

TOGETHER LAKE MAC

OUR PLAN FOR A SUSTAINABLE CITY



Acknowledgements

Lake Macquarie City Council acknowledges the Awabakal People, the traditional custodians of the land over which this document is prepared. We pay respect to knowledge holders and community members of the land, and acknowledge and pay respect to Elders past, present and future.

Lake Macquarie City Council has prepared this Strategy on behalf of the Lake Macquarie community and would like to thank and acknowledge our residents, community groups, businesses, government representatives and other stakeholders involved in contributing to the preparation of this Strategy.

Disclaimer

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Reference

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Lake Macquarie City Council 2020 *Together Lake Mac, Our Plan for a Sustainable City, Environmental Sustainability Strategy and Action Plan 2020-2027*

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Executive summary

Council's Environmental Sustainability Strategy and Action Plan 2020-2027, the Strategy sets out how we plan to achieve Council's Community Strategic Plan's Vision for the City to 'balance our cherished environments with our need for great spaces to live and visit, smart transport options and a thriving economy; which adapt and strive to be fair for all' (LMCC 2017:7).

In Lake Macquarie City we acknowledge that environmental sustainability is important to our community. Like many others, Lake Macquarie faces the ongoing challenges of protecting and enhancing our natural landscapes while supporting the development of a sustainable, resilient city and communities – maximising the wellbeing of the City's residents whilst reducing the City's ecological footprint.

We are presented with a multitude of serious and on-going environmental challenges: greenhouse gas emissions; air and noise pollution; species extinction and biodiversity loss; water pollution and scarcity; the drain on natural resources; deforestation; soil degradation; and the adverse effects of climate change. To address these challenges, we engage in a diverse range of

activities. Our mission is to provide services and facilities to promote a sustainable lifestyle and, in keeping with the vision held by Council and the community, create a City where the environment will be protected and enhanced, and where scenic, ecological, recreational and commercial values and opportunities are promoted and protected.

As a sustainable and resilient City, we will further enhance our connected communities to support the health, wellbeing, social opportunities and shared decision-making of our residents. With aims to reduce their vulnerability to economic shocks, social disconnection and natural disasters and hazards.

Real progress to reduce our energy consumption, improve our air quality, and protect and conserve our natural environment requires a determined, long-term effort, with co-operation between a wide range of stakeholders (including residents, community groups, businesses and government representatives). This demands an ambitious response, practical steps and informed evidence-based policy to identify solutions to enable positive and lasting change for both our environment and the lives of all.



As a local council, we acknowledge we have a responsibility and a duty to act. The measures outlined in this Strategy illustrate Council's commitment and determination to take meaningful action and provide a clear and concise management action plan, to embed into Council operations and to influence the operations of key stakeholders (including businesses) and partners.

The management action plan, Appendix 1 of the Strategy, provides an integrated and targeted approach, which will be reviewed and updated annually to ensure its relevance and maintain an implementation focus. The management action plan identifies a delivery and reporting governance framework together with key Council services that contribute to the Strategy's administration of transformational actions across four strategic themes.

We are defined by how we behave and what we do, so this must be driven by clear values and behaviours that communicate our commitment to environmental sustainability as articulated in our Sustainability Policy. This Strategy

further establishes Council's vital role as key stakeholder to create a city committed to the localisation of the global United Nations Sustainable Development Goals (SDGs).

The *2030 Agenda for Sustainable Development* (UN 2015) adopted in September 2015 by 193 United Nations member states and ratified by the Australian Government describes 17 SDGs of which 13 goals, consistent with the City's Vision and Community Values, have been utilised in the development of this Strategy.

'The coming years will be a vital period to save the planet and to achieve sustainable, inclusive human development.'

(UN 2019)

— Antonio Guterres
Secretary-General of the United Nations

Sustainable Development Goals and associated targets offer a complex, aspiring and holistic global

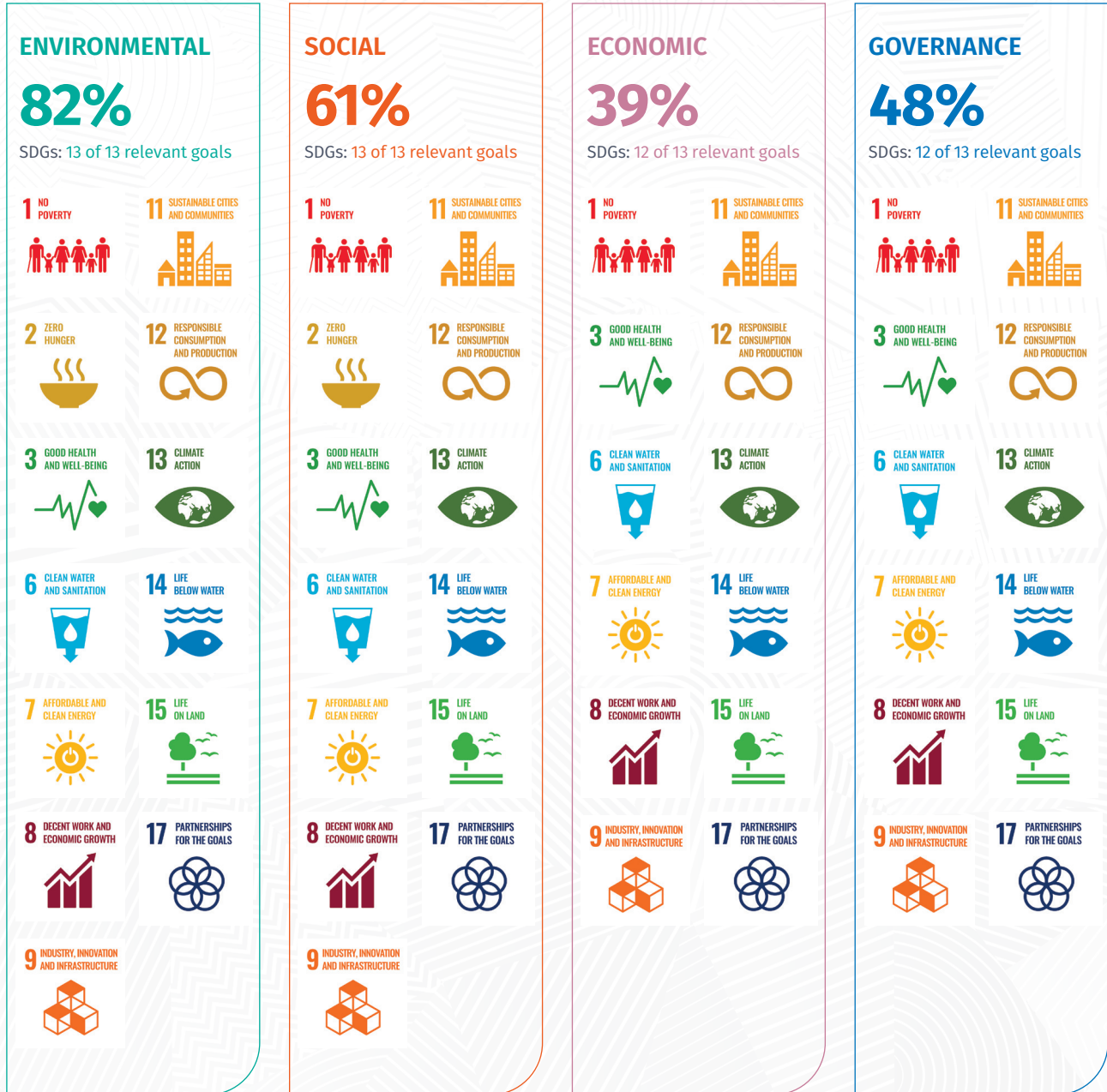
framework applied by governments, organisations and businesses worldwide.

The SDGs provide a framework for the integration of environmental, social, economic and governance aspects of sustainability into local government responsibilities. This Strategy's management actions are mapped across these pillars and the relevant SDGs in recognition of their importance in driving local sustainable and inclusive development.

Ultimately, the SDGs are a fundamental element as to who we are globally and what we plan to do locally and Lake Macquarie City Council is committed to playing a central role to realise them.

All of us have a role to play to tackle the environmental problems of the modern world. Not only do we owe it to today's residents but we also owe it to the next generations.

Localising priorities – percentage of our actions mapped to the four pillars of sustainability and associated SDGs



Note: - management actions can contribute to one or more of the Sustainability Pillars

OVERVIEW





Purpose

Lake Macquarie City Council is committed to building a better City and has long supported the principles of sustainable development, particularly the protection of biodiversity, intergenerational equity in relation to service delivery and public assets, and the integration of environmental, social and economic considerations in decision-making. We engage in a diverse range of activities and our aim is to provide services and facilities to promote a sustainable lifestyle and, in keeping with the City Vision and set of Community Values, guide future planning.

The Lake Macquarie City Environmental Sustainability Strategy and Action Plan 2020-2027 (the Strategy) provides a framework for sustainability planning, decision-making and action to achieve improved environmental sustainability for Lake Macquarie City. The Strategy supports and builds upon the initial strategy, the 2011-2018 Environmental Sustainability Action Plan, and following review in 2014, the 2014-2023 Environmental Sustainability Action Plan (see Appendix 2 for a snapshot of achievements from 2014-2023 Environmental Sustainability Action Plan).

To continue to effect change and enable desired outcomes to be realised, the Strategy provides the framework for action, with a clear and concise implementation plan embedding strategic directions into Council operations.

Council strives to become a leading local government globally by incorporating all four pillars of sustainability (environmental, social, economic and governance) into core business activities. Its aims and priorities are implemented strategically through Council's: Imagine Lake Mac, Our Plan to 2050 and beyond; and Local Strategic Planning Statement to provide land use planning direction for the City. Delivering an adaptable approach to sustainably manage growth and development for prosperity into the future.

The Lake Macquarie City Community Strategic Plan 2017-2027 outlines how Council will work with the community to address challenges and identify major priorities to 2027. Further detail on Council's programs are contained in Council's four-year Delivery Program and Annual Operational Plan.

Our vision, our values

Lake Mac's City Vision and Community Values, developed by the community in 2016, guide our planning and provide direction for how the City responds to change and growth. The Vision and Values reflect the priorities of our residents and shape policies and plans prepared by Council, including this Strategy.

Our Vision

Lake Macquarie is a City with a lake at its heart encircled by distinctive towns and villages.

We balance our cherished environments with our need for great spaces to live and visit, smart transport options and a thriving economy; which adapt and strive to be fair for all.

(LMCC 2017:7)

Our Values

Unique landscape

A place where the natural environment (bushland, coast, lake and mountains) is protected and enhanced; where our existing urban centres are the focus of our growth, maintaining their unique characteristics.

Lifestyle and wellbeing

A place that encourages safe, active and social opportunities.

Mobility and accessibility

Effective transport systems that provide choices to conveniently move people, goods and services.

Diverse economy

Which is resilient and adaptable to change, making the best use of the unique advantages of our location and lifestyle.

Connected communities

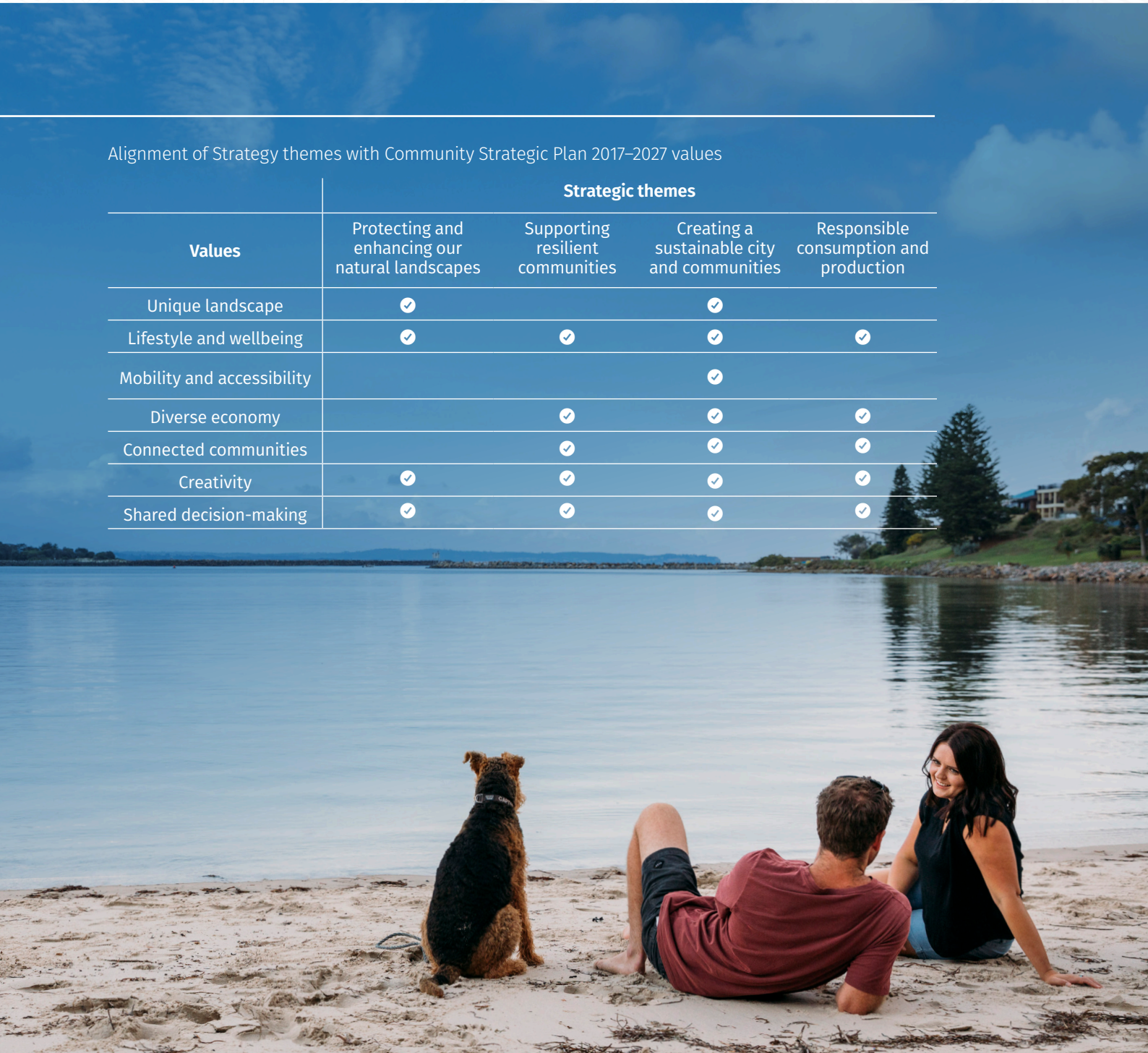
That support and care for all and provide a sense of belonging.

Creativity

Working together with creative process and outcomes that bring together history, culture, knowledge and expertise that support new technologies and ways of thinking.

Shared decision-making

Lake Macquarie communities continue shared responsibility for governance.



Alignment of Strategy themes with Community Strategic Plan 2017–2027 values

Values	Strategic themes			
	Protecting and enhancing our natural landscapes	Supporting resilient communities	Creating a sustainable city and communities	Responsible consumption and production
Unique landscape	✓		✓	
Lifestyle and wellbeing	✓	✓	✓	✓
Mobility and accessibility			✓	
Diverse economy		✓	✓	✓
Connected communities		✓	✓	✓
Creativity	✓	✓	✓	✓
Shared decision-making	✓	✓	✓	✓



OUR ROLE

IN DRIVING ENVIRONMENTAL SUSTAINABILITY



Our challenge

Local government, as the level of government closest to the community, acknowledges environmental management as a core function. A fundamental aspect of an environmental sustainability strategy is to identify opportunities to achieve positive outcomes through action, partnerships and advocacy and to develop a holistic approach to strive for and achieve all future goals.

The Environmental Sustainability Strategy is Council’s strategic response to address community expectation and face important challenges of the future, including:

- Biodiversity conservation
- Efficient use of energy and water
- Climate change (mitigation and adaptation)
- Waste management
- Sustainable growth

The benefits to developing this Strategy include:

- Aligning with Council’s Sustainability Policy
- Consolidating actions to achieve Council’s environmental resilience and sustainability priorities
- Providing a medium-term action plan aligned with the City’s Community Strategic Plan
- Mainstreaming environmental sustainability across Council
- Implementing aspects of Council’s Local Strategic Planning Statement
- Providing a location where Council’s environmental actions are documented and tracked to inform annual reporting, including the State of the Environment report.
- Incorporating global United Nations Sustainable Development Goals into planning processes



Our values and behaviours

How we achieve our City Vision and Community Values is as important as the vision and values themselves. We are defined by how we behave and what we do, so this must be driven by clear values and behaviours that communicate our commitment to environmental sustainability as articulated in our overarching Sustainability Policy. Under this policy Council commits to making an equitable contribution to all aspects of sustainability (environmental, social, economic and sustainable governance) for Council and the City.

SUSTAINABILITY POLICY

Scope

The Local Government Act 1993 mandates a requirement for council decision making to consider sound financial management, investment in responsible and sustainable infrastructure, principles of ecologically sustainable development and social justice principles. Accordingly, the scope of this policy pertains to all persons conducting or undertaking business on behalf of Council.

Objectives

The objectives of this policy are to establish a common commitment to the four pillars of sustainability and to ensure that decision-making considers the needs of current and future generations of Lake Macquarie City.

Policy Statement

Lake Macquarie City Council is committed to making an equitable contribution to all aspects of sustainability for the organisation and the City. For us, being sustainable means:

Economic sustainability: we will help to build prosperity for the people of Lake Macquarie City by encouraging economic growth and sustainable development. We will ensure cost-effective delivery of works and services, as well as appropriate maintenance and renewal of our asset base within the framework of present and future financial sustainability.

Environmental sustainability: we will use resources wisely and help to enhance the quality of our natural landscapes. When making decisions we will seek to achieve positive outcomes for our local environment and make an equitable contribution to improving regional, national and global environments.

Social sustainability: we will help to build an inclusive, resilient and connected community that embraces innovation and creativity, and values our heritage. When making decisions and actions that affect the broad community we will undertake inclusive community engagement.

Sustainable governance: we will demonstrate transparency, fairness, ethical practices and accountability. We will encourage and promote effective public, public-private and civil society partnerships.

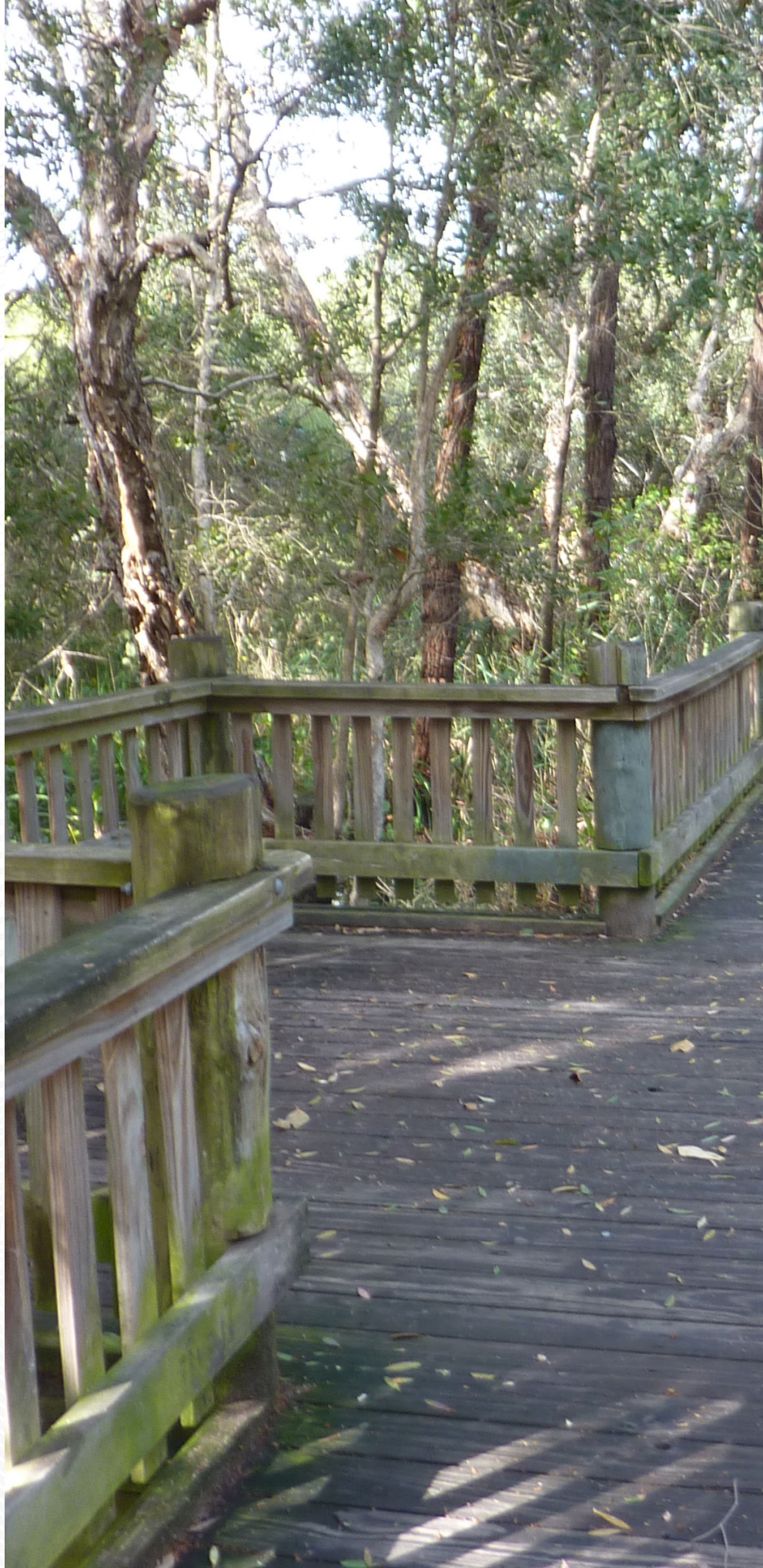
Applicability

We will demonstrate leadership by undertaking decision-making through the integrated framework of the Sustainable Development Goals that delivers a whole of Council approach to sustainable policy, infrastructure and services. We will share responsibility for our performance with all who work for and with us, and regularly report on our progress.

This Strategy establishes our role for environmental sustainability for the City and the incorporation of the global United Nations Sustainable Development Goals (SDGs) into planning processes.

The *2030 Agenda for Sustainable Development* adopted in September 2015 by 193 United Nations member states and ratified by the Federal Government of Australia describes 17 SDGs of which 13 goals, consistent with Council's Vision and Community Values, have been utilised in the development of this Strategy.

The SDGs and associated targets (which offer a complex, aspiring and holistic global framework) build on the four pillars of sustainability (environmental, social, economic, and governance) and our Strategy's management actions link to the pillars and relevant SDGs to recognise their importance in driving local, sustainable and inclusive development.





Our targets

The targets have been developed, following a review of best practice approaches, to drive and measure our progress toward the goals stated in each theme. The targets considered factors such as available research, existing evidence-based approaches, data availability and the extent that Council can influence the actions required to move toward the realisation of these goals.

Community and stakeholder consultation was undertaken on both the strategic themes and the targets. Further consultation provided specific actions to guide our effort and describe detailed measurable indicators that make a meaningful contribution toward the theme goals.

The targets presented focus on factors for:

 **Enhancing our natural landscapes**

 **Supporting resilient communities**

 **Creating a sustainable city and communities**

 **Responsible consumption and production**

Unless otherwise stated, targets are for the period 2008-2027 (a baseline of 2007-2008, being four years prior to the initial 2011-2018 Environmental Sustainability Action Plan)

Targets for 2027

STRATEGIC THEME 1

Protecting and enhancing our natural landscapes

The targets presented focus on factors that have been shown to be key for maintaining ecosystem function, such as connectivity, protection of habitat of high conservation value and ecosystem health and land use practices that support high water quality in the aquatic environment

- 1.1 Maintain at least 57.5% native vegetation cover in the City
- 1.2 Improve the condition of 30% of public land with high conservation value compared to 2007 baseline
- 1.3 No net loss in connectivity of ecological communities from 2007 baseline
- 1.4 5% increase in area of the City (land and water) with conservation status compared to 2007 baseline
- 1.5 20% increase in lake and waterway health compared to 2007 baseline
- 1.6 Achieve a '100% Water Cycle City' state (using the Water Sensitive Cities Benchmarking Assessment)
- 1.7 90% of residents place a high value on the health of the natural environment (beaches, lake and bushland) of Lake Macquarie

STRATEGIC THEME 2

Supporting resilient communities

The targets presented focus on factors that help the community and Council, in relation to its own assets, understand the risks from natural hazards and the influence climate change is expected to have on the frequency and severity of these events and its specific contribution to sea level rise and how we prepare for these risks so adverse outcomes can be minimised.

- 2.1 Natural disaster risk reduction strategies in place for 100% of the City's extreme and high risks
- 2.2 Climate change risk reduction strategies in place for 100% of the City's extreme and high risks
- 2.3 100% of known contaminated public land assessed for risk to human health and prioritised for risk mitigation measures
- 2.4 Air quality emissions in the City meet the National Environment Protection (Ambient Air Quality) Measure
- 2.5 70% of residents believe they have the information and resources needed to prepare, respond and recover from adverse events

STRATEGIC THEME 3

Creating a sustainable city and communities

The targets presented focus on factors: that maximise the efficient use of energy and reduce reliance on non-renewable energy sources (with reducing greenhouse gas emission as a well-recognised indicator); that drive efficient use of water and encourage diversification of suitable supply options; and that guide land use and transport planning to support development of a high-quality built environment.

- 3.1 57% reduction in City-wide per capita and total Council greenhouse gas emissions from 2007 baseline
- 3.2 12% reduction in City-wide per capita and total Council drinking water consumption from 2007 baseline
- 3.3 Increase active transport (walking and other) to 15% of total trips (Transport for NSW Household Travel Survey - Data by LGA)
- 3.4 80% of residents report taking positive actions to source renewable energy and/or conserve water and/or undertake active transport trips

STRATEGIC THEME 4

Responsible consumption and production

The targets presented focus on factors: that maximise the value placed on finite resources by encouraging separation of once unrecovered resources, into useful components, and development of markets for their beneficial reuse; and recognise that resources include the land, water and energy needed to create our goods and services, as captured in the concept of the ecological footprint.

- 4.1 30% reduction in the per capita ecological footprint of the City from 2007 baseline
- 4.2 To divert 75% of waste from properties serviced by Council (residential and commercial) away from landfill
- 4.3 To divert 90% of construction and demolition waste generated and managed by Council operations away from landfill
- 4.4 100% of Council tender specifications include recycled, reused and sustainably sourced products, where a functionally and economically viable alternative to new materials is available
- 4.5 Increase the number of businesses in the region involved in Circular Economy manufacturing, design, reuse, repair and recycling of materials by 20% from 2019 baseline
- 4.6 90% of residents believe it is important for residents of Lake Macquarie to reduce their resource consumption





STRATEGIC THEMES AND KEY COMMITMENTS

STRATEGIC THEME 1

Protecting and enhancing our natural landscapes

OBJECTIVE

We aim to sustain and enhance our City's natural ecosystems, which include our lake, waterways, bushland, wetlands and open coast. These places provide essential services and contribute to our amenity, health, identity and lifestyle.

Working to achieve the environmental sustainability targets will help us protect and enhance the City's natural landscapes by:

- Ensuring ecosystems are connected
- Protecting habitat of high conservation value
- Encouraging land use practices that support high water quality in the aquatic environment.

KEY SDGS:



STRATEGIC THEME 2

Supporting resilient communities

OBJECTIVE

We aim to prepare, respond and recover from adverse events. These events may be natural disasters, economic shocks or social disconnection. We work together to build our social cohesion, resourcefulness and self-sufficiency, so that when confronted with adversity we are able to adapt, recover and be better prepared.

Working to achieve the environmental sustainability targets will help us support resilient communities by:

- Addressing the risks to health, safety and infrastructure from natural hazards and pollution events
- Addressing the influence climate change is expected to have on the frequency and severity of natural hazards.

KEY SDGS:



STRATEGIC THEME 3

Creating a sustainable city and communities

OBJECTIVE

We aim to improve our living conditions, by creating a city that is safe, attractive and inclusive. Our City is a model of environmental sustainable development. It has diverse housing, employment and services, connects people to open spaces and is easy to get around. Working to achieve the environmental sustainability targets will help us in creating a sustainable city and communities by:

- Maximising the efficient use of energy and reducing greenhouse gas emissions
- Maximising the efficient use of water and diversifying suitable supply options such as harvested stormwater
- Implementing sustainable transport options including low emission vehicles, walking and cycling
- Guiding land use planning to support development of a high-quality built environment.

KEY SDGS:



STRATEGIC THEME 4

Responsible consumption and production

OBJECTIVE

We aim to establish a local economy where natural resources are valued and consumed within the limits in which they are created. We make and buy products that are durable and reusable, with minimal waste. Where waste is generated, it is used as a resource in the creation of new products.

Working to achieve the environmental sustainability targets will help us create an even more liveable city by:

- Encouraging separation of once unrecovered resources into useful components and development of markets for their beneficial reuse; and
- Recognising that resources include the land, water and energy needed to create our goods and services, as captured in the concept of the ecological footprint.

KEY SDGS:



Glossary

Acronyms and abbreviations

MWh	megawatt hour
MWp	megawatt peak
SDG	Sustainable Development Goal
UN	United Nations

Other terms

conservation status	formally, 'conservation status' refers to a worldwide listing and ranking by the International Union for Conservation of Nature (IUCN). Broadly for the context of this Strategy, 'conservation status' deals with species and/or population at a local scale to maintain conservation of biological diversity and ecological integrity and to strategically prioritise conservation planning.
ecological footprint	the ecological footprint is a resource accounting tool, as calculated by the Global Footprint Network, that measures the impact of human activities and their demand on nature. It provides an understanding of the amount of biologically productive land and water area required to sustain humanity (consumption patterns, the economy and absorption of generated waste) and provides a quantitative account to assist decision-making for a sustainable future.
greenfield development	an urban development slated for previously undeveloped (greenfield) land in a city or rural area.
infill development	the process of developing vacant or under-used parcels of land within existing urban areas, that are already largely developed.
megawatt peak (MWp)	in the energy industry, the output of a solar electricity module is measured in megawatts peak (MWp) or kilowatts peak (kWp). In the case of photovoltaic modules and systems, the value refers to the rated standardised output (measured under test conditions - 25° Celsius module temperature and irradiance of 1000 watts per square metre). 1MWp = 1000kWp
National Environment Protection (Ambient Air Quality) Measure	the National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM) was established in 1998 under the National Environment Protection Act 1994 (Commonwealth) (NEPC Act) – designed to provide a nationally consistent framework for monitoring and reporting on six common ambient air pollutants. The pollutants include carbon monoxide, lead, nitrogen dioxide, ozone, sulphur dioxide and particulate matter (PM ¹⁰ and PM ^{2.5}).
Urban Forest	An urban forest is broadly defined as the collection of green spaces, trees and other vegetation that grows within an urban area, on both public and private land.

References

LMCC (2017) *Our Future in Focus, Lake Macquarie City Community Strategic Plan 2017-2027*, Lake Macquarie City Council, 2017.

United Nations (2015) *Transforming our world: The 2030 Agenda for Sustainable Development*, United Nations, adopted in New York, September 2015, accessed 31 July 2019, <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>.

United Nations (2019) *The Sustainable Development Goals Report 2019*, United Nations, New York.





Appendices

Appendix 1

Strategy Action Plan

established actions 2020-2027

The following Action Plan sets out a vision across four strategic themes:

 **Protecting and enhancing
our natural landscapes**

 **Supporting resilient
communities**

 **Creating a sustainable
city and communities**

 **Responsible consumption
and production**

Protecting and enhancing our natural landscapes - City

We aim to sustain and enhance our City’s natural ecosystems, which include our lake, waterways, bushland, wetlands and open coast. These places provide essential services and contribute to our amenity, health, identity and lifestyle.

RELATED SDGS





























Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Biodiversity conservation	Community engagement	NL1 (City)	⊕	Develop and implement programs to enhance indigenous involvement in lake health initiatives.	CZMP
Biodiversity conservation	Community engagement	NL2 (City)	⊕	Develop and implement programs to enhance indigenous involvement in terrestrial landscape health initiatives.	CZMP Central Coast Bush Fire Risk Management Plan 2019-2024
Biodiversity conservation	Community engagement	NL3 (City)	⊕	Continue to develop, support and resource volunteer landcare groups.	not applicable
Biodiversity conservation	Community engagement	NL4 (City)	⊕	Develop and deliver City-wide campaign to improve urban habitat (incorporates managing Backyard and Beyond City-wide campaign).	CZMP
Biodiversity conservation	Industry engagement	NL5 (City)	⊕	Encourage, support and partner with industry and private organisations to reduce the intensity of threats facing biodiversity (including the destruction, degradation and fragmentation of habitats) and the impacts on terrestrial ecosystem health.	CZMP
Biodiversity conservation	On-ground works	NL6 (City)	⊕	Review and implement strategic works program for the enhancement of natural areas in the City.	Central Coast Bush Fire Risk Management Plan 2019-2024 Natural Areas Asset Management Plan 2015 (version 3 - 2015) Improvements and Maintenance of Watercourses and Drainage Channels Policy 2004 (version 5 - 2017) Protection of Watercourses and Drainage Channels 2010 - Council Policy (version 6 - 2018) Protection of Watercourses and Drainage Channels 2018 – Procedure (version 5 – 2018)
Biodiversity conservation	Planning	NL7 (City)	⊕	Implement policy and practices that minimise the rezoning of land identified to contain ‘high ecological value’.	Background Technical Report for Lake Mac 2050 Biodiversity Planning Policy and Guidelines 2009 (version 3) (Draft) Biodiversity Offsets Policy 2011

Key

- Short term
 - Medium term
 - Long term
- ENVIRONMENTAL (Planet)**
 - environmental sustainability • sustainable ecosystems • includes energy, air pollution, GHG emissions, waste management, potable (drinking) water and sanitation
 - SOCIAL (People)**
 - social equity • quality of life (health; vigour; well-being; and ability to flourish)
 - ECONOMIC (Prosperity)**
 - financial prosperity • competitive productivity
 - GOVERNANCE (Progress)**
 - adaptive innovation • cultural sustainability

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Systems	Environmental Strategy	30/06/2023	1.2 1.5	• Number of lake health projects that incorporate involvement of indigenous group and communities.		
Environmental Systems	Environmental Strategy	30/06/2023	1.2 1.5	• Number of terrestrial landscape health projects that incorporate involvement of indigenous group and communities. • Use of traditional Aboriginal fire management.		
Community Partnerships	Landcare	30/06/2023	1.2	• Number of new groups developed. • Number of hectares managed for environmental weeds. • State of the Environment reporting.		
Community Partnerships	Sustainability Engagement	30/06/2023	1.1	• Activity and number of participants reported annually via State of the Environment report.		
Environmental Systems	Environmental Strategy	30/06/2023	1.1	• Number of terrestrial ecosystem partnership projects. • Number of vegetation management plans enforced. • Audit of vegetation management plans undertaken.		
Environmental Systems	Natural Assets	30/06/2023	1.1 1.2 1.3 1.5	• Dune, riparian and wetland ecosystem enhancement (weed management, planting, supporting infrastructure). • Foreshore enhancement/ protection (weed management, planting, supporting infrastructure, protective works). • Bushfire management (asset protection zones, fire trails, prescribed burns, ignition management, supporting infrastructure). • Urban tree replacement (urban tree replacement program designed and implemented). • Illegal dumping deterrence (develop strategies, undertake works). • State of the environment reporting.		
Environmental Systems	Environmental Strategy	30/06/2023	1.1	• Maximise rezoning on land not identified as high conservation.		

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Biodiversity conservation	Planning and development controls	NL8 (City)	⊕	Develop and implement a local biodiversity offset policy and strategy that facilitates the provision of local offsets (within the local government area).	Background Technical Report for Lake Mac 2050 Biodiversity Planning Policy and Guidelines 2009 (version 3) (Draft) Biodiversity Offsets Policy 2011
Biodiversity conservation	Research	NL9 (City)	⊕	Support research into terrestrial biodiversity topics (including the use of remote sensing and innovation in monitoring).	not applicable
Erosion and sediment control	Audit/ inspections	NL10 (City)	⊕	Audit the erosion and sediment on-site controls during development against those required in the Development Control Plan - Erosion Prevention and Sediment Control.	CZMP
Erosion and sediment control	Community engagement	NL11 (City)	⊕	Provide education to the community and construction industry consistent with implementation and regulation of Council's erosion and sediment control provisions of the Lake Macquarie development control plan.	not applicable
Feral animals	Control programs	NL12 (City)	⊕	Contribute to regional feral animal control programs.	Vertebrate Pest - Council Policy 2012 (version 6 - 2019) Vertebrate Pest Management Strategy 2012-2018 Hunter Regional Strategic Pest Animal Management Plan 2018-2023 NSW Invasive Species Plan 2018-2021
Freshwater and estuarine health	Monitoring	NL13 (City)	⊕	Monitor key aquatic health indicators, and maintain up-to-date water cycle models.	CZMP
Freshwater and estuarine health	Research	NL14 (City)	⊕	Support research into aquatic ecosystem health topics (including the use of remote sensing and innovation in monitoring).	CZMP
Habitat conservation	Compliance programs	NL15 (City)	⊕	Develop and implement a compliance program which ensures that responses to illegal/ unapproved activities which result in a loss of habitat and/or connectivity (eg. clearing of remnant native vegetation) are effectively prioritised and resourced.	not applicable
Habitat conservation	Planning	NL16 (City)	⊕	Progress Awaba Conservation Area, and Coastal Wetlands Park proposals.	Background Technical Report for Lake Mac 2050 Lake Macquarie Flora and Fauna Database Guideline 2019
Habitat conservation	Planning	NL17 (City)	⊕	Implement priority actions in the Lake Macquarie Coastal Zone Management Plan.	CZMP
Natural heritage protection	Advocacy	NL18 (City)	⊕	Advocate for establishment of Intertidal Protected Area, and/or Marine Reserve status in high priority locations (potential sites include Swansea Heads, Fennell Bay).	NSW Marine Estate Management Strategy 2018-2028

	Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
	Environmental Systems	Environmental Strategy	30/06/2023	1.1 1.3	<ul style="list-style-type: none"> Strategy developed and adopted. Area of land provided as an offset and/or area of clearing for which an offset is provided. Level of biodiversity impacts that are offset. Proportion of approved offsets provided in the local government area. 	 	<ul style="list-style-type: none"> Green leaf icon Red heart icon Red plus icon Blue circle icon
	Environmental Systems	Environmental Strategy	30/06/2023	1.1 1.3	<ul style="list-style-type: none"> Number of terrestrial biodiversity research projects supported. 	  	<ul style="list-style-type: none"> Green leaf icon Red plus icon
	Development Assessment and Certification (DAC)	DAC - Building	30/06/2023	1.5	<ul style="list-style-type: none"> Number of audits conducted. At least 70 per cent of inspections compliant. Pathways reports of compliance. 	 	<ul style="list-style-type: none"> Green leaf icon
	Development Assessment and Certification (DAC)	DAC - Building	30/06/2023	1.5	<ul style="list-style-type: none"> Erosion and sediment control information reviewed. Educational and procedural materials developed. Training needs identified and delivered. 	 	<ul style="list-style-type: none"> Green leaf icon
	City Works	City Presentation - Vegetation and Pest Management	30/06/2023	1.2	<ul style="list-style-type: none"> Focus on control of and reduction in damage caused. 		<ul style="list-style-type: none"> Green leaf icon
	Environmental Systems	Environmental Strategy	30/06/2023	1.5 1.6	<ul style="list-style-type: none"> Annual freshwater and estuarine health monitoring programs (and associated scorecards) completed. Number of water cycle models maintained. Investigate the integration of environmental data, collected in stakeholder monitoring programs, into the broader data set for Lake Macquarie (water quality and lake hydrology). 	  	<ul style="list-style-type: none"> Green leaf icon
	Environmental Systems	Environmental Strategy	30/06/2023	1.5 1.6	<ul style="list-style-type: none"> Number of aquatic ecosystem research projects supported. 	  	<ul style="list-style-type: none"> Green leaf icon Red heart icon
	Environmental Regulation and Compliance	ER&C - Development Compliance	30/06/2023	1.1 1.3	<ul style="list-style-type: none"> Environmental compliance program developed. Number of compliance actions taken. 		<ul style="list-style-type: none"> Green leaf icon
	Environmental Systems	Environmental Strategy	30/06/2023	1.1 1.2 1.4	<ul style="list-style-type: none"> Area of proposed conservation land. Area actively managed for conservation purposes. 	  	<ul style="list-style-type: none"> Green leaf icon
	Environmental Systems	Environmental Strategy	30/06/2023	1.5	<ul style="list-style-type: none"> Number of priority actions complete. 	  	<ul style="list-style-type: none"> Green leaf icon Red heart icon Red plus icon Blue circle icon
	Environmental Systems	Environmental Strategy	30/06/2023	1.2 1.4	<ul style="list-style-type: none"> Amount of land/water with Intertidal Protected Area, and/or Marine Reserve status. 	  	<ul style="list-style-type: none"> Green leaf icon Red heart icon

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Regulation and compliance	Community engagement	NL19 (City)	⊕	Foster responsible pet ownership.	not applicable
Sewage	On-site sewage management	NL20 (City)	⊕	Implement priority recommendations from on-site sewage strategy.	(Draft) Regulatory Activities - Council Policy (version 1 - 2019)
Water pollution	Compliance programs	NL21 (City)	⊕	Develop and implement a compliance program which ensures that responses to illegal/unapproved activities, resulting in a loss of water quality of aquatic ecosystem health, are effectively prioritised and resourced.	CZMP
Water pollution	Industry engagement	NL22 (City)	⊕	Partner with industry (eg. power stations, Hunter Water Corporation) and the community to reduce impacts on water quality and aquatic ecosystem health.	CZMP
Water pollution	Water cycle management	NL23 (City)	⊕	Review and implement Lake Macquarie Water Cycle Management Guidelines (and associated planning controls) to provide best practice water cycle management for new developments.	Water Cycle Management Guidelines (Revision 1 - 2006)
Water quality	Lake and catchment improvement projects	NL24 (City)	⊕	Design and construct water quality and flow control devices (such as constructed wetlands) at priority locations identified within existing stormwater and catchment management plans and at newly identified priority sites.	Stormwater Management Plan 1999 Flaggy Creek Stormwater Management Plan 2004 LT Creek Water Quality Management Plan 2009 Lake Macquarie Estuary Management Plan 1997 Jewells Wetland Catchment Management Strategy 1999
Water quality	Lake and catchment improvement projects	NL25 (City)	⊕	Seek external funds to maximise state and federal government investment in lake and catchment improvement projects.	CZMP Improvements and Maintenance of Watercourses and Drainage Channels Policy 2004 (version 5 - 2017) Protection of Watercourses and Drainage Channels 2010 - Council Policy (version 6 - 2018) Protection of Watercourses and Drainage Channels 2018 – Procedure (version 5 – 2018)
Weeds	Control programs	NL26 (City)	⊕	Implement programs for the control and eradication of noxious and invasive plants.	Hunter Regional Strategic Weed Management Plan 2017-2022 NSW Invasive Species Plan 2018-2021
Biodiversity conservation	Community engagement	NL27 (City)	⊕	Strengthen existing citizen science programs and explore collaborative citizen science partnerships.	not applicable

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Regulation and Compliance	ER&C - Rangers	30/06/2023	1.2 1.7	• Activity and number of participants reported annually via State of the Environment report.	15	
Environmental Regulation and Compliance	ER&C - Environmental Management	30/06/2023	1.5	• Priority recommendations from on-site sewage strategy implemented. • Number of identified systems found annually operating without approval.	6 11 12 17	
Environmental Regulation and Compliance	ER&C - Development Compliance	30/06/2023	1.5	• Environmental compliance program developed. • Number of compliance actions taken. • Determine and define water/sediment quality guideline values and quality objectives.	6 15	
Environmental Systems	Environmental Strategy	30/06/2023	1.5	• Number of aquatic ecosystem partnership projects with industry. • Community engagement to decrease levels of litter/waste and marine debris in the environment. • Determine and define water/sediment quality guideline values and quality objectives.	14 17	
Environmental Systems	Environmental Strategy	30/06/2023	1.6	• Guidelines reviewed and adopted by Council.	14 15 17	
Asset Management	AM - Infrastructure Assets	30/06/2023	1.5	• Number of facilities incorporating sustainable urban water measures; improved water quality.	6 14	
Environmental Systems	Natural Assets	30/06/2023	1.5	• External funding sought and secured.	14 15 17	
City Works	City Presentation - Vegetation and Pest Management	30/06/2023	1.2	• 75 per cent or more, reduction in noxious or invasive plants from before to the end of each treatment. • Education and community awareness programs undertaken relating to the control and eradication of noxious and invasive plants.	12 15	
Community Partnerships	Sustainability Engagement	30/06/2025	1.1 1.2 1.5 1.7	• Activity and number of participants reported annually via State of the Environment report.	6 11 12 15	

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Environmental health	Planning	NL28 (City)	⊕	Review fertiliser, herbicide and pesticide use on public land by Council and community groups and make recommendations aimed at reducing the potential for public and ecosystem health impacts.	not applicable
Habitat conservation	Community engagement	NL29 (City)	⊕	Encourage sensitive environmental management on private land to complement existing habitats/corridors, and care and protect ecologically significant areas and landscapes.	not applicable
Habitat conservation	Planning	NL30 (City)	⊕	Develop and implement an urban forest strategy.	not applicable
Habitat conservation	Planning	NL31 (City)	⊕	Support measures to improve fish passage by removing or modifying artificial barriers.	Lake Macquarie Estuary Management Plan 1997
Natural heritage protection	Planning	NL32 (City)	⊕	Protect and conserve natural heritage places which define our City's distinctive identity, now and into the future, through the protection of biodiversity, geodiversity and ecosystem processes.	CZMP
Water quality	Community engagement	NL33 (City)	⊕	Develop and deliver a City-wide campaign to reduce the impacts from stormwater on water quality and aquatic ecosystem health.	CZMP
Biodiversity conservation	Community engagement	NL34 (City)	⊕	Connect people to nature through programs and activities designed to foster enhanced social resilience, health and wellbeing and environmental stewardship.	not applicable
Biodiversity conservation (Draft)	Community engagement	NL35 (City)	⊕	Explore the ways in which cultural and practical 'Caring for Country' principles can assist in integrating people with nature.	Aboriginal Community Plan 2019-2023 Lake Macquarie Aboriginal Cultural Heritage Management Strategy 2011
Biodiversity conservation	Planning	NL36 (City)	⊕	As required, investigate and support measures to: minimise adverse impacts from all forms of mining (including coal seam gas exploration on surface and groundwater and on ecosystem health); and minimising environmental impacts and negative effects from offshore oil and gas exploration (including the impacts on marine and other wildlife, the sea floor and the devastating cumulative effects of pollution).	not applicable

	Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
	Environmental Systems	Environmental Strategy	30/06/2025	1.5	• Documented guidance for objective, consistent decision making; Council land management contributes proportionally to targets.	6, 11, 12, 14, 15	Green leaf, Red heart, Red plus, Blue circle
	Environmental Systems	Environmental Strategy	30/06/2025	1.1	• Documented guidance for objective, consistent decision making. • Revised policies, strategies and instruments. • Assessment of rezoning and development applications Flora and Fauna referrals. • Activity and number of participants reported annually via State of the Environment report.	15, 17	Green leaf, Red heart
	Environmental Systems	Environmental Strategy	30/06/2025	1.1 1.2 1.3	• Strategy developed, adopted and implemented.	15, 17	Green leaf, Red heart
	Environmental Systems	Environmental Strategy	30/06/2025	1.5	• Reduced frequency or impact of degrading processes; proportional contribution to targets.	15, 17	Green leaf
	Environmental Systems	Environmental Strategy	30/06/2025	1.2 1.4	• Governance system in place to provide: appropriate stakeholder engagement; adaptive management for longer term initiatives; and transparency and accountability. • Decision-makers and environmental managers have a good understanding of: ecosystem function and cultural importance; and current and emerging threats to values. • Management actions being met for improvements to resilience of natural heritage and environmental values. • Reduction of current pressures and emerging risks to natural heritage and environmental values.	11, 12, 15, 17	Green leaf, Red heart, Blue circle
	Community Partnerships	Sustainability Engagement	30/06/2025	1.5	• Activity and number of participants reported annually via State of the Environment report.	6, 14, 15	Green leaf, Red heart
	Community Partnerships	Sustainability Engagement	30/06/2027	1.7	• Environmental Attitudes Survey.	6, 11, 12, 17	Green leaf, Red heart
	Community Partnerships	Sustainability Engagement	30/06/2027	1.7	• Number of activities, number of participants.	6, 11, 12, 17	Green leaf, Red heart
	Environmental Systems	Environmental Strategy	30/06/2027	1.1 1.5	• Reduced frequency or impact of degrading processes.	9, 11, 14, 15, 17	Green leaf

Protecting and enhancing our natural landscapes - Council

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Biodiversity conservation	Monitoring	NL37 (Council)	⊕	Monitor key biodiversity indicators, maintain up-to-date biodiversity information, and report on the health of the City's ecosystems.	not applicable
Biodiversity conservation	Planning and development controls	NL38 (Council)	⊕	Prepare, review and implement guidelines (and associated planning controls) to ensure that biodiversity, and ecological connectivity is adequately assessed and impacts avoided and/or mitigated within the context of new legislation.	Background Technical Report for Lake Mac 2050 Lake Macquarie Flora and Fauna Database Guideline 2019
Coastal estuary and waterway management	Planning	NL39 (Council)	⊕	Prepare Coastal Management Program for the Lake Macquarie coastal zone to provide strategic program for coastal, estuary and waterway management.	not applicable
Erosion and sediment control	Internal training	NL40 (Council)	⊕	Develop and deliver training to Council officers consistent with implementation and regulation of Council's erosion and sediment control provisions of the Lake Macquarie development control plan.	not applicable
Habitat conservation	Planning	NL41 (Council)	⊕	Develop policy and mechanisms to provide for the acquisition of strategically important conservation lands by Council.	not applicable
Habitat conservation	Planning	NL42 (Council)	⊕	Develop local pest and weed management plan.	Vertebrate Pest - Council Policy 2012 (version 6 - 2019) Vertebrate Pest Management Strategy 2012-2018 Hunter Regional Strategic Pest Animal Management Plan 2018-2023 NSW Invasive Species Plan 2018-2021

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Systems	Environmental Strategy	30/06/2023	1.1 1.2 1.3 1.5	<ul style="list-style-type: none"> Regularly update Council's vegetation communities and corridor map. Maintain a threatened species database. State of the Environment reporting (including Community Ecosystem Monitoring Program). 		<ul style="list-style-type: none"> Environment
Environmental Systems	Environmental Strategy	30/06/2023	1.1 1.3	<ul style="list-style-type: none"> Guidelines reviewed/prepared. Loss in connected vegetation (measured via vegetation that is part of a corridor in the mapping). Clearing rate reported annually via State of the Environment report. 		<ul style="list-style-type: none"> Environment
Environmental Systems	Environmental Strategy	30/06/2023	1.2 1.5	<ul style="list-style-type: none"> Scoping study complete. Coastal Management Program completed, certified and gazetted. 		<ul style="list-style-type: none"> Environment
Development Assessment and Certification (DAC)	DAC - Building	30/06/2023	1.5	<ul style="list-style-type: none"> Erosion and sediment control information reviewed. Educational and procedural materials developed. Training needs identified and delivered in consultation with Workforce Planning Unit. 		<ul style="list-style-type: none"> Environment
Environmental Systems	Environmental Strategy	30/06/2023	1.4	<ul style="list-style-type: none"> Strategy developed and adopted. Area of land acquired (funding dependant). 		<ul style="list-style-type: none"> Environment Community
Environmental Systems	Environmental Strategy	30/06/2023	1.2	<ul style="list-style-type: none"> Strategy developed and adopted. 		<ul style="list-style-type: none"> Environment

♥ Supporting resilient communities - City



We aim to prepare, respond and recover from adverse events. These events may be natural disasters, economic shock or social disconnection. We work together to build our social cohesion, resourcefulness and self-sufficiency, so that when confronted with adversity we are able to adapt, recover and be better prepared.




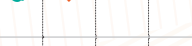












RELATED SDGS































































Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Air pollution	Environmental modelling	RC1 (City)	⊕	Update the air pollutant dispersion model for the City when new data becomes available.	not applicable
Air pollution	Monitoring	RC2 (City)	⊕	Develop and implement strategies to monitor and mitigate air pollution from new developments and existing pollution sources.	Control of Open Burning 2017 – Council Policy (version 1 - 2017)
City resilience	Advocacy	RC3 (City)	⊕	Implement programs and activities designed to increase householder preparedness for natural disasters and climate change.	Lake Macquarie Environmental Security Assessment 2010
City resilience	Community engagement	RC4 (City)	⊕	Plan and implement community engagement campaigns related to priority environmental health issue/s (including air pollution, heat stress and contaminated land).	Lake Macquarie Environmental Security Assessment 2010 Managing Contaminated or Potentially Contaminated Land 2012 – Council Policy (version 7 - 2018)
Climate change	Planning and development controls	RC5 (City)	⊕	Investigate and develop new building and landscape design guidelines, and encourage innovative building, infrastructure and landscape designs that are able to adapt more easily to climate change and sea level rise.	(Draft) Waterway Flooding and Tidal Inundation - Council Policy (version 4 - 2020) CZMP Landscape Design Guidelines 2017 (version 3 - 2019) Assessing Development Proposals on Land Affected by Sea Level Rise - Procedure (version 13 - 2019)
Contaminated land	Compliance programs	RC6 (City)	⊕	Develop and implement strategies to manage contaminated land.	Managing Contaminated or Potentially Contaminated Land 2012 – Council Policy (version 7 - 2018) Environmental Management Plan for Contaminated Land in Council's Care and Control - Procedure (version 3 - 2018)
Contaminated land	Compliance programs	RC7 (City)	⊕	Apply regulatory controls where contamination of land is considered to be of harm to public health and environment.	Managing Contaminated or Potentially Contaminated Land 2012 – Council Policy (version 7 - 2018) Environmental Management Plan for Contaminated Land in Council's Care and Control - Procedure (version 3 - 2018)
Contaminated land	Compliance programs	RC8 (City)	⊕	Implement management actions to address pollution issues associated with Underground Petrol Storage Systems (UPSS).	Managing Contaminated or Potentially Contaminated Land 2012 – Council Policy (version 7 - 2018)

Key

- Short term 
 - Medium term 
 - Long term 
-  **ENVIRONMENTAL (Planet)**
 • environmental sustainability • sustainable ecosystems • includes energy, air pollution, GHG emissions, waste management, potable (drinking) water and sanitation
 -  **SOCIAL (People)**
 • social equity • quality of life (health; vigour; well-being; and ability to flourish)
 -  **ECONOMIC (Prosperity)**
 • financial prosperity • competitive productivity
 -  **GOVERNANCE (Progress)**
 • adaptive innovation • cultural sustainability

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Systems	Environmental Strategy	30/06/2023	2.4	• Air quality model updated.		
Environmental Systems	Environmental Strategy	30/06/2023	2.4	• Number of development applications assessed for air quality. • Review of the control of open burning policy. • Strategies developed and implemented.		
Community Partnerships	Sustainability Engagement	30/06/2023	2.1 2.2 2.5	• Increased participation in early warning networks. • Environmental attitudes survey. • Support the community to develop and maintain community gardening and food production initiatives (increase local food security and community resilience).		
Community Partnerships	Sustainability Engagement	30/06/2023	2.5	• State of the Environment reporting.		
Asset Management	AM - Community Assets	30/06/2023	2.2	• Sea level rise policy, guidelines and new flood levels incorporated in planning for, and designing all new Council infrastructure. • Adjust infrastructure design to meet new standards that include consideration of climate change. • Urban design to mitigate the combined effects of climate change and urban heat islands.		
Environmental Regulation and Compliance	ER&C - Environmental Management	30/06/2023	2.3	• Strategies developed and implemented.		
Environmental Regulation and Compliance	ER&C - Environmental Management	30/06/2023	2.3	• Number of investigations and number of clean-up, and prevention notices issued annually (reported via State of the Environment report).		
Environmental Regulation and Compliance	ER&C - Environmental Management	30/06/2023	2.3	• Management actions implemented and report delivered.		

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Contaminated land	Compliance programs	RC9 (City)	⊕	Investigate feasibility of the establishment of an Environmental Audit program and develop an inspection process for the identification of high risk industry and activity.	(Draft) Regulatory Activities - Council Policy (version 1 - 2019)
Environmental health	Monitoring	RC10 (City)	⊕	Develop environmental health monitoring programs in conjunction with the gathering of specific environmental health risk data.	not applicable
Sewage	Planning	RC11 (City)	⊕	Develop and implement effluent management strategies and policies to reduce environmental health impacts.	not applicable
Waste management	Planning	RC12 (City)	⊕	Disaster waste prevention and management measures identified and ready to be implemented.	WARR 2014-2021
Air pollution	Community engagement	RC13 (City)	⊕	Work collaboratively with the community and internal/external stakeholders to promote air quality improvements from stationary and non-stationary sources.	not applicable
Contaminated land	Partnerships	RC14 (City)	⊕	Build capacity of internal and external stakeholders in relation to the contaminated land policy and procedures.	Managing Contaminated or Potentially Contaminated Land 2012 – Council Policy (version 7 - 2018)
Natural hazards resilience	Partnerships	RC15 (City)	⊕	Work collaboratively with the community and internal/external stakeholders to achieve natural hazard/disaster risk reduction targets.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) EMPLAN 2017
Natural hazards resilience	Planning	RC16 (City)	⊕	Develop and implement strategies to reduce the City's exposure to risks from natural hazards/disasters.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) EMPLAN 2017
Natural hazards resilience	Risk assessment	RC17 (City)	⊕	Undertake flood studies and floodplain risk management studies/plans, that include climate change predictions, for priority catchments in the local government area.	NSW Floodplain Development Manual 2005 AR&R 2019
Natural hazards resilience	Risk management	RC18 (City)	⊕	Implement priority recommendations from approved floodplain risk management studies and plans for all major/prioritised catchments in the City.	not applicable

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Regulation and Compliance	ER&C - Environmental Management	30/06/2023	2.3	<ul style="list-style-type: none"> Audit program objectives established. Inspection program implemented. Compliance with legislative requirements (Protection of the Environmental Operations Act 1997 and Environmental Planning and Assessment Act 1997) assessed. 	 	   
Environmental Regulation and Compliance	ER&C - Environmental Management	30/06/2023	2.5	<ul style="list-style-type: none"> Annual report of environmental health risk exposure. State of the Environment reporting. 	 	 
Environmental Regulation and Compliance	ER&C - Environmental Management	30/06/2023	1.5	<ul style="list-style-type: none"> Stakeholder consultation included in the development of all significant new policies and programs. Strategy developed, adopted, implemented. 	    	 
Waste Services	Strategic Waste	30/06/2023	2.1 2.5	<ul style="list-style-type: none"> Measures identified. Percentage disaster waste diverted away from landfill to resource recovery. 	   	 
Environmental Systems	Environmental Strategy	30/06/2025	2.4 2.5	<ul style="list-style-type: none"> Number of education and community awareness programs relating to air pollution. 	    	  
Environmental Systems	Environmental Strategy	30/06/2025	2.3	<ul style="list-style-type: none"> Number of training sessions undertaken. Fact sheets reviewed. Webpage reviewed. Number of Contaminated Land Certificates issued. 	   	
Environmental Systems	Environmental Strategy	30/06/2025	2.1 2.2	<ul style="list-style-type: none"> Natural hazard/disaster risk reduction targets reached. 	   	 
Environmental Systems	Environmental Strategy	30/06/2025	2.1 2.2 2.3	<ul style="list-style-type: none"> Risk reduction strategies in place for 100 per cent of the City's extreme and high natural hazard risks. 	  	   
Environmental Systems	Environmental Strategy	30/06/2025	2.1 2.2	<ul style="list-style-type: none"> Number of City sub-catchments with completed flood studies and/or risk management studies and plans. 	  	  
Environmental Systems	Environmental Strategy	30/06/2027	2.1	<ul style="list-style-type: none"> Number of priority recommendations from approved floodplain risk management studies and plans implemented. 	  	 

STRATEGIC THEME 2

♥ Supporting resilient communities - Council

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
City resilience	Risk assessment	RC19 (Council)	⊕	Regular review, audit and analysis of department risk registers.	Enterprise Risk Management Framework (version 2 - 2019)
Climate change	Risk assessment	RC20 (Council)	⊕	Through local adaptation planning process, identify vulnerability of existing recreational facilities to sea level rise and maintain access to recreation facilities.	(Draft) Waterway Flooding and Tidal Inundation - Council Policy (version 4 - 2020)
Contaminated land	Risk management	RC21 (Council)	⊕	Ensure that any contaminated excavated material from Council project or maintenance work sites is managed according to Environment Protection Authority requirements.	Managing Contaminated or Potentially Contaminated Land 2012 - Council Policy (version 7 - 2018)
Natural hazards resilience	Risk management	RC22 (Council)	⊕	Implement continuous improvements to the Property Flooding Information Summary web tool.	
Natural hazards resilience	Risk management	RC23 (Council)	⊕	Implement continuous improvements to the City-wide flood and early warning systems and emergency plans.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) EMPLAN 2017
City Resilience	On-ground works	RC24 (Council)	⊕	Implement works or other strategies to improve the process for the renewal of road pavement assets.	Asset Management Policy 2011 (version 4 - 2017)
Climate change	Risk management	RC25 (Council)	⊕	Implement actions in the Marks Point and Belmont South Local Adaptation Plan.	Marks Point and Belmont South LAP (March 2016)
Contaminated land	Risk management	RC26 (Council)	⊕	Implement and continually improve Council's contaminated land policy and procedures.	Managing Contaminated or Potentially Contaminated Land 2012 - Council Policy (version 7 - 2018)
Contaminated land	Risk management	RC27 (Council)	⊕	Implement Council specific recommendations from the Lead Expert Working Group Report on Managing Residual Lead Contamination in North Lake Macquarie.	Managing Contaminated or Potentially Contaminated Land 2012 - Council Policy (version 7 - 2018)

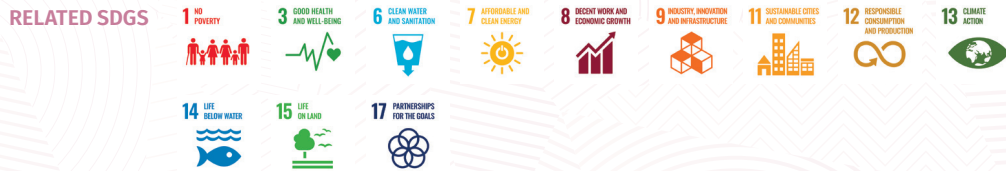
Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
People, Culture and Risk	Risk Management Team	30/06/2023	2.1 2.2	<ul style="list-style-type: none"> Scheduled audits (aligning with Work Health Safety Audit Plan 2018-2020). 	13	<ul style="list-style-type: none"> Heart icon
Environmental Systems	Environmental Strategy	30/06/2023	2.1 2.2	<ul style="list-style-type: none"> Sea level rise policy, guidelines and new flood levels incorporated for planning and designing all new Council infrastructure. Undertake local adaptation planning. 	11, 13	<ul style="list-style-type: none"> Heart icon
City Works	City Construction	30/06/2023	2.3	<ul style="list-style-type: none"> Appropriate licences current. Contaminated Land Register entry. 	11, 12	<ul style="list-style-type: none"> Leaf icon Heart icon
Environmental Systems	Environmental Strategy	30/06/2023	2.1 2.2 2.5	<ul style="list-style-type: none"> Improved links in tool to the Lake Macquarie Development Control Plan (DCP). Floor level data integrated. Definitions amended to improve clarity. Mapping interface incorporated (to illustrate the predicted one per cent flood extent) in relation to property boundaries and existing buildings. User satisfaction survey (capture of community feedback on Tool). 	1, 11, 13	<ul style="list-style-type: none"> Heart icon Target icon
Environmental Systems	Environmental Strategy	30/06/2023	2.1	<ul style="list-style-type: none"> State of the Environment reporting. Early Warning Network user evaluation survey. Flood warning system monitoring score - performance score (per cent data capture). 	1, 11, 13	<ul style="list-style-type: none"> Heart icon Target icon
Asset Management	AM - Infrastructure Assets	30/06/2025	2.1 2.2	<ul style="list-style-type: none"> Road pavement renewal plan developed. Post road pavement review undertaken - incorporating testing for suitability of the bitumen binder type (and ascertain if type used assists in lowering water permeability/saturation to the road pavement as may be caused by sea level rise). 	9, 11, 13	<ul style="list-style-type: none"> Heart icon Target icon
Environmental Systems	Environmental Strategy	30/06/2025	2.2	<ul style="list-style-type: none"> Priority actions implemented. 	1, 11, 13	<ul style="list-style-type: none"> Leaf icon Heart icon
Environmental Systems	Environmental Strategy	30/06/2025	2.3	<ul style="list-style-type: none"> Policy review. Total number of sites registered. Number of sites registered with notation 1 - 6. 	3, 11, 12	<ul style="list-style-type: none"> Leaf icon Heart icon Target icon
Environmental Systems	Environmental Strategy	30/06/2025	2.3	<ul style="list-style-type: none"> Number of recommendations implemented. 	3, 11, 12	<ul style="list-style-type: none"> Leaf icon Heart icon Bar chart icon Target icon

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
City resilience	Monitoring	RC28 (Council)	⊕	Monitor and report on threats to Council and community resilience.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) CZMP Flood Risk Management Study and Plan 2012
City resilience	Partnerships	RC29 (Council)	⊕	Engage Council and community in capacity building to strengthen resilience within the City.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) CZMP Flood Risk Management Study and Plan 2012
City resilience	Risk assessment	RC30 (Council)	⊕	Identify, research and assess environmental risks and develop and implement strategies to reduce Council's and the community's exposure to identified risks.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) CZMP Flood Risk Management Study and Plan 2012
Climate change	Planning	RC31 (Council)	⊕	Integrate climate change adaptation strategies into asset management plans and programs for built and natural assets.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) CZMP Flood Risk Management Study and Plan 2012 Planning for Wetland Retreat in Lake Macquarie (January 2015) Asset Management Policy 2011 (version 4 - 2017)
Climate change	Planning	RC32 (Council)	⊕	Identify and assess emerging climate change risks and review and update policies, strategies and guidelines to mitigate impacts.	(Draft) Waterway Flooding and Tidal Inundation - Council Policy (version 4 - 2020)
Climate change	Risk assessment	RC33 (Council)	⊕	Develop and implement local adaptation plans to address current and emerging climate change risks.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) CZMP Flood Risk Management Study and Plan 2012 Planning for Wetland Retreat in Lake Macquarie (January 2015)
Climate change	Risk management	RC34 (Council)	⊕	Research and pilot emerging climate change adaptation options for built and natural assets.	Lake Macquarie Environmental Security Assessment 2010 Climate Change Risk Assessment Adaptation Report (June 2010) CZMP Flood Risk Management Study and Plan 2012
Contaminated land	Risk management	RC35 (Council)	⊕	Strategically plan for and undertake remediation of Council managed contaminated land at priority sites.	Managing Contaminated or Potentially Contaminated Land 2012 – Council Policy (version 7 - 2018)

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Systems	Environmental Strategy	30/06/2027	2.1 2.2	<ul style="list-style-type: none"> Enterprise risk register current - addressing threats to organisational resilience. State of the Environment reporting. Council and community briefings. 		<ul style="list-style-type: none"> Heart icon Target icon
Environmental Systems	Environmental Strategy	30/06/2027	2.1 2.2 2.5	<ul style="list-style-type: none"> Number of engagement activities. Process and outcome evaluation of training and engagement activities. Environmental Attitudes Survey. 		<ul style="list-style-type: none"> Heart icon Target icon
Environmental Systems	Environmental Strategy	30/06/2027	2.1 2.2 2.5	<ul style="list-style-type: none"> State of the Environment reporting. Number of Council and community briefings or communications and training undertaken. Strategies, guidelines developed or reviewed to address environmental risks. 		<ul style="list-style-type: none"> Target icon
Environmental Systems	Environmental Strategy	30/06/2027	2.2	<ul style="list-style-type: none"> Number of Asset Management plans and programs incorporating climate change considerations. Number/review of planning instruments, policy and procedures addressing sea level rise. 		<ul style="list-style-type: none"> Bar chart icon Target icon
Environmental Systems	Environmental Strategy	30/06/2027	2.2	<ul style="list-style-type: none"> State of the Environment reporting. Number of Council and community briefings and communications. Number of strategies, guidelines developed or reviewed addressing climate change risks. 		<ul style="list-style-type: none"> Target icon
Environmental Systems	Environmental Strategy	30/06/2027	2.2	<ul style="list-style-type: none"> Number of Local Adaptation Plans prepared. Number of Local Adaptation Plan recommendations implemented. Number/review of planning instruments, policy and procedures addressing sea level rise. 		<ul style="list-style-type: none"> Heart icon Bar chart icon Target icon
Environmental Systems	Environmental Strategy	30/06/2027	2.2	<ul style="list-style-type: none"> Number of capital works projects which demonstrate climate change design considerations. Number natural area plans and guidelines addressing sea level rise and climate change. 		<ul style="list-style-type: none"> Leaf icon Heart icon Bar chart icon Target icon
Asset Management	AM - Community Assets	30/06/2027	2.3	<ul style="list-style-type: none"> Number of sites remediated. 		<ul style="list-style-type: none"> Leaf icon Target icon




Creating a sustainable city and communities - City



























We aim to improve our living conditions, by creating a city that is safe, attractive and inclusive. Our City is a model of environmental sustainable development. It has diverse housing, employment and services, connects people to open spaces and is easy to get around.

































Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Active transport	On-ground works	SC1 (City)	⊕	Increase infrastructure for active transport and improve connections for cycling between existing walkways, cycleways, schools, sporting facilities, public transport, parks, residential, commercial and business areas.	Lake Macquarie City Cycling Strategy 2021 Lake Macquarie Footpath Strategy 2013-2023
Energy resilience	Advocacy	SC2 (City)	⊕	Lobby for Government policy and investment mechanisms to drive a reduction in greenhouse gas emissions and reduce community and business energy consumption, particularly in the transport sector.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016)
Energy resilience	Community engagement	SC3 (City)	⊕	Promote programs to enable citizens to take-up energy efficiency and renewable energy technologies.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016)
Energy resilience	Monitoring	SC4 (City)	⊕	Report annually on City greenhouse gas emissions, energy use and supply (renewable and grid) from a 2007-2008 baseline.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016)
Energy resilience	Planning	SC5 (City)	⊕	Investigate and implement energy efficiency and emissions reduction measures, and renewable energy opportunities, across the City for public, commercial and residential developments.	Energy Resilience Plan 2012 Better Buildings Strategy 2018 Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016)
Energy and water resilience	Monitoring	SC6 (City)	⊕	Measure and report on City water consumption from 2007-2008 baseline.	not applicable
Energy and water resilience	Partnerships	SC7 (City)	⊕	Investigate and support initiatives to minimise mains water use and partner with Hunter Water Corporation to support water resilience in the community.	not applicable

Key

























- Short term 
 - Medium term 
 - Long term 
-  **ENVIRONMENTAL (Planet)**
 - environmental sustainability • sustainable ecosystems • includes energy, air pollution, GHG emissions, waste management, potable (drinking) water and sanitation
 -  **SOCIAL (People)**
 - social equity • quality of life (health; vigour; well-being; and ability to flourish)
 -  **ECONOMIC (Prosperity)**
 - financial prosperity • competitive productivity
 -  **GOVERNANCE (Progress)**
 - adaptive innovation • cultural sustainability

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Asset Management	AM - Infrastructure Assets	30/06/2023	3.1 3.3 3.4	<ul style="list-style-type: none"> • Walk score developed and reported. • Off-road shared pathway and on-road (cycle-safe shoulder) constructed and reported. • Improved active transport connectivity. 	11 Sustainable Cities and Communities	   
Environmental Systems	Environmental Strategy	30/06/2023	3.1 4.1	<ul style="list-style-type: none"> • Submissions prepared. 	7 Affordable and Clean Energy, 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 12 Responsible Consumption and Production, 17 Partnerships for Goals	  
Community Partnerships	Sustainability Engagement	30/06/2023	3.1 3.4	<ul style="list-style-type: none"> • Programs provided, as and when required. • Online resources provided to assess energy and water efficiency options. 	6 Clean Water and Sanitation, 7 Affordable and Clean Energy, 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 12 Responsible Consumption and Production	   
Environmental Systems	Asset Optimisation	30/06/2023	3.1 4.1	<ul style="list-style-type: none"> • Carbon emission reduction (t CO₂-e). • State of the Environment reporting. 	3 Good Health and Well-being, 7 Affordable and Clean Energy, 11 Sustainable Cities and Communities, 12 Responsible Consumption and Production	   
Environmental Systems	Asset Optimisation	30/06/2023	3.1 4.1	<ul style="list-style-type: none"> • Annual emissions per capita savings. 	3 Good Health and Well-being, 7 Affordable and Clean Energy, 8 Decent Work and Economic Growth, 9 Industry, Innovation and Infrastructure, 11 Sustainable Cities and Communities, 17 Partnerships for Goals	   
Environmental Systems	Asset Optimisation	30/06/2023	3.2	<ul style="list-style-type: none"> • State of the Environment reporting. 	6 Clean Water and Sanitation, 12 Responsible Consumption and Production	  
Environmental Systems	Asset Optimisation	30/06/2023	3.2	<ul style="list-style-type: none"> • Hunter Water - metered mains water use (kilolitres). • Climate corrected mains water use (kilolitres). • Potable water savings - City (kilolitres). • State of the Environment reporting. • Number of alternative water supply projects. • Water efficiency programs developed with Hunter Water Corporation. • Promotion of Hunter Water Corporation efficiency programs (rebates etc.). 	6 Clean Water and Sanitation, 12 Responsible Consumption and Production, 17 Partnerships for Goals	   

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Stormwater management	Internal training	SC8 (City)	⊕	Provide appropriate training and information to Council officers to facilitate the assessment and compliance of new development with conditions of approval relating to stormwater management and treatment.	Stormwater Management Plan 1999 CZMP Water Cycle Management Guidelines (Revision 1 - 2006)
Transport	Planning	SC9 (City)	⊕	Investigate and recommend improvements to sustainable transport infrastructure within and close to key economic centres as part of transport management plans.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Charlestown Transport Management Plan Lake Mac Parking Strategy 2018 Lake Macquarie City Cycling Strategy 2021 Lake Macquarie Footpath Strategy 2013-2023
Transport	Planning	SC10 (City)	⊕	Implement electric vehicle (EV) charging strategy to support the City's preparedness for global transition to electric vehicles.	Electric Vehicle Charging Strategy 2020-2023 Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Charlestown Transport Management Plan Lake Mac Parking Strategy 2018
Active transport	Planning	SC11 (City)	⊕	Implement programs and activities to facilitate the uptake of active transport options to foster enhanced health and wellbeing.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Lake Macquarie Footpath Strategy 2013-2023 Lake Macquarie City Cycling Strategy 2021
Energy resilience	Planning	SC12 (City)	⊕	Update the Energy Resilience Strategy for the City (including action plan to support smart grid demonstration projects).	Innovators Support Roadmap (2019) Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Energy Resilience Plan 2012

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Systems	Environmental Strategy	30/06/2023	1.5 1.6	<ul style="list-style-type: none"> Number of staff attending training per year. Water Sensitive Urban Design (WSUD) applied to all new developments (ensuring treatment of 50-80 per cent of stormwater from each subcatchment in new subdivisions). Water Cycle Management Guidelines updated to incorporate WSUD objective. 	    	   
Integrated Planning (IP)	Strategic Planning	30/06/2023	3.1 3.3	<ul style="list-style-type: none"> Charlestown Transport Management Plan adopted. Transport Management Plan for at least one additional centre completed. Work with government agencies and public transport operators to improve public transport accessibility and uptake in the City. Funding sources investigated to increase the delivery of sustainable transport infrastructure. Build/prioritise active transport infrastructure (i.e. footpaths, cycleways etc.). 		  
Environmental Systems	Asset Optimisation	30/06/2023	3.1	<ul style="list-style-type: none"> Electric Vehicle Strategy implemented. 	 	   
Community Partnerships	Sustainability Engagement	30/06/2025	3.3 3.4	<ul style="list-style-type: none"> Activity and number of participants reported annually via State of the Environment report. Walk score of town centres developed and reported. 	 	  
Environmental Systems	Asset Optimisation	30/06/2025	3.1	<ul style="list-style-type: none"> Industry partnerships developed (Ausgrid etc.). Design standards reviewed in regard to smart grid transition and high percentage of Distributed Energy Resources. Number of smart grid projects established in Lake Macquarie. 	   	 

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Energy and water resilience	Partnerships	SC13 (City)	⊕	Engage with development/housing industry and residents to support the supply of energy and water resilient houses and businesses in the City.	Energy Resilience Plan 2012 Electric Vehicle Charging Strategy 2020-2023
Sustainable tourism	Planning	SC14 (City)	⊕	Devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products.	Arts Heritage and Cultural Policy 2017 (version 1 - 2017) Destination Management Plan 2018-2022
Transport	Monitoring	SC15 (City)	⊕	Investigate smart technology access to public transport and people movement data and analytics, to understand current usage and what would improve public and active transport.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Charlestown Transport Management Plan Lake Mac Parking Strategy 2018
Transport	Technological innovation	SC16 (City)	⊕	Prepare for the electrification of vehicles in the local government area in the response to global motor vehicle industry by developing and implementing an electric vehicle (EV) charging and fleet transition strategy to take advantage of and respond to the global transition to electric and autonomous vehicles.	Electric Vehicle Charging Strategy 2020-2023

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Integrated Planning (IP)	IP - Strategic Planning	30/06/2025	3.1 3.2	<ul style="list-style-type: none"> Developer Engagement Strategy developed to facilitate inclusion of emerging technology (EV charging, solar photovoltaic access, battery storage) in new developments facilitated by appropriate and co-developed DCP Guidelines. Number of meetings with industry associations. Number of development and Council partnerships established. Number of 'House with no bills' demonstration houses. Design reviews supplied. 	    	   
Arts, Culture and Tourism (ACT)	ACT - Cultural Engagement, Marketing and Tourism	30/06/2025	3.1 3.2 4.1	<ul style="list-style-type: none"> Implement Destination Management Plan. 		   
Asset Management	AM - Infrastructure Assets	30/06/2025	3.1 3.3	<ul style="list-style-type: none"> Number of data service and insight tools developed. 	 	 
Environmental Systems	Asset Optimisation	30/06/2025	3.1	<ul style="list-style-type: none"> Number of facilities with EV charging. Participation in autonomous vehicle trials. EV Charging Strategy developed and implemented. Engagement with development industry to facilitate incorporation of EV charging in new developments. 	    	






































































STRATEGIC THEME 3

Creating a sustainable city and communities - Council

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Active transport	Partnerships	SC17 (Council)	⊕	Measure and report on commitment to implementing Walk 21 - International Charter for Walking.	Walk 21 - International Charter for Walking
Energy and water resilience	Monitoring	SC18 (Council)	⊕	Report annually water use, and associated efficiency measures, at Council's facilities from a 2007-2008 baseline.	Staff Sustainability Strategy 2018-2027
Energy and water resilience	Technological innovation	SC19 (Council)	⊕	Deploy optimisation systems incorporating smart monitoring and control across Council assets to continuously minimise energy and water demand and facilitate proactive maintenance.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016)
Energy conservation	Internal training	SC20 (Council)	⊕	Provide technical support at the concept, design, procurement and commissioning phases, and relevant training for Council staff to better implement energy efficiency and related initiatives, to minimise resource consumption across the assets lifecycle.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Better Buildings Strategy 2018
Energy conservation	Monitoring	SC21 (Council)	⊕	Report annually on Council's greenhouse gas emissions, energy use and supply (renewable and grid) from a 2007-2008 baseline.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016)
Energy conservation	Technological innovation	SC22 (Council)	⊕	Identify and implement renewable energy and efficiency improvements in stationary energy (solar, photovoltaics, LED) and increase fuel use efficiency across Council's assets and operations.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Staff Sustainability Strategy 2018-2027 Better Buildings Strategy 2018
Energy resilience	Risk assessment	SC23 (Council)	⊕	Identify and prioritise critical Council services, and develop policy frameworks to strengthen its resilience to energy disruptions, and control increases in maintenance costs.	Energy Resilience Plan 2012 Business Continuity Plan - Procedure (version 4 - 2019)
Energy resilience	Technological innovation	SC24 (Council)	⊕	Facilitate Council transition to 100 per cent renewable electricity supply, by supplementing on-site renewables to supply the remainder of its energy from renewable resources, via strategic procurement of off-site renewables that support the national and regional transition to renewable energy.	not applicable

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Asset Management	AM - Infrastructure Assets	30/06/2023	3.3 3.4	• State of the Environment reporting.		
Environmental Systems	Asset Optimisation	30/06/2023	3.2	• Hunter Water - metered mains water use (kilolitres). • Climate corrected mains water use (kilolitres). • State of the Environment reporting.		
Environmental Systems	Asset Optimisation	30/06/2023	3.1 3.2	• Number of facilities with optimisation systems in place. • Percentage energy and water reductions versus 2007-2008 baseline. • Kilolitres of water and kilowatt hours of energy per facility utilisation unit (e.g pool patrons).		
Environmental Systems	Asset Optimisation	30/06/2023	3.1	• Numbers of projects, training events, and/or staff supported. • Tools developed to guide feasibility assessment, project specifications, commissioning and operational plans.		
Environmental Systems	Asset Optimisation	30/06/2023	3.1 4.1	• Carbon emission reduction (t CO ₂ -e). • State of the Environment reporting.		
Environmental Systems	Asset Optimisation	30/06/2023	3.1	• Sites identified as suitable. • Annual emissions savings. • Solar Photovoltaic capacity (kW). • Percentage of energy supplied from on-site solar.		
Property and Business Development	Facilities Management	30/06/2023	3.1	• Internal policies and design guidelines developed and in place. • Number of facilities with business continuity plans incorporating renewable energy and storage.		
Environmental Systems	Asset Optimisation	30/06/2023	3.1	• Percentage of electricity supply from renewable sources. • Multi-Council/customer renewable power purchase agreement procurement process.		

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Fleet management	Planning	SC25 (Council)	⊕	Review fleet policies and procedures, to ensure alignment with Council adopted greenhouse gas emission reduction targets, and identify and implement methods to ensure Council is prepared for a shift in global vehicle markets and transition to higher efficiencies, alternative fuels, by continuing to assess: fuel usage; identify high users; and investigate reduction options to reduce fossil fuel reliance.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Vehicle Fleet Greenhouse Gas Emissions Reductions - Guideline (version 6 - 2018) Electric Vehicle Charging Strategy 2020-2023
Stormwater management	On-ground works	SC26 (Council)	⊕	Implement a Stormwater Quality Improvement Devices (SQID) monitoring and maintenance improvement program, assess current maintenance methods, and develop best practice guidelines of Council's stormwater system and devices (including wetlands, litter baskets, Gross Pollutant Traps, vegetated drains and street cleaning operations).	Stormwater Management Plan 1999 Stormwater Asset Management Plan 2015 (version 6) CZMP
Stormwater management	Partnerships	SC27 (Council)	⊕	Seek funding to implement new and retrofitted stormwater harvesting and reuse systems.	Stormwater Management Plan 1999
Stormwater management	Planning	SC28 (Council)	⊕	Establish a leading practice maintenance program for Council's existing and new stormwater quality devices/assets which identifies maintenance needs based on the type of device and its location.	Stormwater Management Plan 1999 Stormwater Asset Management Plan 2015 (version 6)
Stormwater management	Technological innovation	SC29 (Council)	⊕	Construct new Council facilities and buildings to incorporate source control options for stormwater management as a demonstration of best practice environmental/stormwater management.	Stormwater Management Plan 1999
Active transport	Planning	SC30 (Council)	⊕	Improve infrastructure in Council facilities for those who commute using active transport.	Staff Sustainability Strategy 2018-2027
Energy resilience	Planning	SC31 (Council)	⊕	Develop an approach to carbon offsetting from Council's rehabilitation projects aligned with accredited carbon offset methods for native forest regeneration.	not applicable
Energy and water resilience	Planning	SC32 (Council)	⊕	Develop and implement a water resilience strategy for Council facilities by type (e.g sportsfields) that identifies design standards and opportunities to use alternative water sources to improve reliability of supply and water dependent services to the community in times of water constraint.	not applicable
Transport	Planning	SC33 (Council)	⊕	Investigate alternative options to private car use for commuters and leaseback holders.	Staff Sustainability Strategy 2018-2027
Transport	Planning	SC34 (Council)	⊕	Reconsider a car pool trial and develop a car pooling strategy for Council staff.	Staff Sustainability Strategy 2018-2027

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
City Works	City Buildings and Support - Plant and Fleet	30/06/2023	3.1	<ul style="list-style-type: none"> Annual report submitted. Tools developed to guide feasibility assessment, project specifications, commissioning and operational plans etc. Projected or actual carbon emission saving (t CO₂-e). Implement electric vehicle strategy (Environmental Systems). Number of Council facilities with EV charging infrastructure. Percentage of electric vehicles/ hybrids in the Council fleet. 	    	   
Environmental Systems	Environmental Strategy	30/06/2023	1.5	<ul style="list-style-type: none"> Evaluation report. SQID maintenance guideline developed. Retrofit of existing stormwater quality improvement devices. 	   	   
Environmental Systems	Environmental Strategy	30/06/2023	3.2 1.5	<ul style="list-style-type: none"> Funding acquired. 	   	   
City Works	City Infrastructure	30/06/2023	2.1 2.2 1.5	<ul style="list-style-type: none"> Review of maintenance practices completed. 	 	  
Environmental Systems	Environmental Strategy	30/06/2023	3.2 1.5	<ul style="list-style-type: none"> Infrastructure projects incorporating best practice stormwater management. 	   	   
Property and Business Development	Facilities Management	30/06/2025	3.3 3.4	<ul style="list-style-type: none"> Infrastructure installed and/or improved (e.g. bike storage and EV bike charging). 		   
Environmental Systems	Asset Optimisation	30/06/2025	3.1	<ul style="list-style-type: none"> Rehabilitation projects with a carbon offset monitoring and reporting process aligned with an accredited offset method (hectares). 	  	   
Environmental Systems	Asset Optimisation	30/06/2025	3.2	<ul style="list-style-type: none"> Water resilience strategy developed. Sportsfield turf and water management strategy and design standards developed. Number of alternative water supply projects developed and adopted. Percentage of water consumption supplied from alternative sources. 	    	   
Environmental Systems	Asset Optimisation	30/06/2025	3.1 3.3	<ul style="list-style-type: none"> Investigation undertaken. Recommendations implemented. 		   
Environmental Systems	Asset Optimisation	30/06/2027	3.1	<ul style="list-style-type: none"> Trial undertaken. Strategy developed. 		   


Responsible consumption and production - City

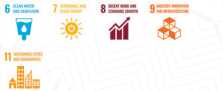








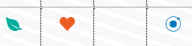






We aim to establish a local economy where natural resources are valued and consumed within the limits in which they are created. We make and buy products that are durable and reusable, with minimal waste. Where waste is generated, it is used as a resource in the creation of new products.



Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
City resilience	Planning	CP1 (City)	⊕	Facilitate higher green building standards for new and retrofitted buildings to reduce City-wide energy, water and waste.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Better Buildings Strategy 2018
Illegal dumping	Compliance programs	CP2 (City)	⊕	Adopt a pro-active approach to illegal dumping and continue to issue warnings and penalties to offenders. Participate in regional, and state funded illegal dumping programs, as appropriate.	WARR 2014-2021 Waste Strategy 2015-2023
Illegal dumping	Planning	CP3 (City)	⊕	Identify locations affected by illegal dumping and develop strategies (works, surveillance and community education programs) to deter dumping.	Waste Strategy 2015-2023
Resource consumption	Community engagement	CP4 (City)	⊕	Develop and make available information, education and engagement programs, to the community and business, on accessible ways to live a low impact lifestyle.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Energy Resilience Plan 2012 WARR 2014-2021
Resource consumption	Partnerships	CP5 (City)	⊕	In co-operation with Hunter Joint Organisation develop and maintain a Material Flow Analysis of all unrecovered resource streams, and partner within industry and research institutions to identify high value and reprocessing options and business to progress a circular economy.	not applicable
Waste diversion	Partnerships	CP6 (City)	⊕	Maintain specialist services for waste not collected in kerbside waste (garbage, recycling and greenwaste) pickup (including Chemical Clean Out, domestic sharps, mobile muster, oil, battery, and light globe recycling).	WARR 2014-2021 Waste Strategy 2015-2023
Waste diversion	Planning	CP7 (City)	⊕	Manage kerbside recycling and green waste contracts to maximise resource recovery and minimise waste to landfill.	WARR 2014-2021 Waste Strategy 2015-2023
Waste management	Community engagement	CP8 (City)	⊕	Promote waste services through a City-wide education campaign and development of resources.	WARR 2014-2021 Waste Strategy 2015-2023

Key

- Short term 
 - Medium term 
 - Long term 
-  **ENVIRONMENTAL (Planet)**
 • environmental sustainability • sustainable ecosystems • includes energy, air pollution, GHG emissions, waste management, potable (drinking) water and sanitation
 -  **SOCIAL (People)**
 • social equity • quality of life (health; vigour; well-being; and ability to flourish)
 -  **ECONOMIC (Prosperity)**
 • financial prosperity • competitive productivity
 -  **GOVERNANCE (Progress)**
 • adaptive innovation • cultural sustainability

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Systems	Asset Optimisation	30/06/2023	3.1 3.2 4.1	<ul style="list-style-type: none"> • Guidelines and strategy implemented. • Number of facilities incorporating guidelines. 		
Environmental Regulation and Compliance	RID Squad	30/06/2023	4.1	<ul style="list-style-type: none"> • Service request report; identification of illegal dumping sites. 		
Environmental Regulation and Compliance	RID Squad	30/06/2023	4.1	<ul style="list-style-type: none"> • Service request report; identification of illegal dumping sites. • Compliance reports. • Education and community awareness programs undertaken to deter illegal dumping. 		
Community Partnerships	Sustainability Engagement	30/06/2023	3.1 3.2 4.1 4.2 4.5 4.6	<ul style="list-style-type: none"> • State of the Environment reporting. • Engagement activity; number of participants. 		
Environmental Systems	Asset Optimisation	30/06/2023	4.5 4.2 4.1 3.1	<ul style="list-style-type: none"> • Material Flow Analysis tool maintained and updated. 		
Waste Services	Strategic Waste	30/06/2023	4.1 4.2	<ul style="list-style-type: none"> • Per cent per capita reduction in waste to landfill. • Activity and number of participants reported annually via State of the Environment report. 		
Waste Services	Strategic Waste	30/06/2023	4.1 4.2	<ul style="list-style-type: none"> • Per cent per capita reduction in waste to landfill. 		
Community Partnerships	Sustainability Engagement	30/06/2023	4.2	<ul style="list-style-type: none"> • Activity and number of participants reported annually via State of the Environment report. • Per cent per capita reduction in waste to landfill. 		

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Waste management	Planning and development controls	CP9 (City)	⊕	Land use planning and development applications incorporate considerations for best practice waste minimisation, recycling, composting and waste management and ensure increasing compliance.	Hunter/Central Coast Waste Avoidance and Resource Recovery Strategy 2017-2021 Waste Management Guidelines 2019 Lake Macquarie Heritage Strategy 2014
Waste recycling	Planning	CP10 (City)	⊕	Expand availability of public place recycling bins.	Hunter/Central Coast Waste Avoidance and Resource Recovery Strategy 2017-2021 Waste Strategy 2015-2023
City resilience	Community engagement	CP11 (City)	⊕	Maintain and increase community engagement and participation - Sustainable Neighbourhoods, Landcare, other volunteers and community groups.	Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Energy Resilience Plan 2012 WARR 2014-2021
Resource consumption	Planning	CP12 (City)	⊕	Develop low carbon industry and circular economy opportunity analysis for the local government area.	Innovators Support Roadmap (2019) Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016)
Waste management	Advocacy	CP13 (City)	⊕	Support product stewardship programs as they become available, and promote awareness and use.	WARR 2014-2021 Waste Strategy 2015-2023
Waste management	Partnerships	CP14 (City)	⊕	Increase commercial business participation in Council commercial waste services.	WARR 2014-2021
Waste management	Planning	CP15 (City)	⊕	Design and construct an east lake waste management facility and establish operations at both Awaba and east lake facilities for core problem waste.	Hunter Central Coast Waste Avoidance and Resource Recovery Strategy 2017-2021 WARR 2014-2021

	Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
	Waste Services	Strategic Waste	30/06/2023	4.1 4.3 4.4	• Percentage developments compliant - providing facility for separated waste streams.	8, 11, 12, 17	Leaf, Heart, Pillars, Goal
	Waste Services	Strategic Waste	30/06/2023	4.1	• Increase in number, and type of public place recycling bins installed since June 2018.	11, 12	Leaf, Heart, Pillars
	Community Partnerships	Sustainability Engagement	30/06/2025	3.1 4.1 4.2 4.5 4.6	• State of the Environment reporting. • Engagement activity; number of participants.	6, 11, 12, 13, 15	Leaf, Heart, Pillars, Goal
	Environmental Systems	Asset Optimisation	30/06/2025	4.2 4.5 3.1	• Opportunity analysis prepared. • Outputs considering in precinct plans.	3, 7, 8, 11, 12	Leaf, Pillars, Goal
	Waste Services	Strategic Waste	30/06/2025	4.1 4.2	• Number of programs supported. • Number of participants. • Per cent per capita reduction in waste to landfill.	11, 12, 17	Leaf, Heart, Pillars
	Waste Services	Strategic Waste	30/06/2025	4.1 4.2	• Increase in provision of Council waste services (commercial garbage, recycling and green waste) and percentage recycled or composted. • Number of comparative, percentage of other types of separated wastes diverted to recycling.	11, 12, 17	Leaf, Pillars
	Waste Services	Strategic Waste	30/06/2027	4.2	• East lake facility operational. • Usage of facility by East Lake residents. • Cost neutral operation or positive for Council to operate.	11, 12	Leaf, Pillars















Responsible consumption and production - Council

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Procurement	Planning	CP16 (Council)	⊕	Implement Council's revised Procurement Policy Framework and Sustainable Procurement Guideline.	(Draft) Procurement Policy Framework and Sustainable Procurement Guideline Staff Sustainability Strategy 2018-2027
Resource consumption	Planning	CP17 (Council)	⊕	Embrace sustainable and environmental practices such as United Nations Sustainable Development Goals and target actions into our planning and programming of service delivery, events and festivals.	Arts Heritage and Cultural Policy 2017 (version 1 - 2017) Event and Festival Strategy and Action Plan 2019-2024
Resource consumption	Planning	CP18 (Council)	⊕	In co-operation with City Works for all projects requiring demolition to review options for materials reuse and reprocessing at the project initiation stage and within contractor procurement process.	WARR 2014-2021 Waste Strategy 2015-2023
Resource consumption	Risk management	CP19 (Council)	⊕	Continue a Council process, facility and construction audit program to identify opportunities for improvement and risk management.	not applicable
Waste recycling	Planning	CP20 (Council)	⊕	Embed sustainable design and optimise Council assets to increase recycled content in construction materials and achieve reductions in finite materials use.	Energy Resilience Plan 2012 Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 - 2016) Better Buildings Strategy 2018
Waste recycling	Planning	CP21 (Council)	⊕	Council to lead by example in waste avoidance, repair, reuse and recycling, in purchasing and disposal of assets, resources and wastes.	WARR 2014-2021 Waste Strategy 2015-2023 Staff Sustainability Strategy 2018-2027 Event and Festival Strategy and Action Plan 2019-2024 Lake Macquarie Heritage Strategy 2014
Waste recycling	Planning	CP22 (Council)	⊕	Focus on opportunities for the maximum recycling and re-use of bulk construction materials. Implement strategies to improve existing recycling practices, and address long-term recycling needs to reduce disposal of construction materials and green waste.	WARR 2014-2021 Waste Strategy 2015-2023

Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Finance	Procurement	30/06/2023	4.1 4.4	<ul style="list-style-type: none"> Council requires procurement activities of staff and suppliers to be conducted in accordance with guideline expectations. Sustainable procurement training implemented. Review Sustainable Procurement Heat Map (to identify risk, opportunity spend categories to target sustainable procurement considerations, actions in Category Management Program and Tender Program. 		<ul style="list-style-type: none"> Green Pillar Social Pillar Economic Pillar Blue Pillar
Arts, Culture and Tourism (ACT)	ACT - Events	30/06/2023	4.1 4.5	<ul style="list-style-type: none"> Environmental and social responsibility issues integrated into event planning. Sustainable event planning undertaken. 		<ul style="list-style-type: none"> Green Pillar Social Pillar Economic Pillar Blue Pillar
Environmental Systems	Asset Optimisation	30/06/2023	4.3 4.4	<ul style="list-style-type: none"> Demolition projects reviewed for reuse options. 		<ul style="list-style-type: none"> Economic Pillar Blue Pillar
Environmental Systems	Asset Optimisation	30/06/2023	4.1	<ul style="list-style-type: none"> Facilities/processes audited. 		<ul style="list-style-type: none"> Blue Pillar
Environmental Systems	Asset Optimisation	30/06/2023	4.1 3.1	<ul style="list-style-type: none"> Facility involvement. Develop and/or implement an audit process for evaluating extent to which buildings achieve these objectives across the local government area. 		<ul style="list-style-type: none"> Green Pillar Social Pillar Economic Pillar Blue Pillar
Waste Services	Strategic Waste	30/06/2023	4.3 4.4	<ul style="list-style-type: none"> 70 per cent of Council's own waste recycled or composted by 2021 (75 per cent by 2027). Annual reduction in tonnage of Council produced waste. Council to lead by example, reducing environmental and social impacts, in the delivery of low waste and responsible food purchasing events. 		<ul style="list-style-type: none"> Green Pillar Economic Pillar
City Works	City Construction	30/06/2023	4.1 4.3	<ul style="list-style-type: none"> More than 90 per cent of Council-generated Construction and Demolition (C&D) waste is reused or recycled each year. 100 per cent of Council-generated green waste used by Council or recycled by approved contractor. 		<ul style="list-style-type: none"> Green Pillar Economic Pillar Blue Pillar

Issue	Proposed management approach or response	ESSAP 2020-2027 Management Action reference	Timeframe	Management Action	Alignment with other relevant Policy, Plan, Strategy
Waste recycling	Planning	CP23 (Council)	⊕	Encourage the use of recycled materials in the construction of Council buildings, recreational facilities etc.	WARR 2014-2021 (Draft) Procurement Policy Framework and Sustainable Procurement Guideline Better Buildings Strategy 2018
Procurement	Advocacy	CP24 (Council)	⊕	Promote and support campaigns to reduce packaging through the supply chain.	Staff Sustainability Strategy 2018-2027 (Draft) Procurement Policy Framework and Sustainable Procurement Guideline
Resource consumption	Partnerships	CP25 (Council)	⊕	In co-operation with City Works trial materials and review required design specifications guidelines, operationalise use in Council project specifications and facilitate market creation for waste materials collected or processed by Council.	WARR 2014-2021 Waste Strategy 2015-2023



Primary Responsible Department	Primary Internal Team	Due Date	ESS 2027 Target	Monitoring or Evaluation method	Key United Nations Sustainable Development Goal (SDG)	Integration with the four Pillars of Sustainability
Environmental Systems	Asset Optimisation	30/06/2023	4.3 4.4	<ul style="list-style-type: none"> Development assessment referrals responded to. Better Building Strategy evaluation method implemented. Number of projects incorporating second-hand recycled materials. 	 	   
Finance	Procurement	30/06/2025	4.1	<ul style="list-style-type: none"> Incorporate packaging reduction strategy in Sustainable Procurement Charter. Incorporate consideration in targeted Sustainability Training. 	 	 
Environmental Systems	Asset Optimisation	30/06/2025	4.2 4.4	<ul style="list-style-type: none"> Material Flow Analysis tool maintained and updated. Percentage of tender specifications including recycled materials. Design guidelines reviewed. Number of material trials. 	 	 

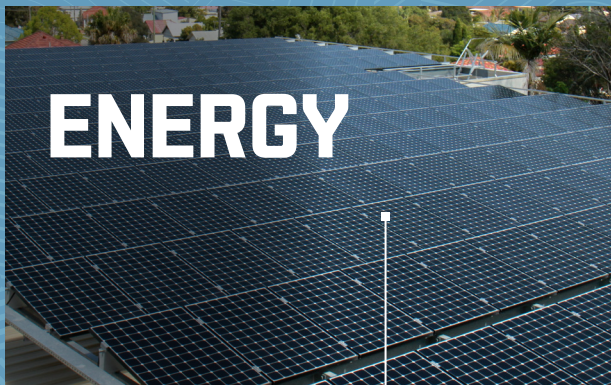


Appendix 2

Snapshot of Achievements

2014-2015 to 2017-2018

Snapshot of achieved progress across themes - within the four year working life (2014-2015 to 2017-2018) of ESAP 2014-2023



ENERGY

REDUCTION IN GREENHOUSE GAS EMISSIONS

(below 2007-2008 baseline levels)

↓ 30%
(Council)

↓ 6.08%
(City - per capita)

SOLAR RENEWABLE ENERGY INSTALLED CAPACITY

196.1 MWh (Council)
45.31 MWp (City)
(2017-2018 capacity)



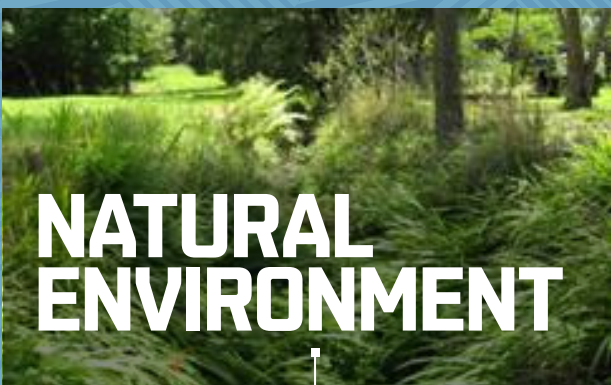
WASTE

UPTAKE OF COUNCIL COMMERCIAL RECYCLING SERVICES

↑ 7.52%
(increase on 2007-2008 baseline levels)

DECREASE IN WASTE TO LANDFILL

↓ 31.6%
(City - kg per capita reduction)
(below 2007-2008 baseline level)



NATURAL ENVIRONMENT

ON-GROUND WORKS

(from 2014-2015 to 2017-2018 financial year)

Area of land rehabilitated	109.62ha
Wetland improvement	99.76ha
SQID - pollutant trapping area	43.34ha
Streambank rehabilitation	1,365m

COASTAL ZONE MANAGEMENT PLAN IMPLEMENTATION

Providing for a more balanced focus on both lake and coastline with Council's CZMP plan certified by the NSW Minister for Planning and Environment in August 2016, under the NSW Coastal Protection Act 1979



CLIMATE CHANGE ADAPTATION

LOCAL AREA ADAPTATION PLANNING

✓ Marks Point and Belmont South adopted

↻ Pelican and Blacksmiths (80% complete)

📍 Swansea (commenced)



WATER AND LAND

CITY POTABLE WATER CONSUMPTION

↑ **0.59%**

(0.57kL/capita increase on 2007-2008 baseline)
 (2017-2018 potable water use per capita - 97.62kL)
 (2007-2008 baseline - 97.05kL/capita)
 (2023 target: 5% per capita reduction versus 2007-2008 baseline)

COUNCIL WATER CONSUMPTION

↑ **11.65%**

(46,375kL) (2017-2018 climate corrected outcome)
 (2023 target: 12% reduction on 2007-2008 baseline)

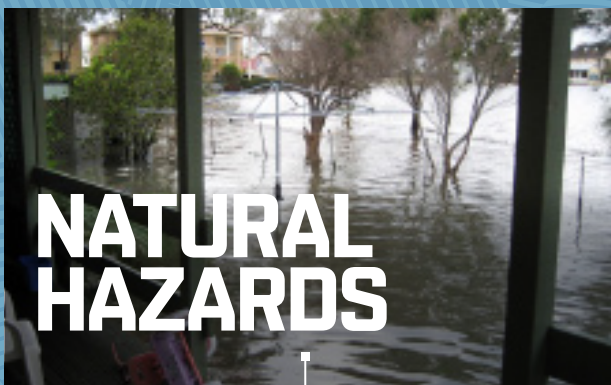


TRANSPORT

CONSTRUCTION OF OFF-ROAD SHARED PATHWAY

↑ **15.59km**
 (35.91%)

(from 2014-2015 to 2017-2018 financial year)
 (2017-2018: total length off-road shared pathway 59km)



NATURAL HAZARDS

LAKE MACQUARIE CITY-WIDE FLOOD WARNING SYSTEM

99.7%
 performance score

(per cent data capture for flood warning system monitoring and equipment)

MAINTENANCE OF ASSET PROTECTION ZONES

183

APZs across the City
 (over 60 hectares maintained annually)



ENVIRONMENTAL HEALTH

CONTAMINATED LAND

Implementation of Council's Contaminated Land Database

AIR POLLUTION EMISSIONS

No net increase in per capita air pollution emissions within the City

Establishment of Air Quality Reference Group

Appendix 3

Council reference documents

Document Title	Appendix 1 Abbreviation
Planning Framework	
City of Lake Macquarie Annual Report 2018-2019	Annual Report 2018-2019
Imagine Lake Mac, Our plan to 2050 and beyond Local Strategic Planning Statement	Imagine Lake Mac 2050 and beyond Local Strategic Planning Statement
Our Future in Focus, Lake Macquarie City Community Strategic Plan 2017-2027	Community Strategic Plan 2017-2027
Delivering Our Future, Lake Macquarie City Resourcing Strategy 2017-2027	Resourcing Strategy 2017-2027
Let's Make It Happen, Revised Delivery Program 2017-2021 and Operational Plan 2019-2020	4 Year Delivery Program 2017-2021
Lake Macquarie Local Environmental Plan 2014	Local Environmental Plan
Development Control Plan 2014	Development Control Plan
Lake Macquarie City Environmental Sustainability Action Plan 2014-2023 Full review 2019-2020 producing: Together Lake Mac, Our Plan for a Sustainable City, Environmental Sustainability Strategy and Action Plan 2020-2027	LMESAP 2014-2023 ESSAP 2020-2027
Sustainability Policy 2019 (version 1-2019) (next scheduled review: August 2023)	Sustainability Policy 2019
Council Policy	
Arts Heritage and Cultural Policy 2017 (version 1 – 2017) (next scheduled review: October 2021)	Not abbreviated
Asset Management Policy 2011 (version 4 – 2017) (next scheduled review: 13/7/2021)	Asset Management Policy 2011 (version 4 – 2017)
Biodiversity Planning Policy and Guidelines for (LEP) Rezoning Proposals 2009 (version 3 - 2015) (next scheduled review: 22/12/2019)	Biodiversity Planning Policy and Guidelines 2009 (version 3 - 2015)
(Draft) Biodiversity Offsets Policy for Lake Macquarie LGA - 2011	(Draft) Biodiversity Offsets Policy 2011
Control of Open Burning 2017 – Council Policy (version 1) (next scheduled review: 1 April 2019)	Not abbreviated
Enterprise Risk Management Framework – Internal Policy and Procedure (version 2 – 2019) (next scheduled review: 21/10/2021)	Enterprise Risk Management Framework (version 2 - 2019)
Greenhouse Gas Emission Reduction Targets Policy 2008 (version 3 – 2016) (next scheduled review: 29/08/2020)	Not abbreviated
Improvements and Maintenance of Watercourses and Drainage Channels Policy 2004 (version 5 - 2017) (next scheduled review: 25/5/2021)	Not abbreviated
Lake Macquarie Waterway Flooding and Tidal Inundation Policy 2012 (version 3 – 2016) (next scheduled review: 03/02/2020)	Waterway Flooding and Tidal Inundation – Council Policy 2012 (version 3 - 2016)
Managing Contaminated or Potentially Contaminated Land within the City of Lake Macquarie 2012 – Council Policy (version 7 - 2018) (next scheduled review: 27/8/2021)	Managing Contaminated or Potentially Contaminated Land 2012 – Council Policy (version 7 - 2018)
Procurement Policy 2009 (version 6 – 2020) (next scheduled review: 25/05/2024)	Not abbreviated
Protection of Watercourses and Drainage Channels 2010 - Council Policy (version 6 - 2018) (next scheduled review: 25/07/2020)	Not abbreviated
(Draft) Regulation and Compliance Council Policy (version 1 - 2019)	Not abbreviated
Vertebrate Pest – Council Policy 2012 (version 6 - 2019) (next scheduled review: 23/5/2021)	Not abbreviated

Document Title**Appendix 1 Abbreviation****Strategies and Guidelines**

Assessing Development Proposals on Land Affected by Sea Level Rise - Procedure (version 13 - 2019) (next scheduled review: 23/5/2020)	Assessing Development Proposals on Land Affected by Sea Level Rise - Procedure (version 13 - 2019)
Australian Government, Geoscience Australia, Australian Rainfall and Runoff Guidebook	AR&R 2019
Background Technical Report for Lake Mac 2050 Strategy – Biodiversity, Lake Macquarie Combined Ecological Layer 2018	Background Technical Report for Lake Mac 2050
Business Continuity Plan – Procedure (version 4 – 2019) (next scheduled review: 20/12/2020)	Business Continuity Plan – Procedure (version 4 - 2019)
Central Coast Bush Fire Management Committee: Bush Fire Risk Management Plan 2019-2024	Central Coast Bush Fire Risk Management Plan 2019-2024
Charlestown Transport Management Plan	Not abbreviated
City of Lake Macquarie Waste Strategy 2015-2023	Waste Strategy 2015-2023
Climate Change Risk Assessment Adaptation Report Lake Macquarie City Council (June 2010) (Facilitated and Developed by Statewide Mutual Liability Scheme and Echelon Australia Pty Ltd)	Climate Change Risk Assessment Adaptation Report (June 2010)
Electric Vehicle Charging Strategy 2020-2023	Not abbreviated
Environmental Management Plan for Contaminated Land in Council's Care and Control - Procedure (version 3 - 2018) (next scheduled review: 10/7/2020)	Not abbreviated
Flaggy Creek Stormwater Management Plan 2004	Not abbreviated
Guideline – Lake Macquarie City Council Flora and Fauna Database (version 1 – 2019)	Lake Macquarie Flora and Fauna Database Guideline 2019
Heritage Strategy for the City of Lake Macquarie 2014	Lake Macquarie Heritage Strategy 2014
Hunter Regional Strategic Weed Management Plan 2017-2022 (NSW Government - Local Land Services Hunter)	Not abbreviated
Hunter/Central Coast Waste Avoidance and Resource Recovery Strategy 2017-2021	Not abbreviated
Hunter Regional Strategic Pest Animal Management Plan 2018-2023 (NSW Government – Local Land Services Hunter)	Not abbreviated
It's All Uphill From Here – Preparing Lake Macquarie Wetlands for Retreat (January 2015)	Planning for Wetland Retreat in Lake Macquarie (January 2015)
Jewells Wetland: Catchment Management Strategy Proposed Plan of Management 1999	Jewells Wetland: Catchment Management Strategy 1999
Lake Mac Parking Strategy 2018	Not abbreviated
Lake Macquarie City Aboriginal Community Plan 'Bayikulinan' (to act in the future)	Aboriginal Community Plan 2019-2023
Lake Macquarie City Council Better Buildings Strategy - September 2018	Better Buildings Strategy 2018
Lake Macquarie City Destination Management Plan 2018-2022	Destination Management Plan 2018-2022
Lake Macquarie City Council Energy Resilience Plan: Strategies for an energy resilient future (July 2012)	Energy Resilience Plan 2012
Lake Macquarie City Council Energy Resilience Plan Implementation Plan	
Lake Macquarie City Council Footpath Strategy 2013 to 2023	Lake Macquarie Footpath Strategy 2013-2023

Document Title**Appendix 1 Abbreviation****Strategies and Guidelines (continued)**

Lake Macquarie City Council Landscape Design - Guidelines 2017 (version 3 - 2019) (next scheduled review: 2021)	Landscape Design Guidelines 2017 (version 3 - 2019)
Lake Macquarie City Council Natural Areas Asset Management Plan 2015 (version 3 - 2015)	Natural Areas Asset Management Plan 2015 (version 3 - 2015)
Lake Macquarie City Council Stormwater Asset Management Plan 2015 (version 6)	Stormwater Asset Management Plan 2015 (version 6)
Lake Macquarie City Council Vertebrate Pest Management Strategy 2012-2018	Vertebrate Pest Management Strategy 2012-2018
Lake Macquarie City Cycling Strategy 2021 (June 2012) (and final appendix – maps)	Lake Macquarie City Cycling Strategy 2021
Lake Macquarie City Event and Festival Strategy and Action Plan 2019-2024	Event and Festival Strategy and Action Plan 2019-2024
Lake Macquarie City, Let's Imagine, Innovators Support Roadmap	Innovators Support Road Map (2019)
Lake Macquarie Coastal Zone Management Plan Part A for the coastline (November 2015) Part B for the estuary (October 2015) Part C for Swansea Channel (October 2015) Part D – Four Year Action Plan 2015-2019	CZMP
<small>(CZMP endorsed April 2015, plan certified by the NSW Minister for Planning and Environment under the NSW Coastal Protection Act 1979 in August 2016)</small>	
Lake Macquarie Environmental Security Assessment 2010	Not abbreviated
Lake Macquarie Estuary Management Plan 1997	Not abbreviated
Lake Macquarie Local Emergency Management Plan (July 2017) – public	EMPLAN 2017
Lake Macquarie Waterway Flood Risk Management Study and Plan 2012	Flood Risk Management Study and Plan 2012
LT Creek Catchment Water Quality Management Plan 2009	LT Creek Water Quality Management Plan 2009
NSW Department of Planning – Floodplain Development Manual 2005	NSW Floodplain Development Manual 2005
New South Wales Invasive Species Plan 2018-2021, NSW Department of Primary Resources	NSW Invasive Species Plan 2018-2021
NSW Marine Estate Management Strategy 2018-2028	Not abbreviated
Plan of Management for Community Land 2011 (version 3)	Not abbreviated
Planning for Future Flood Risks Marks Point and Belmont South Local Adaptation Plan: A plan for Marks Point and Belmont South to adapt to changing lake and flood levels, Volume 1: Summary (March 2016)	Marks Point and Belmont South LAP (March 2016)
<small>(Draft) Procurement Policy Framework and Sustainable Procurement Guideline</small>	Not abbreviated
Protection of Watercourses and Drainage Channels 2018 – Procedure (version 5 – 2018) <small>(next scheduled review: 29 September 2020)</small>	Not abbreviated
Staff Sustainability Strategy 2018-2027: Taking Action Together	Staff Sustainability Strategy 2018-2027
Stormwater Management Plan 1999	Not abbreviated

Document Title

Appendix 1 Abbreviation

Strategies and Guidelines (continued)

Sustainable Management of Aboriginal Cultural Heritage in the Lake Macquarie Local Government Area: Lake Macquarie Aboriginal Heritage Management Strategy – August 2011 (Parts 1 to 4/Appendices 1–9)	Lake Macquarie Aboriginal Cultural Heritage Management Strategy 2011
Vehicle Fleet Greenhouse Gas Emissions Reductions - Guideline (version 6–2018) (next scheduled review: December 2019)	Not abbreviated
Walk 21 - International Charter for Walking (endorsed by Council March 2015)	Walk 21 – International Charter for Walking
Waste Avoidance and Resource Recovery Strategy 2014-2021	WARR 2014-2021
Water Cycle Management Guidelines (Revision 1 - 2006) (next scheduled review: 30 June 2023)	Not abbreviated



For more information

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