

Protect. Create. Live

Northern Beaches Environment and Climate Change Strategy 2040

northern beaches council

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Acknowledgment of Country

We acknowledge the traditional owners of this land and elders past, present and future. We recognise Aboriginal people as the original custodians of the Northern Beaches.

Message from the Mayor

We are extremely fortunate on the Northern Beaches to have a natural environment that features rare flora and fauna, coastal beaches, harbours, lagoons, catchments, waterways and extensive bushland.



All of this literally on our doorsteps, or in our backyards. It is undeniably what makes us special, supports our health and active lifestyles, connects us and is what we value most about our region. It supports a diverse economy, including a rich tourism and recreation industry.

Our built environment is improving the way we get around with better bike paths, rapid bus networks and greener buildings. Look around and you will see more and more rooftops supporting solar panels, more people carrying keep cups and more electric vehicles on our roads.

Our environment is in many ways amazing and diverse, but it still faces a host of challenges. Population growth and accompanying development, consumption patterns and the adverse effects of climate change all pose threats to our environment.

The Protect. Create. Live – Environment and Climate Change Strategy was developed with extensive consultation with the community, and reflects its values. It provides a roadmap for how we can shape a bright environmental future by addressing the challenges and embracing opportunities. It will guide planning decisions, policy making and identifies strategies for helping improve and protect our environment.

This strategy includes:

- Protecting the environment that we have, the health of our waterways and beaches, the diversity in our plants and animals and the extent of our bushland;
- Creating a sustainable built environment that connects people together and with the outdoors; and
- Helping people to make sustainable living choices everyday, like reducing car use, purchasing green energy and producing less waste.

Northern Beaches Council will act as a role model for our community by adopting ambitious corporate commitments and driving change in our community.

This strategy will guide our community to act now to tackle the challenges our environment faces and protect it in the long term. It will protect our extraordinary nature, create a better built environment and a brighter future.



Michael Regan, Mayor





Summary

Protect. Create. Live - Northern Beaches Environment and Climate Change Strategy 2040 is our plan for a healthy and diverse natural environment that is respected, supported and celebrated. It defines key strategies for how we live well in the built and natural environment.

The unique natural environment of the Northern Beaches stretches over 254km^2 from Port Jackson to Broken Bay and Pittwater, and out to Middle Harbour and Cowan Creek. Our land and water environments are home to diverse and rich flora and fauna and are a key part of the identity of the Northern Beaches.

We are committed to delivering real reductions in the way we use our resources, improvements in how we protect and access our natural areas and how we build and design our neighbourhoods. We have included commitments and aspirations for the whole community to work towards together to focus our efforts, keep us on track and measure our progress.

The strategy is built around three major directions:

Protect

We will protect and enhance our natural environment.

Create

The places, parks, structures, district urban landscapes, homes, neighbourhoods and the connections between them will be built sustainably to protect our environment.

Live

We will live sustainability everyday to reduce our waste generation and resource use. We will prepare for the current and future impacts of natural hazards and climate change.

Northern Beaches Council - Operations - Community Engagement & Collaboration

To work towards being a zero emissions and water wise organisation through innovation and efficient resource use. We will drive change within our community

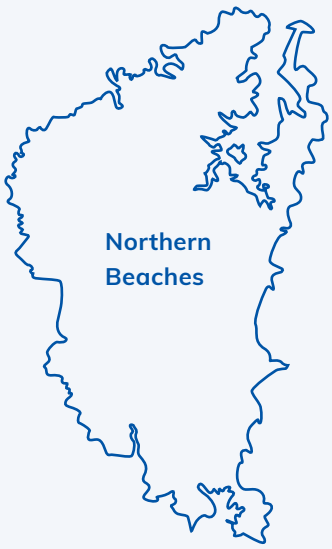
Vision

The community developed Shape 2028 Northern Beaches Community Strategic Plan with a clear focus on the environment as shown in the community outcomes:

"We aspire to protect the natural and built environment from the risk and impacts of global and local pressures"

"We aspire to be leaders in managing our resources sustainably and for the long term ensuring that development is balanced with our lifestyle and environment"

This strategy, including our goals, commitments, aspirations and strategies, were developed with input and feedback from stakeholders, including Council's Environment Strategic Reference Group, and the community through workshops and focus groups. The commitments we have chosen are ambitious, and our aspirations even more so, as they need to drive the urgent action needed to address the challenges our environment faces. The commitments were selected to help us reach our goals. They are memorable, meaningful and measurable and act as indicators for their respective themes.





Total
254km²



Population
268,849



Dwellings
101,629



17km²
Bushland



1460
Native Plant Species



540
Native Animal Species

"In planning for the future, we acknowledge the deep knowledge and resilience of Aboriginal people who have already responded to dramatic climate change and sea level fluctuations, not once but many times. The rock art, shell middens and rock engravings are reminders that people have long sought to look after this country sustainably.

In looking to the future, we acknowledge that the First Australians have set us a challenge - to develop strategies to ensure that we can pass on the environmental wealth of this land to future generations far beyond those closest to us. We look now to 2040 and sow the seeds for much more." (AHO, 2019)

Commitments

Our commitments are ambitious but achievable. We will aim to meet these by the years listed, if not before. The Protect. Create. Live. commitments are for our entire Northern Beaches Community to work towards together.

Aspirations

Our aspirations are where we would ideally like to be and aim to accelerate action and inspire innovation wherever possible.

"A healthy environment goes hand in hand with economic growth and jobs, and is an indispensable foundation for sustainable development."

EUROPEAN UNION COMMISSIONER KARMENU VELLA

Council will use this strategy to direct our future planning, actions and resources. It will direct our efforts in advocacy and partnerships with key agencies to deliver the community's aspirations for a more sustainable future.

To realise our vision we need everyone to take action and do their bit. Council will work closely with our community, our key partners and stakeholders to protect, create and live in our extraordinary Northern Beaches.



Our Strategic Line of Sight

Various legislation requires Council to take action to protect our environment and consider the impact on future generations in the decisions we make today. The environment and our effects on the environment don't stop at our local government boundaries, we therefore have a responsibility to also consider relevant international, Federal and State Government targets and strategies in what we do locally. This strategy aligns with the following:

Global

- 2015 Paris Agreement
- UN Sustainable Development Goals



National

- Renewable Energy Target – ~23.5% electricity from renewable sources in 2020
- Australia's 2030 climate change target - 26-28% emissions reduction by 2030 on 2005 levels

State

- Net-zero emissions by 2050

Region

- Our Greater Sydney 2056 - North District Plan
- Resilient Sydney – A strategy for city resilience 2018

Local Area

- Northern Beaches Council Community Strategic Plan, Local Strategic Planning Statement and other long term strategies

Our Plans

This strategy provides a long-term vision (20 years) for the environment on the Northern Beaches.

It will be supported by short term action plans (4 years) which will provide more specific detail on what will be done to achieve the goals, aspirations and commitments in this strategy.

Our new planning framework provides a platform for achieving our community's vision for the Northern Beaches - 'a safe, inclusive and connected community that lives in balance with our extraordinary coastal and bushland environment'.

This strategy will help us deliver the Protection of the Environment and the Environmental Sustainability community outcomes within Shape 2028 - The Northern Beaches Community Strategic Plan. The strategy has also been developed to help us deliver the sustainability objectives of the Paris Agreement, the Greater Sydney Region Plan and priorities of the North District Plan; the United Nations Sustainable Development Goals and the Resilient Sydney Strategy. It aligns with our new Local Strategic Planning Statement which bridges the gap between Regional, District and Local Plans and informs our strategic land use planning and development controls.

Northern Beaches Council - Plan Structure

Community Vision

Long Term Plans

Shape 2028	Towards 2040	Protect. Create. Live
Community Strategy Plan (10yrs+)	Local Strategic Planning Statement (20yrs)	Environmental & Climate Change Strategy (20yrs)

Short Term Plans	Planning Instruments	Action Plans for this Strategy
Delivery Program (4 years)	LEP	Climate Change Action Plan Bushland Action Plan Waterways and Catchments Action Plan Coast Action Plan Biodiversity Action Plan Sustainable Built Environment Action Plan Sustainable Living Action Plan Adaption and Resilience Action Plan Northern Beaches Council's Sustainable Operations Action Plan Environmental Education and Sustainable Behaviours Action Plan Urban Tree Canopy Plan
Operational Plan (annual)	DCP	

Our Actions



Challenges and Opportunities

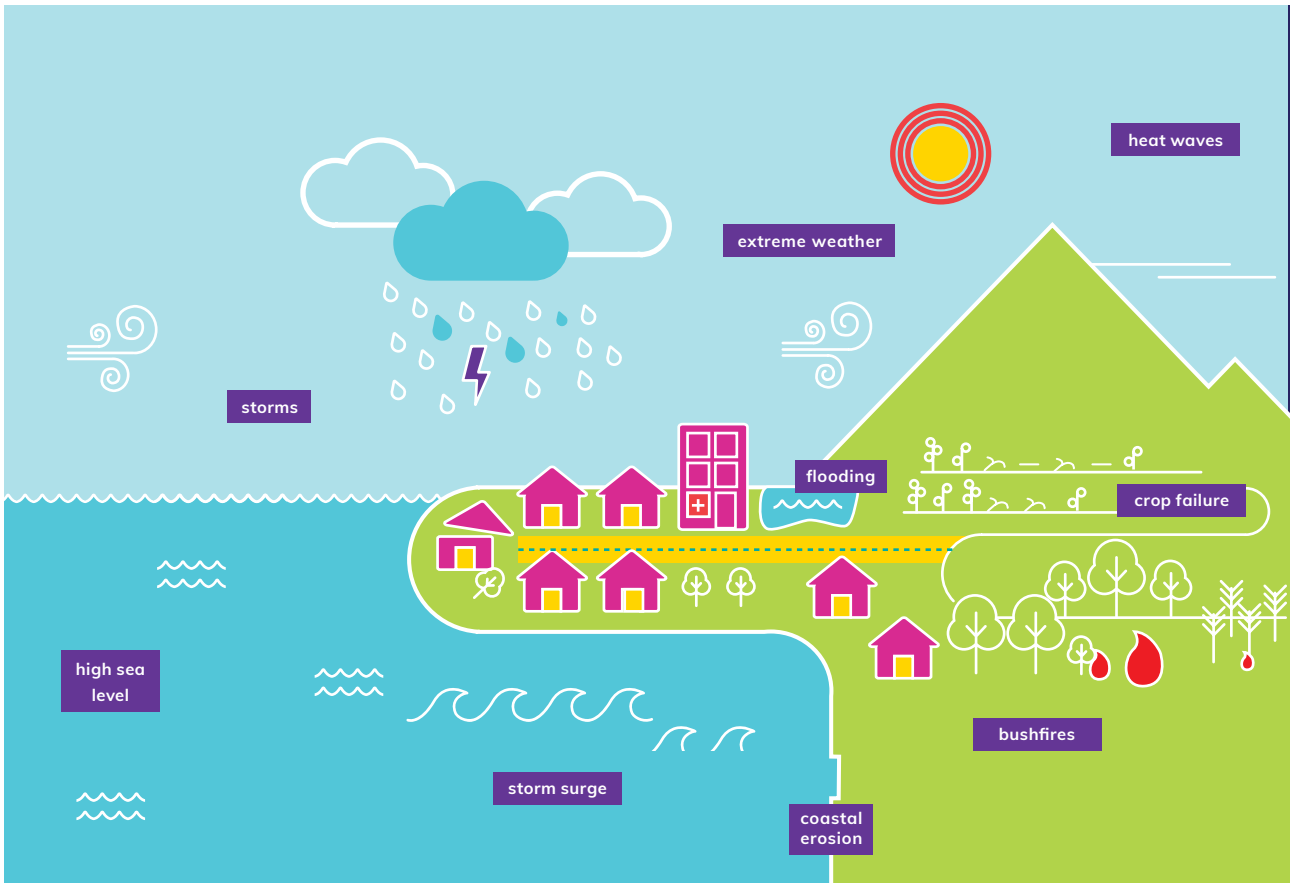
Our environment faces a range of challenges, many of which are global challenges, with threats that we must actively manage locally. Our climate is changing rapidly, our cities are growing and technology is transforming the way we live, work and play. We have access to more information than ever before and with this diverse opportunities to do things differently, to do them better.

Climate Change

Climate change is already affecting the way we live. It will continue to impact both our natural environment and the liveability of the Northern Beaches and demands urgent local and global action. Council declared a climate emergency in August 2019 noting that we must take the opportunity to work collaboratively with the community and key stakeholders to accelerate action. We need to significantly reduce carbon emissions to minimise risks and address predicted affects of effects of climate change, including impacts from sea level rise and frequency of extreme weather events, bushfires, coastal storms, floods and drought.

Climate change is affecting biodiversity and water quality as ecosystems respond to increased temperatures. Severe storms and rising sea levels have potential to erode Aboriginal heritage sites. We may see changes to insurance premiums and maintenance and repairs costs, while heatwaves will impact public health.

Impacts of Climate Change



Adapted from NCCARF Coastadapt infographic

The climate has already changed. More change is unavoidable as it is locked in to the climate system from past emissions.

1°C
Oceans around Australia have warmed by around 1°C since 1910

0.19m
Increase in global average sea level between 1901 and 2010

There has been a decline of around 11% in April-October rainfall in the southeast of Australia since the late 1990's

Adapted from Australian Government, 2015 and BOM 2018

Climate Change Mitigation

Greenhouse gas emissions drive climate change with emissions being predominantly generated through electricity and gas usage, transport choices and waste generation. As a community the Northern Beaches contributes almost 2 million tonnes of emissions from these sources annually.

Our first priority as a community is to commit to mitigating the future impacts of climate change by reducing our emissions. We will do this by changing the way we live, how we develop and by adopting creative solutions.

It is also important that we address the emissions created in producing and transporting the food we eat, clothes we wear etc. and we aim to reduce over consumption and food wastage (IPCC, 2019).

Australia signed the Paris Agreement in 2015 and committed to limit global temperature increase by the end of the century to 2°C and strive to limit it to a 1.5°C increase. To do this we need drastic and immediate change (IPCC, 2018).

At a local level on the Northern Beaches we acknowledge the seriousness of this task. We believe it is imperative that we put significant local effort into reducing our emissions to prevent more severe climate change. This is reflected in each section and every theme of this strategy, within the ambitious commitments and even more so in our aspiration to strive to achieve net zero emissions by 2030.

Climate Change Adaptation

The global nature of climate means that we are already experiencing change and that some level of change is unavoidable (IPCC, 2018). Past emissions remain in the atmosphere for decades and during this time continue to cause temperature increase, essentially locking future change into the system.

It is critical we prepare for the changes already locked into the system. We do this by being prepared for what is to come and adapting the way we design and build our structures today. These buildings, roadways, stormwater pipes, seawalls etc. will stand for the next 50 to 100 years, so they need to be able to withstand the future impacts.

> "Climate change adaptation helps individuals, communities, organisations and natural systems to deal with those consequences of climate change that cannot be avoided."
>
> **-AUSTRALIAN GOVERNMENT, 2019**

Population Growth

Like the rest of Sydney, the Northern Beaches is growing. By current trends, an extra 39,000 people will call the Northern Beaches home over the next 20 years. It is expected that our population increase will come from residential expansion, as there are large numbers of older children (late teens, twenties and even thirties) expected to leave home over the coming years, and from in-bound migration, most notably from overseas, as well as areas to the south (profile.id, 2019).

Each year the Northern Beaches attracts nearly 3 million domestic and international visitors. Visitors are enticed here by the area's natural beauty and are an important part of our economy.

We know that development can put significant pressure on our environment. This includes the impacts that come from increasing consumption and an expanding urban footprint. We need to make sure that we manage any growth so it occurs in the right locations and is supported by sustainable infrastructure. If we don't change the way we live, in particular the amount we as individuals and collectively as a community consume, then we will not be able to achieve our goals and commitments in this strategy.

To address this challenge, we need to:

- plan for local jobs;
- ensure housing is both suitable and sustainable;
- provide suitable supporting infrastructure; and
- protect our natural environment.

Our transport network remains a key infrastructure challenge. You can view the community's aspirations to reduce trips by car, increase trips by public transport and in turn reduce our carbon emissions from transport by 30% in our Move: Northern Beaches Transport Strategy.

Where growth is needed, we will design our new houses, offices, industries and public infrastructure to be sustainable and resilient and to create liveable communities that integrate the built and natural environment.

The Relationship Between Adapting to Climate Change and Emissions Reduction

Climate change mitigation means reducing or avoiding greenhouse gas emissions to minimise the rate and magnitude of climate change

Climate change adaptation means taking steps to prepare and respond to the effects of the changing climate

Ways to Mitigate

Enhancing Energy Efficiency Lighting
uses 8-15% of the average Australian household electricity. Switching to LED's can significantly reduce energy usage

Increased Uptake of Renewable Energy
19% of Australia's electricity came from renewable sources in 2018

Improvements in Industrial Processes
For example improved maintenance and operation of boilers can reduce energy use by up to 5% in steam, hot water and process heating systems

Increased Uptake of Sustainable Transport
21% of people in Sydney usually travelled to work by public transport in 2016

Enhancing Carbon Sinks
A carbon sink is anything that absorbs more carbon than it release. Bushland, soils, oceans and the atmosphere can act as carbon sinks



Environmentally-responsible building design



Mangrove and saltmarsh planting and restoration of catchments



Water Conservation



Urban Growing

Ways to Adapt

Changing The Use Of Land
can protect buildings and infrastructure from existing and new hazards and can allow for changes in the landscape

Upgrading or Hardening the Design of Buildings and Infrastructure
CSIRO wind design standards for all new housing can reduce the risk of damage from wind by 50-80%

Adjusting Activities and Lifestyle
To manage increasing heat some sporting organisations are changing the time games are played, to avoid the heat in the middle of the day

Emergency and Business Continuity Planning
Even without factoring in climate change, the total economic cost of natural disasters in Australia is forecast to rise to $23 billion annually by 2050

Increasing Community Understanding of Climate Risks
To build capacity in the community to adapt to the changing climate

Some actions can have mitigation and adaptation benefits

Adapted from Australian Government, 2015



Influences

Our environment faces a range of challenges, many of which are global challenges, with threats that we must actively manage locally. Our climate is changing rapidly, our cities are growing and technology is transforming the way we live, work and play. We have access to more information than ever before and with this diverse opportunities to do things differently, to do them better.

Politics and globalisation

Global politics, megatrends and financial movements can have strong influences locally. Climate change policies and pledges, carbon pricing and financial trade markets are some examples that have the potential to impact the ability to successfully deliver this strategy.

Federal and State government policy changes impact our ability to meet our local commitments. Council will advocate on behalf of the community to deliver our commitments.

Technological Change

Driverless cars and electric vehicles are on their way. Smart city advances are fast tracking decentralised power grids, intelligent building management, and transforming how we communicate. Drones and remote mapping technologies are already being used to manage our natural areas.

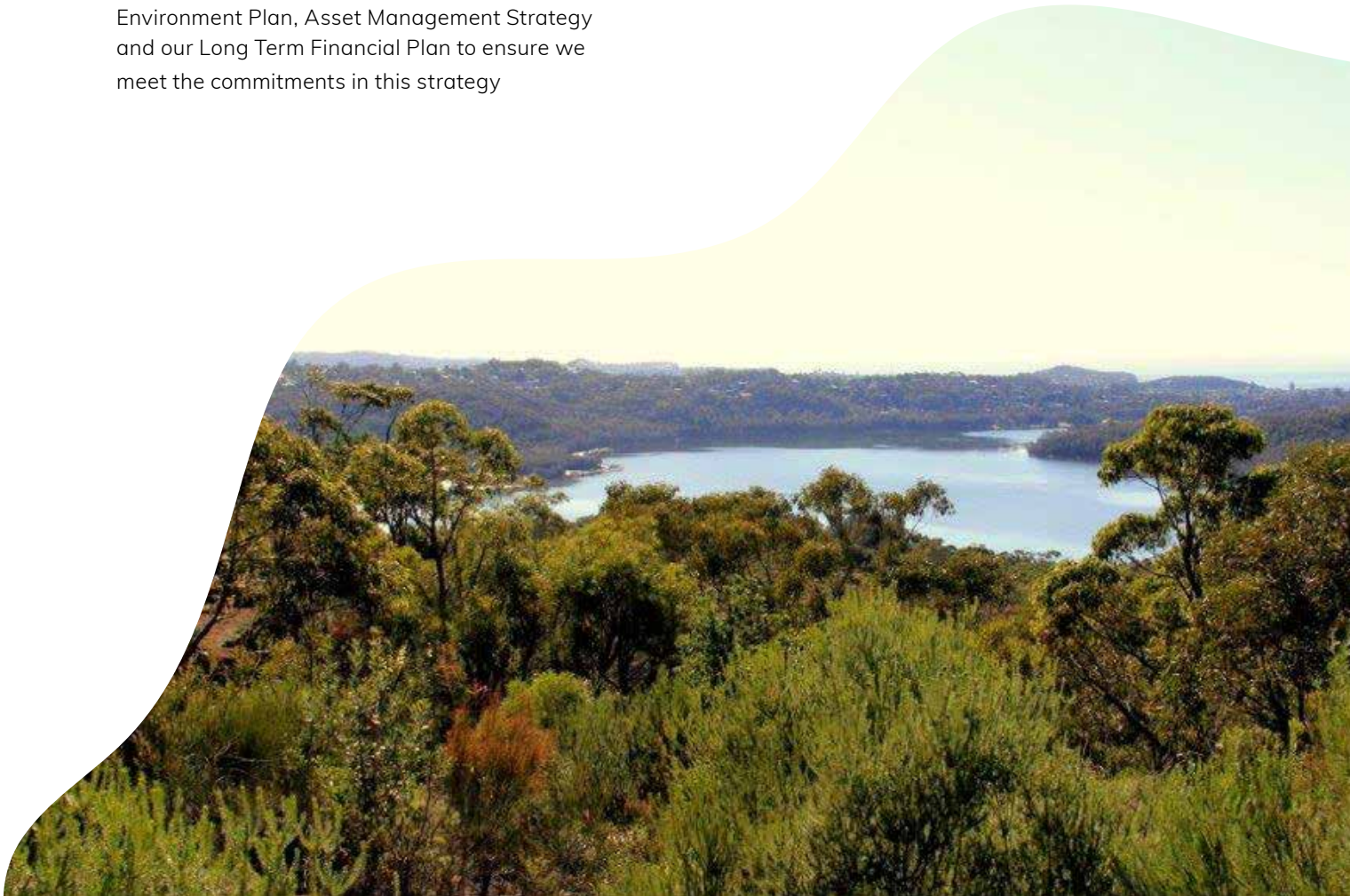
We already have access to large amounts of data and this continues to grow. Technological innovations are transforming rapidly and we have an opportunity to respond and adopt these to make smarter decisions and allocate resources more efficiently.

Council's ability to influence

The level of influence Northern Beaches Council has varies. However Council can play a key role in our community to reduce barriers, influence people's attitudes and transform behaviours to facilitate change. Council will use these guiding principles to maximise our impact and drive the change needed to achieve our goals:

- Advocacy: Council will lobby and advocate on behalf of our community to ensure that local, state and federal policies reflect and enforce the efforts needed to tackle climate change and protect our environment
- Education: Council will work to educate the community on our extraordinary natural environment, how climate change and the way we live impacts it and why it is important that it is actively protected and enhanced
- Leading by example: Council will embed sustainability in our own business practices. We will trial new technologies and approaches and facilitate and accelerate uptake in our community. Council will undertake projects to reduce emissions and support and enable our community to do the same
- Key levers: Council will use the key levers of the Local Strategic Planning Statement, Local Environment Plan, Asset Management Strategy and our Long Term Financial Plan to ensure we meet the commitments in this strategy
- Funding: Council will deliver the strategy as a priority across its diverse portfolio. This will be done with consideration for quadruple bottom line responsibilities to balance the environmental, social, economic and governance outcomes. Council will seek opportunities to access grant funding and leverage external sources of funds to increase our impact
- Engagement and collaboration: Council will engage and collaborate with our local environment groups, volunteers, stakeholders, the community and other change makers to leverage the great work they are doing to amplify the collective impact. This will include embracing innovation and motivating and inspiring the community to achieve behaviour change

It will take mobilising our entire community to achieve the goals, commitments and aspirations in this plan. Collaboration, engagement and education has been incorporated throughout the themes to ensure the natural environment is protected, valued and enjoyed by our community, and the community is motivated, inspired and supported to live more sustainably.





Protect

Our Natural Environment

The natural environment is key to our Northern Beaches bush and beach identity and is made up of our bushland, waterways and catchments, coastline and marine waters. A healthy environment is vital to our everyday lives and contributes to our lifestyle and quality of life.

Our natural environment is under pressure every day in many ways, from pollution, development and invasive species. It is vital that we act now to avoid future impacts from climate change, and take steps to build resilience for the changes that are already coming.

We will drive behaviour change to protect our environment through our Environment Centres and programs and use planning controls to achieve environmentally sensitive developments.

We are the custodians of our ecosystems, our plants, animals and waterways. It is up to us to protect their abundance, extent, diversity and quality. If we do this we will protect our natural environment for its intrinsic value and ensure that future generations will be able to enjoy living, hiking, biking and paddling in our extraordinary nature.

Theme 1:
Bushland

Background

Our bushland is made up of many native plant communities which together cover 155km^2 of the Northern Beaches. The bushland is vital habitat for our native animals from the threatened Eastern Pygmy Possums and Powerful Owls, to the more common Ring Tail Possum and Swamp Wallaby. The plants in bushland areas clean our air and together with the soil, filter the water running into our waterways and act as our very own carbon sink.

Our bushland is under continual pressure from existing and expanding development. Development is reducing the amount of bushland we have and increasing the fragmentation of what remains. Climate change is also predicted to put stress on our bushland from more extreme weather events such as storms, heat waves and changes in rainfall patterns leading to drought and bushfires.

Council manages 17km^2 of this bushland and a further 114km^2 is in the local national parks. The remainder of our bushland is found in state government owned land, schools, golf courses and in private ownership. With ownership in both public and private hands being able to balance competing priorities means it is important that Council works with our community and key stakeholders to realise our goals.

Council also needs to balance bushland management with the need to protect people and property from bushfire. This balance is important as about 1 in 5 properties in the area are affected by bushfire. Natural hazards including bushfire are discussed in more detail in Theme 8.



Our goal

Protect and enhance the extent and quality of all bushland to preserve its unique value for future generations



155km² Bushland

114km² in 3 National Parks

17km² Council Management

We aspire to achieve...

No net loss of bushland

We are committed to...

- **Maximising the retention of bushland**
- **Improving the quality of existing bushland**
- **Improving the connectivity of wildlife corridors**
- **Balancing bushland protection with the need for responsible bushfire management**

We will...

1.1 Work to protect existing bushland and enhance its ecological value using best practice restoration techniques

1.2 Protect our bushland and its associated biodiversity through strategic land-use planning and development controls

1.3 Capture quality baseline data on our bushland and continue to monitor and report to the community

1.4 Actively engage in partnerships, research and innovation opportunities to improve the way we do things

1.5 Improve and manage sustainable recreational access whilst protecting environmentally sensitive lands

1.6 Consider scenic and cultural landscapes and heritage in strategic land-use planning, development controls and when undertaking works

1.7 Motivate, inspire, educate and support our community and stakeholders to value, protect and enhance our bushland, including facilitating environmental volunteering

1.8 Work to prevent unlawful actions, such as illegal clearing and dumping, and reduce pollution by implementing enforcement and compliance activities to protect the bushland from destruction

1.9 Promote more environmentally friendly gardens.

Theme 2:
Waterways and Catchments

Background

Waterways and adjacent riparian areas support a variety of aquatic and terrestrial life, provide habitat and breeding grounds for many aquatic plants and animals and are an essential part of larger ecosystems. They are also an important part of the scenic landscape of our region.

The Northern Beaches' waterways are a mix of creeks, wetlands, lagoons, estuaries, groundwater and constructed waterways. We have seven major catchments that drain to our coastal lagoons, directly onto the beaches or into North Harbour, Middle Harbour and Pittwater.

Our lagoons, creeks and wetlands support Threatened Ecological Communities as well as a broad range of plants and animals. These include endangered species such as the Hairy Pipefish and the Bush Stone Curlew, as well as a number of migratory birds protected by international agreements.

Our waterway systems, including natural creek lines, the constructed stormwater network and all the associated structures used to be seen as just a way to take away nuisance water, the faster the better. This saw a preference for straightening creek lines and lining the channels with concrete. The increased speed of flow carries pollutants, including litter and plastics, from gutters and roads to natural creek lines to waterways and to the ocean.

Now we value our waterways for their part in local and regional ecosystems, contribution to our own standard of living, and their aesthetic value. We want to restore our waterway systems to as natural a condition as we can. Allowing our waterways to meander and slow down the flow of water improves the water quality entering our receiving waters - our lagoons, harbours and beaches, as well as providing riparian and in-stream habitat.

There are significant challenges balancing the protection of our waterways with development while also considering the impact of flooding and erosion in these areas. Flooding and prolonged periods of drought from climate change will alter the natural flow patterns of our waterways. Through mitigation, we are doing our bit to reduce future climate change and protect our waterways. We need to embrace Water Sensitive Urban Design principles to improve the ability of urban environments to capture, treat and reuse stormwater. Bringing water into our environment also helps to cool our urban areas and reduce the impacts of the increased heat waves that we expect with our changing climate.



Our goal

Our catchments and waterways will be healthy and resilient; valued and enjoyed by our community. They will be protected and enhanced as an integrated system; connecting built, natural and cultural elements.



7 Major Catchments

20 Major Creeks

5 Coastal Lagoons

3 Major Estuaries (Sydney Harbour, Hawkesbury River, Pittwater)

600km of stormwater pipes

We aspire to...

Improve the condition of all our waterways

We are committed to...

- **Protecting our receiving waters and riparian areas**
- **Protecting and improving the condition of creeks and riparian vegetation**
- **Minimising threats to aquatic ecosystems**
- **Reducing the impact of urban runoff on our waterways**
- **Actively working to keep single use plastics and other litter out of our network**

We will...

2.1 Prioritise and implement works to improve our impacted waterways, including activities to minimise the impact of the natural environment on people and property and reduce pollution

2.2 Progressively improve our stormwater network so that we discharge to our waterways in an environmentally sensitive way without increasing risks to the community

2.3 Protect our waterways with strategic land-use planning and development controls including water sensitive urban design

2.4 Integrate the management of our waterway systems so that they better protect receiving environments

2.5 Balance the way we manage our waterways to consider both improving the condition as well as minimising impacts of natural hazards

2.6 Capture quality baseline data on our waterways and continue to monitor and report to the community

2.7 Actively engage in partnerships, research and innovation opportunities to improve the way we do things

2.8 Improve and manage sustainable recreational access whilst protecting environmentally sensitive lands

2.9 Ensure scenic and cultural landscapes and heritage are considered in strategic land-use planning, development controls and when undertaking works

2.9 Motivate, inspire, educate and support our community and stakeholders to value, protect and enhance our catchment and waterways, including facilitating environmental volunteering

2.10 Work to prevent unlawful actions, such as illegal discharges, by implementing enforcement and compliance activities to protect waterways from pollution and destruction

Theme 3:
Coast

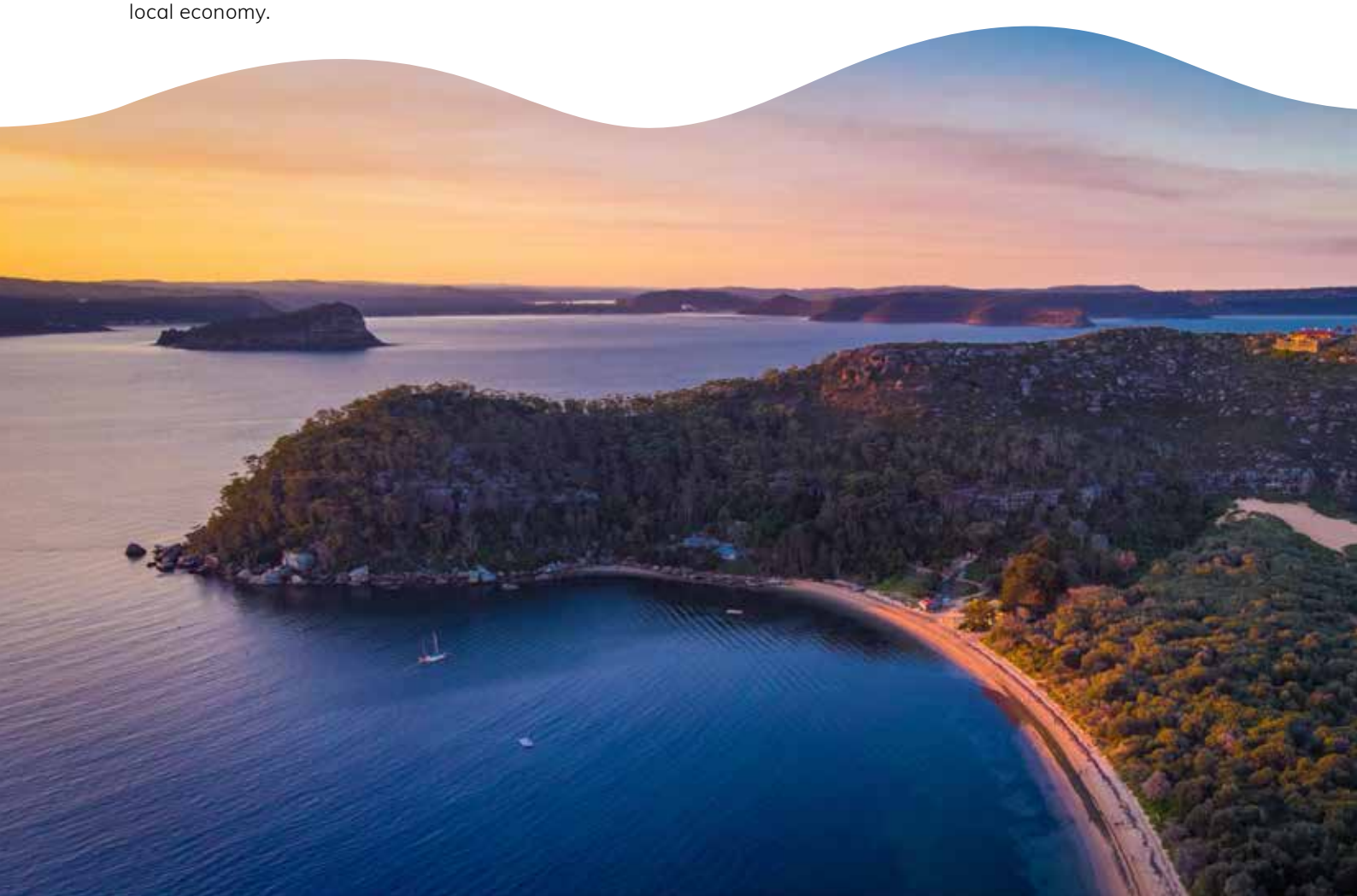
Background

We are the Northern Beaches and our iconic coastline, stretching from Manly to Palm Beach and round to Pittwater and Middle Harbour, is a large part of our identity. It is where we choose to spend a lot of our free time. We fish, swim, surf, snorkel, and paddle in our waters and trek, run and picnic along the coastal beaches and walkways. The coastal area includes the natural and built foreshore, our beaches, dunes, rocky headlands, cliffs, intertidal areas, marine waters, harbours, estuaries, and reefs.

Our 80km of iconic open coastline and 24 ocean beaches supports a rich biodiversity of plants and animals, including those within the five aquatic reserves, four intertidal protection areas as well as two national surfing reserves. It draws visitors from all over the world, which boosts our local economy.

History has shown us how susceptible our coastline is to erosion. Climate change is expected to bring more damaging coastal storms as well as a higher sea level. We need to manage current risks to the coast and mitigate future climate change by making more sustainable choices. Natural hazards including coastal erosion are discussed in further detail in Theme 8.

Development on the coast needs to prepare for the changes we know are coming, as well as the other impacts on our coast like water quality and loss of dune vegetation.



Our goal

Protect and enhance our unique coast and its processes to support a healthy natural environment and provide excellent recreation, views and amenity.



80km	Coastline
24	Ocean beaches
27	Coastal and public rock pools
36km	Coastal walkway
5	Aquatic Reserves
2	National Surfing Reserves
4	Intertidal Protected Areas

We aspire to...

Ensure our coastal environment, amenity and processes are protected into the future

We are committed to...

- **Our beaches having the highest water quality rating**
- **Maintaining our beaches, headlands and rockpools to a high level of community satisfaction**
- **Maximising retention of natural coastal habitat and improve the quality of coastal vegetation**
- **Reducing the impact of urban runoff on the coast**
- **Actively working to keep single use plastics and other litter off our coast**

We will...

3.1 Work to allow coastal processes to naturally shape the coastal environment, whilst preserving the natural character, through policies, strategic land use planning and development controls

3.2 Reduce pollution entering our coastal environment using best practice source controls, treatment measures and better detection systems

3.3 Prioritise and implement works to improve the condition of our coastal and marine environment using regeneration and habitat enhancement techniques, and minimise the impact of coastal processes on people and property.

3.4 Create inclusive opportunities for our community to enjoy the coast, by delivering high quality, sustainable, resilient and appropriate facilities whilst protecting environmentally and culturally sensitive lands

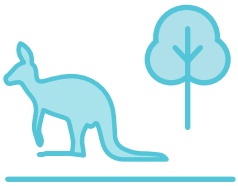
3.5 Actively engage in partnerships, research and innovation opportunities to improve the way we do things

3.6 Motivate, inspire, educate and support our community and stakeholders to value, protect and enhance our coastline, including facilitating environmental volunteering

3.7 Work to prevent unlawful actions, such as illegal clearing and development, by implementing enforcement and compliance activities to protect our coastline from damage

3.8 Capture good quality baseline data and continue to monitor and report to the community

Theme 4:
Biodiversity



Background

The Northern Beaches is home to an extensive diversity of plants, animals and microorganisms, living throughout our terrestrial, aquatic and marine environments. Together they form our rich biodiversity and make up complex ecosystems of soil, water, air, plants and animals that interact together.

> "I can't imagine anything more important than air, water, soil, energy and biodiversity. These are the things that keep us alive".
>
> DAVID SUZUKI

Biodiverse, healthy ecosystems provide the foundation for all life to thrive; they clean the air, the water and provide fertile soil. They also distribute fresh water, regulate the climate, provide pollination and pest control and reduce the impact of natural hazards (IPBES, 2019).

Both our natural and urban areas have their place in enhancing biodiversity and supporting an increasing number of threatened and endangered species on the Northern Beaches. Whilst our natural areas are critical in supporting most of our local biodiversity and threatened species, urban habitats including parks, tree lined streets and even our backyards act as wildlife corridors and contribute to connectivity of biodiversity across the Northern Beaches. The endangered Swift Parrot feeds on winter flowering street trees like the Swamp Mahogany before flying to Tasmania to breed; the Eastern Bentwing-bat has chosen many of our larger stormwater pipes as a winter roosting spot with the females migrating to maternity caves far from the Northern Beaches during the warmer months. We have the only known breeding population of Little Penguins in mainland NSW.

To protect our biodiversity we need to consider and protect each different scale, from the worms which process nutrients in our estuaries, to reducing the impact of invasive species and domestic animals on our native wildlife.

Natural areas cover almost half of the Northern Beaches including 350 bushland reserves, three national parks and 80km of coastline. At a landscape scale we need to increase connections between our natural areas. Bringing nature into our streets and suburbs will improve their character and liveability, encourage connection with nature and improve attractiveness of active travel.

Development, pollution and invasive species, both plants and animals, are constantly increasing the pressures on our local biodiversity (IPBES, 2019). Climate change impacts including increased temperatures, drought and bushfires are predicted to impact the variety of our local native species. Some of our plants require fire to germinate their seeds. Too frequent fire prevents them growing enough to flower and set seed, which could significantly alter our natural bushland and diminish the diversity of fauna it supports. Elevated water temperatures can increase the frequency of algal blooms in our waterways and change the species able to survive in our aquatic reserves.

We need to mitigate future climate change by taking action now to reduce our emissions. Development needs to be coordinated to protect core bushland areas, support and enhance wildlife corridors and allow natural waterways to meander through our suburbs. Invasive species need to be removed and suppressed to prevent them from competing with native species.

It will require a community wide effort and careful and considered planning to ensure we protect and enhance our extraordinary local biodiversity.



Our goal

Protect our local native plants and animals, and restore our ecosystems so they are healthy, resilient and valued by our community.

540	Native animal species
1,460	Native plant species
48	Plant community types
60	Threatened species
13	Threatened Ecological Communities
50	Wildlife Protection Areas

Did you know?

We have an "Area of Outstanding Biodiversity Value" protecting our little penguins, the only mainland colony of little penguins in NSW.



We aspire to...

Maintain our local native plant and animal species, populations and communities

We are committed to...

- **Maximising retention and ecological condition of key habitats**
- **Reducing the impact of invasive species**
- **Improving the connectivity of wildlife corridors**
- **Improving biodiversity in the urban environment**

We will...

4.1 Prioritise high value conservation sites and implement on-ground works, such as bush regeneration and invasive species control, to protect our biodiversity and enhance the ecological value and function of our environment

4.2 Prepare and implement a strategic approach to biodiversity land management and use this to inform our strategic land use planning and development controls

4.3 Capture good quality baseline data and continue to monitor and report to the community

4.4 Actively engage in partnerships, research and innovation opportunities to improve the way we do things

4.5 Motivate, inspire, educate and support our community and stakeholders to protect and enhance our biodiversity, including facilitating environmental volunteering

4.6 Work to prevent unlawful actions, such as illegal clearing and development, by implementing enforcement and compliance activities to reduce the loss of biodiversity

4.7 Consider the impacts of climate change on biodiversity and understand pathways for adaption



Create

A Sustainable Built Environment

The way we create our built environment influences how we move around, how comfortable our homes and workspaces are, the amount of resources we use and the liveability of our neighbourhoods. Our built structures typically remain in the environment for a long time. Our buildings are a major energy consumer and account for almost one quarter of Australia's carbon emissions (ASBEC, 2016).

Development is a constant pressure of urban living. We have the opportunity to use our land use planning instruments and controls to design and build our neighbourhoods well so they fit within our natural environment, rather than damage or destroy it, and reduce resource use. To do this Council will need to work closely with the community, other levels of government and key stakeholders so that we are all working towards the same goals. If we get this right from the start it will reduce other urban hazards such as air, noise, light, water and soil pollution and exposure to UV. Our built environment will be livable and inclusive and compliment our natural one.

Electricity and transport together are responsible for 85% of our community's carbon emissions on the Northern Beaches. Transitioning to renewable energy, building more efficient homes and workplaces, greening our suburbs and changing the way we move around are key strategies to reducing our impact on the environment.

Theme 5:
Sustainable Built Environment

Background

It is important that we design our neighbourhoods so they are liveable and function well, encourage active travel and integrate with our natural environment. We also need to build our homes, offices and infrastructure as sustainably as we can because they will be around for the next 50 to 100 years. Our existing buildings and homes can be renovated and retrofitted to reduce our environmental footprint.

Designing and building our neighbourhoods, homes and workplaces right will improve our overall community resilience. It will mean better connected places for us to move around. We will be better prepared to live with the climate change impacts of increased heat stress, storms and rising sea levels. We will reduce air, noise, light, water and soil pollution and exposure to UV.

With electricity consumption responsible for 56% of our community emissions, it is great to see that our community has already begun the switch to renewable energy. By the end of 2018 our community had installed over 8,500 individual solar installations, which together reduces over 37,000 tonnes of carbon emissions each year. We need to continue to make this transition away from energy sources that create emissions whilst also reducing the total amount we use.

After electricity, travel is our next biggest emission reduction challenge and supporting different transport options is key for us to achieve our commitments and aspirations. We need to plan our cities to reduce the need to travel and in turn improve liveability and connectedness and support our local economies. We will do this by implementing the Move: Northern Beaches Transport Strategy 2038 which includes more specific and detailed goals, commitments, aspirations and strategies.

Urgent action is needed to address the challenges and acknowledge the scale and longevity of influence the structures being built today will have on our environment.

We are using more resources than nature can regenerate - built-up land, crops, grazing, fishing - and releasing more carbon dioxide than bushland can sequester

(GLOBAL FOOTPRINT NETWORK, 2018)

By 2020 three major volume home builders will offer carbon-neutral homes

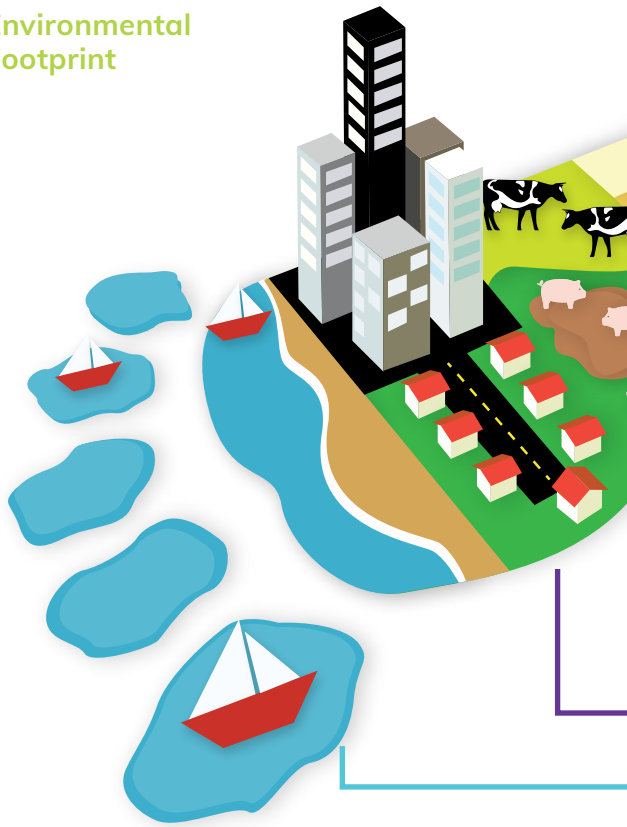
It costs on average $20k more to build a zero energy home, and utility bill savings will pay back the cost in 10yrs

(CRC Low Carbon Living, 2019)

A 5kW solar PV system in Sydney will have a payback period of 4-5 years

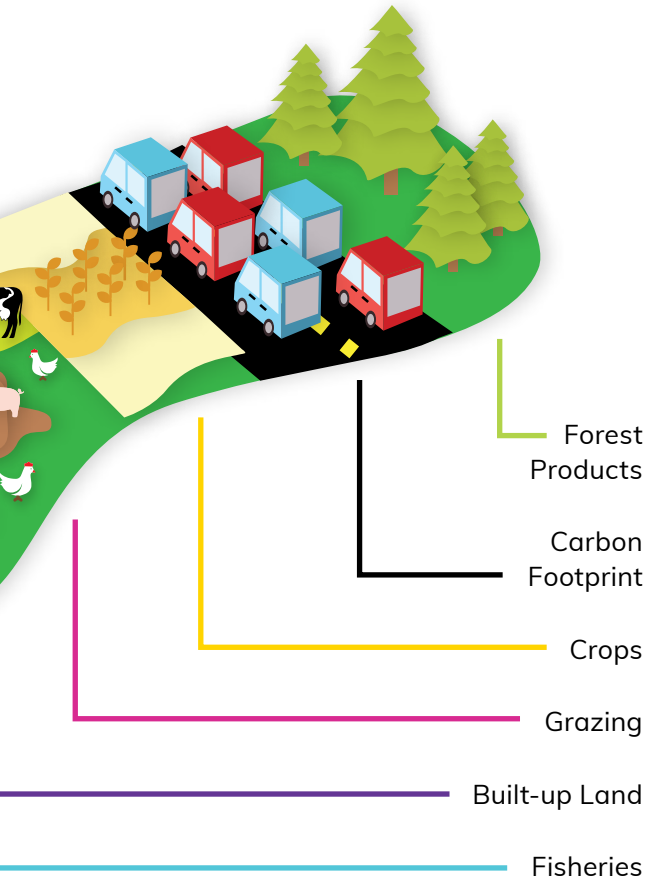
(Alternative Technology Association, 2018)

Environmental Footprint



Our goal

Our homes, work places, buildings, infrastructure and neighbourhoods are designed, built and maintained with low environmental footprints, to improve liveability and support community resilience.



We aspire to achieve...

All new buildings being net zero emissions by 2030

We are committed to...

- **Reducing resource consumption in our community**
- **50% of suitable premises with solar panels installed by 2030**

We will...

5.1 Support and encourage renovations, retrofits and refurbishments to lower energy and water use in our community, including driving conversion to renewable energy, especially solar panels

5.2 Help our community to understand the benefits of building sustainably

5.3 Improve local planning controls to ensure residential and non-residential buildings and infrastructure are sustainably designed and built

5.4 Encourage state and federal government to rapidly drive down emissions, water use and other pollution through actions such as better building standards for residential and non-residential buildings and relevant infrastructure; eg. increasing BASIX and implementing standards for non-residential development.

5.5 Partner with all levels of government to deliver best practice infrastructure e.g. the Beaches Link Tunnel and the rapid public transport expansion and associated infrastructure.

5.6 Implement the Northern Beaches Move Transport Strategy to improve travel infrastructure, public transport, mass transit, and community behaviour

5.7 Actively engage in partnerships, research, innovation and investigate potential for incentives to provide opportunities for our residents and businesses to increase uptake of sustainable choices to reduce their footprint

5.8 Seek out, support and encourage precinct scale solutions to reducing resource use

5.9 Undertake proactive inspections, education programs and environmental auditing to minimise air, noise, water, light and soil pollution and exposure to UV. This includes implementing the NSW Wood Smoke Reduction Program.

Theme 6:
Green Neighbourhoods



Background

A green neighbourhood is made up of a network of green spaces, urban waterways, natural systems and semi-natural systems including parks, creeks, native bushland, wetlands, private gardens and tree lined streets that connect communities to the natural landscape. These components are identified by the NSW Government Architect as "Green Infrastructure" and collectively make up what is known as the green and blue grids.

"Increased use of green infrastructure and other ecosystem-based approaches can help advance sustainable urban development while reinforcing climate change mitigation and adaptation."

INTERGOVERNMENTAL SCIENCE-POLICY PLATFORM ON BIODIVERSITY AND ECOSYSTEM SERVICES

Green infrastructure complements other infrastructure, surrounds and connects buildings, streets and utilities and is as crucial as transport, culture and communications. It also helps us cool our urban areas as every 10% increase in tree canopy can reduce land surface temperatures by over 1°C (Resilient Sydney, 2018).

This strategy, along with the Draft Northern Beaches Urban Tree Canopy Plan 2019 is key to delivering and protecting green infrastructure and expanding the green grid, including our urban tree canopy.

We are lucky to have one of the highest tree canopy coverage rates in Sydney, but according to 202020 Vision we are also losing it in the highest percentage rates too. We want to turn this around and create a better quality green grid through the Northern Beaches, incorporate green infrastructure into our buildings and bring water into our public spaces.

Green Infrastructure and the green and blue grid

An urban green and blue grid helps to improve the quality of our urban environment and also helps to adapt and mitigate the effects of climate change. Well designed and planned green infrastructure helps to absorb flood water, cool the urban environment, clean the air, provide spaces for local food production, provide habitat for plants and animals as well as space for recreation, sport and leisure.

Council supports the NSW Government's draft Greener Places Policy which identifies Green Infrastructure as being as crucial to our neighbourhoods as transport, cultural and communications infrastructure. This policy identifies the need to plan and design green infrastructure as a three dimensional envelope that surrounds and connects buildings, streets and utilities. It can frame and shape the growth of sustainable communities by promoting access to open space, nature, culture and sport, which will improve the appeal to visitors and the quality of life for all (Government Architect, 2018).



Our goal

The built environment integrates nature and connects our community through green and blue networks to support active travel and healthy lifestyles. We design our community around nature.

Every 10% increase in tree canopy can reduce land surface temperatures by 1°C

The canopy cover for street trees in the Northern Beaches is 39%

We are committed to...

- **Increasing the existing urban tree canopy to expand the local green grid**
- **Planting a minimum of 5,000 trees each year**
- **Ensuring development integrates and supports the surrounding natural environment**

We will...

6.1 Identify, design and deliver priority local green grid corridors, connections and shared uses. We will integrate this into our planning instruments

6.2 Support, encourage and enable green infrastructure development, including vertical and roof gardens, through our planning instruments and regulations

6.3 Implement relevant tree plans and strategies, including finalising and implementing the Draft Northern Beaches Council Urban Tree Canopy Plan 2019 to protect and enhance our urban trees. Key directions in the plan include protecting urban trees, maintaining tree canopy covers, improving tree health and diversity and inspiring the community to protect and enhance urban trees

6.4 Work to minimise disruption from trees to utilities and other community services

6.5 Select tree canopy species that compliment the local natural environment



Live

Sustainably in our Environment

The way we live in our environment is changing rapidly in response to many factors including climate change, globalisation and new technologies. We have ever increasing access to data and information, our cities are getting smarter and this is opening up new opportunities like remote working and localising power generation and ownership.

We have the chance now to use these advances to help us make positive changes to the way we choose to live in our environment. Smarter everyday actions and habits collectively have the potential to significantly reduce our environmental footprint.

Northern Beaches Council as an organisation is committed to sustainability and addressing climate change and wants to take up the challenge to improve the way we do things and reduce our environmental footprint. We signed up to the Cities Power Partnership and pledged to actively help residents to move towards renewable energy and reducing emissions. We are setting goals, commitments and aspirations for Council's own operations in Theme 9 so that we can understand the challenges at an individual business level and share our knowledge to help our community to do the same. We will do this through maximising the effectiveness of our environment centres and other education and capacity building activities with the wider community, including schools, local residents and businesses to help them meet their commitments.

Climate change is also bringing rapid, complex environmental change. It is predicted to increase the impacts of natural hazards so it is important that we are prepared for what is to come and so we can recover quickly when difficult conditions arrive.

Theme 7:
Sustainable Living

Background

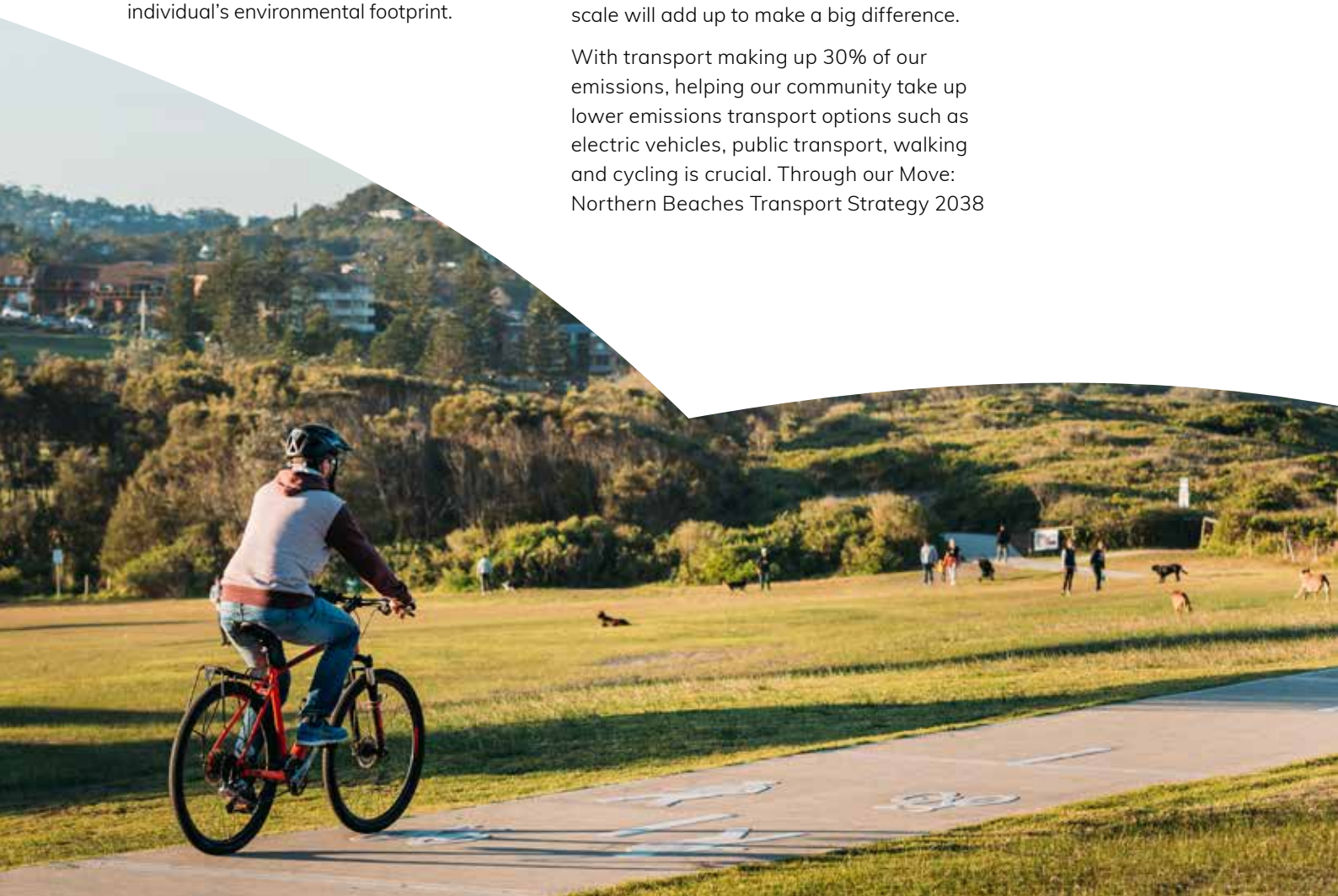
Everyday we make many choices about the way we live in our environment, that result in us consuming energy and water, and producing waste. The amount we use and consume is set to rise as the Northern Beaches population grows and climate change impacts increase.

Australians have one of the world's largest ecological footprints per capita. If the rest of the world lived like we do in Australia, we would need over three and a half earths to sustain our demands on nature (Global Footprint Network, 2019).

We know that on average larger households, with more people and larger spatial footprints, produce more emissions. Owning and driving more petrol and diesel powered cars, taking long-haul overseas flights and meat consumption significantly increase an individual's environmental footprint.

As the Northern Beaches becomes home to more people we need to balance the pressures that come with this by reducing our consumption and making our everyday choices sustainable ones. This will be done by making walking and cycling more attractive, safe options; by bringing more renewable energy powered transport onto our roads. We need to switch off our heaters, put our jumpers on and drink from reusable bottles and coffee cups. Our waste needs to be reduced by using our food scraps and green waste to make compost and mulch and more of our waste needs to be recycled. As a community we need to support a stronger circular economy and where possible buy and source products locally. Making these simple everyday changes will reduce the running costs of our homes and businesses and at a community scale will add up to make a big difference.

With transport making up 30% of our emissions, helping our community take up lower emissions transport options such as electric vehicles, public transport, walking and cycling is crucial. Through our Move: Northern Beaches Transport Strategy 2038



Our goal

Our community is actively working towards being energy, water, waste and transport smart so that we meet net zero carbon emissions by 2050.



6,900 hrs

Over 200 bushcare volunteers who do 6,900hrs work each year



19.2K

Each year our community generates over **19,200** garbage trucks of waste



9,330

Our community uses 9,330 olympic swimming pools of drinking water each year

Our commitment to net zero emissions by 2050 aligns us with the Paris Agreement and NSW Government objectives

We aspire to achieve...

Net zero emissions in our community by 2030

We are committed to...

- Reducing carbon emissions in our community by more than half by 2040
- Net zero emissions by 2050
- Maintaining or reducing overall drinking water use in our community by 2040
- Diverting 85% of waste from landfill by 2040
- Reducing the rate of waste generation per person by 2040.
- Reducing single use plastics

We will...

7.1 Motivate, inspire, support and encourage our community to reduce resource consumption and emissions production. We will promote making choices to reduce waste production, energy and water use by buying and sourcing products locally. We will do this through engagement, education and incentived and by:

- reviewing and maximising Council's Environment Centres and other programs to deliver the goals and commitments in the strategy; and
- supporting community groups to deliver sustainable living choices

7.2 Minimise the use of single use plastic and disposable items by promoting use of reusable items

7.3 Support innovative solutions to reduce waste, minimise waste transport and support a circular economy.

7.4 Reduce waste to landfill through service delivery, including diverting food and green waste to composting, and provision of recycling alternatives and educating the community in ways to minimise waste production at home and maximise recycling

7.5 Drive water efficiency and reuse in our community, including through reuse of grey, black and stormwater

7.6 Accelerate our transition to low emissions vehicles and increase our active travel trips by implementing the Move - Northern Beaches Transport Strategy

7.7 Actively engage in partnerships, research and innovation opportunities to improve uptake of sustainable living choices

7.8 Council will lobby and advocate on behalf of our community to ensure that local, state and federal policies reflect and enforce the efforts needed to help our community transition to living more sustainably

"Net zero carbon is when the amount of carbon dioxide emissions released on an annual basis is zero or negative."

WORLD GREEN BUILDING COUNCIL

CO_2

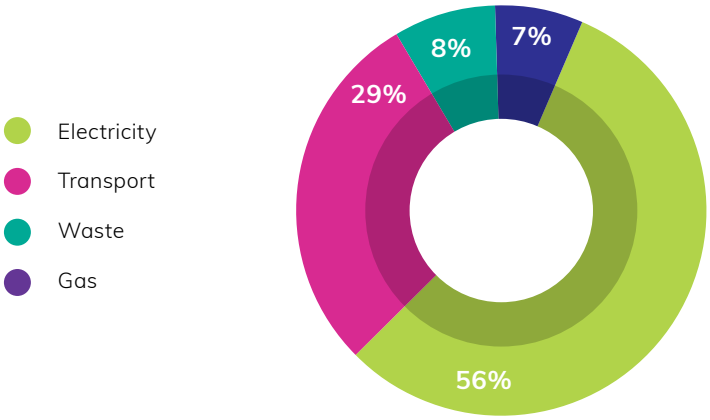
2 Million Tonnes

In 16/17 the **total carbon** emissions from electricity, gas, waste and transport for the Northern Beaches Region was almost 2 Million Tonnes

23,000 MegaLitres

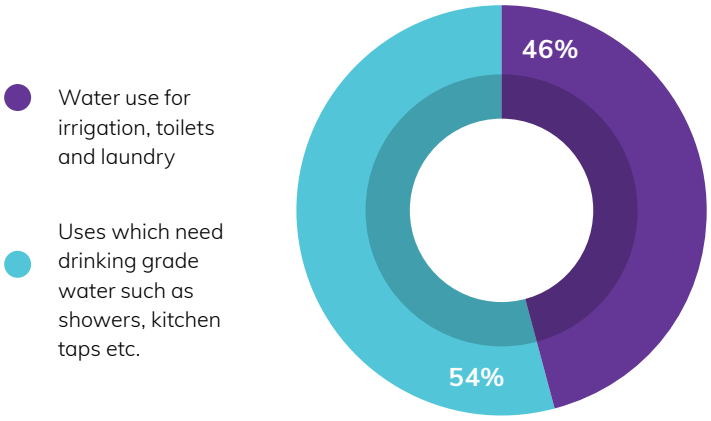
The water use was over 23,000 Mega Litres, which is over 9,000 Olympic swimming pools of water.

Carbon emission in the Northern Beaches by resource type



Reductions targeting electricity and transport should deliver higher emissions reductions

Drinking water consumption on the Northern Beaches



Finding alternate sources for this water will reduce our drinking water use


Charge
Ahead
We're making
the change
to electric
northern
beaches
council
Ahead

Theme 8:
Adaptation and Resilience

Background

Adaptation and resilience is about responding to and being prepared for the current and future impacts of climate change and natural hazards. Our region will be exposed to various climate change impacts such as sea level rise, more intense storms and flooding, leading to increased risks to buildings and infrastructure, heat waves and increased bush fire risk (BOM and CSIRO 2018, and OEH, 2016). We will also see impacts on the diversity of our plants and animals (IPBES, 2019). Our local Aboriginal heritage sites will be exposed to more severe erosion (AHO, 2019). These impacts will influence the way we live, play in and experience our natural environment and need to be balanced with ecological needs.

Our community will continue to be exposed to urban hazards from past and present development activities, such as air, noise, light, water and soil pollution and exposure to UV. These hazards are heavily influenced by land use, with major road corridors linked to noise and air pollution, industrial areas posing risk of stormwater contamination and residential areas contributing woodsmoke pollution, especially in winter. These hazards are discussed previously in Theme 2: Waterways and Catchments and Theme 5: Sustainable Built Environment.

While Council and the community will do their bit to mitigate future climate change, managing or 'adapting to' expected future risks and changes already locked into the system will help to minimise the extent of impacts. By implementing adaptation measures we will:

- Increase social, economic and environmental resilience to the impacts of climate change across all sectors;
- Increase our capacity to recover quickly from disruptions;
- Improve community safety and wellbeing;
- Ensure the built environment, especially critical infrastructure, is resilient to natural disasters and climate change influences;
- Enhance financial advantages and performance; and
- Ensure a sustainable balance between human activity and the natural environment.

The effects of climate change are broad and therefore strategies which address adaptation and resilience are also included in other sections of this strategy.

> " It is about being prepared for what is to come."
>
> **ROB, COMMUNITY FOCUS GROUP**



Our goal

To build resilience in our community and our natural and built environments, so we are prepared for and can adapt to climate change and natural hazards.



1 in 5 properties in the Northern Beaches are potentially affected by flooding



The number of extreme heat days in Sydney are set to rise from an average of 3 to 11 per year



Pre-planning can reduce disaster recovery costs by a factor of 10

Natural Hazards

are those elements of the physical environment, harmful to humans and caused by forces extraneous to them. More specifically, it includes all atmospheric, hydrologic, geologic and bushfire phenomena that, because of their location, severity, and frequency, have the potential to affect humans, their structures, or their activities adversely. (New York: Oxford University Press, 1978)

We aspire to...

Reduce the risk of natural hazards and climate change to our community and our environment

We are committed to...

- **Understanding and actively managing risks from bushfires, coastal erosion and inundation and flooding in the community**
- **Public infrastructure designed, constructed and maintained to address climate change**
- **The community being prepared, educated and resilient to natural hazards and climate change**

We will...

8.1 Undertake community education and engagement to improve preparedness and resilience

8.2 Drive innovation and research to be leaders in natural hazard management and climate change mitigation and adaptation

8.3 Continually incorporate best available climate change and natural hazard knowledge and practices, including innovative solutions, into our strategic land use planning, development controls, construction and operations

8.4 Collect good quality, meaningful data and leverage local knowledge to support and enable decisions

8.5 Enhance our approach to how we manage natural hazards

8.6 Advocate, collaborate and network with stakeholders to represent the needs of our community and environment and leverage outcomes from regional approaches and projects. This includes active involvement in regional initiatives such as Resilient Sydney, and implementing the Resilient Sydney Strategy

8.7 Maintain and enhance, strong collaboration with emergency services and relevant agencies

8.8 Build our skills and capacity to respond during a natural hazard emergency to reduce the impact and facilitate recovery

8.9 Improve our community's connectedness and their access to information to empower them to make appropriate decisions during an event.

8.10 Continue to identify properties affected by natural hazards to ensure strategies are in place to reduce their impact

8.11 Continue to monitor and record Aboriginal and salvage sites, undertake conservation work where appropriate and deliver education and training programs.

Theme 9:
Northern Beaches Council Operations

"If Council can do it, it shows it is possible."

COMMUNITY FOCUS GROUP



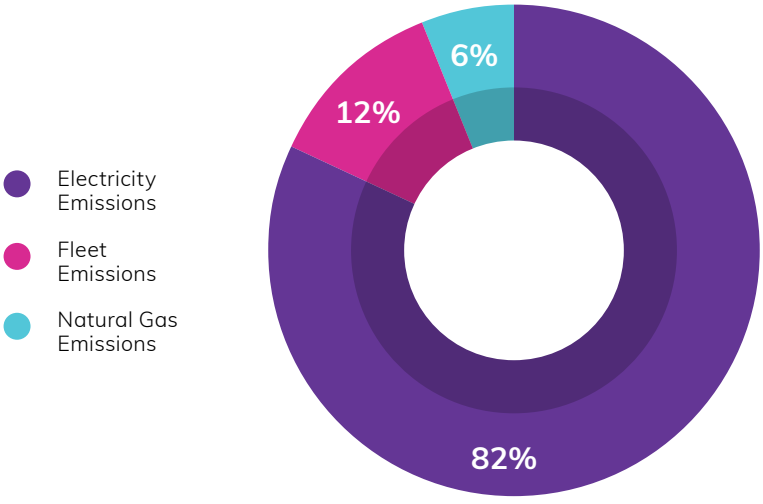
Northern Beaches Council as an organisation is responsible for approximately 2% of the emissions in our area (Kinesis, 2018). While this may not seem like a significant amount, it is important that Council acts as a best practice leader by lowering its corporate environmental footprint. Council will learn from experience what it takes to operate more sustainably and use this knowledge to help lead our community to do the same. To do this Council has set our commitments to stretch further than those for the community.

Council will drive the change within our community to do the same by using our influence where it is most significant. Council will meet our commitments by using:

- Community Strategic Plan
- Planning instruments - the Local Strategic Planning Statement, Local Environment Plan and Development Control Plan
- The Asset Management Strategy and subsequent Asset Management Plans
- Long Term Financial Plan; and
- Collaboration, engagement and education to motivate and mobilise our community.

For larger, more diverse issues and challenges, we will advocate and lobby state and federal agencies for policy change.

Northern Beaches Council's carbon emissions broken down by resource type.



Reductions targeting electricity consumption should deliver higher emissions reductions

Our goal

To work towards being a net zero emissions and water wise organisation through innovation and efficient resource use. We will drive change within our community.

We aspire to achieve ...

Net zero emissions by 2030.

We are committed to...

- A 60% reduction in carbon emissions by 2040
- Net zero emissions by 2045
- A 10% reduction in our drinking water use by 2040
- Diverting 85% of waste from landfill by 2040
- 90% recycling of construction waste by 2040
- All suitable sites being powered by renewable electricity by 2030
- Increasing the frequency of everyday sustainable behaviours in our community
- Increasing the number of environmental volunteers
- Delivering our environmental education programs and facilities to a high level of community satisfaction

We will...

9.1 Regularly monitor, report and publicise our sustainability initiatives

9.2 Reduce carbon emission from our operations by using alternative processes, different ways of working, products and vehicles

9.3 Monitor our waste generation and minimise waste, maximise recycling, reduce waste to landfill and support a circular economy

9.4 Build the capacity of staff to support and implement initiatives

9.5 Strongly and consistently consider sustainability criteria in all Council's procurement activities, including electricity contracts and investments

9.6 Investigate the latest technologies and procedures to eliminate waste from our stormwater and waterways

9.7 Actively seek opportunities for capture of water and wastewater and find ways to reuse it

9.8 Reduce drinking water use by continually improving the way we use water, especially for irrigation and our swimming pools

9.9 Retrofit Council buildings and other assets to make them use less energy and water and incorporate green infrastructure. Examples include solar panels and efficient lighting, appliances, air conditioning, and pool water heating and water sensitive urban design

9.10 Make Council buildings and other assets and other assets connected and automated to be smarter and more efficient

9.11 New builds and infrastructure to be exemplars of best practice in sustainability and embrace innovation

9.12 Lobby and advocate on behalf of our community to ensure that local, state and federal policies reflect and enforce the efforts needed to help our community transition to living more sustainably

Implementing the Strategy



The strategy will be supported by 11 action plans:

- Climate Change
- Environmental Education and Sustainable Behaviours
- Bushland
- Waterways and Catchments
- Coast
- Biodiversity
- Sustainable Built Environment
- Sustainable Living
- Adaptation and Resilience
- Northern Beaches Council's Sustainable Operations
- Urban Tree Canopy Plan (draft 2019)

Protect. Create. Live - the Northern Beaches Environment and Climate Change Strategy 2040 will be implemented by Council in partnership with key stakeholders and the community.

These action plans will be short term (4 years) and will guide our Delivery Program and Operational Plans. They will include specific projects and actions that Council will undertake to deliver the high level strategies in this document and drive us towards achieving our commitments.

It is clear a variety of tools will be needed in the action plans including innovation and research, strategic land use planning and development controls, on-ground works, compliance, collaboration, education and engagement for behaviour change.

This last two points are important; Council alone cannot achieve the goals, commitments and aspirations in this strategy, as many of the actions needed to achieve them fall beyond the direct control of local government. As a Council we will need to play a strong collaboration and advocacy role to bring relevant stakeholders together to deliver our outcomes.

Implementation of this strategy across the diverse operations of Council will consider the quadruple bottom line principles of sustainability to deliver equally on environmental, social, governance and economic outcomes. We will endeavour to deliver this strategy within our existing resources in line with the Long Term Financial Plan. We will seek opportunities to leverage external sources of funds where we can.

Council will be evaluating our progress against the goals, commitments and aspirations in this strategy annually. A detailed assessment, report and review will be completed every two to four years. This will allow us to adapt the commitments, aspirations and goals in light of fast paced changes in the market, knowledge, technology, science as well as federal and state policies.

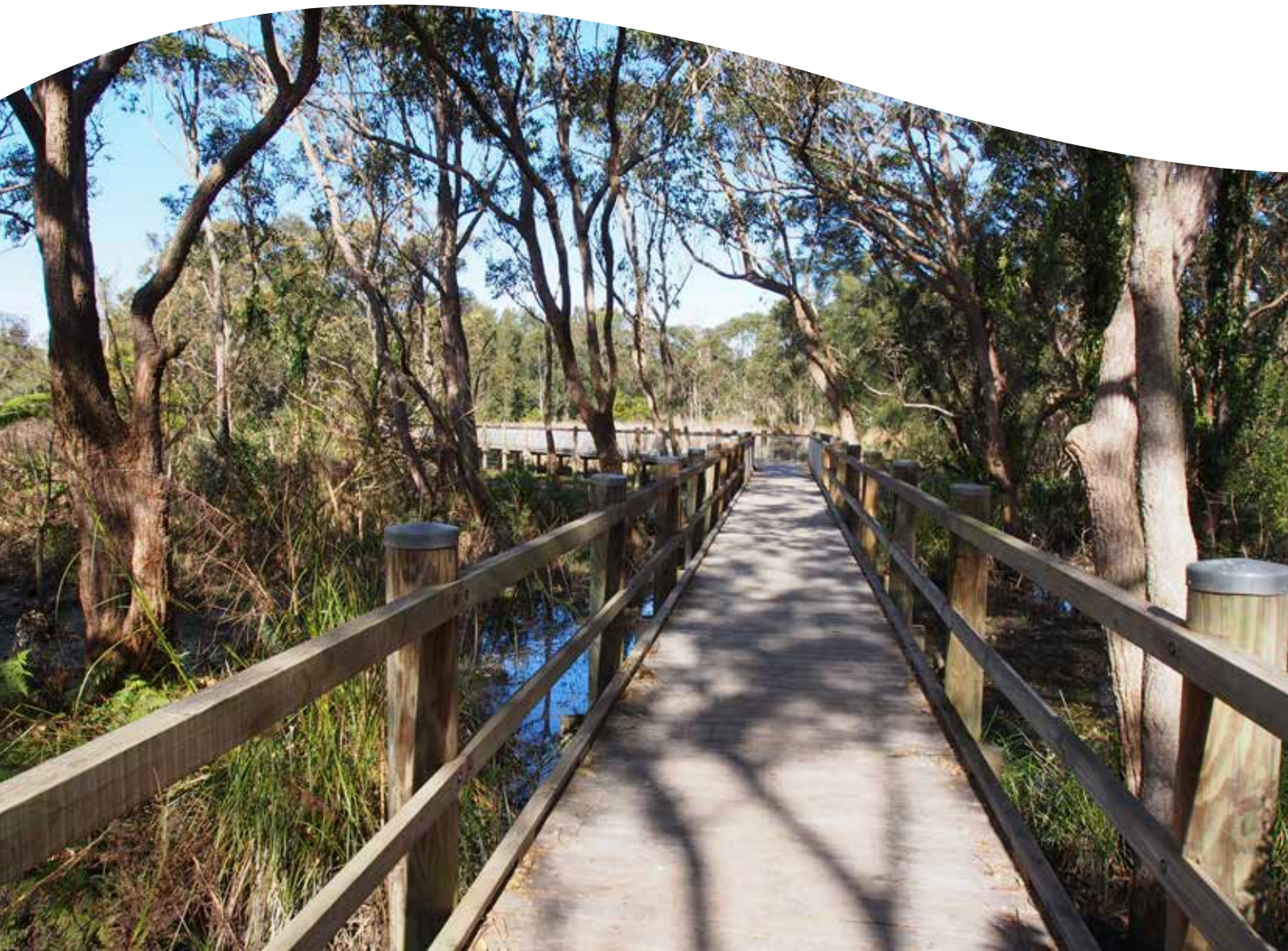
Moving Forward

We will work closely with our community and stakeholders to deliver the strategies in this document. Importantly we will track our progress and report this to the community on a regular basis.

We will tackle the challenges of climate change, population growth, globalisation, technological advancement and funding head on to meet our goals, commitments and aspirations.

In delivering the Protect. Create. Live – Northern Beaches Environment and Climate Change Strategy 2040 we will:

- Protect our environment;
- Create homes, work places and neighbourhoods to support growth sustainably; and
- Live sustainably in our environment.



Glossary

Name	Definition
Amenity	Refers both to the desirable or useful feature of a facility of a building or place as well as the pleasantness or attractiveness of that place.
BASIX	Is a performance based regulatory scheme that delivers energy and water efficiency outcomes in line with the requirements of the Building Code of Australia. BASIX applies to all new residential buildings and to alterations and additions with a cost of works more that $50,000.
Biodiversity	The variety of species and ecosystems and the ecological processes that they are part of.
Bushland	Refers to the land which supports remnant vegetation or land which is disturbed but still retains a predominance of the original vegetation and structure.
Carbon Footprint	The amount of carbon emitted by an individual or organisation in a given period of time, or the amount of carbon emitted during the manufacture of a product.
Carbon Neutral	Refers to achieving net zero carbon dioxide emissions by balancing carbon emissions with carbon removal (often through carbon offsetting) or simply eliminating carbon emissions altogether (the transition to a “post-carbon economy”).
Circular Economy	A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.
Corridors	Areas of land that provide connectivity between habitats and enable species movement and genetic exchange.
Ecological Condition	The state of ecological systems, which includes their physical, chemical and biological characteristics and the processes and interactions that connect them.
Environmental Footprint	The effect that a person, company, activity etc. has on the environment, for example the amount of natural resources they use and the amount of harmful gases they produce.
Ecosystem	A biological community of interacting organisms and their physical environment.
Local Green Grid	The Northern Beaches’ local green grid forms part of the Greater Sydney Green Grid and is composed of four layers: the hydrological or blue grid; the ecological grid; the recreational grid; and the agricultural grid.
Net Zero Emissions Building	A highly efficient building that is fully powered from on-site and/or off-site renewable energy sources and offsets.
Net Zero Emissions	(As for carbon neutral) refers to achieving net zero carbon dioxide emissions by balancing carbon emissions with carbon removal (often through carbon offsetting) or simply eliminating carbon emissions altogether (the transition to a “post-carbon economy”).
Our Community Carbon Emissions	In this strategy we have included emissions from electricity and gas use, transport and waste production for people living in the entire Northern Beaches Local Government Area in the community emissions profile. It does not include the emissions produced in the manufacture, growing or transport (the life cycle) of products we purchase or consume.
Resilience	In this strategy refers primarily to the capacity of our social and ecological systems to absorb stresses and maintain function. It also refers to the ability to adapt, reorganise and evolve to leave our systems better prepared for future impacts of climate change.
Strategic Land	Use planning and development controls – This refers to the various policies and plans which direct the way we undertake development and plan future growth. Such documents include the Community Strategic Plan, Local Strategic Planning Statement, Local Environment Plan, Development Control Plan and policies.
Sustainable	A responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality.

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