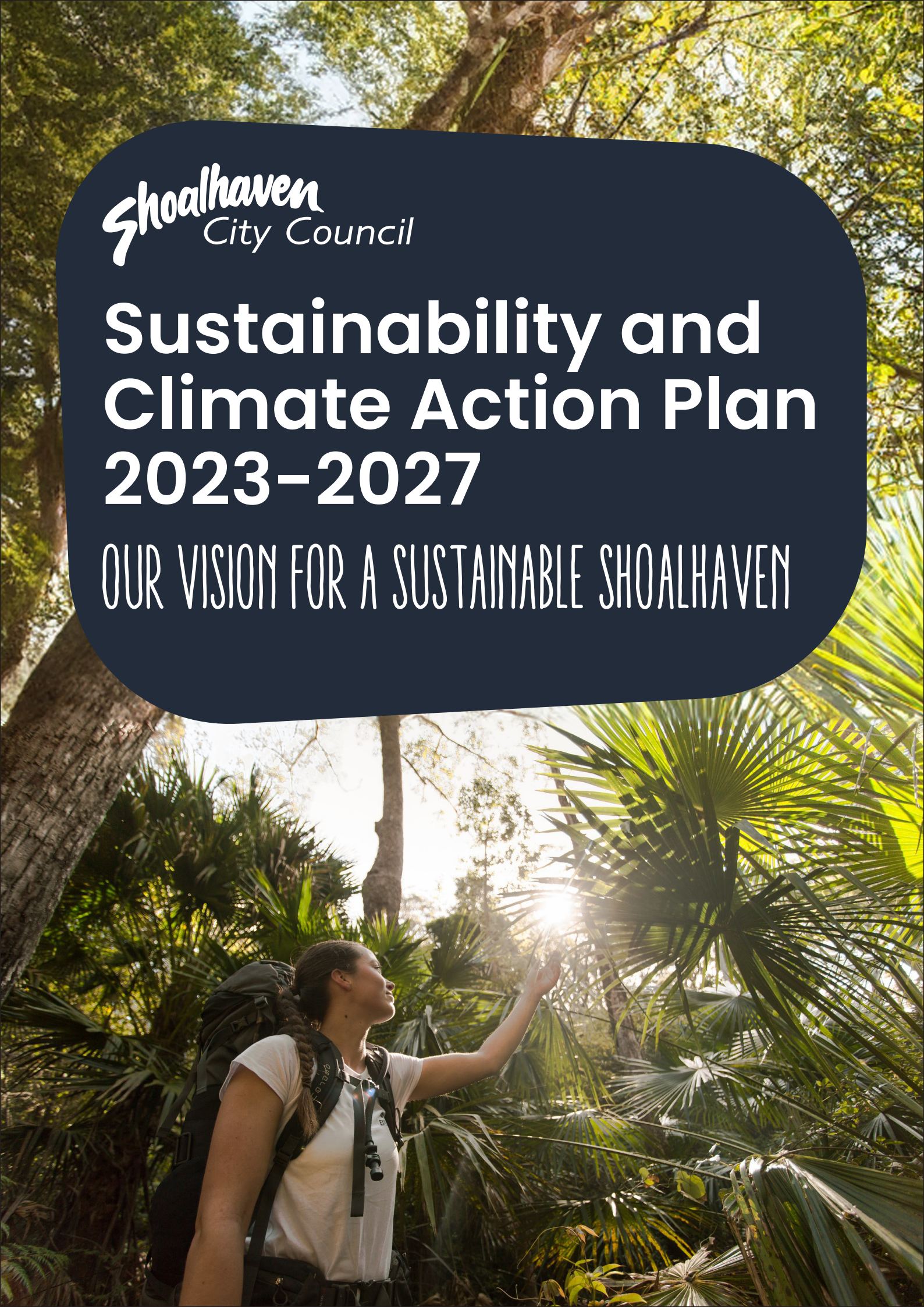


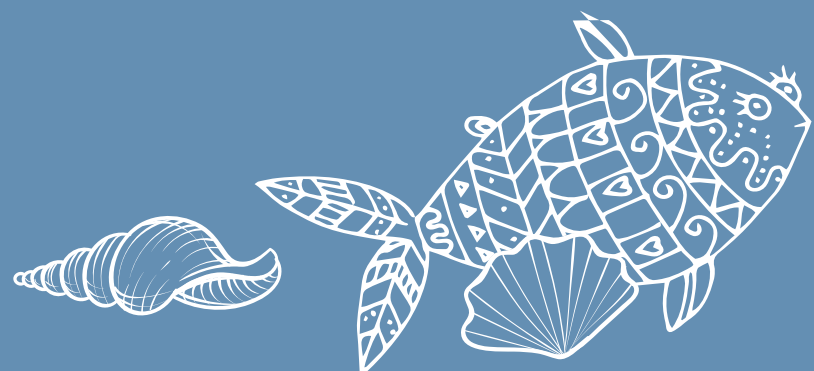


# Sustainability and Climate Action Plan 2023–2027

OUR VISION FOR A SUSTAINABLE SHOALHAVEN







# ACKNOWLEDGING COUNTRY

Shoalhaven's Aboriginal communities have a long, rich spiritual and cultural connection to this land, to the natural landscapes, sacred objects, and stories that are embedded throughout the region. Their continued work towards maintaining and restoring these enduring cultural traditions, empowering local Aboriginal communities, and strengthening connections to Country is highly valued and respected.

Council acknowledges all Aboriginal groups of Shoalhaven, the Bhwerawerri, Budawang, Jerrinja, Murramarang, Tomikin, Wandi wandandian, Wodi wodi, Yuin and associated clans of which many are Dhurga and Dharawal language speakers. We pay respect to Elders past, present and emerging, and extend that respect to all Aboriginal people who call our beautiful region home.

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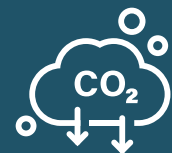
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# VISION

Our vision for Shoalhaven is to be a thriving and sustainable region which celebrates and protects our unique natural environment and strives to continuously improve outcomes for current and future generations.

Creating a sustainable Shoalhaven means:



Reducing greenhouse gas emissions and adapting to climate change



Living in balance with our natural environment to protect and support our ecosystems



Ensuring our assets, towns and villages are future-ready, environmentally sustainable, and climate resilient



Using materials and water wisely and avoiding waste to protect natural resources



Supporting our community to adopt sustainable living practices and prepare for a changing climate



Innovating, collaborating, and advocating to all levels of government to protect and enhance the health of our environment and community.

Looking beyond the goal of sustaining our current environment and quality of life, Council will work to continually improve outcomes for the local region.

This plan is aligned with the vision of our Community Strategic Plan 'Shoalhaven 2032'.

“WE WILL WORK TOGETHER IN THE SHOALHAVEN TO FOSTER A SAFE AND ATTRACTIVE COMMUNITY FOR PEOPLE TO LIVE, WORK, STAY AND PLAY; WHERE SUSTAINABLE GROWTH, DEVELOPMENT AND ENVIRONMENTAL PROTECTION ARE MANAGED TO PROVIDE A UNIQUE AND RELAXED LIFESTYLE.”



# WHAT IS SUSTAINABILITY?

Sustainability is defined by the United Nations as meeting the needs of the present without compromising the ability of future generations to meet their own needs. It is about ensuring the wise use and management of all resources within a framework which balances community liveability, environmental sustainability, and economic prosperity over time.

The concept of sustainability recognises the critical role that the environment plays in our lives, providing us with the resources that we need to survive – from the water we drink, to the air we breathe, the food we eat, and the spaces we enjoy.

The goal of sustainability is to enhance the wellbeing of society whilst minimising impacts on the environment, so that we can protect the ecological processes on which life depends and ensure a healthy environment and quality of life for generations to come.



‘It’s about protecting and valuing our environment and being responsible’  
– Freya

‘To me, sustainability means to live with the environment in a way that does not harm the environment. The key is to not take more than what can recover naturally in a reasonable time’  
– Kristian

‘Ensuring we can exist into the future alongside our natural environment and making sure we don’t have a negative impact’  
– Kelly

‘Preservation whilst providing the needs of today’  
– Simon

“A BRIGHTER FUTURE FOR OUR KIDS AND GRANDCHILDREN”

– Peter

‘We live in a beautiful place and making use of our natural resources such as our beaches and nature reserves is great for our spiritual and mental wellbeing’  
– survey participant

‘Adopting sustainable practices, whether large or small, can have significant impacts in the long run’  
– Darlene

‘For something to be sustainable it should be able to be created or generated and function as intended through it’s entire lifecycle without compromising the present or future, including its disposal, recycling or reuse’  
– Claire

‘That we sustain hope for future generations’  
– Bob



# INTRODUCTION

The Shoalhaven is known for its spectacular natural environment, home to pristine coastline and bushland, unique ecosystems, and a growing community of over 110,000 residents.

The natural beauty, temperate climate, and relaxed lifestyle of the Shoalhaven are highly valued by the local community and visitors alike – however a rising population and changing climate present a growing challenge to the region. As a Local Government Authority, Council has a duty to help protect and manage the ongoing health and sustainability of the Shoalhaven for current and future generations.

In 2022, Council adopted its Sustainability and Climate Policy, recognising the international scientific consensus that warming of the climate system is unequivocal, and that human activities (primarily greenhouse gas emissions) are the principal cause of these changes.

The Policy outlines Council's commitment to protect our natural environment and address climate change, identifying 16 key objectives, to:

1. Integrate the principles of sustainability and Ecologically Sustainable Development into planning, asset management and decision-making processes across the organisation.
2. Mitigate and build resilience to climate change by reducing Council greenhouse gas emissions, seeking opportunities for carbon abatement, and adapting to climate change impacts.
3. Achieve net-zero greenhouse gas emissions across Council operations by 2035, with an interim target to reduce emissions by 50% by 2028 compared to 2020 levels.
4. Implement Council's Sustainable Energy Strategy to generate renewable energy on Council assets, transition Council plant and equipment away from fossil fuels, and continually improve energy efficiency across the organisation.
5. Support the circular economy and adopt the principles of the waste hierarchy to prioritise avoiding and minimising waste.
6. Embed sustainability into Council procurement processes to encourage sustainable, low-carbon and high recycled content procurement.
7. Support the principles of a water sensitive city by increasing the use of recycled water, providing efficient and effective water and waste-water services, and improving the quality of waterways.
8. Increase the provision of low and zero emissions vehicles for Council's fleet and support active and low-emissions transport options for our community.
9. Encourage environmentally and socially sustainable, equitable, and climate resilient land-use planning and development across the Shoalhaven region.
10. Recognise and support the rich cultural heritage and Aboriginal history of the Shoalhaven region and the practice of caring for country.
11. Improve the ecological and environmental values of the Shoalhaven through a stronger emphasis on biodiversity conservation, natural areas management, and sustainable tourism.
12. Increase tree canopy cover in our towns and villages in order to enhance community resilience to climate change and support wildlife.
13. Reduce pollution and protect the health and safety of our air, water, and natural resources.
14. Prioritise sustainable and low-carbon building materials across Council buildings, infrastructure, and other assets.
15. Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region.
16. Advocate to all levels of government for greater action and support to reduce emissions, meet renewable energy targets, and adapt to climate change.



# WHAT IS COUNCIL'S ROLE?

The decisions and activities of Shoalhaven City Council impact upon the local and regional environment, and the ecological systems that current and future generations value and depend upon. Under the Local Government Act 1993 (NSW), Council has an obligation to properly manage, develop, protect, restore, enhance, and conserve the environment of the area for which it is responsible in a manner which is consistent with the principles of Ecologically Sustainable Development (ESD).

Council has a significant opportunity to contribute to the sustainability and climate security of the region, and in doing so contribute to broader regional, state, federal and international strategies and goals. Council plays a key role in urban planning; economic and community development; waste and water management; transport; and public land management, and as the level of government closest to the community, Council also plays a key role in supporting the community to adopt healthy and sustainable living practices.

This Action Plan outlines Council's strategic response to address community expectations and face important challenges. One of the most direct levels of influence that Council has is to reduce the environmental impact of its own operations, and this will be a key focus of this Action Plan.

Sustainable and liveable environments is also one of the four priorities identified by Shoalhaven's community as part of Shoalhaven's Community Strategic Plan, and Council is committed to delivering this outcome for the LGA. To do so, Council will continue to collaborate and partner with other government agencies and organisations, such as the Illawarra-Shoalhaven Joint Organisation and Cities Power Partnership, to advocate for programs which contribute to the ongoing sustainability of the Shoalhaven region and beyond its borders.

Although councils plays an important role, it is important to recognise that sustainability is a shared responsibility between government, business, and the community, and all have a part to play.

## THE BIGGER PICTURE

This Action Plan has been developed in alignment with other key Council policies and strategies and supports the broader sustainability targets and requirements of State, Federal, and international policies and agreements.

The key directions and goals contained within this Plan also support the delivery of the United Nations Sustainable Development Goals, adopting the approach to 'think global, act local', in recognition of the role that we all play in contributing to a more sustainable future.

## The United Nations Sustainable Development Goals

The Sustainable Development Goals (SDGs) are seventeen interconnected goals that 193 United Nations member states (including Australia) have committed to.

These goals form the framework for improving the lives of populations around the world and mitigating climate change.





## International

### **Kyoto Protocol (1997)**

Committed industrialised countries and economies to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets.

### **United Nations Framework Convention on Climate Change Paris Agreement**

An international treaty on climate change adopted by 196 parties (including Australia) with target to hold the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit temperature increase to 1.5°C.

### **United Nations Sustainable Development Goals**

17 interconnected goals forming a blueprint to achieve a more sustainable future for all.

## NSW State

### **Net Zero Plan**

Plan to deliver a 70% cut in emissions by 2035 compared to 2005 levels and achieve net zero emissions by 2050.

### **Environmental Planning and Assessment Act 1979**

The primary land use planning statute in NSW.

### **Waste and Sustainable Materials Strategy**

Outlines actions over the next six years to contribute to the circular economy.

### **Water Strategy**

Sets the overarching vision for 12 regional and two metropolitan water strategies.

### **Electric Vehicle Strategy**

Strategy to increase EV sales and help NSW achieve net-zero emissions by 2050.

### **NSW Premier's priorities**

Priorities and commitments to enhance the quality of life of the people of NSW.

## National

### **Australia's long-term emissions reduction plan (2021)**

A whole-of-economy Plan to achieve net zero emissions by 2050.

### **Environment Protection and Biodiversity Conservation Act 1999**

The legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities, and heritage places.

### **National Climate Resilience and Adaptation Strategy (2021)**

Strategy to drive investment and action, improve climate information and services, and to assess progress and improve over time.

## Regional

### **Greater Cities Commission, Six Cities Region**

Vision to connect six cities in a way that improves opportunity, lifestyle, and the environment.

### **Illawarra-Shoalhaven Regional Plan**

Vision and direction for the region's future housing, jobs, infrastructure, and environment.

### **Illawarra-Shoalhaven Water Sensitive Framework**

Vision to establish a water sensitive region.

### **Illawarra Shoalhaven Regional Transport Plan**

Outlines local actions to achieve the transport vision for the region.

### **Shoalhaven Illawarra Enabling Regional Adaptation Project**

Builds on local knowledge to understand climate vulnerabilities in the region.

### **16 Regional Cities Services Improvement Program**

Identifies improvements to public transport.

## Local strategies and policies

This Action Plan has also been developed to align with and support local plans, strategies, and policies, including:



**Community Strategic Plan 2032**



**Sustainability and Climate Policy 2022**



**Community Wellbeing Strategy 2022**



**Shoalhaven Adaptation Plan 2022**



**Sustainable Energy Strategy 2020-2025**



**Electric Vehicle Charging Stations on Public Land Policy 2022**



**Waste Reduction Management Strategy 2022-2027**



**Shoalhaven 2040 - Our Strategic Land-use Planning Statement**

- **Waste Education and Communications Strategy**
- **Flood Studies (in development)**
- **Coastal Management Programs (in development)**



# CLIMATE CHANGE

Climate change is considered one of the most significant threats of our time, posing widespread risks to human health and wellbeing, global food and water security, loss of biodiversity and the decline of ecological systems that we rely upon.

The CSIRO and the Bureau of Meteorology have reported that extreme weather across Australia is occurring more frequently and with greater intensity, and as global temperatures continue to rise, the likelihood of compounding extreme weather events happening at the same time or in succession is increasing.

In recent years, the Shoalhaven community has experienced first-hand the impacts of escalating climate change. In 2019/20, over 68% of the Shoalhaven Local Government Area burned in the Black Summer bushfires, destroying or damaging 485 homes and tragically resulting in the loss of human lives. Following the 2020 bushfires, Shoalhaven experienced one the worst flood events recorded in 30 years, with storms resulting in 270 electrical hazards across the network and causing over 13,500 homes and businesses to lose power (ABC, 2020). Throughout 2021 and 2022, storm events and flooding continued to impact the Shoalhaven region and coastline, compounded by the La Niña phenomenon and resulting in landslips, road closures, and the deterioration and destabilisation of beaches and coastal ecosystems. With the increasing impacts of these events on our

community and natural environment, it is critical that we take action to mitigate and prepare for further anticipated climate change.

Under the Global Paris Agreement, signatory governments, including both the Australian Federal government and NSW State government, committed to the target of keeping global temperature rise this century to well below 2°C above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5°C. The latest science from the IPCC suggests that we are almost certain to overshoot the target of 1.5°C this century, however with rapid and sustained emissions reductions, it is still possible to hold global average temperature to well below 2°C if governments act immediately (Climate Council 2022).

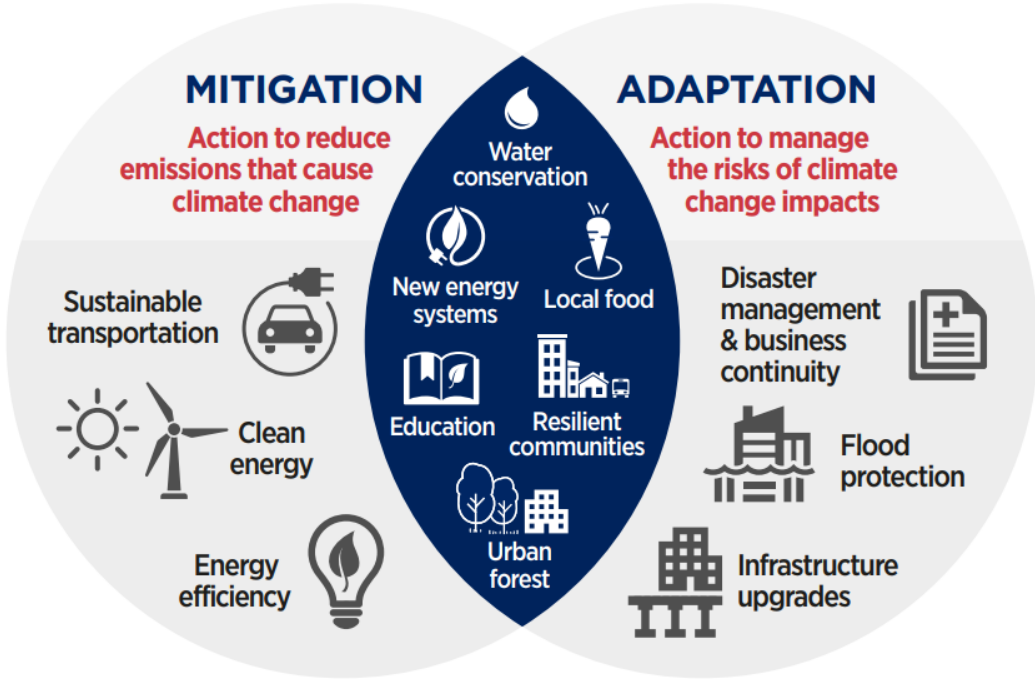
Through its Sustainability and Climate Policy, Council has committed to mitigate the impacts of climate change with a target to achieve net zero emissions by 2035, in line with the findings and recommendations of the IPCC and Climate Council Australia.

By managing climate change processes and greenhouse gases at a local scale, Council is also contributing to the broader national and international decarbonisation targets.

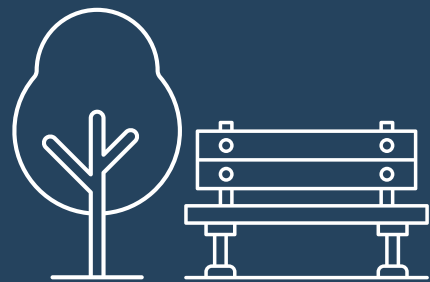
## Adaptation versus mitigation

While it is critical to address the root cause of climate change by reducing emissions, it is also important to recognise that the local and global community are already experiencing the impacts of climate change. Even with deep emissions reductions, society will continue to experience these impacts over the coming years (Climate Council 2021).

To meet this challenge, and support the delivery of this Action Plan, Council has also prepared an Adaptation Plan (2022) identifying key climate risks to Council operations and outlining the actions Council will take to adapt to and manage these risks.







Over 300,000  
hectares of  
national park



Over 7000  
business



165km of coastline



Over 3 million  
visitors every year

# THE SHOALHAVEN



72,250 tonnes of  
operational  
greenhouse gas  
emissions (FY22/23)



49 towns and  
coastal villages



16 threatened  
ecological  
communities  
and 275  
threatened  
species



Over 100  
beaches



Area of 4,531  
square kilometres



Over 110,000 residents (6.5%)  
identifying as Aboriginal or  
Torres Strait Islander

## Our community

Comprised of 49 towns and coastal villages, the Shoalhaven is a growing region and economy, home to approximately 110,000 residents and over 7,000 local businesses.

Shoalhaven is the largest coastal area close to the growing Sydney metropolitan region, and also lies within 190km of Canberra. Due to this central geographic location and the beauty and natural amenity of the area, visitation across the Shoalhaven increases significantly during the warmer months, with the population of some towns and villages increasing by six times over the summer period.

Projections show that the Shoalhaven will continue to be a focus for growth into the future, and by 2051, the Shoalhaven is expected to have a population of over 140,000 residents (Forecast ID Shoalhaven, 2023).



Our environment and economy

Bordered by mountains and coastal plains, Shoalhaven is known for its natural environment and scenically beautiful landscapes, supporting extensive biodiversity values.

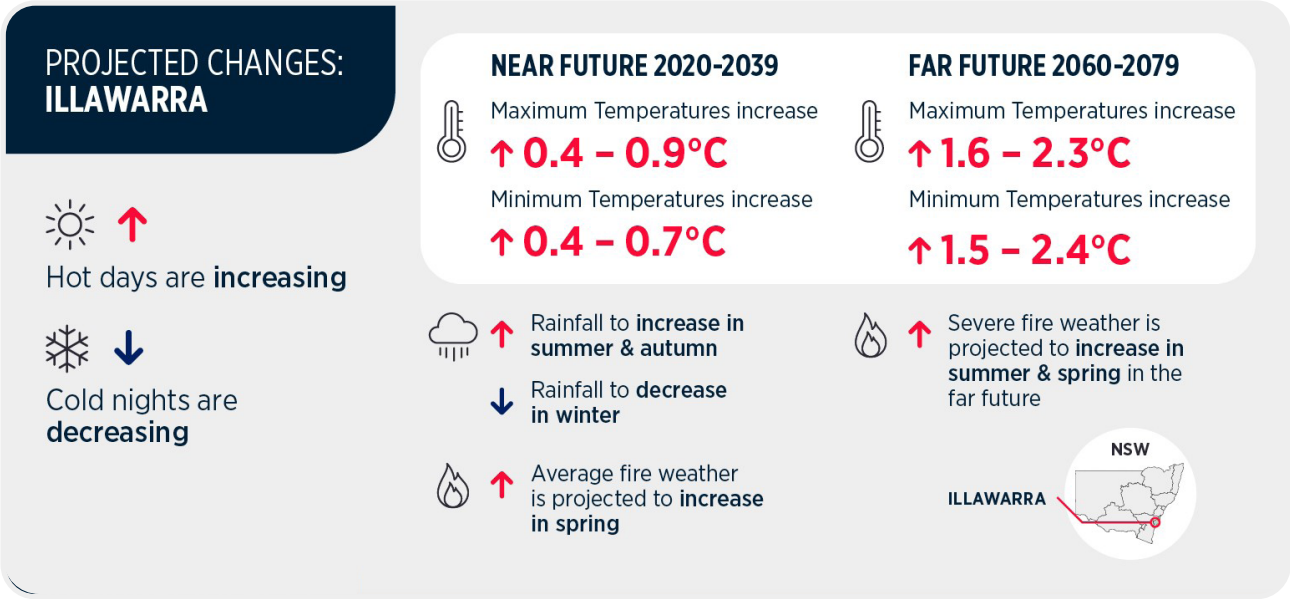
The Shoalhaven coastline is approximately 165 kilometres long, and the proportion managed by Council is larger than any other local government area in New South Wales. Crown Land, State Forest and National Park make up 64% of the total land area across the LGA, which is home to many significant water bodies and marine areas, large tracts of bushland, and more than 100 beaches.

Vegetation ranges from escarpment woodlands, native forest, rainforests, heaths, grassland, dune scrub, and estuarine communities. This rich environment of complex ecosystems and vegetation provides habitat for a multitude of animal species and ecological communities, many of which are threatened.

The environment and its diverse coastline habitats and waterways provide critical economic and social benefits for the region, supporting tourism and primary industries, commercial and recreational fishing opportunities, and enhancing the health and wellbeing of our communities.

Expected climate change

Although there is a level of uncertainty regarding the speed and scale of climate change projections, the NSW Climate Impact profile provides some reliable insight into the expected regional changes we can anticipate across the Shoalhaven and Illawarra region.





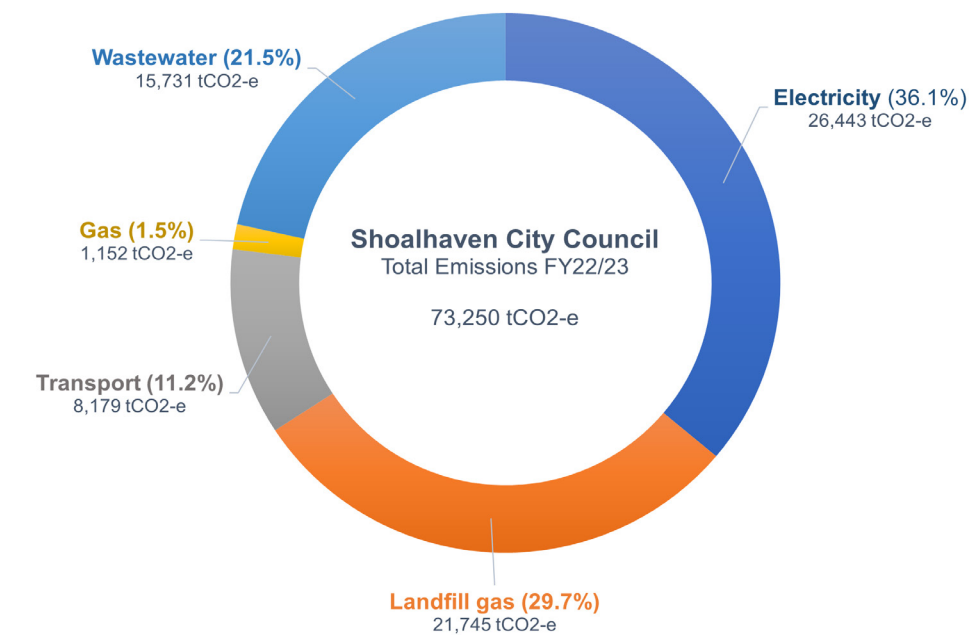
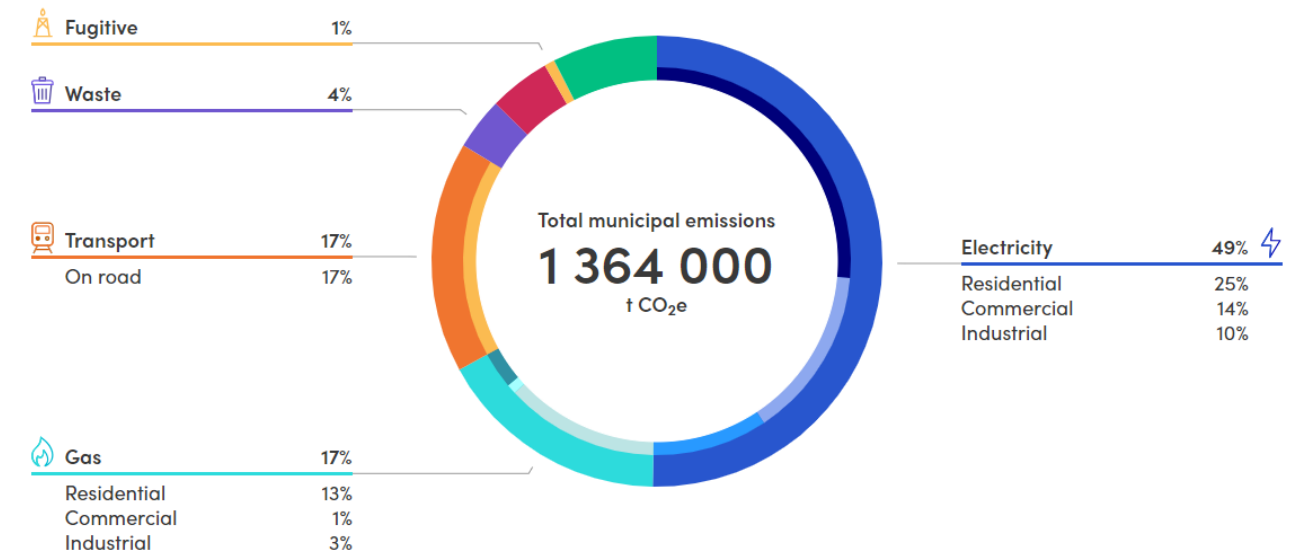
Our emissions

To mitigate against climate change, Council has set an ambitious target to achieve net zero emissions from its operations by 2035. Council prepares annual performance reports to identify and calculate emissions resulting from its operations, and to assess progress towards this target.

Energy in the form of electricity, gas, and vehicle fuel, is an essential resource for the effective operation of Council and for the Shoalhaven community. However, the majority of Shoalhaven’s current energy is derived from fossil fuels which are a costly and finite resource.

In 2022-23, electricity represented 36% of total Council emissions, and at a municipal level, electricity consumption was estimated to make up 49% of emissions (Ironbark and Beyond Zero Emissions Snapshot Climate Profile 20/21). Becoming more energy efficient and transitioning to renewable energy therefore offers a significant opportunity to substantially reduce emissions across the Shoalhaven.

Over the next three years, Council has committed to a series of actions and renewable energy contracts to address electricity emissions - however, it is important to note that some of the highest sources of Council emissions are from scope one activities, including from water and wastewater processing, and landfill gas. Addressing these scope one emissions will be a critical part of Council’s work in meeting its emissions targets in future.







Upgrading recycling and waste processing facilities to reduce waste to landfill



Over 55 council assets with more than 1276 kW of solar PV systems installed saving 1,500 tonnes of CO2 equivalent emissions each year

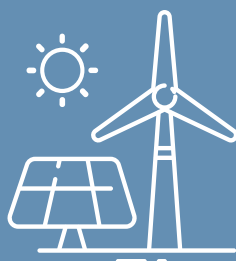


Member of Cities Power Partnership with 5 climate pledges



Supporting local EV charging stations and fleet transition with 2 electric vehicles and 16 hybrid vehicles.

# OUR ACHIEVEMENTS



Renewable Power Purchase Agreement with 25% of electricity sourced from renewables from 2023 increasing beyond 50% from 2025



Recycling and reusing up to 13ML (or 13 million litres) of water a day



Sustainability and Climate Policy with target to achieve net zero operational emissions by 2035



Established Revolving Energy Fund in 2019 to fund energy efficiency projects



Commitment to develop Urban Greening Strategy with over 2000 trees planted in 2023



Upgrading 100% of streetlights to energy efficient LEDs by 2023

## Increasing renewable energy

Council has been working to reduce its operational greenhouse gas emissions and increase renewable energy across buildings and assets for over a decade.

In 2004, Council installed its first solar PV system at its Waste Depot in Berry. Today, Council has over 55 assets with 1276 kW of solar PV systems installed, generating over 1,500,000 kWh of renewable electricity every year. Through these systems, Council is saving over 1,500 tonnes of annual carbon dioxide equivalent emissions.

Council has also committed to transition all public streetlighting to energy efficient LEDs by 2023, and will continue to purchase renewable energy for Council's electricity needs under an 8 year Power Purchase Agreement, with a target of achieving net zero greenhouse gas emissions across our operations by 2035.



# OUR ACHIEVEMENTS

## Revolving Energy Fund

The Revolving Energy Fund was established by Council in 2019 to provide funding for energy efficiency projects, such as solar installations and energy efficient lighting upgrades.

Projects which have been completed under the Revolving Energy Fund include 30kW of solar installed at Bomaderry Works Depot, 30kW of solar and an energy efficient lighting upgrade at the Nowra Library, an LED lighting upgrade across four Aquatic Centres and the Shoalhaven Entertainment Centre, an LED lighting upgrade and large scale 99kW solar installation at the Ulladulla Civic Centre. These projects combined are estimated to reduce carbon emissions by 362 tonnes per year.

## Building community resilience

As part of Council's Recovery into Resilience project, renewable energy and battery technology has been installed at 23 Council-owned halls and community centres across the Shoalhaven since 2021. Each site includes a 7–10 kW Solar PV system with microinverters, and a 13.5 kWh Tesla Battery System. These secondary power supply setups ensure that essential power is supplied to these sites during emergencies and grid outages.

Council is also supporting the delivery of the first resilient energy community microgrid on the NSW South Coast. The initiative will see the coastal villages of Bawley Point and Kioloa receive a community microgrid and battery, providing access to reliable energy during power outages. Led by Endeavour Energy with funding from the NSW Government Bushfire Local

Economic Recovery Fund, the project has also seen 100 local homes and businesses receive solar and battery systems, helping to increase local renewable energy.

## Adapting to a changing climate

Council has been working to identify and prepare for climate change risks for over a decade.

In 2010, Council undertook its first climate change risk assessment and developed a responding Adaptation Plan. In June 2021, Council completed an updated Climate Change Risk Assessment based on the latest projected climatic changes for the region and prepared Council's 2022 Adaptation Plan. This Plan identifies key actions to reduce climate change impacts and build a more resilient and climate adapted Shoalhaven.

## Climate commitments

Council joined the Cities Power Partnership in 2017 and under the program has already achieved four key pledges to improve our sustainability and reduce the impacts of climate change on our community and environment. To date, Council has:

1. Set a city-level renewable energy or emissions reduction targets.
2. Installed renewable energy (solar PV and battery storage) on Council buildings.
3. Set minimum renewable energy benchmarks for new developments.
4. Encouraged sustainable transport use such as public transport, walking and cycling through Council transport planning and design.

Building on this work, and to further improve sustainability performance, Council has committed to five additional pledges to:

1. Adopt best practice energy efficiency measures across all Council buildings, and support community facilities to adopt these measures.
2. Use council resources to support the uptake of renewable energy.
3. Roll out energy efficient lighting across the municipality.
4. Ensure Council fleet purchases meet strict greenhouse gas emissions requirements and support the uptake of electric vehicles.
5. Facilitate large energy users collectively tendering and purchasing renewable energy at a low cost.

## Recycling, reuse, and the circular economy

In 2020, 2021 and 2022 Council received multiple Excellence in Environment Awards for its innovative work in reusing material destined for landfill and transforming waste into new products.

## 2022 NSW Excellence in Environment Awards – Transitioning to a Circular Economy

Council won the Transitioning to a Circular Economy Award for its integrated and innovative approach to resource recovery. During the past two years, Council has delivered several projects to prioritise reuse over recycling and divert waste from landfill.

Projects included developing a MICROfactory to produce ceramic tiles and benchtops from recycled glass sand and textiles, and commencing construction of a state-of-the-art Materials Recovery Facility and new Resource Recovery Learning Centre to provide a centralised hub for waste and recycling tours, workshops, and education.

## 2021 NSW Excellence in Environment Awards – Circular Economy

Council was also the overall winner in the Transitioning to a Circular Economy Award for its Shoalhaven glass recycling facility in the 2021.

The glass recycling facility in West Nowra enables Council to recover previously rejected glass fines. This material is reused in asphalt mixes and roads across the Shoalhaven and New South Wales instead of virgin natural materials (e.g. sand). Approximately 1,000 tonnes of glass fines are produced every month.

## Recycled content in local projects

In 2020, Council trialed the use of a sustainable asphalt mix incorporating soft plastics, glass, toner, and reclaimed road across 2,500 square metres of road in Plunkett Street, Nowra. The project saved an estimated 13,263 plastic bags, 4.2 tonnes of asphalt, 301 toner cartridges, and 20 car tires of rubber from going to landfill.



## Caring for our parks, dunes, and bushland

Council works with over 60 volunteer Bushcare groups and 50 Parkcare groups to help care for, revegetate, and protect the local environment. The Bushcare and Parkcare programs help to achieve ecologically sustainable management of natural area and parkland reserves and enables the community to participate in this process. In 2022, Council hosted more than 34 planting events with over 5,000 plants being installed across its parks and bushland.

Council also undertakes ongoing dune care, foreshore remediation, dune revegetation and beach scraping as part of its Coastal Zone Management Plan and pending Coastal Management Program. Revegetation of coastal dunes provides a buffer against hazards such as wind erosion, wave action, and tidal inundation during storm events, helping to protect the local environment, key infrastructure, and private residences along coastal areas.

## Transitioning to low emissions vehicles

Council is working to diversify its vehicle fleet to trial and increase low emissions vehicles. Council's fleet currently includes two electric vehicles, 21 hybrids and an electric ride-on mower. This number will continue to grow as current vehicles become due for replacement, with an additional 10 hybrids on order and standard Internal Combustion Engine vehicles no longer being offered for light passenger vehicles.

To support the transition to electric vehicles in the community, Council adopted its Electric Vehicle Charging Stations on Public Land Policy and is investigating suitable EV fast charging and destination charging locations across the Shoalhaven.

Council will continue to work with Charge Point Operators to create a local EV charging network.



## Protecting waterways and recycling water

Shoalhaven Water's Reclaimed Water Management Scheme (REMS) is one of the largest water recycling schemes ever undertaken by a Council in Australia, receiving three national environmental awards across 2020 and 2021.

Through the REMS, wastewater from six local treatment plants is recycled and treated so that it can be used for irrigation on local farms, sporting fields and golf courses. By providing an alternative water source, the scheme helps to save potable drinking water and future proof against drought and population growth, contributing to the economic development of the region while also protecting local aquatic ecosystems.

The Scheme has made a huge contribution to the ongoing sustainability of local dairy farms and sporting facilities, with up to 13ML (or 13 million litres) of water being recycled or reused a day across 20 properties.

## Supporting large scale renewable projects

Set on 5 hectares of Council owned land, the Shoalhaven Solar Farm comprises approximately 8,000 solar panels and is expected to generate an estimated 5.9 GWh of clean electricity annually and reduce carbon dioxide emissions by 5,500 tonnes per year.

The privately-owned solar farm was made possible through a collaboration between Shoalhaven City Council as the land-owner, local not-for-profit solar company Repower Shoalhaven, and energy retailer Flow Power.

## Capturing landfill emissions

Council commenced landfill gas capture in West Nowra in 2002 and is working with a landfill biogas management company to increase the capture of methane emissions. Recent upgrades to the biogas management system have enabled double gas extraction rates, allowing for the possibility to develop a renewable power station with battery storage to help stabilise the local electricity system. The capture of landfill gas has already reduced Shoalhaven City Council's greenhouse gas emissions by 100,000 tonnes – the equivalent of removing 14,400 cars off the road each year.



# OUR CHALLENGES

Like many other councils across New South Wales, Shoalhaven faces a number of growing challenges.

## Escalating impacts of climate change

With 165 km of coastline and a population concentrated along the coastal region, Shoalhaven is particularly vulnerable to the discernable impacts of sea level rise, inundation, and storm surge. The surrounding forested areas and mountainous regions are also at risk of bushfire, and high levels of rainfall and run-off increase vulnerability to flooding. These impacts need to be considered in Council's land-use planning and infrastructure provision, along with impacts on threatened species and biodiversity.

## Managing emissions and costs

As a large regional Council which manages additional services of landfill waste treatment and waste-water processing for its community, Shoalhaven City Council has a broader emissions profile than many smaller urban councils. While reducing scope two emissions such as electricity-use can be addressed relatively simply through adopting and procuring renewable energy, approximately 57% of Council's operational emissions currently result directly from landfill, water and waste-water treatment.

Without improvements in technology and processing, these emissions remain very challenging to reduce. Council must consider new technologies and innovative processes to minimise or capture these emissions to achieve its target of net zero emissions by 2035, without relying on costly carbon offsets.

## Connecting our towns and villages

The distance between the towns and settlements of the Shoalhaven presents a significant challenge in connecting communities and delivering infrastructure. With a total area of 4,351 square kilometres encompassing 49 towns and villages, active transport options are limited for travel between townships, and the Shoalhaven community is heavily reliant on private vehicle use. This has implications both for the sustainability and life of local roads, as well as for transport emissions, which make up 21% of community emissions across the Shoalhaven (Ironbark, 2021). The increased summer and year-round population changes associated with visitors also bring increased pressure on infrastructure and the local environment.

## Managing development to protect our environment

With a rising population and increasing tourist visitation during peak seasons, there is growing pressure on Shoalhaven's towns, villages, and infrastructure to provide the essential services and accommodate community needs. At the same time, increasing development puts pressure on the local environment and ecological systems. Across the Shoalhaven there are currently 275 threatened species and 16 threatened ecological communities, 11 of which are on Council-owned land. Protecting these areas and species while accommodating a growing population remains an ongoing challenge.

Maintaining the provision and health of green spaces across towns and villages is also a growing challenge. Although the Shoalhaven is surrounded by National Parks and bushland, the removal of trees and vegetation as a result of development and private clearing has led to a significant loss of trees and canopy cover in some towns and suburbs, impacting the liveability and resilience of these areas.



# OUR COMMITMENTS

To work toward a more sustainable, liveable, and healthy future for the Shoalhaven, this Action Plan identifies six key strategic pathways and goals.

Across each of these strategic pathways, this plan outlines actions to meet the objectives of the Sustainability and Climate Policy. These actions also support Council’s Community Strategic Plan priorities, the foundations of Council’s Community Wellbeing Strategy, and the United Nations Sustainable Development Goals.

## Community Strategic Plan



Resilient, Safe, Accessible & Inclusive Communities



Sustainable, liveable environments



Thriving Local Economies That Meet Community Needs



Effective, Responsible & Authentic Leadership

## Community Wellbeing Strategy Foundations



**Foundation 1**  
Vibrant communities where everyone can participate and connect



**Foundation 2**  
Lifelong learning and helping each other



**Foundation 3**  
Safe and prepared communities



**Foundation 4**  
Healthy and active communities



**Foundation 5**  
Transport connections to access our community's opportunities



**Foundation 6**  
Sustainable natural and built environments



**Foundation 7**  
Housing that meets the community's needs





































































**Foundation 8**  
Resilient local economies and inclusive economic opportunities

## UN Sustainable Development Goals





Strategic Pathway	Goal	Community Strategic Plan	UN SD Goal	Community Wellbeing Strategy
Low emissions and climate ready	We will take action to reduce emissions and prepare for a changing climate, with a target to achieve net zero emissions by 2035 for our operations.	 <p><b>1.1</b> Support inclusive, safe, and connected communities</p> <p><b>2.1</b> Manage our infrastructure and assets for long term sustainability</p> <p><b>2.3</b> Protect the natural environment and enhance sustainability</p> <p><b>4.1</b> Deliver reliable highquality services</p>	    	  
In balance with nature	We will protect and maintain the health of our ecosystems and waterways, our urban areas will be cooler and greener, and our community will be connected to the natural environment.	 <p><b>1.2</b> Preserve, support and develop cultural and creative vitality across our communities</p> <p><b>2.2</b> Manage growth and development with respect for environmental &amp; community values</p> <p><b>2.3</b> Protect the natural environment and enhance sustainability</p> <p><b>4.3</b> Inform and engage with the community about the decisions that affect their lives</p>	     	   
Built for the future	Our buildings, towns, villages, and utilities will be future-ready, designed and built from sustainable, efficient, and climate resilient materials to meet the changing needs and expectations of our growing community.	 <p><b>2.1</b> Manage our infrastructure for long term sustainability to meet community need</p> <ul style="list-style-type: none"> <li>Public infrastructure is maintained for its current purpose and for future generations</li> </ul> <p><b>2.2</b> Manage growth and development with respect for environmental &amp; community values</p> <p><b>2.3</b> Protect the natural environment and enhance sustainability</p>	     	     

Strategic Pathway	Goal	Community Strategic Plan	UN SD Goal	Community Wellbeing Strategy
		<b>3.2</b> Deliver, safe, vibrant, and attractive public spaces		
Low waste and resource smart	We will use resources carefully and strive to achieve zero waste, seeking innovative opportunities to use recycled content and contribute to the circular economy.	 <p><b>2.3</b> Protect the natural environment and enhance sustainability</p> <ul style="list-style-type: none"> <li>Resource consumption is reduced, and waste minimised</li> </ul> <p><b>3.1</b> Strengthen and diversify the economy</p> <p><b>4.1</b> Deliver reliable, highquality services</p>	     	  
Living sustainably	We will support and empower our community to adopt sustainable living practices, connect with the natural environment, and contribute to a healthy and liveable Shoalhaven.	 <p><b>2.2</b> Manage growth and development with respect for environmental &amp; community values</p> <p><b>2.3</b> Protect the natural environment and enhance sustainability</p> <p><b>3.2</b> Deliver, safe, vibrant, and attractive public spaces</p> <p><b>4.3</b> Inform and engage with the community about the decisions that affect their lives</p>	        	   
Leading and innovating	Environmental and climate leadership will underpin Council decision-making and service delivery. We will collaborate with all levels of government and advocate for better outcomes for our community and environment.	 <p><b>1.3</b> Support community wellbeing through fostering active and healthy communities</p> <p><b>2.3</b> Protect the natural environment and enhance sustainability</p> <p><b>3.1</b> Strengthen and diversify the economy</p> <p><b>4.2</b> Provide transparent leadership through effective government and administration</p>	     	 



# STRATEGIC PATHWAYS

## 1. LOW EMISSIONS AND CLIMATE READY

We will take action to reduce emissions and prepare for a changing climate, with a target to achieve net zero emissions by 2035 for our operations.

### What we know

To achieve the target of the Paris Agreement and limit warming to well below 2°C above preindustrial levels, the IPCC has indicated that countries would need to halve their emissions by 2030 and reach net zero by 2040.

Based on Australia’s renewable energy resources and high emissions, the Climate Council has recommended that all efforts should be made to target and reach net zero by 2035. This is the target that Council has adopted.

### What we can do

The most effective way that Council can help to mitigate the impacts of climate change is by reducing its own greenhouse gas emissions. Council can work towards this goal by improving the efficiency of its operations, transitioning to renewable energy sources and low or zero emissions transport, and seeking opportunities to drawdown carbon. Council can also support the Shoalhaven community in this goal and deliver programs that facilitate the transition to a low carbon future.

In addition to climate change mitigation, Council is taking action to prepare for and adapt to climate change impacts by undertaking climate change risk assessments and developing responding adaptation plans.



Flagship project  
- Power Purchase Agreement

### ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation
1.1	Transition to 100% LEDs for Council street lighting by 2023 and continue to increase the procurement of renewable energy for Council’s electricity needs under the Power Purchase Agreement, with a target of 100% renewable energy by 2030	Achieve net-zero greenhouse gas emissions across Council operations by 2035, with an interim target to reduce emissions by 50% by 2028 (Objective 3)	Energy Coordinator	Sustainable Energy Strategy
1.2	Support our community to reduce emissions through the delivery of a Sustainable Living program including workshops and events that support uptake of solar and battery, electrification of buildings and transport, and other carbon reduction initiatives.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Sustainable Living Program
1.3	Continue to collaborate with Greening Australia and assess Council land to identify underutilised parcels which may be suitable for carbon sequestration through revegetation or blue carbon initiatives.	Mitigate and build resilience to climate change by reducing Council greenhouse gas emissions, seeking opportunities for carbon abatement, and adapting to climate change impacts (Objective 2)	Environmental Services	Urban Greening Strategy / Emissions Reduction Plan
1.4	Continue work toward achieving Council’s pledges under the Cities Power Partnership.	Mitigate and build resilience to climate change by reducing Council greenhouse gas emissions, seeking opportunities for carbon abatement, and adapting to climate change impacts (Objective 2)	Sustainability Lead	Cities Power Partnership
1.5	Continue to implement a strategic and proactive program to generate renewable energy on Council assets and continually improve energy efficiency through the Revolving Energy Fund.	Implement Council’s Sustainable Energy Strategy to generate renewable energy on Council assets, transition Council plant and equipment away from fossil fuels, and continually improve energy efficiency across the organisation (Objective 4)	Sustainability Lead	Sustainable Energy Strategy

Actions in progress



## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
1.6	Continue to identify, monitor, and address climate risks through implementation of the Shoalhaven Adaptation Plan and conduct an updated climate change risk assessment in 2025.	Mitigate and build resilience to climate change by reducing Council greenhouse gas emissions, seeking opportunities for carbon abatement, and adapting to climate change impacts (Objective 2)	Sustainability Lead	Shoalhaven Adaptation Plan	Actions in progress
1.7	Continue to analyse and report annually on Council's corporate greenhouse gas emissions to ascertain trajectory to specified targets.	Mitigate and build resilience to climate change by reducing Council greenhouse gas emissions, seeking opportunities for carbon abatement, and adapting to climate change impacts (Objective 2)	Energy Coordinator	Net Zero Emissions Report	
1.8	Implement actions identified in Council's Sustainable Energy Strategy, including energy efficiency measures across Council facilities and sites, upgrade of HVAC systems, continuing to optimise pool heating settings for improved energy efficiency, implementing landfill gas methane flaring where feasible.	Achieve net-zero greenhouse gas emissions across Council operations by 2035, with an interim target to reduce emissions by 50% by 2028 (Objective 3)	Energy Coordinator	Sustainable Energy Strategy	
1.9	Develop a fleet improvement plan identifying emissions of existing fleet vehicles and opportunities to transition to low or zero emissions vehicles and phase out standard internal combustion engine vehicles.	Increase the provision of low-emissions vehicles for Council's fleet and support active and low emissions transport options for our community (Objective 8)	Fleet Services	Fleet Improvement Plan	New actions to be delivered
1.10	Establish a minimum 4-star energy and water efficiency rating for the procurement of applicable council equipment and appliances.	Prioritise sustainable and low-carbon building materials across Council buildings, infrastructure, and other assets (Objective 14)	Sustainability Lead / Procurement	ESD Guidelines for Council Buildings	

## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
1.11	Develop an emissions reduction plan targeting scope one emissions which cannot be avoided, including further opportunities to capture landfill methane gas for energy. Monitor and assess opportunities to offset remaining emissions to achieve net zero by 2035.	Achieve net-zero greenhouse gas emissions across Council operations by 2035, with an interim target to reduce emissions by 50% by 2028 (Objective 3)	Sustainability Lead / Energy Coordinator	ESD Guidelines for Council Buildings	New actions to be delivered
1.12	Transition council facilities, plant, and equipment from gas to electricity produced from renewable energy, with a target of electrifying all feasible buildings by 2035. Investigate the application of the Revolving Energy Fund for this purpose.	Implement Council's Sustainable Energy Strategy to generate renewable energy on Council assets, transition Council plant and equipment away from fossil fuels, and continually improve energy efficiency across the organisation (Objective 4)	Sustainability Lead / Energy Coordinator / Building Services	Emissions Reduction Plan	

## 🚩 Flagship project - Power Purchase Agreement

In 2022, Shoalhaven City Council partnered with Shellharbour and Kiama Councils to enable the collaborative procurement of renewable energy for all of Council's large energy sites and streetlighting. Under the Power Purchase Agreement, Council will purchase renewable electricity from wind and solar farms in regional NSW from 1 January 2023 to cover the operation of its large facilities, including pools, administration buildings, street lighting and treatment plants.

The Power Purchase Agreement will supply 25% renewable power in 2023 and 2024, increasing to 50% renewable from 2025. From 2025, additional Large-scale Generation Certificates, if purchased, would enable Council to achieve 100% renewable electricity for all of its assets. Council's renewable energy will be supply-linked from a number of renewable generation assets in New South Wales, including the Sapphire Wind Farm and Cootamundra Solar Farm, however Council is also working to support the development of up to two new solar farms in the Shoalhaven region.

This project is expected to reduce Council's corporate emissions by 35%, saving an estimated 30,000 tonnes of carbon dioxide equivalent emissions from being released by Council each year (based on 2022 usage). The development of local solar farms will also inject an estimated \$10 million into the local economy and create local jobs in the renewables sector.



# 2. IN BALANCE WITH NATURE

We will protect and maintain the health of our ecosystems and waterways, our urban areas will be cooler and greener, and our community will be connected to the natural environment.

## What we know

Our natural ecosystems support a rich diversity of habitats and ecological processes. The health of these ecosystems is central to the ongoing amenity and liveability of the Shoalhaven.

Well managed vegetation makes a significant contribution to the local character and liveability of neighbourhoods, providing benefits such as improved property value, shade and cooling, and spaces for children to play. It also provides habitat linkages and supports essential services such as clean air and water, productive soils, flood mitigation, and carbon sequestration.

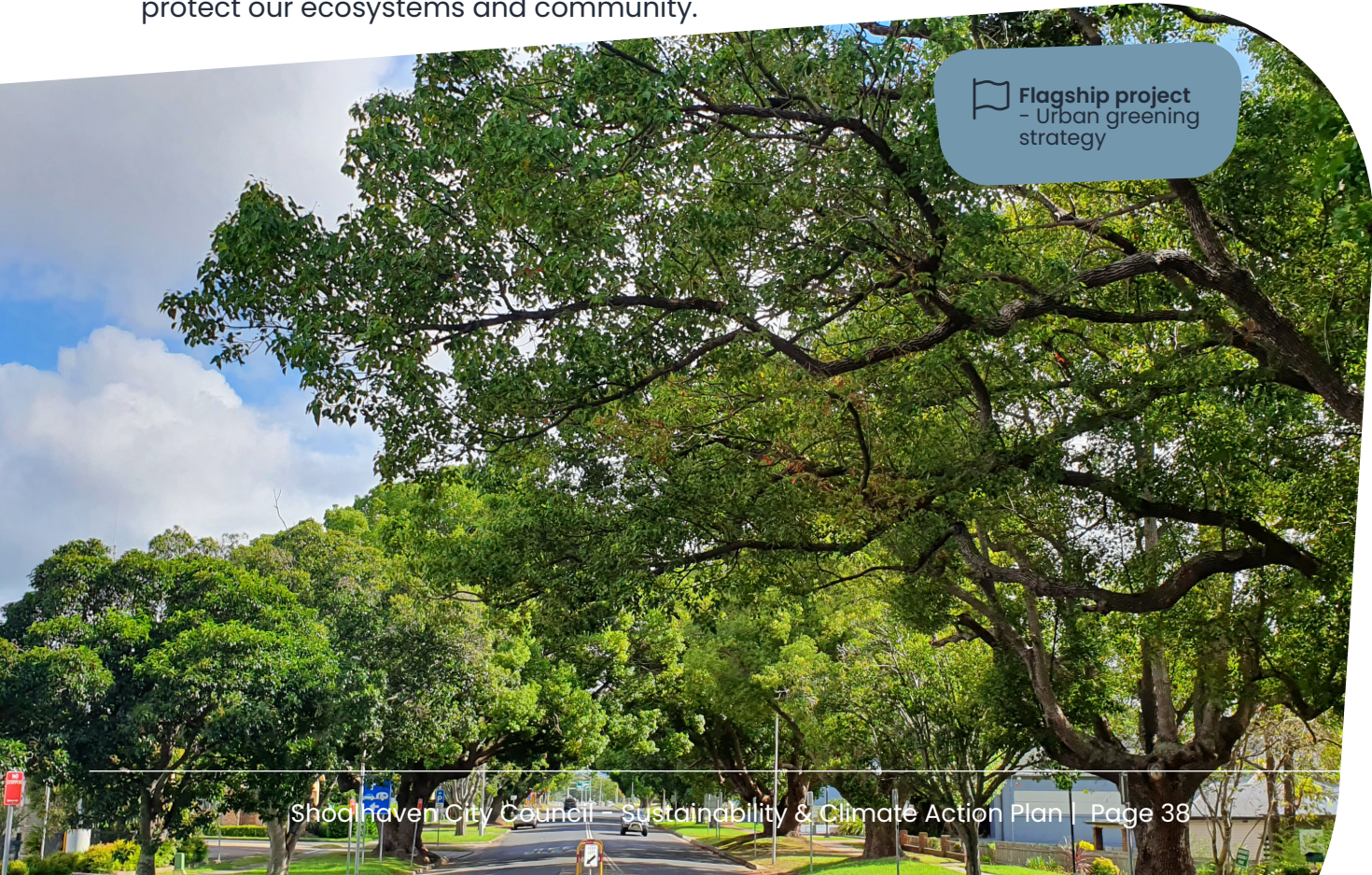
As our towns and cities densify to accommodate a growing population, we must be mindful of how we design, build and expand buildings and infrastructure to protect our ecosystems and community.

## What we can do

As the responsible authority for administering the planning scheme, and a significant land manager in the region, Council has a key role in managing and protecting our natural environment and biodiversity.

Appropriate planning controls and replacement programs can ensure that trees, habitat, and green space are managed and protected to achieve positive outcomes for our community.

We can help to preserve and enhance the Shoalhaven's natural landscapes by ensuring ecosystems and habitat remain connected, and by encouraging land use practices that protect our water catchments.



## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation
2.1	Continue to implement and expand the Natural Areas Management Program to ensure conservation of remnant bushland, foreshore, wetland, and riparian areas.	Improve the ecological and environmental values of the Shoalhaven through a stronger emphasis on biodiversity conservation, natural areas management, and sustainable tourism (Objective 11)	Environmental Services	Natural Areas Management Program
2.2	Continue the development of Coastal Management Programs and implement these following approvals from Council and the NSW government.	Improve the ecological and environmental values of the Shoalhaven through a stronger emphasis on biodiversity conservation, natural areas management, and sustainable tourism (Objective 11)	Environmental Services	Coastal Management Program
2.3	Continue to identify and map wildlife corridors within the Shoalhaven and implement programs to protect and enhance habitat connectivity. Advocate for and collaborate with other agencies to adopt a coordinated approach to habitat connectivity across the region.	Increase tree canopy cover in our towns and villages in order to enhance community resilience to climate change and support wildlife (Objective 12)	Environmental Services	Coastal Management Program
2.4	Continue to implement programs for the control and eradication of priority weeds and animal pests.	Improve the ecological and environmental values of the Shoalhaven through a stronger emphasis on biodiversity conservation, natural areas management, and sustainable tourism (Objective 11)	Environmental Services	Biosecurity Weed Inspection Policy / Vertebrate Pest Management Plan
2.5	Continue to develop, support and resource volunteer Bushcare, Parkcare, and Dunecare groups.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Environmental Services	Bushcare and Park-care Programs
2.6	Continue to mitigate impacts on biodiversity through the Biodiversity Offset Scheme and investigate development of Biodiversity Stewardship Site Policy.	Improve the ecological and environmental values of the Shoalhaven through a stronger emphasis on biodiversity conservation, natural areas management, and sustainable tourism (Objective 11)	Environmental Services	NSW Biodiversity Offset Scheme

Actions in progress



## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
2.7	Develop an urban greening strategy to protect and enhance public green space, tree canopy cover and biodiversity connectivity, and identify priority urban greening sites by 2025.	Increase tree canopy cover in our towns and villages in order to enhance community resilience to climate change and support wildlife (Objective 12)	Environmental Services	Urban Greening Strategy	Actions in progress
2.8	Continue to promote water efficiency and rainwater harvesting through water tank rebates and educational programs for residents.	Support the principles of a water sensitive city by increasing the use of recycled water, providing efficient and effective water and wastewater services, and improving the quality of waterways (Objective 7)	Shoalhaven Water	Shoalhaven Water Education Program	
2.9	Continue to educate residents regarding the benefits of urban trees including delivery of tree planting events with schools and continue to enforce Council's Vegetation Vandalism Prevention Policy.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Environmental Services	Vegetation Vandalism Prevention Policy	
2.10	Continue to implement Beachwatch program and Council's wider Water Quality Monitoring Program to sample and monitor water quality across the Shoalhaven.	Reduce pollution and protect the health and safety of our air, water, and natural resources (Objective 13)	Environmental Services	Beachwatch & Water Quality Monitoring Programs	
2.11	Review Council's Town Street Tree Planting Strategy and investigate a holistic tree species selection model that incorporates climate change risk, urban heat island mitigation and habitat corridor connectivity for enhanced biodiversity.	Increase tree canopy cover in our towns and villages in order to enhance community resilience to climate change and support wildlife (Objective 12)	Tree Officers / Environmental Services	Urban Greening Strategy	New actions to deliver
2.12	Investigate backyard biodiversity initiatives and deliver workshops and events as part of a Sustainable Living Program with a focus on biodiversity and supporting local ecology.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Sustainable Living Program	

## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
2.13	Collaborate with first nations peoples of the Shoalhaven on environmental projects to promote ecological understanding and the practice of caring for country.	Recognise and support the rich cultural heritage and Aboriginal history of the Shoalhaven region and the practice of caring for country (Objective 10)	Environmental Services	Coastal Management Program	New actions to deliver
2.14	Pursue opportunities to expand the use of REMS recycled water for the supply and irrigation of council parks and assets, and explore and implement stormwater and rainwater capture where feasible.	Support the principles of a water sensitive city by increasing the use of recycled water, providing efficient and effective water and waste-water services, and improving the quality of waterways (Objective 7)	Shoalhaven Water	REMS Reclamation Annual Report	
2.15	Develop Environmental Handbook and provide training for staff to ensure environmental due diligence across Council activities and to identify and minimise the risk of environmental impacts.	Integrate the principles of sustainability and ESD into planning, asset management and decision-making processes across the organisation (Objective 1)	Environmental Services	Environmental Handbook	

## 🚩 Flagship project – Urban greening strategy

Urban trees play a significant role in creating liveable neighbourhoods and increasing the health and wellbeing of our community. An urban forest not only encompasses trees, but also other vegetation including shrubs, bushes, and green infrastructure. These assets bring aesthetic appeal to towns and streets and contribute other benefits like shade and cooling, filtering of our air and water, reducing noise, sequestering carbon, and improving habitat for native plants and animals.

A key objective of Council's Sustainability and Climate Policy is to increase tree canopy cover in our towns and villages in order to enhance community resilience to climate change and support biodiversity. To achieve this, Council has committed to develop an Urban Greening Strategy which will assist in directing, prioritising and planning the management of a healthy urban forest, so that our community can receive maximum benefits in a cost effective and ecologically sound way.



# 3. BUILT FOR THE FUTURE

Our buildings, towns, villages, and utilities will be future-ready, designed and built from sustainable, efficient, and climate resilient materials to meet the changing needs and expectations of our growing community.

## What we know

The way that the urban environment is designed, built, and managed has a lasting impact on the long-term sustainability of our region and the livelihood of our community. Buildings, towns and villages provide the setting for our everyday lives and determine the comfort, efficiency, and connectedness of our community. The way that we build and operate our buildings also has significant impacts on our climate, with buildings contributing 39% of global carbon emissions through their construction, materials, and ongoing use (UN 2019).

With the pressures of a growing population, new technological advances, and a changing climate, we must prepare for the future by encouraging efficient, resilient and ecologically sound development in keeping with the ecological values and character of the Shoalhaven.

## What we can do

To reduce our impact on the environment and prepare for a changing climate, we can work to strengthen and implement planning mechanisms that protect and enhance social and environmental outcomes for our community.

This includes facilitating active and low emissions transport opportunities for our community, and encouraging sustainable design features through planning controls, policies and guidelines for developments.

Council can also establish ESD guidelines to reduce the environmental impacts associated with our own buildings, infrastructure and assets.



## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	Actions in progress
3.1	Continue flood investigations and stormwater modelling and ensure controls for new development minimise flood risk to people and property.	Encourage environmentally and socially sustainable, equitable and climate resilient land use planning and development across the Shoalhaven region (Objective 9)	Flood Team	Flood Investigations Program	
3.2	Continue maintenance of Council's stormwater treatment devices to minimise the discharge of litter and other stormwater pollutants into the Shoalhaven's waterways and beaches.	Support the principles of a water sensitive city by increasing the use of recycled water, providing efficient and effective water and waste-water services, and improving the quality of waterways (Objective 7)	District Engineers	Stormwater maintenance program	
3.3	Review Council Sea Level Rise Projections Framework in line with latest reliable scientific and technical advice.	Mitigate and build resilience to climate change by reducing Council greenhouse gas emissions, seeking opportunities for carbon abatement, and adapting to climate change impacts (Objective 2)	Environmental Services	Sea Level Rise Projections Framework	
3.4	Facilitate the uptake of Electric Vehicles throughout the region through partnerships, advocacy, and strategic support, including the identification of suitable council sites for Electric Vehicle (EV) charging points and requirements for new residential and commercial developments to include charging facilities in future.	Increase the provision of low-emissions vehicles for Council's fleet and support active and low emissions transport options for our community (Objective 8)	Sustainability Lead	Electric Vehicle Charging Stations on Public Land Policy / Development Control Plan	



## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
3.5	Ensure that ESD and climate resilience are integrated in rolling updates of the Development Control Plan. Identify opportunities to encourage environmentally sustainable development, including energy and water efficient buildings, urban greening, water sensitive urban design, use of renewable energy, and integrated transport.	Encourage environmentally and socially sustainable, equitable and climate resilient land use planning and development across the Shoalhaven region (Objective 9)	Planning	Development Control Plan	Actions in progress
3.6	Support and encourage precinct scale renewable infrastructure and building efficiencies in new land releases.	Encourage environmentally and socially sustainable, equitable and climate resilient land use planning and development across the Shoalhaven region (Objective 9)	Planning	Local Strategic Planning Statement Shoalhaven	
3.7	Review and update Council's Pedestrian Access and Mobility Plan and Bike Plan to improve and support the expansion of paths, pedestrian crossings, and bicycle infrastructure across the City.	Increase the provision of low and zero emissions vehicles for Council's fleet and support active and low-emissions transport options for our community (Objective 8)	Principal Traffic Engineer	Pedestrian Access and Mobility Plan / Bike Plan	
3.8	Ensure asset management plans consider and respond to climate risk and adaptation measures are integrated into asset management plans and programs for built assets.	Encourage environmentally and socially sustainable, equitable and climate resilient land use planning and development across the Shoalhaven region (Objective 9)	Asset Custodians	Asset Management Plans	
3.9	Continue to identify and report cultural heritage sites to Heritage NSW and Aboriginal Heritage Information Management System (AHIMS) and investigate placement of appropriate buffers around areas to ensure protection.	Recognise and support the rich cultural heritage and Aboriginal history of the Shoalhaven region and the practice of caring for country (Objective 10)	Environmental Services	AHIMS and Heritage NSW GIS Database	

## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
3.10	Investigate and implement opportunities to use low carbon or 'green' concrete in council civil and construction projects.	Prioritise sustainable and low-carbon building materials across Council buildings, infrastructure, and other assets (Objective 14)	Works and Services	ESD Guidelines for Council Projects	New actions to deliver
3.11	Prepare and adopt standards that establish minimum ESD and sustainable building design guidelines for new and refurbished council buildings and facilities. Standards should ensure that sustainable design options such as the inclusion of PV systems; rainwater harvesting, energy and water efficient devices; use of lighter coloured roof surfaces; use of native vegetation for landscaping and shading; and use of recycled and low carbon building products, are investigated for all council assets and implemented where practical.	Prioritise sustainable and low-carbon building materials across Council buildings, infrastructure, and other assets (Objective 14)	Technical Services	ESD Guidelines for Council Projects	
3.12	Consider development controls for relevant medium and high-density residential development to require efficient and sustainable waste sorting facilities.	Encourage environmentally and socially sustainable, equitable and climate resilient land use planning and development across the Shoalhaven region (Objective 9)	Planning	Local Strategic Planning Statement Shoalhaven	
3.13	Identify opportunities to improve and expand Council's network of stormwater treatment devices and consider WSUD co-benefits and nature-based stormwater treatment solutions when planning new assets.	Support the principles of a water sensitive city by increasing the use of recycled water, providing efficient and effective water and waste-water services, and improving the quality of waterways (Objective 7)	District Engineers / Environmental Services	Drainage Asset Management Plan	



⚡ Actions

No.	Action	Policy objective	Lead team	Implementation
3.14	Investigate opportunities to pilot ecologically sustainable development models such as regenerative or circular economy villages in greenfield housing developments and housing strategies.	Encourage environmentally and socially sustainable, equitable and climate resilient land use planning and development across the Shoalhaven region (Objective 9)	Planning	Strategic Planning Strategies

🚩 Flagship project – ESD guidelines for Council buildings

Ecologically sustainable design (ESD) is the intention to reduce or eliminate negative environmental impacts through careful design.

In the built environment, this includes design features and technology such as energy and water efficiency, renewable energy and rainwater harvesting. Integrating ESD in buildings not only reduces environmental impacts, it also reduces utility and operational costs, builds resilience to climate change, and helps to create healthier and more productive environments.

Incorporating ESD into new Council buildings during design and construction offers the best opportunity to cost effectively reduce the lifecycle impacts and running costs of a building. During the design phase, there is significant opportunity to incorporate sustainable design features, many of which will not be practical or financially feasible to add to the building after construction.

One of the key actions included in this Sustainability and Climate Action Plan is the development of ESD Standards for Council buildings. These standards will ensure that new Council buildings consider their impact on the local environment and utilise sustainable design, technology and materials, leaving a positive legacy for future generations.

4. LOW WASTE AND RESOURCE SMART

We will use resources carefully and strive to achieve zero waste, seeking innovative opportunities to use recycled content and contribute to the circular economy.

💡 What we know

The way that we generate and manage waste is a significant environmental issue. Australians are reported to be one of the highest generators of waste in the world per capita, and Australia has historically relied on landfill to dispose of waste.

The disposal of waste to landfill presents a number of environmental, economic, and social issues – from the significant methane emissions resulting from organic waste disposal to the legacy of land contamination resulting from landfill practices. There is also a limit to the amount of landfill space available in the Shoalhaven. Council currently operates 10 recycling and waste depots across the Shoalhaven LGA, including the main West Nowra Recycling & Waste Depot. Forecasts indicate that unless we change the way waste is being treated, the landfill at West Nowra is expected to reach capacity within the next 10 years.

☰ What we can do

A circular economy is a model that aims to design waste out of the system, seeking to retain the value of materials through greater reuse, recovery, and recycling. To support a circular economy model, Council has committed to invest in waste reduction technologies that can divert waste from landfill and maximise the potential to recycle and reuse resources.

Council can work to reduce our own consumption of resources by ensuring procurement processes consider the sustainability and lifecycle of products. Through its local recycling facilities, Council is also uniquely placed to take advantage of recycled products in our projects, and to drive innovation through our waste processing technology. Further to this, Council can work with the local community to change behaviours around waste management and address illegal dumping and littering.





## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
4.1	Develop and deliver an LGA-wide education campaign to reduce impacts of litter, illegal dumping, and stormwater pollution.	Reduce pollution and protect the health and safety of our air, water, and natural resources (Objective 13)	Waste Services / Environmental Services	Waste Education Communication Strategy	Actions in progress
4.2	Establish resource recovery park inclusive of alternative waste treatment technology and new materials recovery facility to maximise material diversion from landfill.	Support the circular economy and adopt the principles of the waste hierarchy to prioritise avoiding and minimising waste (Objective 5)	Waste Services	Waste Reduction Management Strategy	
4.3	Develop and operate the Resource Recovery Learning Centre (RRLC) by 2025 to increase community participation and understanding of waste reduction initiatives.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Waste Services	Waste Education Communication Strategy	
4.4	Continue Tapstar water education program and waste education workshops, events, and tip tours to encourage water conservation, waste reduction, re-use, and recycling.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Shoalhaven Water / Waste Services	Shoalhaven Water Education Program	
4.5	Continue Home Sustainability workshops and education programs to support composting and target food waste avoidance.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Waste Services	Waste Education Communication Strategy	
4.6	Support local clean up groups through events such as Clean Up Australia Day and continue litter prevention and EPA RID program for illegal dumping.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Environmental Services	Environmental Awareness Group	
4.7	Develop and deliver sustainable and waste wise event guidelines and requirements for council funded events.	Support the circular economy and adopt the principles of the waste hierarchy to prioritise avoiding and minimising waste (Objective 5)	Tourism	Sustainable Event Guidelines	

## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
4.8	Continue to protect public areas, foreshore reserves, and natural areas from littering and illegal dumping and seek grant funding to expand Ranger Services.	Reduce pollution and protect the health and safety of our air, water, and natural resources (Objective 13)	Environmental Services	Foreshore Reserves Policy	New actions to deliver
4.9	Adopt a target to eliminate the use of single use plastics across Council operations and events in line with the NSW Ban and to address problematic SUP such as balloons.	Embed sustainability into Council procurement processes to encourage sustainable, low-carbon and high recycled content procurement (Objective 6)	Waste Services / Procurement	Waste Reduction Management Strategy	
4.10	Increase use of recycled content including plastics, glass, rubber, aggregate and toner in suitable council infrastructure projects.	Support the circular economy and adopt the principles of the waste hierarchy to prioritise avoiding and minimising waste (Objective 5)	Works and Services	ESD Guidelines for Council projects	
4.11	Investigate developing a Zero Litter to Ocean (ZL2O) Policy and advocate to State and Federal Government to adopt ZL2O targets and provide technical and financial support and resources to councils.	Reduce pollution and protect the health and safety of our air, water, and natural resources (Objective 13)	Environmental Services	Report – Investigation of Z2O Policy	
4.12	Incorporate zero waste objectives into Council contractual purchases and services, eg. avoiding purchase of disposable goods, minimal waste in product and packaging design, product take-back services, and lifecycle analysis.	Embed sustainability into Council procurement processes to encourage sustainable, low-carbon and high recycled content procurement (Objective 6)	Waste Services	Waste Reduction Management Strategy	
4.13	Undertake a review of recycled materials collected and processed through Council's waste facility and identify a list of materials suitable for reuse in Council projects.	Support the circular economy and adopt the principles of the waste hierarchy to prioritise avoiding and minimising waste (Objective 5)	Waste Services	Waste Reduction Management Strategy	



## **Flagship project – Transforming textiles, plastic and recycled glass into new ceramics**

Over the past three years, Council has been recognised as a leader and innovator across multiple projects in the Excellent in Environment NSW Awards – particularly in the circular economy, water management, and energy efficiency space. One such project is the development of a Green Ceramics MICROfactorie, in partnership with the University of NSW's Sustainable Materials and Technology Centre.

The MICROfactorie enables waste materials such as plastic, glass, textiles, and mattresses to be processed into a range of 'green ceramics', which are high performance, non-toxic, engineered bio-composites that can be used in buildings, furniture and for various other architectural and decorative applications.

The Green ceramics MICROfactorie facility began construction in late 2022 and aims to be completed by mid-2023 with the capacity to process approximately 450 tonnes of glass and mattresses every year. In addition to local waste, the facility also has the capacity to accept waste from across the state and country, helping to support state and national outcomes.

## 5. LIVING SUSTAINABLY

**We will support and empower our community to adopt sustainable living practices, connect with the natural environment, and contribute to a healthy and liveable Shoalhaven**



### **What we know**

Sustainability is a shared responsibility between government, business, and the community and we all have a part to play. There are many individuals and community groups who contribute to the ongoing sustainability of the Shoalhaven.



### **What we can do**

As the level of government closest to our community, Council can play a key role in educating, supporting, and enabling our community to adopt sustainable practices. We can deliver programs to foster positive change, reduce community emissions, and increase engagement with our unique natural environment.





## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
5.1	Review the Shoalhaven 360 program and update Council's Tourism Destination Plan to expand sustainable tourism programs that reduce pressure on tourist hotspots and the local environment and encourage environmentally responsible behaviour from visitors.	Improve the ecological and environmental values of the Shoalhaven through a stronger emphasis on biodiversity conservation, natural areas management, and sustainable tourism (Objective 11)	Tourism	Tourism Destination Plan	Actions in progress
5.2	Establish 'Sustainable Shoalhaven' program to provide information on resources, events, and information on adopting sustainable living practices.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Sustainable Living Program	
5.3	Continue to coordinate and expand Council's Environmental Awareness Group and delivery of community environmental programs, campaigns, events, and sustainability initiatives.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Environmental Awareness Group	Environmental Awareness Group	
5.4	Continue to work with local Indigenous groups and traditional owners through the Aboriginal Advisory Committee to identify and support cultural values and priorities.	Recognise and support the rich cultural heritage and Aboriginal history of the Shoalhaven region and the practice of caring for country (Objective 10)	Community Connections	Aboriginal Advisory Committee	
5.5	Provide and promote energy saving kits across Shoalhaven libraries for residents to assess and reduce their energy use and carbon impact.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead / Library Services	Sustainable Living Program	
5.6	Continue to work with local schools and deliver field trips and educational programs to enhance coastal and environmental awareness and engagement.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Environmental Services	Coastal Management Program	

## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
5.7	Promote the Climate Clever program to support community members in reducing their carbon footprint and energy bills.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Sustainable Living Program	New actions to deliver
5.8	Support community gardens and deliver workshops and resources to promote local food production, permaculture, and productive gardening.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Community Connections / Sustainability Lead	Community Garden on Public Land Policy	
5.9	Engage with local Aboriginal Land Councils and Traditional Owners to develop environmental and cultural education and awareness programs.	Recognise and support the rich cultural heritage and Aboriginal history of the Shoalhaven region and the practice of caring for country (Objective 10)	Environmental Services	Coastal Management Program	
5.10	Investigate local sustainability expo to promote and encourage sustainable living practices, connect communities, and increase environmental awareness.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Sustainability and Climate Action Plan	
5.11	Investigate council programs and support for local businesses to adopt sustainable practices and ecotourism.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Tourism Destination Plan	
5.12	Continue to implement key actions under priorities 6.1 - 6.3 of the Shoalhaven Wellbeing Strategy to support community access to sustainable natural and built environments.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region	Community Connections	Shoalhaven Wellbeing Strategy	



⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	New actions to deliver
5.13	Monitor the Shoalhaven Community Emissions Profile and identify programs which will assist the community to achieve a target of net zero community emissions by 2050.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Sustainable Living Program	
5.14	Investigate consolidating the current various grants into one community grants program with multiple categories, including environment and sustainability, to establish a consistent cross-council approach to grant awards and applications.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Community Connections	Community Grants	
5.15	Investigate the Solar my Schools program to support renewable energy installations on local schools.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	Sustainability Lead	Sustainable Living Program	

🚩 Flagship project – Sustainable Shoalhaven

When it comes to achieving our sustainability targets and protecting the local environment, both our greatest asset and our biggest stakeholder is our local community. Council recognises the considerable expertise and commitment of our community in helping to protect our environment for future generations. To build on this, one of the key actions from this Plan is to develop the ‘Sustainable Shoalhaven’ program. This program will help our community to share knowledge and access the information and resources they need to live a healthy, sustainable, and enjoyable lifestyle.

In addition to educational workshops and a regular program of events, Council will develop a Sustainable Living Guide as a one-stop resource for the community to learn about the different sustainability programs available to help reduce emissions – from energy saving kits, to solar mapping tools, and resources to reduce single-use-plastic.

6. LEADING AND INNOVATING

Environmental and climate leadership will underpin Council decision-making and service delivery. We will collaborate with all levels of government and advocate for better outcomes for our community and environment.

💡 What we know

Addressing sustainability and climate change is an ongoing, collaborative, and global effort. As a Local Government Authority, there are many local actions that Council can take to directly contribute to a more sustainable future for our region and community. However, it is important to recognise the boundaries of our authority. Councils are guided by a range of laws, policies and regulatory frameworks, and can only act within State and Commonwealth legal regulations. However, where policies or decisions lie outside of our jurisdiction, Council can play an important role in advocating for better outcomes, services, or infrastructure to meet the needs of our community and environment.

☰ What we can do

Council can collaborate with other regional stakeholders and advocate to all levels of government to seek outcomes in line with the vision and goals contained in this Plan, including the Illawarra-Shoalhaven Joint Organisation and Cities Power Partnership. Council can also continue to seek opportunities to innovate and encourage others through leadership projects and partnerships.

It is also important that this Plan does not sit as a stand-alone document. Council must ensure that the objectives and targets of the Sustainability and Climate Policy and Action Plan are embedded throughout Council decision-making, including procurement activities, staff education, and reporting processes.

⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	Actions in progress
6.1	Continue to collaborate and participate in the Illawarra Shoalhaven Joint Organisation to improve sustainable transport, renewable energy, and climate change outcomes for our region.	Support our community to adopt sustainable living practices, engage with the natural environment, and contribute to the ongoing sustainability and health of the Shoalhaven region (Objective 15)	CEO	ISJO	
6.2	Advocate to Federal Government to improve access to electric vehicles by legislating stronger fuel efficiency standards	Advocate to all levels of government for greater action and support to reduce emissions, meet renewable energy targets, and adapt to climate change (Objective 16)	Councillors	Joint letter through Cities Power Partnership	



## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
6.3	Continue to work with NSW State Government on the 16 Regional Cities Services Improvement Plan for Greater Nowra and advocate for increased investment in an improved and integrated public and sustainable transport system within the region.	Advocate to all levels of government for greater action and support to reduce emissions, meet renewable energy targets, and adapt to climate change (Objective 16)	Principal Traffic Engineer	16 Regional Cities Services Improvement Plan	Actions in progress
6.4	Continue to work with Cities Power Partnership to deliver on and update climate commitments and participate in joint statements to advocate for action on climate change mitigation and adaptation.	Advocate to all levels of government for greater action and support to reduce emissions, meet renewable energy targets, and adapt to climate change (Objective 16)	Councillors	Cities Power Partnership	
6.5	Develop mandatory staff training SCOLAR module on sustainability and climate change for new and existing staff to increase understanding and commitment to the principles of ESD.	Integrate the principles of sustainability and ESD into planning, asset management and decision-making processes across the organisation (Objective 1)	Sustainability Lead / HR	SCOLAR training module	New actions to deliver
6.6	Advocate to State and Federal Government for greater action and support to reduce emissions, meet renewable energy targets, and respond to climate change challenges.	Advocate to all levels of government for greater action and support to reduce emissions, meet renewable energy targets, and adapt to climate change (Objective 16)	Councillors	Joint letter or statement	
6.7	Include sustainability outcomes in Council's internal reporting template to provide information on the sustainability implications and outcomes of Council projects.	Integrate the principles of sustainability and ESD into planning, asset management and decision-making processes across the organisation (Objective 1)	Governance	InfoCouncil and report templates	
6.8	Increase internal staff awareness and communicate sustainability progress through the inclusion of a 'Sustainability spotlight' in Council's staff newsletter.	Integrate the principles of sustainability and ESD into planning, asset management and decision-making processes across the organisation (Objective 1)	Sustainability Lead	Sustainability Spotlight	

## ⚡ Actions

No.	Action	Policy objective	Lead team	Implementation	
6.9	Advocate to State and Federal for higher energy performance standards in national construction and building codes.	Advocate to all levels of government for greater action and support to reduce emissions, meet renewable energy targets, and adapt to climate change (Objective 16)	Councillors	Joint letter or statement	New actions to deliver
6.10	Advocate at government forums, inquiries, workshops and through joint letters to relevant Ministers for stronger sustainability requirements in Federal and State Government planning controls.	Advocate to all levels of government for greater action and support to reduce emissions, meet renewable energy targets, and adapt to climate change (Objective 16)	Councillors	Joint letter or statement	
6.11	Advocate to Transport for New South Wales to provide greater support and guidance for councils to enable a more consistent regional approach to EV charging and fleet transition.	Increase the provision of low and zero emissions vehicles for Council's fleet and support active and low-emissions transport options for our community (Objective 8)	Councillors	Joint letter or statement	

## 🚩 Flagship project - Collaborative networks and partnerships

Through partnerships with institutions like the UNSW Sydney, and memberships in local, state and national networks such as the Illawarra-Shoalhaven Joint Organisation and CitiesPower Partnership, Council continues to collaborate with and advocate for better social, economic and environmental outcomes for the Shoalhaven region.

Council is involved in a number of collaborative projects with neighbouring councils, including Kiama, Wollongong, and Shellharbour. These range from knowledge sharing regarding electric vehicle transition plans, to joint procurement of a renewable Power Purchase Agreement, the development of ESD standards, and projects like the ISJO Regional Net Zero Strategy.

Council is also entering a formal partnership with UNSW as part of the Australian Research Centre's grant program to explore recovery of metals from electronic waste.

Projects like these enable Shoalhaven to progress its sustainability and net zero targets, while also contributing to positive outcomes beyond our borders.



# IMPLEMENTATION

This Sustainability and Climate Action Plan will be reviewed every four years.

This Plan will act as a corporate reference point with key actions included in Council’s annual Delivery Program and Operational Plan. As such, these actions will be subject to Council’s resourcing and budget processes and considerations each financial year. Actions will be assigned to relevant teams and annual reports on the delivery of actions will be prepared and reported to the Executive Management Team.

# GET INVOLVED

Ensuring the ongoing sustainability of our region is a shared responsibility between government, business, and the community, and we all have a part to play.

Council is committed to working with and supporting our community to be part of this journey through the delivery of the Sustainable Shoalhaven program.

**Find out how you can get involved and help contribute to a more sustainable future through our Sustainable Living Page.**



**Sustainable Living**

# APPENDICES

## Appendix 1 - Terms and References

### Acronyms

CO <sup>2</sup>	Carbon dioxide
AAG	Aboriginal Advisory Group
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCP	Development Control Plan
ESD	Ecologically Sustainable Development and/or Ecologically Sustainable Design
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
ISJO	Illawarra Shoalhaven Joint Organisation
LED	Light-emitting diode
LEP	Local Environmental Plan
LGA	Local Government Area
NARClIM	NSW and Australian Regional Climate Modelling
NSW	New South Wales
PV	Photovoltaic (solar)
REMS	Reclaimed Water Management System
UN SDG	United Nations Sustainable Development Goals



# DEFINITIONS

## Biodiversity

The variety of all living things and their interactions – the different plants, animals and microorganisms, the genes they contain and the ecosystems they form.

Biodiversity describes all aspects of biological diversity, including:

- **genetic diversity:** the variety of genes (or units of heredity) in any population,
- **species diversity:** the variety of species,
- **ecosystem diversity:** the variety of communities or ecosystems.

## Carbon emissions

Carbon emissions, carbon dioxide emissions, or CO2 emissions are emissions of carbon dioxide stemming from the burning of fossil fuels and the manufacture of cement; they include emissions produced during consumption of solid, liquid, and gas fuels as well as gas flaring.

## Decarbonisation

The reduction or elimination of carbon dioxide emissions.

## Circular economy

A circular economy is a model that aims to design waste out of the system. It retains the value of the materials we produce as waste through greater reuse, recovery, and recycling and, in turn, dramatically reduces our use of natural resources and the volumes of waste produced.

## Climate

The synthesis of the day-to-day weather conditions in a given area; the actual climate is characterised by long-term statistics of the state of the atmosphere in an area.

## Climate change

Climate change is the long-term change in climate patterns at the global and regional scale. Current climate change is largely driven by human activities which increase greenhouse gases in the atmosphere.

## Climate change adaptation

Adapting to life in a changing climate. The process of adjustment to actual or expected climate impacts.

## Climate change mitigation

Taking action to reduce and stabilise greenhouse gas emissions in the atmosphere, thereby limiting further contribution to climate change and reducing future impacts.

## Ecologically Sustainable Design

Ecologically Sustainable design is the philosophy of designing physical objects, the built environment, and services to comply with the principles of ecological sustainability.

Ecologically Sustainable Design seeks to reduce negative impacts on the environment, and the health and comfort of building occupants, thereby improving building performance. The basic objectives of sustainability are to reduce consumption of non-renewable resources, minimise waste, and create healthy, productive environments.

## Ecologically Sustainable Development

Ecologically Sustainable Development aims to provide for the needs of present generations without compromising the ability of future generations to meet their own needs. It requires the effective integration of economic, environmental, social and equity considerations in

decision-making processes. Ecologically Sustainable Development aims to use, conserve, and enhance the community's resources so that the ecological processes on which life depends are maintained, and the total quality of life, now and in the future, can be increased.

## Ecosystem

A functional system which includes communities of living organisms and their associated physical, non-living environment, which interact to form an ecological unit, such as a tidal rock pool, wetland or forest.

## Greenhouse gases

Greenhouse gases are compound atmospheric gases, including carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone, and water vapour, which trap heat reflected from the Earth's surface. Their presence in the atmosphere makes the Earth's surface warmer, driving climate change.

## La Niña phenomenon

The extensive cooling of the central and eastern Pacific Ocean; in Australia (particularly eastern Australia) associated with an increased probability of wetter conditions

## Net zero emissions

An overall balance between greenhouse gas emissions produced and greenhouse gas emissions taken out of the atmosphere. Achieving net-zero emissions means that some greenhouse gases may still be released, but these can be offset by removing an equivalent amount of greenhouse gases from the atmosphere and storing it permanently in soil, plants, or materials.



# DEFINITIONS

## Scope 1 emissions

Scope 1 emissions are direct greenhouse emissions that occur from sources that are controlled or owned by an organisation (e.g., direct emissions resulting from landfill and waste-water treatment processes).

## Scope 2 emissions

Scope 2 emissions are indirect emissions which occur outside of the boundary of an organisation from the generation of electricity that is consumed by the organisation. They are physically produced by the burning of fuels (coal, natural gas, etc.) at the power station to create the electricity.

## Scope 3 emissions

Scope 3 emissions are indirect greenhouse gas emissions other than scope 2 emissions that are generated in the wider economy. They occur as a consequence of the activities of an organisation or facility, but from sources not owned or controlled by that organisation.

## Sustainability

Sustainability is commonly defined as meeting the needs of present generations without compromising the ability of future generations to meet their own needs. Sustainability seeks to enhance the wellbeing of society – by balancing a combination of community liveability, environmental sustainability, and economic prosperity over time. The quadruple bottom line of sustainability includes consideration of environmental, cultural, social, and economic elements.

## Threatened species

Threatened species are any species (including animals, plants, and fungi) which have been recognised as being at risk of extinction. Threatened species are identified under the NSW Threatened Species Conservation Act 1995.





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