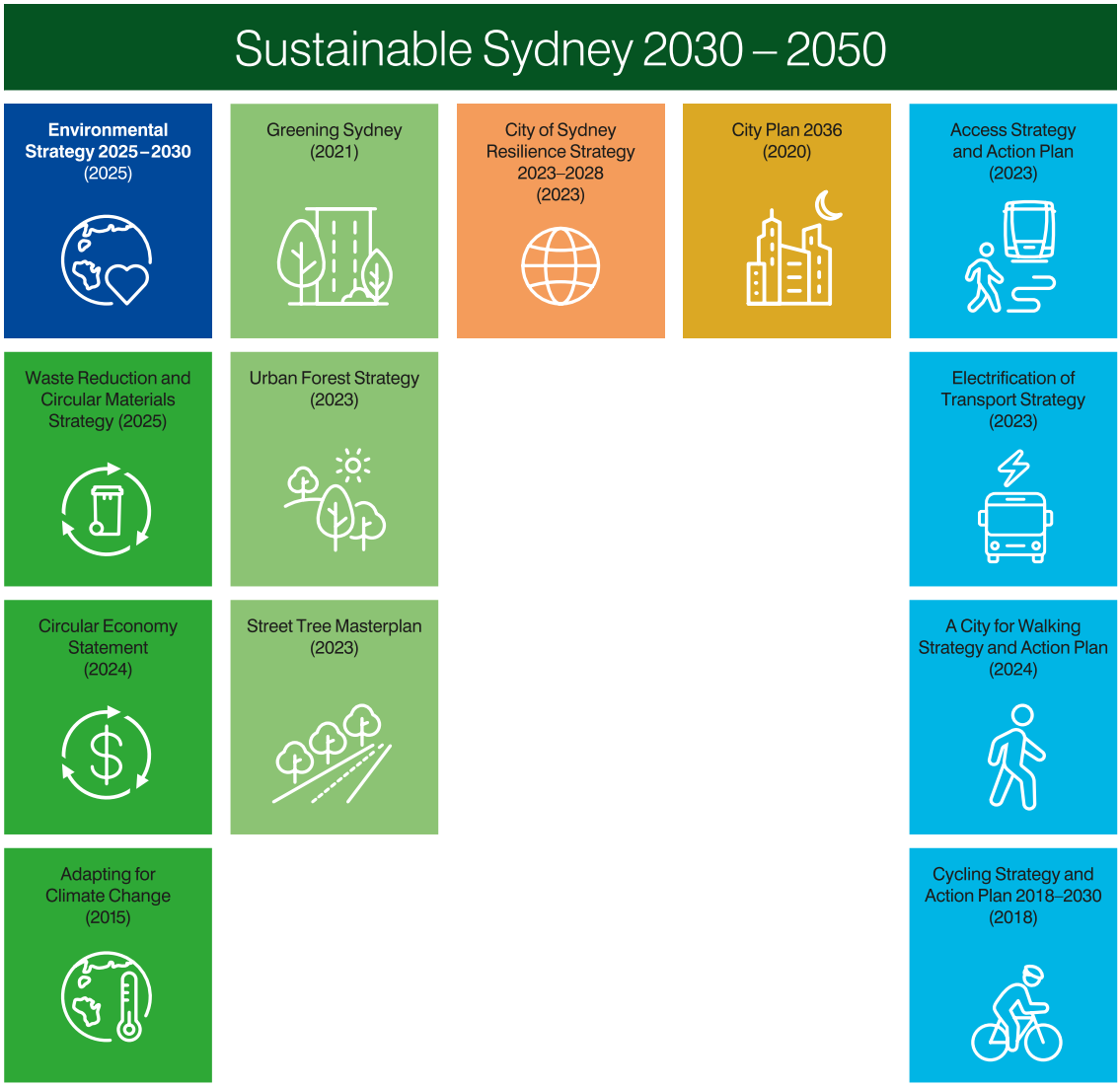
– Climate resilience – see the resilience strategy

– The green economy – see our economic development strategy

– Public transport and other transportation such as cycling and walking – see our transport and access strategies

– Waste and the circular economy – see our forthcoming waste reduction and circular materials strategy

Environmental and sustainability strategies



Executive summary

Through previous strategies, we became a global leader in mitigating climate change with ambitious targets, partnership and action.

Our environmental strategy 2021-2025 helped us to significantly reduce our operational environmental footprint and provided clear direction and support for our communities to play their role.

This strategy is a revision: building on many of our existing programs and activities, it sets out our pathway to 2030 - which will be some of the most crucial years in dealing with the climate crisis. Through 4 directions and 17 strategic priorities, we will continue to focus on reducing the environmental impacts of our own operations and those of our community.

We've committed to new work programs that will reduce energy use, emissions and water use in our operations, including eliminating fossil gas by 2030. We're designing and managing our assets to be more efficient and resilient, and we're upping our focus on embodied carbon.

We continue to support businesses and residents to achieve their sustainability goals and contribute to our targets. This includes prioritising those groups who are disproportionately affected by climate change. A new strategic priority will focus our collaboration and advocacy to enable renters to make their homes more efficient and comfortable in extreme heat and cold.

Aligning with the Greening Sydney strategy, regenerating and restoring our land and waterways will mitigate the urban heat island effect, enhance greening and help minimise environmental harm.

Strong foundations enable collective action, helping us achieve the strategy's goals and meet our targets. We will continue to share knowledge and facilitate collaboration to support businesses and communities lead their own climate action and build capabilities and resilience. Our progress towards the targets outlined in this strategy will be tracked and reported on annually.

Our vision

The city is part of a decarbonised world. Our communities live in a city that is regenerative and makes a positive contribution to the planet, to society and to individual lives. We're innovative leaders in climate change mitigation and adaptation.

– The city reaches net zero emissions by 2035 with embodied carbon significantly reduced
– Greening has increased to create a cool, calm and resilient city
– Water is managed to support a resilient, sustainable and liveable city
– A circular economy approach is embedded in products, services and systems
– Our community has the capacity to understand risk, take action and collaborate for sustainable outcomes

Sustainable Sydney 2030 to 2050: Continuing the Vision is our community strategic plan. It is the result of extensive consultation with people who live, work and visit in our city. This is their vision for 'a leading environmental performer' that is central to the future of our city.

Strategy snapshot

Operational targets

by **2030**

85% reduction in emissions from 2006 baseline

CO_2

30% reduction in energy use from FY2023 baseline

All light commercial and passenger vehicles **100% electric**

20% reduction in fleet emissions from FY 2023 baseline

Use of fossil gas eliminated

Zero increase in potable water use yearly from 2006 baseline

Local area targets

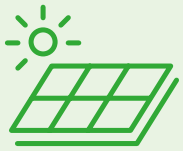
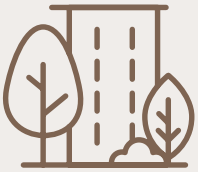
by **2030**

- **70% reduction in carbon emissions** from 2006 baseline
- **Reduce residential potable water use** to 204L/person/day
- **10% reduction in non-residential potable water use** for each m^2 from 2019 baseline
- **23% reduction in total suspended solids** from 2006 baseline
- **37% reduction in gross pollutants** from 2006 baseline
- **12% reduction in total phosphorus** from 2006 baseline
- **5% reduction in total nitrogen** from 2006 baseline

Net zero emissions by **2035** CO_2

Increase green cover by **40%**, **including 27% tree canopy** by **2050**

Strategic directions

Resilient and efficient operations	Efficient and climate resilient buildings	Regenerative and inclusive city	Strong foundations for delivery
Priorities			
Reduce direct operational emissions and energy use by electrifying our buildings and fleet	Drive electrification of all buildings and reduce reliance on fossil gas	Enhance and regenerate waterways and land through restorative practices and managing environmental risk	Understand and manage our climate risk
Deliver environmental sustainability through responsible asset planning and management	Support communities to reduce embodied carbon	Support cultural, social and economic outcomes for Aboriginal and Torres Strait Islander people through environmental action	Produce transparent reporting and inclusive communications
Build water resilience in our operations with increased efficiency and non-potable water use	Encourage community uptake of renewable electricity including onsite solar	Improve walking, cycling and zero emissions transport options for everyone	Use and share data to drive efficiency and clear decisions
Practice sustainable procurement to reduce supply chain emissions and create circular economy opportunities	Build water resilience through encouraging water efficiency in homes and businesses	Provide inclusive access in the community to reduce, reuse and repair instead of buying new	Strengthen employee and community expertise to drive environmental outcomes
	Support renters' access to efficient and climate resilient homes		

What our communities told us

We asked our communities to help inform our Sustainable Sydney 2030 – 2050: Continuing the vision strategy and our Resilience strategy 2023 – 2028. It was clear that despite stressors such as cost of living, environmental sustainability is still a very important issue for them.

When we asked for feedback to revise our environmental strategy, there was strong support to continue to improve the environmental performance of our operations and prepare new and existing buildings for the shocks of climate change, such as hotter days. More green spaces and trees to support liveability and manage heat were also important. The general view, especially among young people, was that regenerating waterways and land is essential because climate change is a significant threat to our future and the environment must be protected.

Our previous environmental strategy supported businesses to help reduce our local area's environmental footprint and they want to continue this work. Businesses identified that collaborating with us and each other is essential to further mitigate emissions and build climate resilience.

As equity is fundamental to our work, we held several focus groups with priority communities – people disproportionately impacted by climate change. Participants were from a variety of backgrounds. All felt strongly the next environmental strategy should prioritise providing access to nature in the city, supporting the community to reduce energy use and emissions, supporting renters with climate-resilient homes, and helping the community to reuse and repair instead of buying new items.

People identified managing waste as one of the key areas where they would like to be more sustainable. They see their part in reducing waste and fostering collective action to reuse or repair items. Responses also highlighted that people are keen to take local action to combat climate change.

A need to reduce fossil gas use through electrification and more use of renewable electricity was also highlighted by our communities. The impact of the cost of living, including pressure caused by increasing energy prices, and a need to retrofit older buildings to be more energy efficient were emphasised in discussions, especially when we spoke with renters and those from low-income households.

Community feedback has been incorporated into this 5-year plan.

About our local area

Sydney is dynamic, diverse and densely populated. For tens of thousands of years, the land on which it stands was cared for by the Gadigal people of the Eora nation. They were the custodians of the land, water, sky, plants, animals, stories and spirits. Since colonisation, these natural features have been overlaid by roads, buildings, infrastructure, new plants and animals, and people from all over the world. As stewards of our area, we acknowledge these layers of history and the many activities that have harmed our environment. But we are now working hard to rehabilitate the land and make sure our built environments welcome people and natural systems. Balancing these goals with economic and social objectives is a constant challenge, playing out in a very small area.

26 sq km

230,000+
residents [1]

1 million+
daily users [2]

140,000+
homes [3]

5100+
commercial buildings [4]

21,000+
businesses

215 hectares
green open space

35,500
trees in streets and parks

330km
roads

[1] ProfileID, as at June 2023
[2] City of Sydney, Internal Analysis, 2024.
[3] Housing Audit June 2024
[4] City of Sydney, Internal Analysis, 2024.

Direction 1: Resilient and efficient operations

Rooftop solar panel array at Perry Park Recreational Centre, Alexandria.
Credit: City of Sydney

We've already made many improvements in the efficiency and sustainability of our operations. We've reduced our carbon emissions by 76%. We've reduced the amount of potable water used in our parks and pools and turned to innovative ideas and partnerships to recycle water for street cleaning. Sustainability is embedded in our policies and processes. But we still have more to do.

Decreasing our operational environmental footprint even further will not be easy. As our population grows and our climate changes, we'll need to maintain and increase our services. For example, more green spaces will need to be irrigated, use of our libraries and community centres will increase and our roads and pavements will come under increasing stress.

Priority 1. Reduce direct operational emissions and energy use by electrifying our buildings and fleet

To reduce the impact of our operations, we must cut our energy use and waste in buildings, parks and pools.

Since 2006, we have reduced our direct emissions by 76% (as of June 2024) – see figure 1. Our remaining emissions come from: fossil gas; fuel used by our fleet and major contractors; refrigerants; major events; waste; business travel; commuting; food and catering.

We aim to reduce our emissions to 85% of our 2006 baseline by 2030. We plan to eradicate fossil gas from our properties, use less harmful refrigerants in our air-conditioning and make significant energy efficiency improvements, with long-term budget for these projects confirmed.

We buy all our electricity from 100% renewable sources through a power purchase agreement. We also use rooftop solar. Our target to reduce energy use by 30% will help us save money, remove gas use from our operations and play our part in reducing the load on the electricity grid at peak times.

We don't see a role for renewable gas in our operations, or in the grid. Renewable gas should be prioritised for industrial applications where viable alternatives are currently lacking.

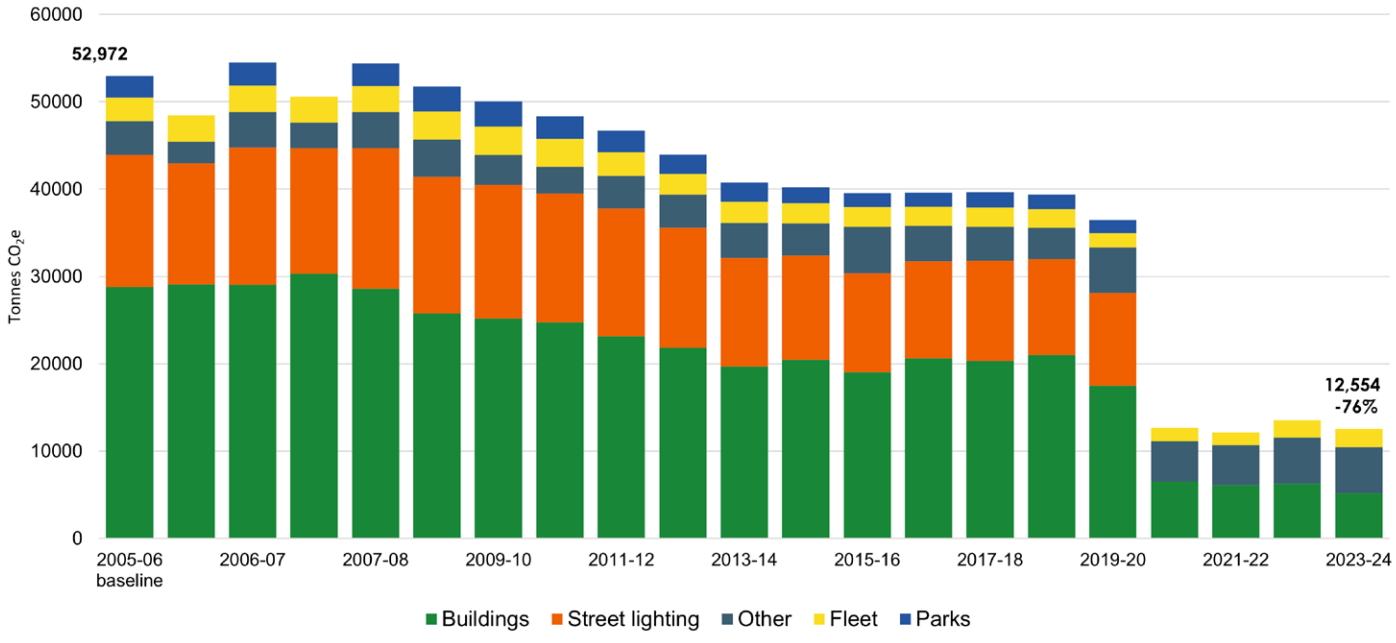


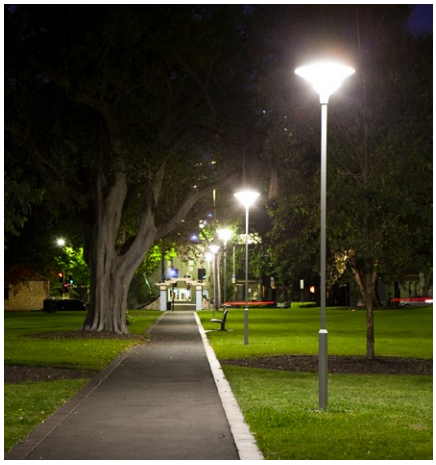
Figure 1: Our operational emissions reduction from a 2006 baseline

Our targets

85% **reduction in our operational emissions by 2030**
from 2006 levels

By June **2030** **fossil gas eliminated**
from our operations

30% **reduction in energy use by June 2030**
from a FY2023 baseline



LED lighting in Alexandria Park.
Credit: Jamie Williams

Electric heat pumps replacing gas at Victoria Park Pool.
Credit: Supplied by Image Air

LED street lighting, Portman Street, Zetland. Credit: City of Sydney

Our electric passenger vehicles charging at Town Hall House.
Credit: Chris Southwood

Fleet transition to electric vehicles

Several types of vehicles make up our fleet, from passenger cars to street sweepers and large rubbish collection trucks. Since 2014, we've transitioned to lower emissions vehicles by first using hybrid cars and now fully electric passenger vehicles. We've also introduced small electric waste collection vehicles that provide clean and safe cleansing services.

Shifting our heavy vehicles to electric is more challenging due to availability and operational constraints. We are trialling electric trucks to identify operationally viable solutions and future proof our capacity to offer efficient services.

At the same time, we're installing electric vehicle charging infrastructure at our operational facilities.

Our targets

20% **reduction in fleet emissions by June 2030** from FY2023 baseline and all light commercial and passenger vehicles

100% electric

City of Sydney's first electric fleet truck. Credit: Jennifer Leahy

Priority 2. Deliver environmental sustainability through responsible asset planning and management

Our community asset management plan integrates environmental best practice into every aspect of infrastructure, from planning and design to upgrades and maintenance.

Addressing the operational impacts of our infrastructure during the design or renewal phase can lower environmental impacts and ongoing costs. We can enhance the design of our assets by adopting materials and technologies that reduce energy and water use and incorporate circularity from the outset.

Prioritising better design means focusing on how a building functions. Do material choices interfere with energy efficient heating or cooling? Can recycled water be used? Will the building remain fit for purpose over time and not have to be replaced or upgraded too frequently?

Embodied carbon is a key focus for roads, cycleways, stormwater infrastructure, public spaces, and buildings. Emissions from production of materials such as cement, glass, aluminium, and steel are significant but will decrease as industries adopt cleaner processes and materials and use renewable energy.

Although embodied carbon has been challenging to measure, new tools make this possible. Emissions from capital works can be significant. We will assess upfront embodied carbon during decision-making and, as a member of industry groups, work with suppliers to transform the market.

In our own operations, we'll trial and replace construction materials with sustainable, lower-carbon options, such as low-carbon concrete, crushed recycled glass in asphalt and pipes, and recycled aggregates.

We will report on the embodied carbon of major projects.

While global supply transformation is needed to make low-emission materials the norm, we can play a role.

The renovation of the Aboriginal knowledge and culture centre at 119 Redfern Street used environmentally sustainable materials like cork, and re-used materials from the original fit-out. Credit: Will Jones

Explainer: What is embodied carbon?

Embodied carbon
The emissions from manufacturing, transportation and installation of building materials for the initial construction

Operational carbon
The emissions from a building's on-going energy consumption - including those from new interior fit-outs, materials and the like

The embodied carbon from buildings and infrastructure made up 10% of Australia's carbon emissions in 2023[1]. Embodied carbon is the emissions generated from making, transporting, installing, maintaining, and disposing of materials used in buildings and infrastructure. It refers to the entire lifecycle from construction to refurbishment and deconstruction.

It's a big source of emissions globally. Most of these are from emissions which happen before or during construction. These emissions are locked in after construction. Embodied carbon can be minimised by avoiding or reducing the need for new materials during design stages, reusing existing structures, using recycled and low emissions materials, sourcing locally and constructing with techniques such as prefabrication.

Operational carbon refers to the carbon emissions produced during use of a building. Unlike embodied carbon, operational carbon emissions continue throughout a building's life.

The Australian Government estimates that use of more sustainable materials could reduce upfront emissions by one quarter as soon as 2027, with more savings possible through better design and by building less.

As operational emissions decline due to electricity grid greening, embodied carbon is on track to be the largest source of emissions in the building sector. The decisions made today will lock in or reduce emissions for years to come.

1 https://www.infrastructureaustralia.gov.au/reports/embodied-carbon-projections-australian-infrastructure-and-buildings

Using smart technology to efficiently irrigate our green spaces helps reduce potable water use. Reg Bartley Oval, Rushcutters Bay.
Credit: Chris Southwood

Priority 3. Build water resilience in our operations with increased efficiency and non-potable water use

Sydney's growing population is driving higher water demand, while climate change brings less predictable rainfall, prolonged droughts, and extreme weather. We rely on potable water for irrigation, cooling, and cleaning. However, increasing urban greening and canopy cover to combat climate change requires a resilient water supply.

Depending entirely on potable water threatens our ability to adapt to future droughts. To address this, we are identifying and integrating non-potable water sources into our water supply. These include stormwater harvesting, expanding recycled water networks, and using rainwater or water in buildings, community gardens, parks, and street cleaning. Reducing potable water use is vital for operational resilience and sustainability.

Priority 4. Practise sustainable procurement to reduce supply chain emissions and create circular economy opportunities

We buy a wide range of goods and services when serving our communities. These purchases have environmental impacts, and we have a responsibility to consider the most sustainable option. We can do this by specifying materials, management practices and circularity principles in our procurement contracts.

Working closely with our suppliers will allow us to monitor their environmental performance and improve it during the life of a contract. We also look to our suppliers for innovation in environmental performance and circularity.

As an organisation, we'll improve how we apply circularity principles to the products and services we buy as well as programs we provide.

Our circular economy statement highlights the ways we support circularity leading to less waste and lower emissions.

Our targets

zero **increase in potable water use yearly until 2030**
from 2006 baseline

Direction 2: Efficient and climate resilient buildings

View over Green Square from the Drying Green.
Credit: Abril Felman

Buildings account for nearly 75% of carbon emissions in our area. As Sydney grows, designing and constructing efficient, environmentally smart buildings is crucial to reducing carbon emissions, water use, and waste.

Through sustainability programs, grants, and advocacy, we've helped improve building performance across our local area. Since 2006, local emissions have dropped 41%, non-residential water use is down 29% since 2019, and residential per-person waste has decreased 18% since 2015. These achievements set the foundation for further progress under this strategy.

Green Wall Trio Building, Camperdown. Credit: Paul Patterson

Priority 5. Drive electrification of all buildings and reduce reliance on fossil gas

To meet emission reduction targets, buildings must transition away from fossil gas to full electrification.

Electrifying existing buildings is more complex than new ones due to space constraints, decision-making challenges, and split incentives between owners and tenants. Governments must provide incentives for electrification, especially for apartments, renters, and low-income households.

Emissions can be reduced and positive health benefits realised by replacing gas appliances with electric options like reverse cycle air conditioners, heat pump hot water systems, and induction cooktops. Switching to cleaner energy sources, such as solar power or renewable electricity plans, further cuts emissions.

Since October 2023, new large commercial developments and major redevelopments in our area must reduce emissions with efficient, renewable energy or be capable of achieving net zero prior to opening. Proposed changes to our Sydney Development Control Plan (DCP) 2012 include rules to improve indoor air quality and health in new residential developments by preventing indoor gas appliances. We are exploring expanding these rules to new non-residential developments and domestic hot water systems in new residences.

Some apartment complexes have embedded networks - private energy networks for electricity or gas. Embedded network operators receive energy from the grid and then on-sell it to the residents of an apartment complex. There is concern from consumer groups and other government agencies about residents being locked into an expensive, and high-emission, power supply. The City does not have the power to prevent the establishment of embedded networks in our local area, but we have joined with other advocates in calling for these networks to be better regulated and to improve consumer protections.

Goulburn Street parking station with EV chargers. Credit: Chris Southwood

Through sustainability programs, we help residential and commercial organisations to electrify their buildings. Initiatives like Smart Green Apartments and green building grants assist owners' corporations with energy use and electrification studies. The Better Buildings Partnership provides electrification resources for the commercial property sector.

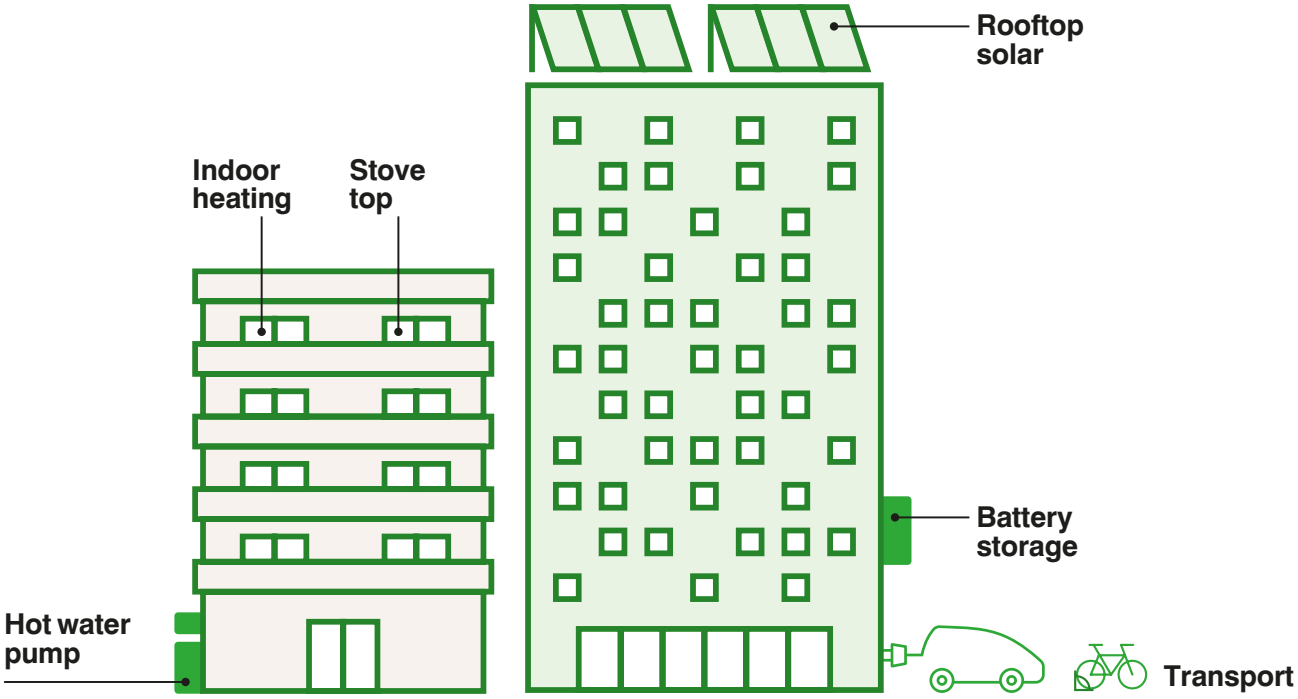
However, voluntary programs will not be sufficient to affect change across the sector. We will continue to advocate for the mandatory disclosure of the energy performance for all major building types, including apartment buildings, expanding on current federal Government requirements for commercial buildings. Disclosure is proven to raise awareness and lead to significant improvements in building performance.

Our targets

net zero by **2035**

70% **reduction in carbon emissions** by 2030 from 2006 baseline

Explainer:
The challenges of electrification



New developments face hurdles like higher upfront costs for all-electric systems, spatial constraints, and preferences for gas. However, the benefits of electrification are substantial:

– lower emissions

– improved indoor air quality

– reduced energy costs

– better climate resilience.

Electric buildings are more efficient, healthier, and cost-effective over time.

Affordable electric appliances and rooftop solar systems create long-term savings and help stabilise the grid. Using solar energy during the day, storing it, or pre-cooling commercial buildings reduces energy waste, afternoon demand, and blackout risks.

Expanding EV charging infrastructure, particularly in apartments, is essential to future proof buildings in the energy transition. We offer green building grants for electrification assessments including assessing the feasibility of EV charging. We also collaborate with the NSW Government to promote retrofitting incentives and advocate for clear EV charging safety messaging.

Through the Smart Green Apartments program, we help building managers and owners' corporations understand the benefits of electrification, energy efficiency and renewable energy. Equitable electrification is key to ensuring renters, apartment occupants and low-income households can benefit from renewable energy and storage.

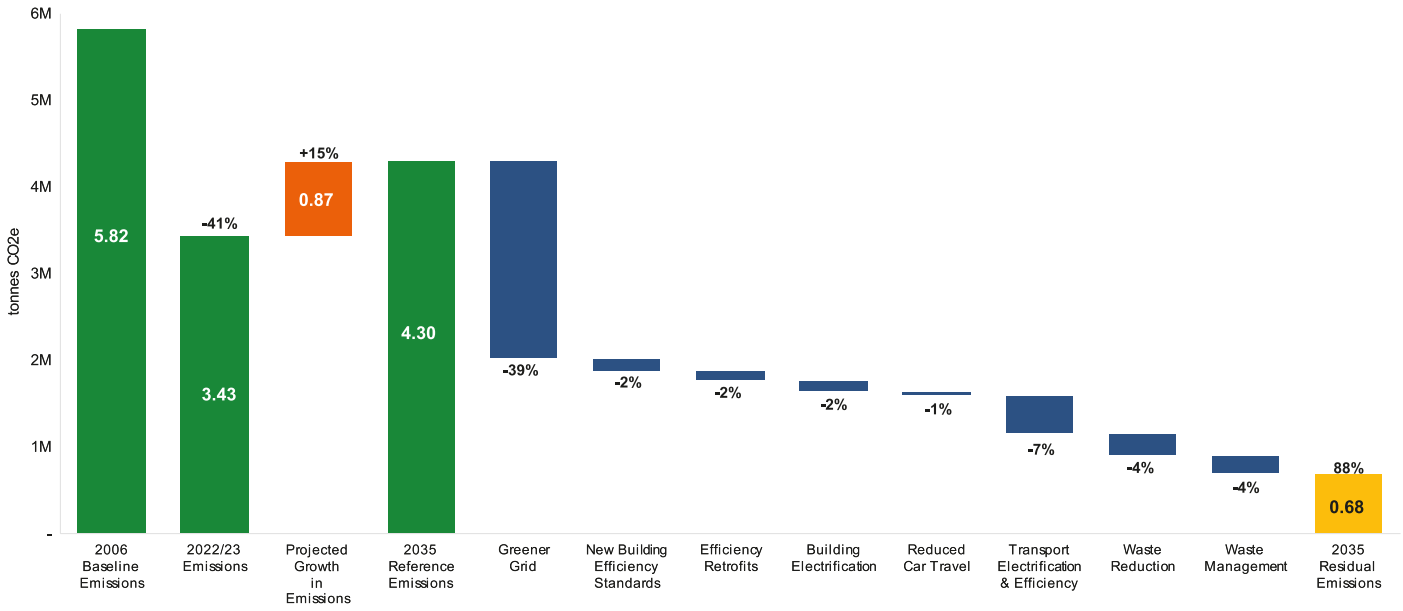


Figure 2: Pathway to net zero emissions (Kinesis data, 2024)

Wulbujubur cultural burning project.
Credit: Aboriginal Carbon Foundation

Our journey to net zero by 2035

As of 2023, emissions for the local area were reduced by 41% relative to the 2006 baseline. The electricity grid has become greener, which together with improvements in buildings and transport has produced real emissions reductions. We have narrowed the gap to net zero.

See figure 2 for what our path to net zero emissions by 2035 may look like. Continued greening of the grid makes the largest contribution, complemented by policies and programs that target waste and gas emissions, improve energy efficiency, reduce car use and electrify transport.

We will use our influence and continue policies and programs that reduce hard-to-avoid emissions in priority areas. But there are likely to be residual emissions. We estimate these residual hard-to-avoid emissions to be 0.68 million tonnes of CO2e by 2035, which is 88% below our 2006 baseline.

We want our local area to align with leading net zero practices by cutting emissions as the top priority and supporting projects that remove carbon from the atmosphere. Innovative carbon removal technologies are emerging as a way for cities to reach net zero, for example by using construction materials that sequester carbon, or by supporting carbon farming in neighbouring regional areas.

Carbon farming is a practice that stores carbon in the soil and plants. The potential for carbon farming in NSW to benefit Aboriginal communities is significant. Aboriginal-led, regenerative carbon farming projects can contribute to employment, cultural practices and revitalisation, wellbeing, healthy ecosystems and connection to Country. Long-term purchase agreements by organisations are key to enabling such projects.

Supporting carbon farming and associated carbon credits is an opportunity for businesses to contribute to social, cultural and economics for Aboriginal and Torres Strait Islander people. We want to see public and private investment directed to Aboriginal businesses and practitioners for high-integrity nature restoration and carbon farming projects. By quantifying these efforts, we can align them to our hard-to-avoid emissions.

We remain committed to our area achieving net zero emissions by 2035. We want to be one of the first cities to show net zero is possible.

Priority 6. Support communities to reduce embodied carbon

Embodied carbon has traditionally been difficult to measure or reduce. Thankfully, momentum is gathering on ways to identify and reduce this major source of emissions.

The NABERS national standard and emissions database is freely available to designers and developers to consistently measure and certify embodied carbon from the construction of new buildings and infrastructure.

There are many industry bodies and government departments working on the policies and support needed to reduce embodied carbon emissions.

New mandatory climate risk disclosure requirements for large organisations will likely lead to a greater focus on reporting embodied carbon as part of investor-led climate action by companies.

Cleaner industries are emerging and commercial products such as low emissions cement, recycled content steel and other materials are available. But more needs to be done.

A NSW Government survey[1] shows a high level of awareness about upfront carbon and its implications in construction but almost all respondents have low confidence in reducing these emissions.

We will advocate for reducing embodied carbon in the built environment sector as a key priority for the national and NSW governments. Reducing embodied carbon remains a key theme for our sustainability program partners. We will apply embodied carbon planning rules in line with the NSW Sustainable Buildings SEPP and national construction code requirements.

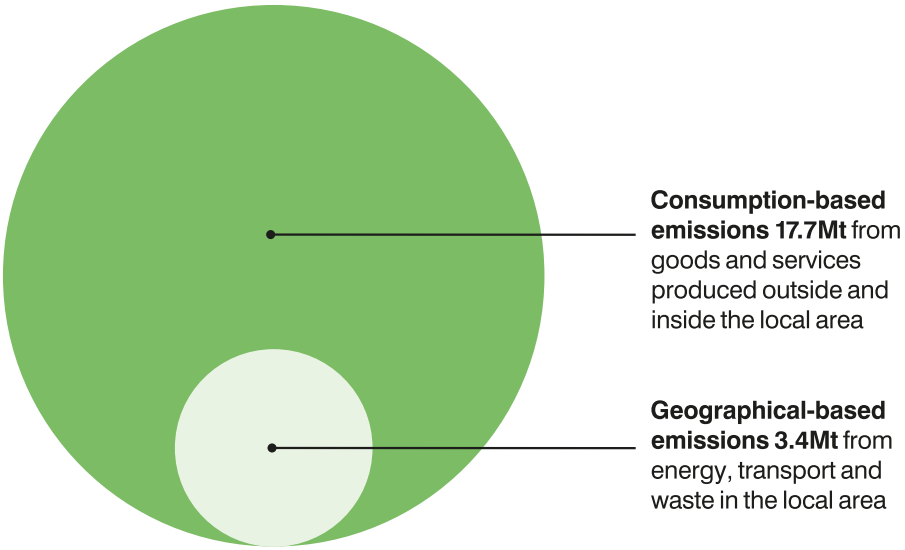
Pyrmont Community Centre under construction.
Credit: Will Jones

Replacing the road surface on Clarence Street with asphalt containing recycled materials to lower its embodied carbon.
Credit: Matt Formica

Skatepark bowl under construction, Sydney Park, Alexandria.
Credit: Chris Southwood

1 https://www.infrastructure.nsw.gov.au/expert-advice/decarbonising-infrastructure-delivery/

Explainer: Geographic verses consumption-based emissions counting



Cities and regions use a geographic-based approach to report emissions including those from electricity, gas, transport, waste, and wastewater. This method prevents double-counting emissions across regions by establishing a boundary around our area. Our target of net zero by 2035 aligns with this geographic-based approach.

However, large city economies like ours rely heavily on products and services made elsewhere, with emissions from these allocated to the regions where they are produced, and we can reduce these emissions by influencing demand. Estimating emissions from products and services used or consumed in our area is known as a consumption-based approach.

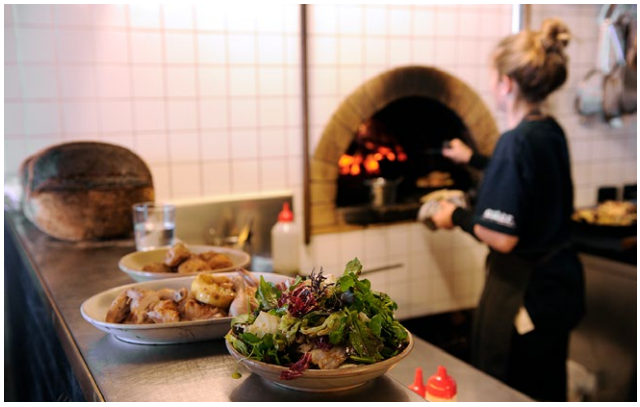
Our area's major sources of consumption-based emissions include air travel, food, utilities, construction, and other goods and services. Domestic flights contribute significantly to air travel emissions, and therefore, we will advocate for state and federal governments to prioritise high-speed rail.

Food and beverage emissions, from production to consumption, are also substantial. Supporting local food production and helping communities reduce food waste can lower these impacts.

Embodied emissions in construction will increasingly be managed through policies, measurement, and reporting, supported by our planning rules and programs.

Our forthcoming waste reduction and circular materials strategy focuses on reducing consumption by funding and supporting projects that encourage reuse and repair over buying new, particularly for small electronics, textiles, and plastics.

Air travel to Sydney is one of the largest sources of consumption-based emissions



Food and beverages are a substantial source of emissions too

Smart Green Apartments partner Windsor Plaza and their rooftop solar array. Credit: Katherine Griffiths

Priority 7. Encourage community uptake of renewable electricity including onsite solar

Australia is rapidly transitioning from coal-sourced electricity to renewables like solar and wind. Renewable electricity has grown from 15% to 40% of national supply since 2014. The grid is expected to exceed 80% renewables by 2030. This progress supports climate goals and our local net zero target, with electricity accounting for 69% of local area emissions in 2023.

A more efficient, two-way distributed energy system is emerging, combining large-scale generation with local energy efficiency, small-scale renewables, storage, and flexibility. Cities like Sydney will play a key role in navigating challenges and opportunities as energy generation, use, storage, and sharing evolve over the next five years. Ensuring electricity remains affordable, equitable, and reliable during this transformation will require innovation.

Large-scale solar, wind, battery storage, and transmission infrastructure are expanding rapidly. Smaller-scale batteries in homes and businesses, alongside electric vehicles as “batteries on wheels,” are growing in importance. About one-third of Australian homes and many businesses now have solar, generating 21 GW of electricity in 2024. Locally, more than 33 MW of solar is installed across 3,000 buildings.

In a high-density local area like the City of Sydney, rooftop solar must be balanced with other demands, rooftop gardens may be prioritised on flat roofs and solar may not be worthwhile where future development could overshadow solar panels. Nonetheless, installations are increasing, supported by state and federal incentives. Rooftop solar provides free electricity to building occupants, and along with large-scale solar, reduces wholesale electricity prices during the day.

We advocate for incentives and price signals to enable zero-emissions electricity, improve grid flexibility, and allow real-time sharing of renewable energy between buildings. Raising awareness about government incentives and simplifying energy rules are also priorities.

Our sustainability programs offer guidance, workshops, grants, and case studies to promote renewable energy. Since 2021, we’ve raised awareness of GreenPower, enabled solar arrays in heritage zones, supported feasibility studies in strata apartments, and encouraged innovative solar projects.

Our targets

Reduce residential potable water use to 204 litres /person/day by 2030

10% **reduction in non-residential potable water use** /m² by 2030 from 2019 baseline

Priority 8. Build water resilience through encouraging water efficiency in homes and businesses

The 2017-2019 drought was a stark reminder of Greater Sydney's vulnerability to water shortages, with more than 50% of water storage depleted in just 2.5 years. Desalination plants may help avoid the severest of restrictions and the possibility of Greater Sydney running out of water. But further action is still required to preserve this vital resource. It can take months for desalination plants to reach full production and years to build more weather-independent water sources.

One of the three key elements in the state's Greater Sydney Drought Response Plan is to reduce water demand by restrictions and conservation. Water efficiency can be improved by fixing leaks, using efficient appliances and changing behaviour. This is particularly challenging to address in apartment buildings because it's harder to find leaks and with many owners and stakeholders, the decision-making process is more complex.

We encourage local apartment buildings to take up Sydney Water's WaterFix Residential program. High water-using apartment buildings can access the service to detect and repair leaks and replace inefficient water fixtures and appliances.

Priority 9. Support renters' access to energy efficient and climate resilient homes

In our area, 65% of households rent[1], and rental properties are often less energy-efficient than owner-occupied homes. This leads to wasted energy, higher carbon emissions, cost of living pressures, and health risks. Renters seeking refuge from climate impacts, like heatwaves—deadlier than all other natural hazards in Australia—struggle in homes without effective indoor temperature regulation. These risks will worsen as summers grow longer and hotter.

Upgrading rental properties with insulation, draught-proofing and efficient heating and cooling can alleviate hardships and support our net zero target. Renters have limited control over their homes due to laws, regulations and a competitive market that restricts options.

The national Trajectory for Low Energy Buildings framework includes measures like energy efficiency disclosure, minimum rental standards and financial incentives for landlords. We advocate for mandatory energy performance disclosure, especially in apartments and their common areas. While the National Home Energy Ratings Disclosure Framework is expected in 2025, a benchmarking tool for rating entire apartment buildings is still lacking.

We will advocate for minimum rental standards with safeguards to avoid effects on housing affordability, with resources for monitoring and enforcement.

We also promote state and federal programs and upgrades that help renters access renewable energy and energy-efficient technologies building-wide.

1 Housing Audit June 2024 - https://www.cityofsydney.nsw.gov.au/research-reports/city-monitor-reports

Partnerships

The most powerful changes always happen in collaboration. Minimising the local environmental footprint is no different. Everyone has a part to play to ensure buildings where we work and live have a minimal environmental impact and are fit for the future.

Paloma is one of 300 apartment buildings that have participated in the Smart Green Apartments program.
Credit: Chris Southwood

Smart Green Apartments

We work with owners, strata managers and building managers to improve the environmental performance and resilience of apartment buildings. Participants learn to understand their energy and water use as well as opportunities to reduce waste, install solar panels, electrify their buildings with heat pumps and electric vehicle charging infrastructure.

Since 2016, we've worked with almost 300 apartment buildings to provide NABERS ratings and action plans, which highlight opportunities for sustainable upgrades.

On average, buildings can reduce their energy use by 33%, equalling a yearly cost saving of up to $40,000.

Apartment buildings taking part can enjoy networking and collaboration with other residential communities. The goal is to accelerate energy efficiency measures and renewable energy uptake as well as reduce water consumption and waste generation.

Our sustainability programs partners coming together to showcase and celebrate their achievements in 2024.
Credit: Katherine Griffiths

Australian corporate law firm Gilbert + Tobin switched to 100% GreenPower through our CitySwitch program.
Credit: Stefanie Zingsheim

Sustainable Destination Partnership

We bring together owners, managers and key influencers in Sydney's accommodation and entertainment sector to reduce emissions, water use and waste. The partnership represents over 70 buildings, 53% of hotel rooms and 17% of entertainment venues in our area. The collective tackles key sustainability issues and develops solutions that are shared among members and tourism partners. In June 2023, the partnership achieved a 24% reduction in emissions and a 24% reduction in water from a June 2018 baseline.

Better Buildings Partnership

We participate in this leading collaboration of property owners, managers and key industry stakeholders to improve the performance and sustainability of buildings across Australia. The partnership has 19 members. In our area, 55% of office space is represented, spanning 99 buildings. As of 30 June 2023, the partnership achieved a 95% reduction in emissions intensity and a 63% reduction in water use from a 2006 baseline.

CitySwitch

We coordinate this free national net zero program that supports office-based businesses. Our partners include City of Melbourne, North Sydney Council, City of Yarra, City of Port Philip, City of Ballarat and NABERS. Designed to help businesses quantify emissions and work towards net zero, the program focuses on areas such as reducing waste, renewables, and supply chain emissions. Members are supported through workshops, webinars, resources and tools. The program represents 10% of office space nationally. Among local members, 80% of tenancies have switched to renewables.

Direction 3: Regenerative and inclusive city

Restored wetlands in Sydney Park.
Credit: Ethan Rohloff

Cities across the world are focusing on how nature-based and community-designed actions can contribute towards their health, connection and resilience. Sydney is a city of green spaces, blue waterways and a very diverse population. In our quest to be environmentally responsible and protect biodiversity, we must ensure that nature-based solutions and inclusive actions are a priority.

The Gadigal, first people of this area, lived with and nurtured the natural environment for thousands of generations, caring for Country. Country is more than the land. It is the people, water, sky, plants, animals, stories and spirits of a place. Caring for Country builds community connections and a shared understanding. It brings balance and inclusivity to this direction.

Across our local area, we have restored contaminated sites such as Sydney Park, a public green space that enables animals and plants to thrive in the wetlands amid careful planting. Rain gardens filter out harmful pollutants from stormwater to help build the health of our waterways and harbour.

As in our resilience strategy, this document acknowledges priority communities are disproportionately affected by the impacts of climate change, and we plan to strengthen and support them. We'll advocate for priority communities to have equal access to affordable renewable energy options. We want to ensure that everyone in the community has access to environmentally-friendly modes of transport. We will continue to provide programs that support priority communities to reduce waste and achieve their sustainability goals.

Canal Reserve, Montague Crescent, Forest Lodge. Credit: Will Jones

Explainer: Priority communities

Kendall Towers, Redfern. Credit: Katherine Griffiths

While climate change affects everyone, those who contribute the least to the problem are disproportionately impacted. Climate change worsens existing stresses, where even minor shocks can cause long-term harm.

'Priority communities' describes groups experiencing vulnerability due to systemic or circumstantial factors. These individuals may need extra support during stressful situations or emergencies and may belong to more than one priority group, experiencing heightened vulnerability.

Under this strategy, priority communities include:

– Aboriginal and Torres Strait Islander peoples
– people on low incomes
– renters and social housing residents
– people experiencing homelessness
– people with disability
– those with mental health or chronic health conditions
– people over 65
– babies and children under 5
– new migrants, non-citizens and refugees
– culturally and linguistically diverse people (with English as a second language).

According to the 2021 Census, 60% of residents in our area rent, often in medium or high-density buildings. Over 22,000 households live in social or community housing and/or are on low incomes. These residents are particularly vulnerable to climate impacts due to poor-quality, energy-inefficient housing that fails to protect against extreme heat or heavy rainfall. With fewer resources, less empowerment, and limited ability to adapt, they face greater risks of heat injury, higher energy costs, and decreased wellbeing.

Our programs and actions to address climate change must prioritise those most affected, fostering sustainable, equitable change.

Priority 10. Enhance and regenerate waterways and land through restorative practice and managing environmental risk

As one of the most urbanised parts of Australia, our landscape and waterways have been substantially reshaped since colonisation. Creeks, wetlands and the land in between were converted to industrial precincts, now transitioning into spaces to live and play. We inherited contamination from historic industries and landfills and need to manage the risk of land and water pollution.

Managing environmental risk aims to prevent damage while restorative practice improves the current state of the land and waterways. Both are important. Strong environmental management for our sites and services helps our teams understand how our activities may cause environmental damage, eliminate the chance of harm and respond to problems. In the next 5 years, we will strengthen our environmental management of our own land with updated guidance, more investment in training and improved records management. We also aim to reduce harm reduction in private properties through our contaminated land policy and development application provisions. We enforce water quality improvement through the Water Sensitive Urban Development provisions and the Protection of the Environment Operations Act 1997 (POEO Act).

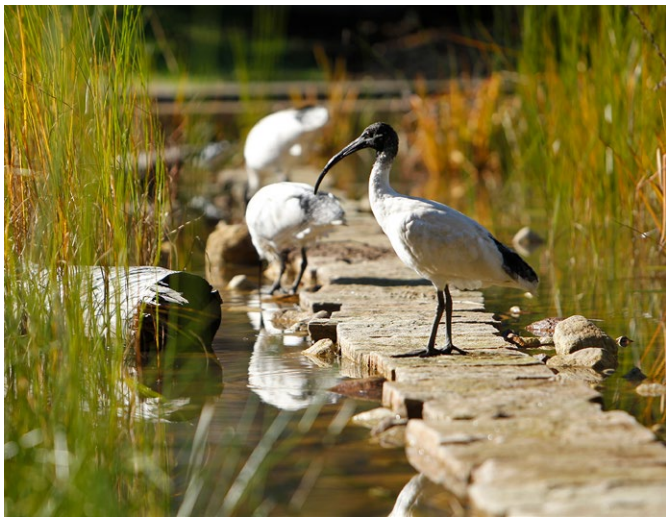
Urban stormwater systems directly affect waterway health, flushing chemicals and items from streets into rivers and bays. We assess water quality by reporting on litter, sediment and nutrient loads that flow from our area into the stormwater system.

As we manage 80% of the local stormwater network in our local area, we have improved water quality by installing 47 gross pollutant traps and 250 rain gardens to stop excess stormwater, nutrients, rubbish and sediment from polluting local waterways. We'll expand the number of gross pollutant traps by installing an additional 9 traps over the next 5 years.

We'll also tackle pollutants by collecting waste from public places, cleaning streets, and enforcing planning rules in private developments.

Our artificial wetlands, such as Sydney Park or Woolwash Park Pond, are examples of our restorative practices. Rehabilitated from their industrial past, they provide habitat for local wildlife and migrating birds, replacing some of the wetland ecosystems lost through urban development. They also act as a biological stormwater filter, with plants and algae catching sediments and absorbing pollutants. We'll continue to measure the levels of nutrients in our stormwater harvesting systems to ensure adequate filtering by plants. These water stores are also an important source of non-potable water for irrigation. We'll look for more opportunities to deliver naturalisation projects.

Our area is located between 2 saltwater ecosystems. Water that falls in the north flows into Sydney Harbour and water in the south flows into Botany Bay (Kamay) through Alexandra Canal. The health of these waterways and coastal areas depends on multiple stakeholders. We will continue to support the coastal management programs for Sydney Harbour and the Cooks River catchment, and advocate for a concerted effort to protect water quality.



Birds in Victoria Park, Broadway. Credit: Jamie Williams

Shea's Creek water channel, Alexandria. Credit: Adam Hollingworth

Our targets

Improve water health by 2030

from 2006

- **23%** reduction in total **suspended solids**
- **37%** reduction in **gross pollutants**
- **12%** reduction in total **phosphorous**
- **5%** reduction in total **nitrogen**

Increase overall green cover to 40% across the local area, including **27% tree canopy by 2050**

Glebe Bushcare Group helping to restore local bushland around Orphan School Creek in Forest Lodge. Credit: Katherine Griffiths

JV McMahon Reserve, Forest Lodge. Credit: Abril Felman

Explainer: What is nature positive?

According the NSW plan for nature, nature positive means the environment is being repaired and regenerated. Cities and economies depend on healthy, functioning natural systems. This is the next step beyond current sustainability approaches of minimising negative effect, and instead focuses on the repair and regeneration of the environment. International, national and state governments and organisations set targets, develop nature positive frameworks and report on progress. The diagram above demonstrates the key elements of a nature positive approach.

Our greening Sydney strategy provides more information about how we help regenerate the environment.

WINYA is majority Indigenous owned and controlled business, supplying workstations, sit-stand desks, task seating, lounges and storage, lockers and boardrooms through Indigenous employment focused manufacturing. Credit: Shyma Sreekanta, WINYA

Priority 11. Support cultural, social, and economic outcomes for Aboriginal and Torres Strait Islander people through environmental action

We acknowledge the incredible resilience of Aboriginal and Torres Strait Islander people who, despite unconscionable adversity, continue to remain connected to, and protectors of, Country.

We will always respect Indigenous cultural and intellectual property and never use Aboriginal and Torres Strait Islander knowledge without full, prior and informed consent. We commit to community involvement and to invest, remunerate, listen, learn and work together on tangible ways to heal Country.

The City of Sydney maintains carbon neutral status for our operations through the purchase of carbon credits. We will continue to purchase high quality carbon credits from Aboriginal carbon farming projects to address unavoidable emissions, offering social, cultural and economic benefits. This aligns with our organisational commitment to reconciliation as detailed in our Reconciliation Action Plan.

Country-centred

An action in our local strategic planning statement: City plan 2036 is to recognise Aboriginal and Torres Strait Islander peoples through land use planning, including designing with Country in mind.

The NSW Government's Connecting with Country framework incorporates Aboriginal and Torres Strait Islander perspectives in the built environment in ways that protect Aboriginal interest and self-determination. This is a key opportunity to return to more sustainable and environmentally responsible ways of restoring land and waterways. It's a great starting point for responding to Country and positive tangible benefits for communities.

We aim to use a Country-centred approach when developing new programs and projects. It will include truth telling, working with Indigenous cultural knowledge holders, cultural heritage, recognition in the public domain, and economic development.

Separated cycleways around Waterloo. Credit: Chris Southwooda

The Sydney light rail on George Street. Credit: Mark Metcalfe

Priority 12. Improve walking, cycling and zero emissions transport options for everyone

Transport is the second-largest source of carbon emissions in our local area, currently equivalent to 15% of our overall emissions. Some forms of transport contribute to noise pollution, urban heating, and ecosystem fragmentation, including urban forest corridors. Our electrification of transport in the city strategy and action plan details our approach to achieving net zero from transport emissions by 2035.

Our area is well served by public transport, with substantial improvements to the light rail, metro and bus system in recent years. As well as using space more efficiently, public transport emits fewer carbon emissions per person than driving. Further gains will come from moving away from fossil fuels – for example, in 2024, Sydney Trains transitioned to buying 100% renewable electricity. The NSW Government is committed to transitioning the bus fleet to zero emissions, with some depots and fleet already electrified. We advocate to accelerate this action.

Our access strategy and action plan shows how we'll create a city for walking, cycling and public transport. We now have 25 km of permanent separated cycleways, 3.6 km of pop-up cycleways, 66 km of shared paths and 71 kms of other bike friendly streets, including bike lanes, traffic calmed streets, helping residents and visitors travel across Sydney by bike. Ongoing upgrades to improve walkability include better footpaths, ramps, crossings, lighting, shade, seating and wayfinding.

We will work with the state government to expand the separated bike network and improve walkability. For example, actions include reducing speed limits on our streets reduces noise emissions, makes the streets more walkable and supports more cycling on more streets, contributing to streets that are more sustainable, safer, more inclusive and equitable, and more economically productive.

To complement this approach, we'll use planning requirements and feasibility studies to facilitate expanded EV charging in apartment buildings, and supplement this with a small amount of public on-street charging.

Banga Community Shed in Green Square operated by The Bower. Credit: Brook Mitchell

Ideas and Innovation grant awardees, ReLove are a furniture rescue organisation that provides no-cost furniture to families in crisis. Credit: Abril Felman

Priority 13. Provide inclusive access in the community to reduce, reuse and repair instead of buying new

Creating new products relies on extracting finite materials from the earth—an unsustainable process, especially at current manufacturing and consumption rates. The best way to counter this is by keeping materials and products in use for as long as possible, reducing the need for new. Systems to support reuse, repair, and recycling remain underdeveloped. These options are often less accessible and more expensive than buying new.

As a local government, we encourage reuse, repair and recycling by:

– reusing furniture and office equipment, and recycling electronics and employee uniforms

– using recycled materials in major roads, cycleways, and footpaths

– hosting resident-focused reuse and repair events like clothes swaps, toy swaps and mending workshops

– providing pick-up and drop-off options for hard-to-recycle items such as electronics, paint, and polystyrene

Despite progress, we urgently need more accessible and embedded systems, alongside increased community awareness and participation. Local councils alone cannot achieve this and require financial and regulatory support from other levels of government to incentivise industry and transform service models.

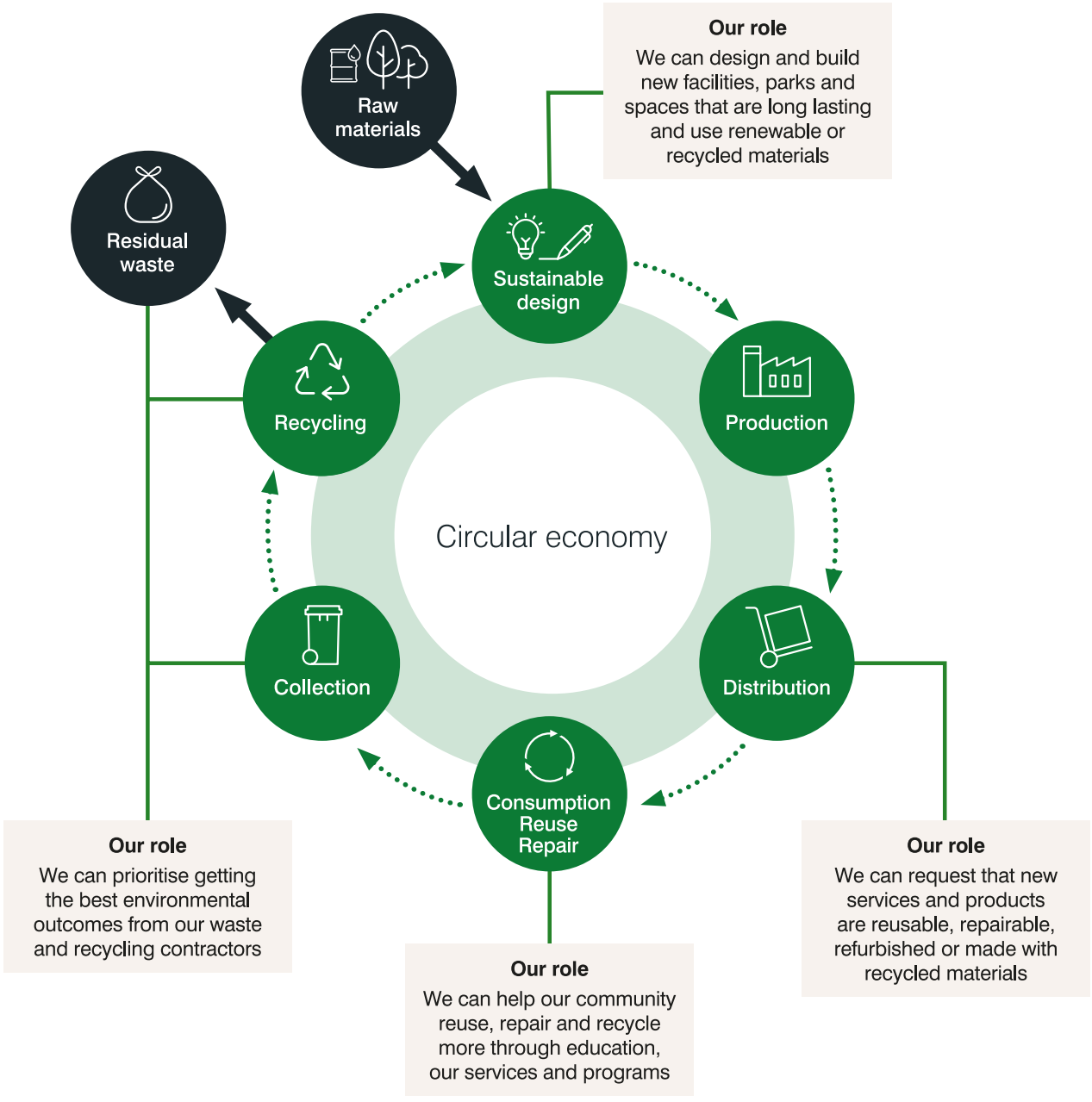
30% of the furniture that is thrown away is household furniture. We'll continue supporting reuse and repair by trialling programs to rehome quality furniture for those in need, including a quarterly event specifically for household furniture.

We will support organisations who provide repair services and education programs with grants.

We will better promote the reuse, repair and recycle services that are available to priority communities.

More information about how we support waste management and circular practices is available in our forthcoming waste and circular materials strategy.

Explainer: What is the circular economy?



In a fully circular economy, services are carefully designed for sharing and products for reusing, repairing and refurbishing many times before they need to be recycled.

It's a different way to look at the things we buy, use and throw away. It's an opportunity to rethink buying or building something new in the first place.

Local governments have several connections with the circular economy. We don't extract or make raw materials, but we have some responsibility for how places and buildings are designed. And while we don't produce items, we do buy and use them. We are responsible for collecting waste and recycling from our residents, buildings and public spaces. We work with industry to design processes that better recycle and dispose of waste we collect. There is no one blueprint for transitioning to a circular economy. It will require shared responsibility from all levels of government, industry and our communities.

Direction 4: Strong foundations for delivery

Sydney Rainbow Path Prince Alfred Park.
Credit: Chris Southwood

Strong foundations allow us to realise this strategy, achieve our targets and report on our progress accurately and transparently.

We are committed to developing strong foundations of knowledge, services and leadership that play an important role in reducing the environmental consequences of our actions in and around our local area.

Priority 14. Understand and manage our climate risk

Climate change creates new risks for us and our communities. These can be environmental, such as more frequent and intense storms, or changes to the economy, laws, technologies, business and investment, as people and organisations respond.

We have identified climate change as one of the most significant risks facing our organisation and likely to affect our facilities and services.

One of the challenges we, like many organisations, face in understanding and managing climate risk is access to the right information. In 2024, the state government updated the NSW and Australian Regional Climate Modelling (NARCliM) project. We can now use this to understand how climate change may impact our area in specific places and over a range of time periods. This will help us to better adapt our properties and services to a changing climate.

We help our communities understand how climate change may affect them and to adapt their homes, businesses and lives. This requires collaboration with the NSW Government, community organisations and the private sector. It is particularly important for our priority communities, as the most vulnerable are disproportionately affected. Climate change compounds existing stress and disadvantage, where even minor shocks can lead to long-term impacts.

Explainer: Why is climate resilience important?

Climate change is already affecting Sydney, particularly through increased temperatures and more extreme weather. The NSW Government predicts that under a high-emissions scenario, increased temperatures are expected across metropolitan Sydney and in all seasons over the coming decades. There will be an increase in the number of hot days above 35 degrees. Rainfall will be variable and severe fire weather days will increase. Sea level rise will accelerate, which has an impact on Sydney Harbour and the local ecology.

While we focus on reducing emissions, we also need to adapt our operations and build the resilience of our assets to cope with the continued shocks and stresses of climate change. This is to ensure continuity of our core services as well as help prepare and support priority groups more adversely affected by climate change.

We have outlined the climate resilience challenges for our organisation and local area, and how we will address them, in our resilience strategy.

Priority 15. Produce transparent reporting and inclusive communications

We have a strong history of communicating environmental issues and solutions. Through various channels, we listen to our communities and provide advice about reducing emissions, reusing and recycling, and the natural environment. We also connect our audiences with resources such as community organisations and government grants.

Reaching our diverse communities effectively can be challenging, requiring the right level of detail in the right format at the right time. To improve, we are exploring greater use of spatial data, digital and non-digital communication, and partnering with community organisations, which is often the most effective way to reach specific groups.

Standards for public sustainability reporting are rising globally to enhance accountability for climate action. In Australia, legislation and policies now require corporations and federal and state entities to disclose emissions and manage climate risks. While local governments aren't yet included, we must prepare for stricter reporting requirements.

We will continue to publish an annual environmental report that tracks progress against our targets and showcases the achievements of our collaborative impact programs.

Priority 16. Use and share data to drive efficient and clear decisions

We hold and access vast amounts of information to guide our operations and decisions. The way we use data is evolving, with smart sensors and new tools enabling more evidence-based, climate-responsive work. We rely on smart systems to collect and report data, requiring efficient solutions to capture and analyse performance. For example, the water data we collect from our irrigation meters tell us how and when we need to irrigate parks and ovals, so we don't waste water by watering at the wrong time. The collection of information on our operational energy allows us to see where best to prioritise energy efficiency initiatives like using heat pumps to replace gas boilers.

Technology helps us improve efficiency, integrate sustainable practices into asset design, and reduce energy, waste, and water use. This includes tools to review performance and upgrades such as irrigation systems, water monitoring and building management systems.

Priority 17. Strengthen employee and community expertise to drive environmental outcomes

Our understanding of climate change impacts and solutions – technical, policy, and behavioural – is constantly evolving. To remain sustainable and environmentally responsible, we must equip our employees and communities with the knowledge and skills necessary for the transformative action needed to achieve our targets.

We will continue to invest in employee training to enhance environmental and social competencies such as training our architects, urban planners and development assessors in how best to manage urban heat through modelling, and improved design principles, enabling them to address current climate impacts and build resilience for the future.

Educational programs and co-designed projects empower our communities to reduce emissions, energy, waste and water, contributing to environmental resilience while saving money.

We will continue to collaborate with businesses, peak bodies and strata organisations to focus on reducing their environmental footprint in our area.