



# **Attachment 1 to Item 4.3.1**

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## **Draft Environmental Sustainability Strategy**

Date of meeting: 14 March 2023  
Location: Council Chambers  
Time: 6:30 p.m.





# **DRAFT HAWKESBURY ENVIRONMENTAL SUSTAINABILITY STRATEGY 2023–2033**

[hawkesbury.nsw.gov.au](http://hawkesbury.nsw.gov.au)



# STATEMENT OF COMMITMENT TO FIRST NATIONS PEOPLES

Council acknowledges the Darug and Darkinjung peoples as the Custodians and Traditional Owners of the land throughout the Hawkesbury.

Council recognises the continuing connection of First Nations people to their Country and respects the cultures and histories of Aboriginal and Torres Strait Islander peoples as the first peoples of this land.

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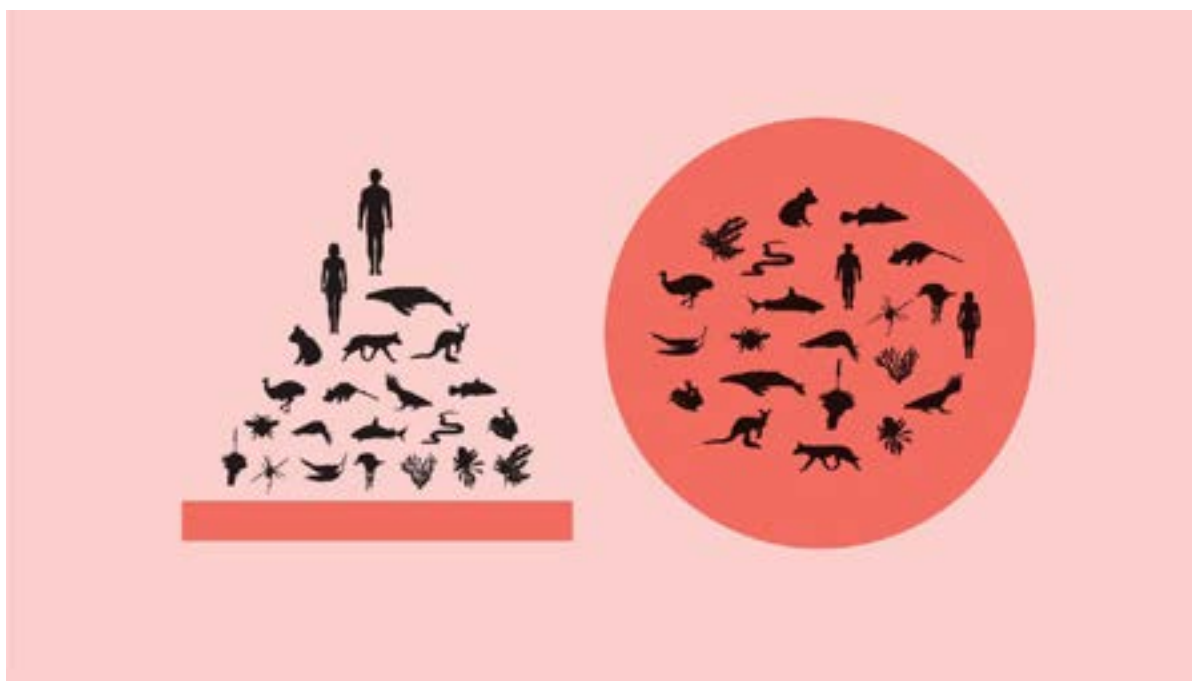
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# CARING FOR COUNTRY

The Hawkesbury Region is home to the Darug and Darkinjung people. Our First Nations people have been Caring for Country for thousands of years and continue to do so.

Caring for Country, draws on laws, knowledge and customs that have been inherited from First Nations ancestors, to ensure the continued health of our natural environment, if you look after Country, Country will look after you.

Caring for Country will require us to consider natural systems that include people, animals, resources and plants, equally, an eco-centred view (figure \*). Council's definition of sustainability (see page 7) supports this view.



**Figure 1: Human Centered v Eco Centered** – Draft Connecting with Country, Government Architect New South Wales

“ The sustainability of natural environment to community is of the utmost importance. We have to embrace Nature; not destroy our natural environment. ....We need to be mindful nature cleans our air, our water, provides foods, medicines, helps with floods. Provides coverage from the sun. Nature provides to our native animals, a habitat and foods as well. This helps to keep us all healthy when the ecosystem is in balance..... The way forward is our past. ”

**Aboriginal community member (excerpt from a survey response)**

# STATEMENT FROM THE NEXT GENERATION

*We want to see a welcoming and inclusive community that, together with Council, takes joint action to care for the environment and shows respect for the rich Aboriginal natural and cultural heritage of our unique Hawkesbury.*

We will achieve this by:

## Being the change

We will make ourselves heard and seen amongst decision-makers, demanding a seat at the table to bring about urgent action on climate change that radically breaks with past practice. Aware of our own ability to influence our surroundings, we will spread the word to others and promote sustainability throughout our communities. We will champion and role-model the behaviours we want to see by buying less, buying better, travelling lighter and leaving less behind.

## Understanding Country

We will ask Aboriginal Elders to help us understand how better to Care for Country and will always respect and recognise First Nation's people's unbroken connection to Country.

## Making sense of the evidence

We will make conscious decisions that take next generations and long-term perspective into account. Our decisions will be based on best available science and the lived experience of the local population. We will educate, communicate, and motivate positive change through creative methods and proactive engagement.

## Collaborating and caring

We will band together and link up to take local action on global issues; we see collaboration as the only way forward to tackle the complex challenges of the future and will make sure no one is left behind. We know that future impacts of climate change will hit some people harder than others and will look out for those most in need.

## Going local on clean energy and food

We want to be self-sustaining in producing the essentials of living: clean energy and good food. We are committed to reducing our reliance on fossil fuels, and will meet our needs for heating, cooling and fuel through locally produced renewable energy sources. We will produce much of our food locally in a thriving and greener agricultural sector, improving food security, reducing food miles and protecting water quality.

## Protecting our unique natural environment

We will protect the natural environment and continue to look after our vast bushland, rich biodiversity, and extensive waterways that sustain our lives and define our identity.





# ABOUT THE STRATEGY

The implementation of this Strategy will be guided by the principles of Caring for County, the Statement from the Next Generation and our community's desire to see a sustainable Hawkesbury. A more sustainable Hawkesbury will be achieved through inclusive joint Council and community actions.

## Purpose

***To provide a framework for collaborative action and direct change toward living more sustainably and in harmony with our history and environment***

The Strategy consolidates existing knowledge, actions, and directions, providing a long-term foundation for progressing the sustainability of the Hawkesbury Local Government Area whilst aligning with the UN Sustainable development goals.

As a 10-year plan, the Strategy sets the course for a continuous journey towards a more sustainable environment. Further actions will be developed over time and in step with Council's overall Integrated Planning and Reporting Framework (see page 47).

## Definition of Sustainability

Sustainability is understood as *"meeting the needs of the present without compromising the ability of future generations to meet their own needs"*. Building upon this United Nations (UN) Brundtland Commission definition, and based on input and feedback from the Strategy engagement, our definition of sustainability is:

- our programs, projects and works will not compromise the ability of **future generations** to meet their needs
- the environmental, economic, and social implications of our work will be considered with **everything we do**

# HOW DID WE DEVELOP THIS STRATEGY

The approach for developing the Strategy is outlined in Figure 2 below.

## STEP 1: Research and document review

This stage involved a comprehensive review of existing Council strategies and plans as well as key reference documents

## STEP 2: Establishment of planning context

Internal engagement across Council was undertaken to ensure the planning and implementation content is well understood and defined

## STEP 3: Initial engagement

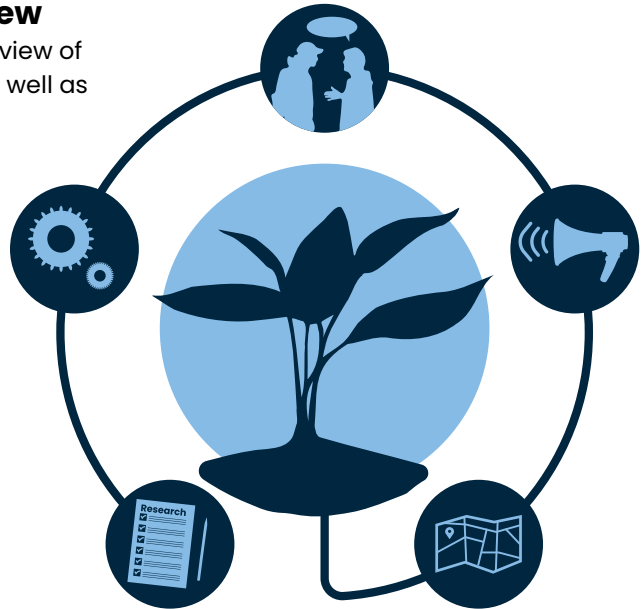
Engagement of youth (Youth Forum and follow up survey), Aboriginal community (survey); community and business representatives and internal engagement

## STEP 4: Public exhibition of draft strategy

Broader public engagement to seek input and feedback on the Draft Environmental Sustainability Strategy

## STEP 5: Final strategy

Based on community feedback, the strategy will be finalised and presented to Council for adoption



**Figure 2: Approach**

# CAPACITY BUILDING FOR SUSTAINABILITY

We have identified five key areas for capacity building as shown in Figure 3 below. Each of the strategic actions, outlined on pages 36–46, is described in terms of how it will deliver on these core capacity building elements.

## KNOWLEDGE

Establish baseline data and methods of knowledge sharing internally and in partnership with research institutions, agencies and the community

## POLICY

Develop a policy and strategy framework for long term change

## AWARENESS

Creating a greater sense of awareness of personal and collective opportunities for action

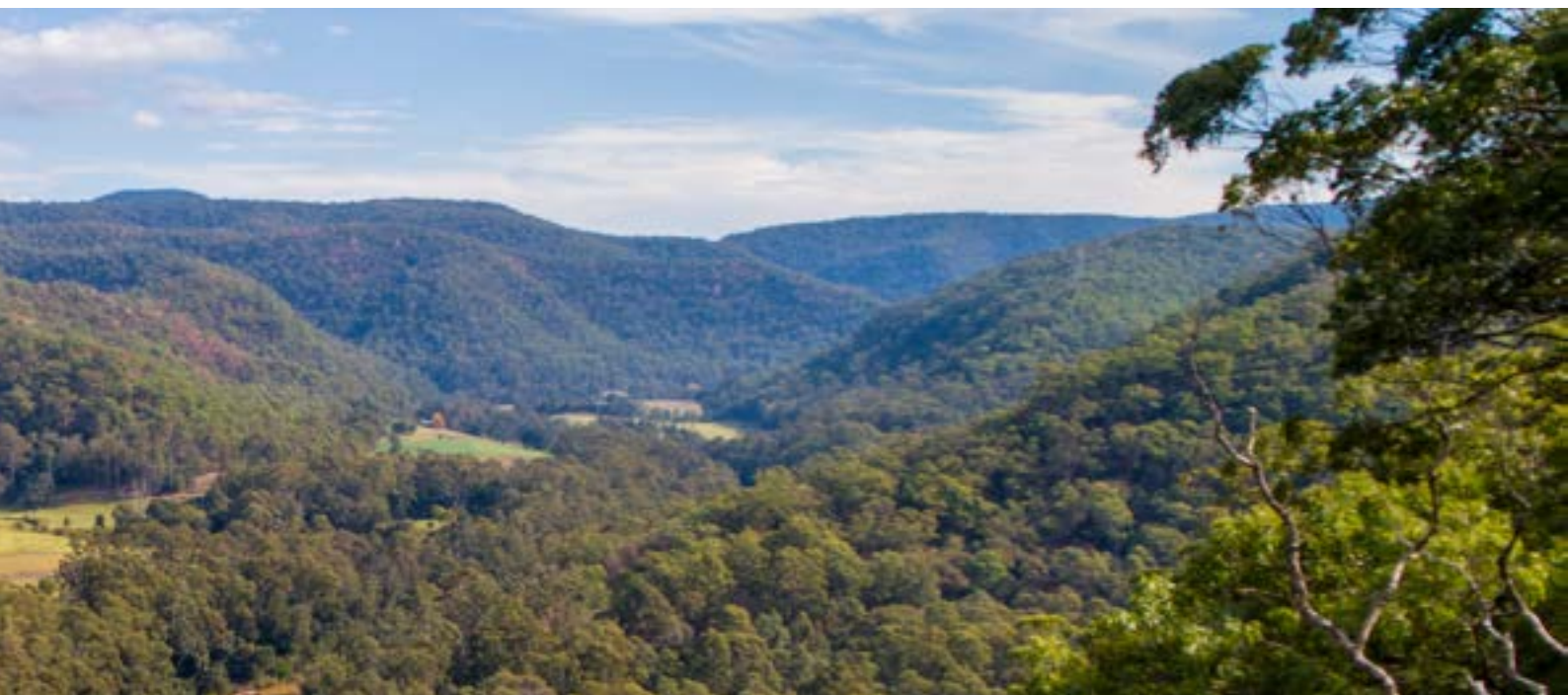
## PARTNERSHIPS

Strengthening partnerships and building networks for ongoing collaboration

## TRIALS

Conduct demonstration projects and on-ground works

**Figure 3: Capacity building for sustainability**







## WHAT OUR COMMUNITY SAID

Community feedback obtained during the development of the Community Strategic Plan 2022–2042 and other Council projects (for example the Liveability Projects), has been incorporated into the development of this Strategy. In addition, targeted engagement was undertaken, as outlined below:

- A **Youth Forum** was held to develop an understanding of how future generations of Hawkesbury residents envisaged their Hawkesbury in years to come. A Statement from the Next Generation was developed expressing their desire for joint action- Council and community- inclusive of First Nations peoples, to care for the environment. The Statement also lists specific actions that can be undertaken to enable collective action.
- A **First Nations survey** was developed and circulated to First Nations individuals/ groups. We asked for their perspectives on Caring for Country, the value of Country, and how we engage with First Nations People in the future.
- **Environmental groups** and our **business community** were invited to participate in a workshop to provide feedback and input on Strategy actions and reaffirmed the collaboration and partnership approach for the Strategy.

## WHAT WE HEARD

Our community want to work collaboratively and with Council to bring about the changes needed to ensure a sustainable Hawkesbury, now and for future generations.

We heard that:

- Circular economy and waste reduction is critical to our sustainability.
- Protecting the environment is integral to our identity, belonging and wellbeing.
- Looking after the bushland, waterways and biodiversity of Hawkesbury requires a holistic approach on all fronts and across natural and urban environments.
- We need to Care for Country and protect the rich Aboriginal heritage of the Hawkesbury.
- Our agricultural lands are critical to our resilience and local economy.
- Partnerships for Power – investing in renewable energy is critical to our local power supply and provides a long-term economic opportunity for the region.

# OUR HAWKESBURY

The Hawkesbury Local Government Area (LGA) lies approximately 52 kilometres northwest of the Sydney CBD. It is the largest LGA in the Sydney Metropolitan region covering an area of nearly 2,800 square kilometres and surrounded by adjoining councils. The Hawkesbury region is characterised by its vast bushland, extensive rivers and wetlands and rich Aboriginal continuous history and heritage. There are four river valleys, fertile flood plains and wetlands, hills, ridges and gorges within the Hawkesbury. The Hawkesbury River, known to the Darug people as Dyarubbin, was a significant place in Dreaming stories, rich in resources, and a critical means of transport<sup>1</sup>.

While Hawkesbury is the largest LGA in the metropolitan Sydney region in land area, it is one of the smallest LGAs in terms of size of population. Figure 3 shows the Hawkesbury's population dispersion and density.

Most of the land (two thirds) in the LGA is comprised of agricultural land and extensive areas of National Parks, mainly located in the north of the LGA. The Upper Hawkesbury River flows through the LGA, from Wisemans Ferry to Yarramundi.

The regions abundant bushland, river systems and unique landscapes form an integral aspect of the values and identity of the community, starting with our First Nation people.

The Hawkesbury community have shown great resilience and community spirit in the face of increasing impacts of climate change and natural disasters. These core strengths are invaluable as the region, like the rest of the world, faces increasing and compounding challenges relating to climate change, such as heat waves and the increasing frequency and intensity of floods and bushfires.



**85,050** people are projected to be living in the Hawkesbury by 2036

**67,581** people live in the Hawkesbury

**66%** of the population live in urban townships

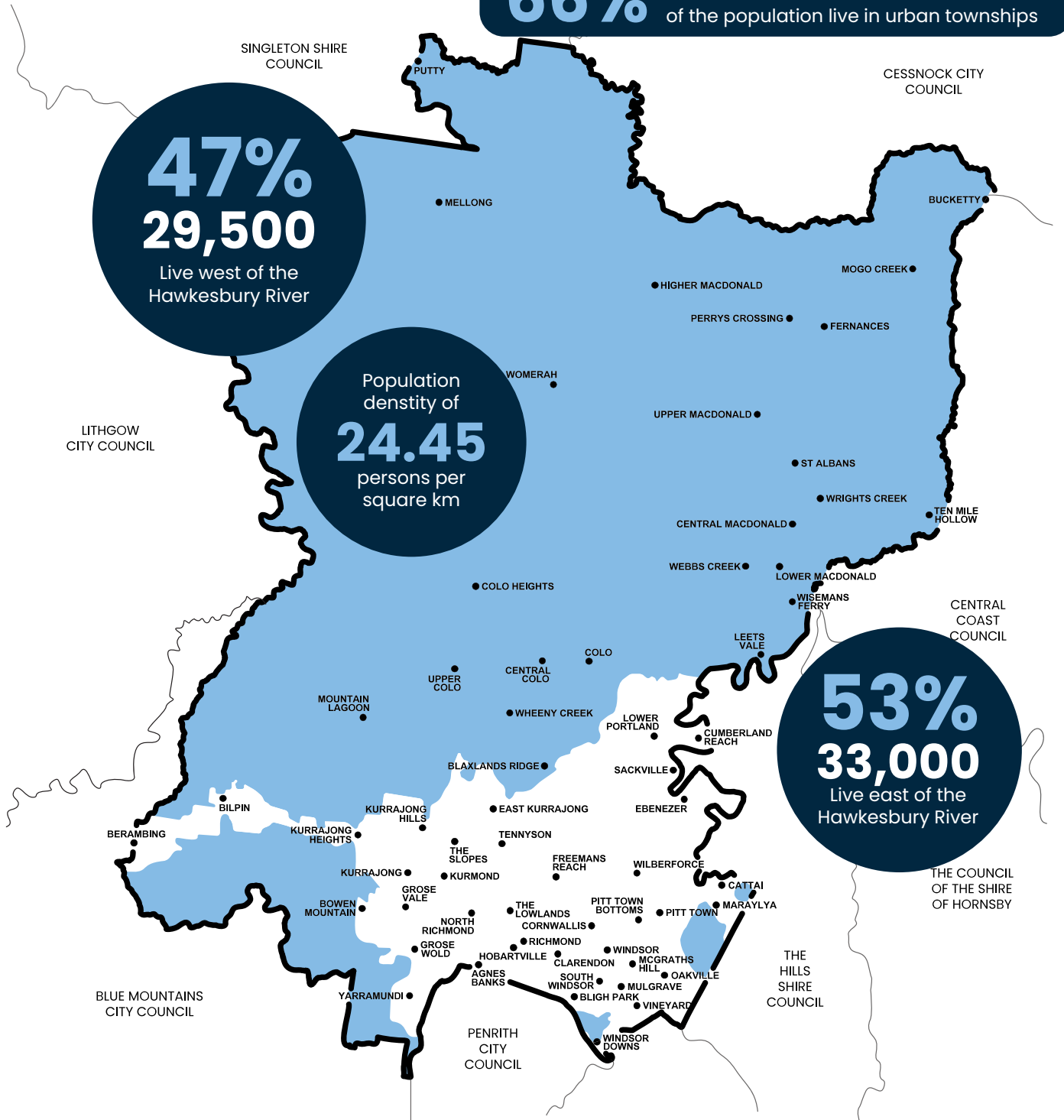


Figure 3: Hawkesbury LGA

# GLOBAL TO LOCAL

This Strategy is informed by key global, federal, state, regional and local directions, as pictured in the infographic below. This is not a comprehensive list; it highlights some of the strategic context directly relevant to this strategy.

## FROM GLOBAL TO LOCAL

### Global

- United Nations Sustainable Development Goals
- UN Convention on Biodiversity
- UN FCCC: Paris Agreement

### Federal

- The Environmental Protection and Biodiversity Conservation Act 1999
- Australia State of the Environment 2021
- Climate Change Bill 2022

### State

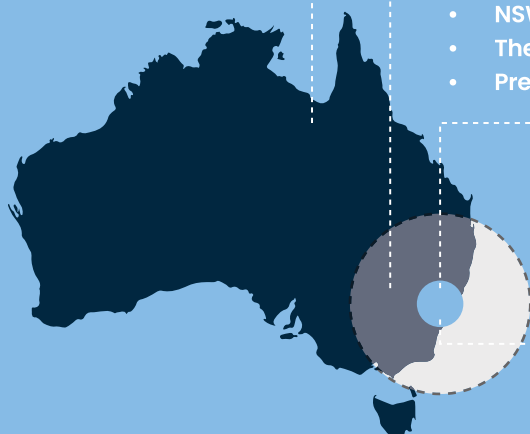
- NSW Climate Change Adaption Plan
- NSW Net Zero Plan: Stage 1: 2020–2030
- NSW State of the Environment 2021
- The Environmental Planning and Assessment Act 1979
- Premier's Priorities – Greening Our City, Greening Public Places

### Regional

- Greater Sydney Commission – Greater Sydney Regional Plan
- Greater Sydney Commission – Western Sydney District Plan
- WSROC – Turn Down the Heat Strategy and Action Plan 2018
- Future Transport Strategy 2056

### Local

- Hawkesbury City Council Community Strategic Plan 2022–2042
- Hawkesbury Local Strategic Planning Statement 2040
- Hawkesbury LGA Aboriginal Cultural Heritage Study 2021
- Hawkesbury Net Zero Emissions and Water Efficiency Strategy 2021





# LOOKING TO THE FUTURE

The Hawkesbury LGA faces unique challenges in looking after its community and vast natural, cultural, built assets and environment.

***Climate change will have direct impacts on our lives, and particularly vulnerable groups. It will also affect biodiversity and water quality as ecosystems respond to increased temperatures. Severe storms and floods will impact not only natural and built assets, but also have potential to erode Aboriginal heritage sites.***

The Hawkesbury's population is expected to increase to 85, 050 by 2036. We need to work together to reduce our carbon emissions as well as protect our natural environment, history and heritage. While the challenges may seem overwhelming at times, there are also significant positive opportunities for bringing about lasting change. For example, technology has changed how we live and work, and potentially reducing our reliance on transport by offering work from home options. Household solar power has become more affordable. Waste management and recycling options are more readily available.

The more sustainable actions and decisions we make, no matter how small, whether they be at an individual or household level, collectively, will move us towards the more sustainable future we all desire.



# STRATEGY THEMES

The challenges and opportunities ahead are complex and call for partnerships and collaboration on all fronts and across all sectors. The Strategy focusses on building upon the already well-established networks and partnerships across government, non-government organisations, research institutes and the local community.

Based on the initial research and engagement, the Strategy centres around three core themes and 11 sub-themes, as shown below:

## The Natural Environment



BUSHLAND



BIODIVERSITY



RIVERS, CREEKS  
WETLANDS &  
CATCHMENTS



ABORIGINAL NATURAL  
& CULTURAL HERITAGE

## The Built Environment



OPEN SPACE &  
CONNECTIVITY



URBAN GREENING



URBAN COOLING



SUSTAINABLE &  
ACTIVE TRANSPORT

## Sustainable Living



ENERGY AND  
CARBON



WATER



WASTE &  
RESOURCE RECOVERY

# SUSTAINABLE DEVELOPMENT GOALS

The Strategy themes will guide our progress towards the strategy's purpose and alignment with the UN Sustainable Development Goals (SDG's). The below figure identifies each theme, sub-theme and their alignment with the UN SDG's.

**THE NATURAL ENVIRONMENT**

**BUSHLAND** **BIODIVERSITY** **ABORIGINAL CULTURAL & HERITAGE** **RIVERS, CREEKS, WETLANDS & CATCHMENTS**

Take urgent action to combat climate change and its impacts	Make cities and human settlements inclusive, safe, resilient and sustainable	Ensure healthy lives and promote wellbeing for all at all ages	Reduce inequality within and among countries	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

**THE BUILT ENVIRONMENT**

**OPEN SPACE & CONNECTIVITY** **URBAN GREENING** **URBAN COOLING** **SUSTAINABLE & ACTIVE TRANSPORT**

Take urgent action to combat climate change and its impacts	Make cities and human settlements inclusive, safe, resilient and sustainable	Ensure healthy lives and promote wellbeing for all at all ages	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

**SUSTAINABLE LIVING**

**ENERGY AND CARBON** **WATER** **WASTE RESOURCE & RECOVERY**

Ensure access to affordable, reliable, sustainable and modern energy for all	Take urgent action to combat climate change and its impacts	Ensure availability and sustainable management of water and sanitation for all	Ensure sustainable consumption and production patterns	Make cities and human settlements inclusive, safe, resilient and sustainable	Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development



# THEME 1: THE NATURAL ENVIRONMENT

“ *The quality of our natural environment reflects the quality of the life we live.* ”

**Hawkesbury's Aboriginal Heritage Study Aboriginal, 2021**

Our natural environment supports the life we live every day; from the air we breathe to the food we enjoy and the places that offer us respite and cultural connection – it is all a product of an ecosystem that is sustaining life.

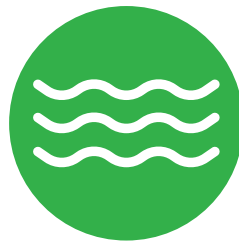
We have identified four sub-themes for creating a more sustainable natural environment:



**BUSHLAND**



**BIODIVERSITY**



**RIVERS, CREEKS  
WETLANDS &  
CATCHMENTS**



**ABORIGINAL NATURAL  
& CULTURAL HERITAGE**

## SNAPSHOT OF THE HAWKESBURY'S NATURAL ENVIRONMENT



Over 1500 hectares of native bushland



The Upper Hawkesbury River flows through the LGA, a total length of around 76km



71% of land in Hawkesbury LGA is National Parks



495 regionally significant wetlands in the Hawkesbury-Nepean River catchment



# BUSHLAND

Bushland and the ecosystems it supports are the bedrock of natural ecosystems and play defining roles in our sense of belonging. Bushland provides shelter for biodiversity to thrive and help create a better balance for our ecosystems. The vegetation of the Hawkesbury area is diverse and complex, reflecting the diversity of environments with regards to influences such as the Hawkesbury- Nepean River, geology, and climate.

## Challenges

- Urban growth and impacts of natural disasters (namely flooding, bushfires, drought, heat and storms) and the effects of rising temperatures on bushland.

## Opportunities

- Council's bushland management program and partnership with the Hawkesbury River County Council (HRCC), aims to reduce or eliminate the adverse impacts of urban development whilst restoring and conserving native plant and animal communities.
- With an environmentally conscious and active local community, there may be opportunities to expand the current bushcare and volunteer groups.

## Desired future state

- Continued implementation of Council's bushland management and education programs
- Continue to collaborate with community groups, research organisations and all levels of Government to improve bushland
- An increased number of bushcare volunteers



# BIODIVERSITY

Although the Hawkesbury is characterised by vast bushland that supports significant biodiversity, many species and ecological communities are diminishing and under threat. For example, the Hawkesbury is home to 238 threatened species and 49 endangered ecological communities. Ensuring the long-term survival of species and ecosystems is critical to ensuring the survival of species and ecosystems.

## Challenges

- Urban growth and impacts of natural disasters (namely flooding, bushfires, drought, heat and storms) and the effects of rising temperatures on biodiversity health.
- Clearing of native vegetation
- Invasive and exotic species impact on native flora and fauna
- Climate change impacts, namely as resulting from rising temperatures, floods, fires and major storm events

## Opportunities

- The Hawkesbury community is passionate about protecting biodiversity in the region – this is an excellent foundation for building collaborations and partnerships such as bushcare volunteers, citizens science groups, and working through schools
- Scientists, researchers, government agencies and educational institutions recognise the significance of Hawkesbury's environmental assets and ecosystems and are keen to enter into partnerships and collaboration to improve knowledge and awareness of local biodiversity.

## Desired future state

- Evidenced increase of biodiversity in both natural and urban areas
- Improved knowledge of local biodiversity
- Strengthened provisions on biodiversity within Local Strategic Plans and Development Control Plans
- Easier access to data documenting current state of biodiversity and usage of data to inform decision making
- Strengthened collaboration with community groups, research organisations and all levels of Government to improve Biodiversity
- The implementation of biodiversity management actions outlined within an adopted Biodiversity Policy



# RIVERS, CREEKS, WETLANDS AND CATCHMENTS

Rivers, Creeks, Wetlands and Catchments are important elements of our ecosystem, and are vital to all living creatures. In addition to supporting human life as well as their critical ecosystem functions, creeks absorb rainwater, filter pollution and recharge groundwater. Well-managed and healthy rivers and catchments can help reduce the risk of flooding and assist in preventing soil erosion. Our local waterways are also used for recreation purposes, and ensuring our waterways are healthy is important.

## Challenges

- Vegetation clearing (exacerbate bank erosion risks)
- Weed invasion of riparian areas, pollution, stormwater runoff and impacts from extreme weather events. These factors combine to impact river health; mangroves and casuarina forests in creeks; and water quality.

## Opportunities

- Water recycling, stormwater harvesting and implementation of Water Sensitive Urban Design (WSUD) elements to cool urban environments, improve the quality of stormwater run-off, secure water supply to the region, and to assist in maintaining water flows during drought periods.
- Partnering with 6 other councils on the development of the Hawkesbury- Nepean River Coastal Management Program, to support the coordinated management of the Hawkesbury Nepean River system

## Desired future state

- Continue to monitor water quality within the Hawkesbury River with the assistance of the NSW Government.
- An expanded Water Quality Monitoring program to better understand stressors and possible interventions to assist in improving catchment health
- Implementation of Water Sensitive Urban Design (WSUD) practices to address water quality issues
- Continue to collaborate with community groups, research organisations and all levels of Government to improve catchment health





# ABORIGINAL NATURAL AND CULTURAL HERITAGE

The first known inhabitants of the Hawkesbury Nepean River were the Darug people, who are believed to have been living along the Hawkesbury River region at least 50,000 years ago<sup>1</sup>. To Aboriginal people, bushland and biodiversity is integral to cultural, community and individual wellbeing and cannot be separated from human life.

## Challenges

- Aboriginal cultural heritage is intrinsically linked to the natural environment, and so the key challenges affecting Aboriginal cultural heritage are to a large extent mirrored in the challenges associated with the protection and enhancement of bushland, biodiversity, rivers and wetland health. Additional and unique challenges include ensuring access to sites and places of high cultural significance; ensuring ongoing protection of sites in a culturally appropriate manner; and sound land use protocols for ensuring that future development does not impact known or potential Aboriginal heritage.

## Opportunities

- There are significant opportunities to engage with the Traditional Owners to ensure the continued protection and recognition of the rich Aboriginal heritage of the region, and to create greater awareness and recognition of Aboriginal cultural heritage and Caring for Country practices. The Hawkesbury Aboriginal Cultural Heritage Study identifies specific opportunities and recommendations that compliment this Strategy.

## Desired future state

- Well-established framework for engaging Traditional Owners community in land use management, environment protection and heritage conservation.

<sup>1</sup> Hawkesbury City Council Community Strategic Plan 2022-2024



# THEME 2: THE BUILT ENVIRONMENT

The built environment in Australia is estimated to generate 40% of global energy related greenhouse gas (GHG) emissions and consumes almost half of the total global raw material.<sup>2</sup> The majority of the Hawkesbury LGA population live in urban townships - in single dwellings - this is an area of particular importance in terms of reducing emissions as well as preparing for the projected impacts of climate change, such as increases in heatwaves.

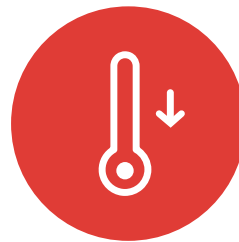
We have identified four sub-themes for creating a more sustainable built environment:



**OPEN SPACE & CONNECTIVITY**



**URBAN GREENING**



**URBAN COOLING**



**SUSTAINABLE & ACTIVE TRANSPORT**

## SNAPSHOT OF THE HAWKESBURY'S NATURAL ENVIRONMENT



1,333 ha Council managed public open space



5 -10 additional hot days by 2030



214 parks and reserves



<10% Tree Canopy in Town Centres



13.1% medium or high-density dwellings

<sup>2</sup> [www.wbcsd.org/Programs/Cities-and-Mobility/Sustainable-Cities/Blueprint-for-a-sustainable-built-environment](http://www.wbcsd.org/Programs/Cities-and-Mobility/Sustainable-Cities/Blueprint-for-a-sustainable-built-environment)



# OPEN SPACE AND CONNECTIVITY

Open space includes public parks, gardens, community sportsgrounds, plazas, reserves, rooftop gardens, green corridors and linkages in our cities. Open spaces provide a wide range of benefits - improved physical wellbeing as well as mental health, strengthened social cohesion, visual amenity, cultural heritage, and protection of biodiversity and environmental values.

## Challenges

- Impacts of climate change combined with increased development may place more pressure on existing open space with limited opportunities and resources to acquire land for future open spaces given the geographic constraints of the area
- Annual budget for open space provision and ongoing maintenance is limited
- Extreme weather events, flooding and heatwaves have significant implications for open space planning and use.
- Characterised by its vast land area and geographically constrained by rivers and gorges, connectivity remains a key Council priority (Hawkesbury Local Strategic Planning Statement 2021)
- While there are many well-used parks in the City, open space provision across the LGA are random in certain areas and not easily accessible

## Opportunities

- With its extensive river systems and scenic outlooks, the Hawkesbury region has great potential to use its natural assets and open space to support the well-being of its community & natural environment, and help boost the visitor economy.
- The river systems also offer unique opportunities for the creation of green – blue infrastructure that provides connectivity, recreation and cooling benefits, as well as a range of other social, and environmental opportunities

## Desired future state

- Updated Recreational Open Space Strategy addressing the diverse needs of the community.
- Local neighbourhoods have easy access to quality open spaces.
- Mapped opportunities for improving blue/green infrastructure and connectivity.
- Continue investigating opportunities for partnerships, funding, and collaboration to improve access to open space.
- New developments provide reinvestment into public open spaces.



# URBAN GREENING

Urban trees play a significant role in creating liveable neighbourhoods that support the health and wellbeing of communities. They are important assets for the community that bring many benefits to cities and town centres, including, biodiversity support, urban cooling, aesthetic appeal, improved water and air quality, reduced noise and increasing energy efficiency.

## Challenges

- Some of the key challenges include selection of appropriate trees and managing dual needs for tree canopy in urban areas with maintenance and water requirements
- Low canopy cover in urban areas
- Low percentage of trees planted on private land
- Vandalism of public trees
- Smaller minimum lot sizes for new developments

## Opportunities

- Through NSW Government grants, tree planting has occurred in a number of suburbs throughout the LGA
- Work with the community on incorporating tree planting and protecting mature trees on private land
- Council is currently developing an Urban Forest Strategy to guide how tree canopy and greening can be increased within our town centres and encouraging planting on private land

## Desired future state

- Urban Forest Strategy adopted
- Identified priority areas for tree planting and heat mitigation interventions
- The community has a high-level appreciation of the importance of urban greening
- Continue investigating opportunities for encouraging and enabling private, commercial and industrial landowners and public institutions to plant appropriate trees and understory on their properties.
- Baseline data identifying the current trees planted on Council managed land, within urban town centres
- Have adopted tree asset management plans and conduct regular tree audits and maintenance to better protect mature trees on public land.



# URBAN COOLING

We need to implement effective urban cooling measures to reduce the impact of urban heat and also to decrease the demand for energy and water consumption. Improving urban cooling in our cities by integrating urban green infrastructure (e.g. street trees, green walls, green roofs) and incorporating sustainable building materials (e.g. cool roofs and permeable pavements).

## Challenges

- Climate change and urbanisation will see increases in urban heat, and the impacts will be experienced by our community, especially amongst the vulnerable populations.

## Opportunities

- Implementation of the Urban Heat Planning Toolkit (2021) in collaboration with Western Sydney Organisation of Council's (WSROC) and research Institutes, to inform planning provisions
- There is already a significant body of knowledge and research available to inform future planning, providing an opportunity for significant reduction to urban heat through better urban design (e.g., integration of Water Sensitive Urban Design, adoption of passive cooling methods in building design, controls for using heat mitigating roofs used in residential sector)

## Desired future state

- Have a standalone provision on urban heat management included in the Hawkesbury Development Control Plan (DCP) and Local Environmental Plan (LEP)
- Implementation of urban heat response mitigation and adaptation measures through collaborating with research institutions, state government and industry.
- Continue investigating opportunities for using stormwater harvesting, recycled water, and green infrastructure to support cool urban environments.
- Continue to work with WSROC and its associated Council's to implement the actions within the Turn Down the Heat Strategy and Action Plan (2018), to create cooler, more resilient communities.<sup>3</sup>

<sup>3</sup> [www.hawkesbury.nsw.gov.au/\\_data/assets/pdf\\_file/0020/210836/20220628AT6toitem1-Urban-Heat-Planning-Toolkit.pdf](http://www.hawkesbury.nsw.gov.au/_data/assets/pdf_file/0020/210836/20220628AT6toitem1-Urban-Heat-Planning-Toolkit.pdf)



# SUSTAINABLE AND ACTIVE TRANSPORT

Sustainable transport is low/zero-emission, energy efficient modes of transport, which include electric or alternate fuel vehicles, that cause less impact on the environment. Active transport refers to walking and cycling and are a subset of sustainable transport.

## Challenges

- There are currently approximately 3.22 cars per household in the Hawkesbury LGA (Household Travel Survey 2019/20, Transport for NSW)
- Provision of public transport opportunities is outside the control of Council and remains a priority area for advocacy with NSW Government.

## Opportunities

- The Hawkesbury Net Zero Emissions and Water Efficiency Strategy (2021) identifies sustainable and active transport as a core component for reducing carbon emissions. Engagement for the strategy identified that 96% of survey respondents were supportive of sustainable transport options, including active transport
- Many residents work within the LGA, providing an opportunity for more localised transport options other than by private vehicle.<sup>4</sup> This would help in reducing emissions and in travel costs for residents.
- Hawkesbury's community survey results, to inform the Net Zero Emissions and Energy Efficiency Strategy in August 2020 found that the community is receptive to changing to more sustainable modes of transport.

## Desired future state

- Continue investigating partnerships and funding opportunities for enabling active and/or electric transport options and infrastructure throughout the LGA
- Continue to enable and promote opportunities for community uptake of sustainable, active and/or electric transport choices.
- Safe mobility options for all
- An adopted Active Transport Strategy

<sup>4</sup>Hawkesbury ID Profile

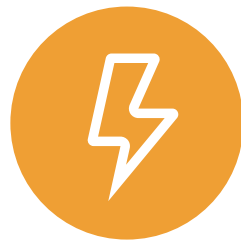




# THEME 3: SUSTAINABLE LIVING

The United Nations environment program defines sustainable living as an understanding of how our lifestyle choices impact the world around us and finding ways for everyone to live better and lighter. With an increase in population comes more demand for food, fashion, travel, housing and related aspirations. In a world stretched thin for resources and under the threat of global biodiversity loss and climate change, our lifestyles decisions are putting the planet at risk. To combat these impacts, we need targeted local actions.

We have identified three sub-themes for sustainable living which require high attention in our daily life choices:



**ENERGY AND CARBON**

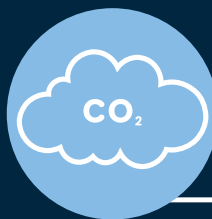


**WATER**

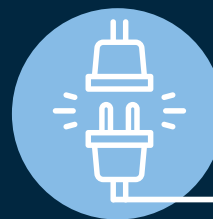


**WASTE & RESOURCE RECOVERY**

## SNAPSHOT OF THE HAWKESBURY'S NATURAL ENVIRONMENT



848 thousand tonnes of CO<sub>2</sub> generated by community (2020/21)



On average Hawkesbury households use 8,456 kWh compared to the Greater Sydney household average of 5,576 kWh (2020/21)



28.7% of households have solar systems (Sept 2022)



5.27M kL/year of water use (2020/21)



40% of household red garbage bins are made up of food and garden waste



# ENERGY AND CARBON

Reducing our energy consumption (e.g. heating and cooling) is not only good for our household economy; it's also critical to our collective and global responsibility of reducing greenhouse gas Greenhouse Gas (GHG) emissions.

## Challenges

- The prevalence of heat absorbing materials such as dark-coloured pavements and roofs, and concrete, in addition to building design, urban canyons trapping hot air, and lack of shade and green space in dense urban environments deepens the need for electricity.

## Opportunities

- Hawkesbury residents are installing solar systems at an accelerating rate
- Council's Net Zero Emissions and Water Efficiency Strategy, outlines actions to work towards the target of Net Zero Emissions by 2030, for both council operations and community
- Council is currently investing in solar power and sustainability measures to reduce energy consumption

## Desired future state

- Continue to demonstrate leadership and motivate change through showcasing renewable energy initiatives on Council assets
- Continue to enable, educate and inspire the community to reduce their carbon emissions.
- Have an established reporting framework for monitoring and reporting on Council's carbon emissions and energy consumption.
- Partnerships and investments into local renewable and more sustainable energy production and storage options.



# WATER

We all want to live in cool, green and clean spaces, and this wouldn't be possible without water. Only 1% of water in the whole world is fresh, drinkable and accessible to us and increasing demand in water and high consumption is leaving our future generations vulnerable to safe drinking water.

## Challenges

- Some of the key challenges include run-off from urban development and pollution of rivers and water systems that are exacerbated by extreme weather events and flooding.
- Extreme temperatures and heat waves during summer, along with regular periods of prolonged drought conditions, result in water restrictions, and present a serious threat to quality of life, public health and economic prosperity.

## Opportunities

- Increasing the use of recycled water to cool suburbs, by irrigating greenery, gardens, open spaces
- Council manages significant wastewater infrastructure which can be utilised to reduce the impact of urban development on water resources, reduce water extraction and save valuable potable water for personal use and drinking.

## Desired future state

- Established measuring and reporting requirements for water efficiency targets
- Continue community education programs outlining water conservation, recycling and water reuse
- Continue investigating opportunities for ongoing and extended provision of drought-resistant water supplies through provision of recycled water infrastructure and services
- Continue investigating options for improving stormwater management to reduce run-off and sewer overflows.



# WASTE & RESOURCE RECOVERY

In 2021/2022 the Hawkesbury community recycled 5,185 tonnes and composted 6,090 tonnes of materials through their household bins. This has resulted in water, energy, emissions and landfill savings. Council has adopted the Waste and Resource Recovery Strategy 2032 to rethink waste as a resource as we move towards higher waste diversion from landfill through increased services as well as a circular economy approach that boosts the agri-business sector.

## Challenges

- Achieving the NSW Government's 80% recovery rate by 2030 for Council's household waste and recycling services. Council's current recovery rate is 36%.
- Currently Council is landfilling an estimated 8,046 tonnes of Food Organics and Garden Organics (FOGO). FOGO material when landfilled produces methane, a powerful greenhouse gas, which over a 20-year period is 80 times more potent at warming than carbon dioxide.
- Council's landfill only has another 4 years of capacity remaining. Post-2026 alternate residual waste disposal options will be required.

## Opportunities

- The NSW Government has mandated the introduction of Food Organics & Garden Organics (FOGO) for all households by 2030. This will ensure this material is diverted from landfill which will help to achieve zero emissions from organics in landfill by 2030.
- Collaborate with key stakeholders including for example Western Sydney University and Sydney Water to establish local circular economy initiatives.
- Continue to deliver community waste education programs to maintain low levels of recycling and garden organics contamination, further reduce litter and generate community support for the introduction of FOGO.

## Desired future state

- Have baseline data and be reporting publicly on key waste measures.
- Continue investigating the possibility of circular economy initiatives through collaboration with research institutes, agriculture, industry, the business community and wider public.
- Have sustainable government procurement practices implemented.
- Continue to support the implementation of the Waste and Resource Recovery Strategy 2032

# STRATEGIC ACTIONS: INTRODUCTION

This section presents the Strategic actions to progressing the community's vision and ensure a more sustainable Hawkesbury. With a focus on motivating change and building capacity, the strategic directions have been developed with the following key elements in mind:


- **KNOWLEDGE:** Establishing baseline data and methods of knowledge sharing internally and in partnership with research institutions, agencies and the community
- **POLICY:** Developing a policy and strategy framework
- **AWARENESS:** Creating a greater sense of awareness of personal and collective opportunities for actions
- **PARTNERSHIPS:** Strengthening partnerships and building networks for ongoing collaboration
- **TRIALS:** Conducting demonstration projects and on ground works


Indicative timelines are provided in the tables, where:


- Short-term is estimated to be delivered within a 1-2 year timeframe;
- Medium-term is estimated to be delivered within a 3 – 5 year timeframe; and
- Long-term estimated to be delivered within a 5- 10 year timeframe.

It should be emphasised that these are approximations only and are subject to refinement in step with Council's Integrated Planning and Reporting framework as well as any arising opportunities. It should also be noted that the timelines do not signify relative importance; all strategic actions identified are critical to progress the overall vision for the Hawkesbury.

# STRATEGIC ACTIONS: THE NATURAL ENVIRONMENT

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <b>BUSHLAND</b>	1.1 Motivate, educate, and include the community in initiatives to protect and enhance bushland	<b>Awareness Trials</b>	Ongoing	NSW Department of Planning and Environment, Local Land Services, Bushcare volunteers, Hawkesbury Community, Hawkesbury Environment Network, Hawkesbury- Nepean Landcare Network
	1.2 Gather baseline data on the current state of bushland	<b>Knowledge Partnerships</b>	Short Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network
	1.3 Understand and map bushland connectivity and identify high priority bushland corridors to improve the habitat conditions for native flora and fauna.	<b>Partnerships Awareness Trials</b>	Medium Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network
	1.4 In collaboration with research institutes and volunteer groups, monitor environmental health of bushland on a regular basis and report on key indicators such as the size (% area) of the bush cover, weed coverage (% area), shape, area of the core of habitat (% area).	<b>Knowledge Awareness Trials</b>	Long Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network, Council's Bushcare volunteers
	1.5 Establish a bushland strategy and a 10-year action plan to restore, regenerate and monitor the health of bushland	<b>Policy Awareness Trials</b>	Long Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network
	1.6 Extend partnership, collaboration, and volunteering opportunities for bushland protection, restoration and weed control (e.g. Bushcare, Citizens Science, schools and research institutes), with priority given to threatened and endangered species as per the registered recovery strategies and threat abatement strategies	<b>Awareness Trials</b>	Long Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury- Nepean Landcare Network, Hawkesbury County Council, Western University, Hawkesbury TAFE, Bushcare volunteers, Hawkesbury Environment Network
	1.7 Restore or enhance critical bushland areas and expand habitats where biodiversity can be improved to promote native flora and fauna.	<b>Awareness Trials</b>	Long Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury- Nepean Landcare Network, Hawkesbury County Council, Hawkesbury Bushcare volunteers

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>BIODIVERSITY</b></p>	1.8 Motivate, educate, and include the community in initiatives to protect and enhance biodiversity.	<b>Knowledge Awareness Trials</b>	Long Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network, Council's Bushcare volunteers
	1.9 Review the Local Environment Plan (LEP) and Development Control Plan (DCP) to strengthen provisions related to biodiversity conservation	<b>Policy</b>	Short Term	NSW Department of Planning and Environment
	1.10 Gather baseline data on the current state of biodiversity	<b>Knowledge Partnerships</b>	Medium Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network, Council's Bushcare volunteers
	1.11 Understand and map bushland connectivity and identify high priority bushland corridors to improve the habitat conditions for native flora and fauna.	<b>Knowledge Partnerships</b>	Medium Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network, Council's Bushcare volunteers
	1.12 Establish a biodiversity strategy and a 10-year action plan to restore, regenerate and monitor the health of bushland	<b>Policy</b>	Short Term	NSW Department of Planning and Environment

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>RIVERS, CREEKS, WETLANDS AND CATCHMENTS</b></p>	<p>1.13 Collect baseline data and work with the NSW Government to conduct subsequent regular ongoing monitoring of water quality to help monitor the health of local waterways</p>	<p><b>Knowledge Trials</b></p>	<p>Short Term</p>	<p>NSW Department of Planning and Environment, Water NSW, Natural Resources Access Regulator, Sydney Water, Hawkesbury- Nepean Coastal Management Program</p>
	<p>1.14 Investigate opportunities and set priorities for reducing run-off and pollution entering rivers, creeks and catchments through initiatives such as implementation of Water Sensitive Urban Design measures, such as, constructed wetlands, and instalment of gross pollutant traps.</p>	<p><b>Trials</b></p>	<p>Medium Term</p>	<p>NSW Department of Planning and Environment, Water NSW, Natural Resources Access Regulator, Sydney Water, Hawkesbury- Nepean Coastal Management Program</p>
	<p>1.15 Motivate, educate, and include the community and businesses in initiatives to protect and enhance rivers, creeks, wetlands and catchments</p>	<p><b>Partnerships Awareness</b></p>	<p>Short Term</p>	<p>NSW Department of Planning and Environment, Hawkesbury Community, Hawkesbury Environment Network, Hawkesbury- Nepean Coastal Management Program</p>
	<p>1.16 Protect and enhance the health of local waterways and their catchments in collaboration with key stakeholders, research institutions, industry (agricultural and commercial), and the community.</p>	<p><b>Partnerships Awareness</b></p>	<p>Long Term</p>	<p>NSW Department of Planning and Environment, Water NSW, Natural Resources Access Regulator, Western University, Hawkesbury TAFE, Department of Primary Industries, Sydney Water, Hawkesbury Community, Hawkesbury- Nepean Coastal Management Program</p>
	<p>1.17 Strengthen regulatory compliance measures and monitoring of potential run-off and pollution activities of industry, agriculture and properties and enforce environmental protection of waterways health.</p>	<p><b>Policy</b></p>	<p>Long Term</p>	<p>NSW Department of Planning and Environment, Water NSW, Natural Resources Access Regulator, Environment Protection Authority, Hawkesbury- Nepean Coastal Management Program</p>





SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>ABORIGINAL NATURAL AND CULTURAL HERITAGE</b></p>	<p>1.18 Protect Aboriginal natural and cultural heritage and engage appropriately with Traditional Owners on how to look after sites (and as informed by the Aboriginal Cultural Heritage Study 2021)</p>	<p><b>Partnerships Awareness</b></p>	<p>Medium Term</p>	<p>NSW Department of Planning and Environment, Water NSW, Natural Resources Access Regulator, Aboriginal Affairs NSW, National Parks and Wildlife Service, Local indigenous Groups, Hawkesbury Heritage Committee</p>
	<p>1.19 In collaboration with Traditional Owners and the local Aboriginal community, recognise the importance of the rivers, waterways, and bushland to the First Nations people of Hawkesbury through culturally appropriate signposting, artwork, and community education.</p>	<p><b>Partnerships Awareness Trials</b></p>	<p>Medium Term</p>	<p>NSW Department of Planning and Environment, Water NSW, Natural Resources Access Regulator, Aboriginal Affairs NSW, National Parks and Wildlife Service, Local indigenous Groups, Hawkesbury Heritage Committee</p>

# STRATEGIC ACTIONS: THE BUILT ENVIRONMENT


SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>OPEN SPACE AND CONNECTIVITY</b></p>	<p>2.1 Review current provision and quality of open space throughout the LGA and update the Recreational Open Space Strategy (2013) so that it continues to address the evolving and diverse needs of the community.</p>	<p><b>Knowledge</b></p>	<p>Short term</p>	<p>Greater Sydney Commission, NSW Department of Planning and Environment, NSW Government Architects, Hawkesbury Sports Council</p>
	<p>2.2 Ensure local neighbourhoods have easy access to quality open spaces (e.g., as per Government Architect NSW strategic directions and other best practice guidelines)</p>	<p><b>Policy Knowledge</b></p>	<p>Short term</p>	<p>Greater Sydney Commission, NSW Department of Planning and Environment, NSW Government Architects</p>
	<p>2.3 Identify and map opportunities for improving blue/green infrastructure and connectivity, ensuring sustainable and welcoming access to rivers, creeks, and waterways</p>	<p><b>Knowledge</b></p>	<p>Short term</p>	<p>Greater Sydney Commission, WSROC, Hawkesbury- Nepean Coastal Management Program, NSW Department of Planning and Environment</p>
	<p>2.4 Investigate opportunities for partnerships, funding, and collaboration to improve access to open space throughout the LGA, and with a particular focus on high need areas (such as neighbourhoods characterised by a mix of medium to high density housing, low socio-economic disadvantage, and high proportion of seniors, children and young people).</p>	<p><b>Policy Awareness</b></p>	<p>Medium term</p>	<p>Greater Sydney Commission, NSW Department of Planning and Environment, WSROC</p>
	<p>2.5 Ensure new developments provide reinvestment into public benefits, and namely in terms of provision of quality public open space and community facilities</p>	<p><b>Policy Awareness Trials</b></p>	<p>Medium term</p>	<p>Greater Sydney Commission, NSW Department of Planning and Environment</p>

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>URBAN GREENING</b></p>	<p>2.6 Prepare an urban forest strategy to understand the current state of the urban tree canopy and set direction for tree selection, development of a tree inventory for public trees, management of climate change impacts (namely heat and drought), and mitigation and management of risks of pests and disease.</p>	<p><b>Policy Partnerships</b></p>	<p>Short Term (currently being developed)</p>	<p>NSW Department of Planning and Environment, Research Institutes, Resilient Sydney</p>
	<p>2.7 Using existing data and information on urban heat, prioritise areas for tree planting and heat mitigation interventions across the LGA.</p>	<p><b>Knowledge Awareness</b></p>	<p>Medium Term</p>	<p>WSROC, Government Architect NSW, NSW Department of Planning and Environment, Research Institutes</p>
	<p>2.8 Investigate opportunities for encouraging and enabling private, commercial and industrial landowners and public institutions to plant appropriate trees and understory on their properties</p>	<p><b>Awareness Trials</b></p>	<p>Medium Term</p>	<p>Department of Planning &amp; Environment</p>
	<p>2.9 Maintain and monitor tree cover by adopting tree asset management plans and conducting regular tree audits to better protect mature trees on public land</p>	<p><b>Policy Trials</b></p>	<p>Long Term</p>	<p>NSW Department of Planning and Environment</p>

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>URBAN COOLING</b></p>	<p>2.10 Review and revise the Hawkesbury Development Control Plan (DCP) 2002 and Local Environmental Plan (LEP) to include a standalone provision on urban heat management (e.g., in alignment with WSROC urban heat toolkit or similar guidance).</p>	<p><b>Policy</b></p>	<p>Short Term</p>	<p>NSW Department of Planning and Environment, Infrastructure NSW, WSROC</p>
	<p>2.11 Collaborate with research institutions, state government and industry to develop urban heat response mitigation and adaptation measures to be integrated into the various areas of Council services and functions</p>	<p><b>Awareness</b></p>	<p>Medium Term</p>	<p>WSROC, NSW Department of Planning and Environment, Research Institutions</p>
	<p>2.12 Investigate opportunities for using stormwater harvesting, recycled water, and green infrastructure to support cool urban environments.</p>	<p><b>Knowledge</b></p>	<p>Long Term</p>	<p>Water NSW, NSW Department of Planning and Environment, Research Institutions, Sydney Water, developers</p>

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>SUSTAINABLE &amp; ACTIVE TRANSPORT</b></p>	<p>2.13 Investigate partnership opportunities and funding options for enabling active and/or electric transport options and infrastructure throughout the LGA, and with a particular focus on ensuring safe mobility options for vulnerable groups in the community (such as seniors, children, and young people).</p>	<p><b>Awareness Trials</b></p>	<p>Medium Term</p>	<p>NSW Department of Planning and Environment, Hawkesbury community</p>
	<p>2.14 Prepare an active transport plan for Hawkesbury</p>	<p><b>Policy</b></p>	<p>Long Term</p>	<p>Transport for NSW, NSW Department of Planning and Environment, Hawkesbury Community, local bike groups</p>
	<p>2.15 Enable and promote opportunities for community uptake of sustainable, active and/or electric transport choices.</p>	<p><b>Partnerships Trials</b></p>	<p>Long Term</p>	<p>Transport for NSW, NSW Department of Planning and Environment</p>

# STRATEGIC ACTIONS: SUSTAINABLE LIVING

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <b>ENERGY AND CARBON</b>	3.1 Encourage and promote the use of electric or hybrid vehicles to reduce transport related energy consumption and carbon emissions (e.g. through showcasing electric vehicles in Council's fleet)	<b>Partnerships Trials</b>	Short Term	NSW Department of Planning and Environment, Local Land Services, Bushcare volunteers, Hawkesbury Community, Hawkesbury Environment Network, Hawkesbury- Nepean Landcare Network
	3.2 Demonstrate leadership and motivate change through showcasing renewable energy initiatives on Council assets	<b>Partnerships Trials</b>	Medium Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network
	3.3 Enable, educate and inspire the community to reduce their carbon emissions	<b>Partnerships</b>	Medium Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network
	3.4 Establish a reporting framework for monitoring and reporting on Council's carbon emissions and energy consumption	<b>Policy</b>	Long Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network, Council's Bushcare volunteers
	3.6 Investigate opportunities for partnerships and investments into local renewable and more sustainable energy production and storage options to reduce local consumption of fossil fuels.	<b>Awareness</b>	Long Term	NSW Department of Planning and Environment, Local Land Services, Hawkesbury County Council, Hawkesbury- Nepean Landcare Network

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>WATER</b></p>	<p>3.8 Conduct community educational programmes on opportunities for water conservation, recycling, and water reuse</p>	<p><b>Partnerships</b></p>	<p>Ongoing</p>	<p>NSW Office of Energy &amp; Water (EWON), Department of Planning and Environment, Sydney Water</p>
	<p>3.9 Investigate opportunities for ongoing and extended provision of drought-resistant water supplies through provision of recycled water infrastructure and services</p>	<p><b>Policy Knowledge</b></p>	<p>Medium Term</p>	<p>Water NSW, Sydney Water</p>
	<p>3.10 Investigate options for improving stormwater management to reduce run-off and sewer overflows, such as through provision and maintenance of drainage systems and infrastructure; stormwater treatment options; and other actions to protect the health of rivers and waterways</p>	<p><b>Policy Trials</b></p>	<p>Medium Term</p>	<p>NSW Environment Protection Authority, Department of Planning and Environment, Sydney Water</p>
	<p>3.11 Establish measuring and reporting requirements for the water efficiency targets adopted within Hawkesbury's Net Zero Emissions and Water Efficiency Strategy</p>	<p><b>Policy</b></p>	<p>Long Term</p>	<p>Resilient Sydney, Sydney Water, Department of Planning and Environment. Greater Cities Commission</p>

SUB-THEMES	Strategic Actions	Capacity building elements	Timelines	Partnerships
 <p><b>WASTE &amp; RESOURCE RECOVERY</b></p>	3.11 Collect data and report publicly on key waste measures- waste generation, recycling, recovery and disposal performance	<b>Knowledge</b>	Short Term	NSW Environment Protection Authority (EPA), WSROC, Hawkesbury Community
	3.12 Investigate the possibility of circular economy initiatives through collaboration with government, research institutes, agriculture, industry, the business community and wider public	<b>Awareness</b>	Medium Term	NSW Environment Protection Authority (EPA), Research institutes, Department of Primary Industries, Regional Development Australia, Department of Planning and Environment, Office of Energy and Climate Change (OECC)
	3.13 Implement sustainable government procurement practices that encourage greater use of recycled products and support local market development.	<b>Awareness Trials</b>	Long Term	NSW Environment Protection Authority (EPA), WSROC, Local Government Procurement, Department of Planning and Environment
	3.14 Support the implementation of the Hawkesbury's Waste and Resource Recovery Strategy 2032 through educational and behavioural change initiatives that can enable a circular economy approach to waste.	<b>Policy</b>	Long Term	WSROC, Department of Planning and Environment, NSW Environment Protection Authority (EPA)



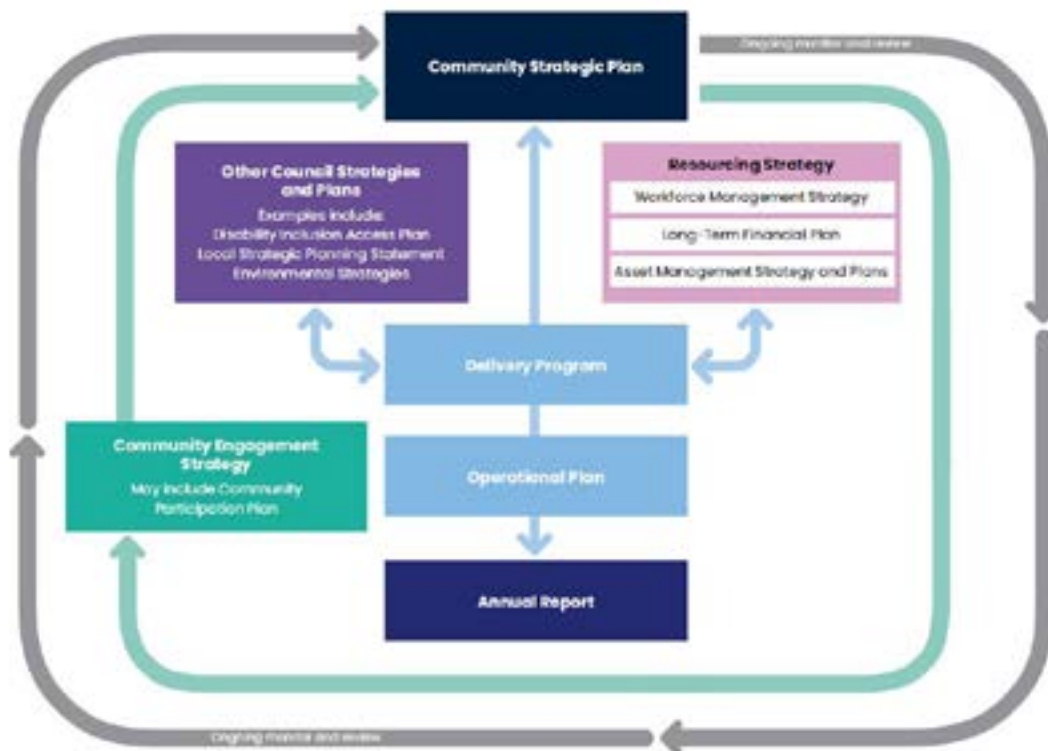
# IMPLEMENTATION

## Integrated delivery

The Environmental Sustainability Strategy (ESS) will be implemented as a core and integral component of Council’s overall business planning and reporting, known as the Integrated Planning and Reporting Framework. The Strategy is also a key outcome of Local Strategic Planning Statement. This means that the ESS, as an overarching strategy, forms the basis for identification of specific projects and actions that will be resourced and managed within Council’s 10-year Resourcing Strategy as well the 4-year Delivery Program. This will in turn inform the annual operational plan, which is Council’s yearly workplan of actions and activities.

Progress against the strategic directions in the Strategy may be monitored and reported on publicly as part of the Annual reporting process. In addition, project updates and key highlights will be included in Council’s quarterly community newsletter and via social media channels.

The Strategy will be reviewed and updated in step with four-year budget cycle for the Delivery Program.



**Figure 4: Integrated Planning and Reporting Framework**  
(source: Community Strategic Plan 2022 - 2042)

# MEASURING PROGRESS

As the purpose of the Strategy ultimately is to increase Council's and the Hawkesbury community's capacity for living more sustainably and protecting and enhancing the natural and built environments of the region, the key measures of success relate to the five components of capacity building, namely:

CAPACITY BUILDING ELEMENT	KEY MEASURES OF SUCCESS
<ul style="list-style-type: none"> <li>Establishing a baseline of data and information</li> </ul>	<ul style="list-style-type: none"> <li>Data and maps of current condition of bushland and biodiversity, including identification of critical habitat and endangered species, established</li> <li>Maps of bushland connectivity and corridors provided</li> <li>Data and framework for monitoring water quality, river and wetland health established</li> <li>Map of priority areas for urban tree planting and heat mitigation measures provided</li> <li>Data collection on waste and recycling measures undertaken</li> </ul>
<ul style="list-style-type: none"> <li>Developing a policy framework and addressing gaps</li> </ul>	<ul style="list-style-type: none"> <li>Bushland policy and action plan adopted</li> <li>Updates to LEP and DCS (namely regarding bushland and biodiversity conservation, urban heat management provision, provision of public open space and active transport infrastructure) implemented</li> <li>Urban forest strategy adopted</li> <li>Tree asset management plans provided</li> <li>Active transport plan adopted</li> <li>Reporting framework for monitoring and reporting on Council's energy consumption and emissions established</li> <li>Waste and Resource Recovery Strategy adopted</li> </ul>
<ul style="list-style-type: none"> <li>Strengthening and establishing partnerships and networks</li> </ul>	<ul style="list-style-type: none"> <li>Partnerships with research institutes established</li> <li>Increase in number of bushcare volunteers</li> <li>Collaboration agreements with government agencies (namely regarding water management and water quality) in place</li> <li>Ongoing collaboration with Traditional Owners established</li> </ul>
<ul style="list-style-type: none"> <li>Building Council and community knowledge and awareness</li> </ul>	<ul style="list-style-type: none"> <li>Community educational programs and web-based resources extended</li> </ul>
<ul style="list-style-type: none"> <li>Conducting demonstration projects and on ground works</li> </ul>	<ul style="list-style-type: none"> <li>Restoration and enhancement projects of critical bushland areas</li> <li>Water quality and pollution reduction infrastructure implemented</li> <li>Water Sensitive Urban Design measures (including stormwater harvesting) implemented</li> <li>Improved access to quality open space</li> <li>Renewable energy flagship projects on Council assets implemented</li> </ul>

# KEY REFERENCES

Department of Planning, Industry and Environment 2021, Climate Risk Ready NSW Guide, viewed 6 April 2022, [www.climatechange.environment.nsw.gov.au/sites/default/files/2021-06/NSW%20Climate%20risk%20ready%20guide.pdf](http://www.climatechange.environment.nsw.gov.au/sites/default/files/2021-06/NSW%20Climate%20risk%20ready%20guide.pdf)

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