

The background of the title section is a high-angle aerial photograph of a dense mangrove forest. The dark green trees form intricate, winding patterns against the lighter green areas where water is present. This visual metaphor represents the interconnectedness and fragility of the environment.

cairns  
**CLIMATE  
CHANGE**  
**STRATEGY 2030**  
DRAFT FOR CONSULTATION

The Cairns Regional Council (CRC) acknowledges the First Peoples within our region who are the Traditional Custodians of this country. Traditional Custodians within the Cairns region include the Djabugay; Yirrganydji; Bulawai, Gimuy Walubara Yidinji; Mandingalbay Yidinji; Gungandji; Dulabed and Malanbara Yidinji; Wanyurr Majay; Mamu and Ngadjonjii peoples. CRC also acknowledges other First Peoples who live within this region.

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## foreword

We are facing the biggest challenge of our generation.

The Climate Change Strategy 2030 is Cairns Regional Council's blueprint for facing this challenge.

We have an opportunity to work together to design and deliver solutions for a healthy natural environment, community and future to:

- Balance the needs of our growing city with our natural resources
- Work with nature and Traditional Custodians to protect and restore our natural environments
- Make our communities more resilient to the impacts of climate change
- Accelerate Council and the community's transition to net zero emissions.

The Traditional Custodians of our region have a long history of caring for country. They have shared stories of adapting to rising sea levels, building resilient communities, applying traditional science and Indigenous knowledge to fire management, revegetation and observing and monitoring species and ecosystems.

Today, our reef, rainforests and ecosystems are at greater risk than ever due to climate change impacts, exacerbated by urbanisation and population growth.

It is important that we take action now to minimise the impacts on our natural ecosystems to ensure that we and our future generations can continue to live, enjoy and care for the environment that we value and love.

## purpose

**The Cairns Climate Change Strategy 2030 sets out a pathway for Cairns Regional Council to achieve net zero emissions by 2030 and to support the climate aspirations of our community.**

The decade 2020-2030 is a critical one for climate action. The strategy sets out the actions we must take to achieve our climate goals, and to accelerate progress towards Queensland's target of reaching net zero emissions by 2050. Council has consulted with subject matter experts, community members, sector representatives and climate action advocates over a two-year period in the process of developing the Cairns Climate

Change Strategy 2030. We have hosted climate summits to listen to and inform the community, as well as workshops, surveys and internal audits.

What we have heard is that a strong majority of people in Cairns want Council to show leadership and action on climate change.

This strategy is our commitment to our community on climate action.

*My favourite place is North Queensland.  
It has, for a naturalist, everything. It has an amazing rainforest  
which is quite unlike any other rainforest in the world.  
Not only does it have that but down on  
the coast it has the Great Barrier Reef.*

Sir David Attenborough



# vision

**Council's vision for 2030 is to be a leader in mitigating and adapting to the impacts of climate change by:**

## Embedding climate change considerations throughout our organisation and operations

Cairns Regional Council will be a net zero emissions organisation and will build resilience of our infrastructure and assets and embed consideration of climate risk.

### Supporting a 'Smart Green Economy'

We will have a diversified economy with jobs in innovative, green sectors, powered by affordable, renewable energy that attracts industries and investment to Cairns and FNQ.

### Prioritising a healthy natural environment

We will work with nature, sequester carbon, and partner with Traditional Custodians to maintain a thriving and adaptive natural environment.

### Building resilient, informed, low emissions communities

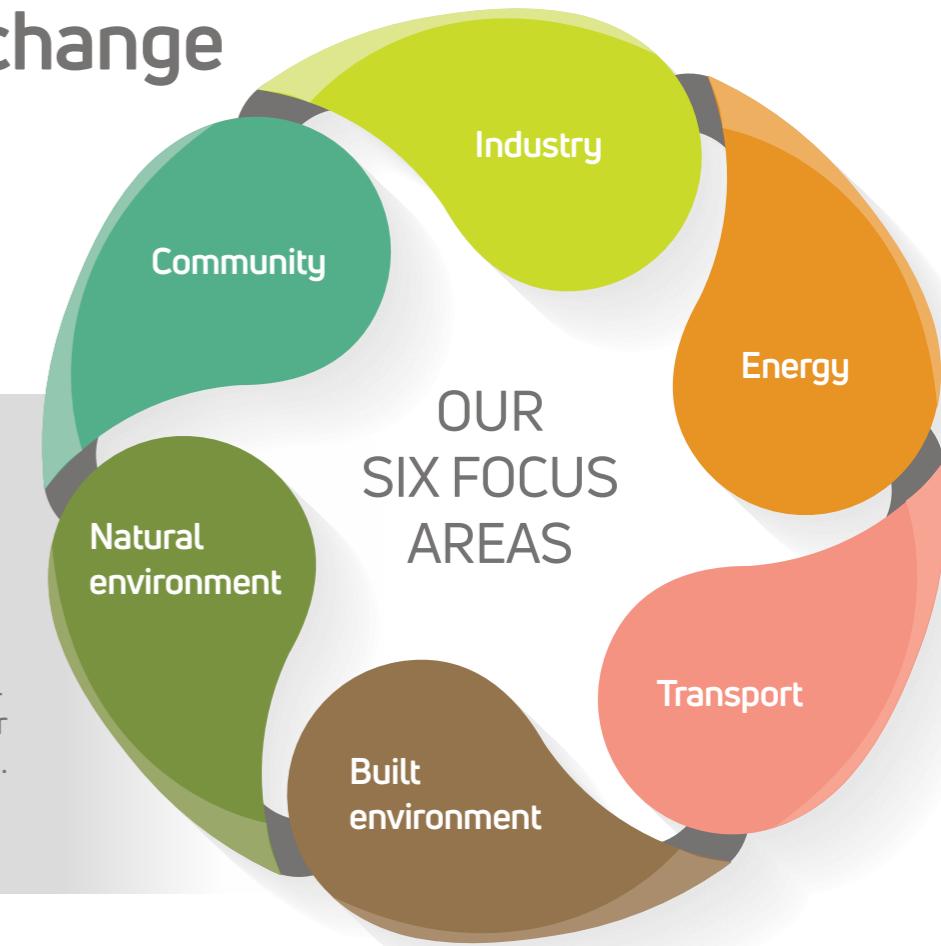
We will inform and support our communities to understand climate change risks and opportunities; be resilient; and actively create positive change.

## planning for change

We have identified six focus areas where the most significant gains can be made to mitigate greenhouse gas emissions in the Cairns region and assist the natural environment, our communities and our economy to adapt to climate change impacts.

This strategy sets out more than 100 actions over 6 focus areas.

These objectives and actions will form the basis of our planning for the next decade of climate action.



## our commitments

1

**NET ZERO EMISSIONS FOR COUNCIL OPERATIONS BY 2030**

2

**COUNCIL ELECTRICITY SUPPLIED FROM 100% RENEWABLE ENERGY**

3

**PREPARE COUNCIL AND THE COMMUNITY TO ADAPT AND PROSPER IN A CHANGING CLIMATE**

4

**SUPPORT COMMUNITY PROGRESS TOWARDS QUEENSLAND'S EMISSIONS REDUCTIONS TARGET OF 30% BELOW 2005 LEVELS BY 2030 AND NET ZERO EMISSIONS BY 2050**

# 1. context

## introduction

This is the critical decade for climate action.

In the past 22 years, we have experienced our warmest 20 years on record, Australian average temperatures are now 1.44°C higher than when national records began in 1910. Even with this modest rise in average temperature, we are feeling the effects of climate change, with erratic weather patterns including wildfires, heatwaves, flood, severe storms, drought and rising sea levels. This will only worsen if global warming intensifies. There is a global movement underway to reduce our emissions and address the impacts of climate change, to decarbonise our economies and move to cleaner energy sources.

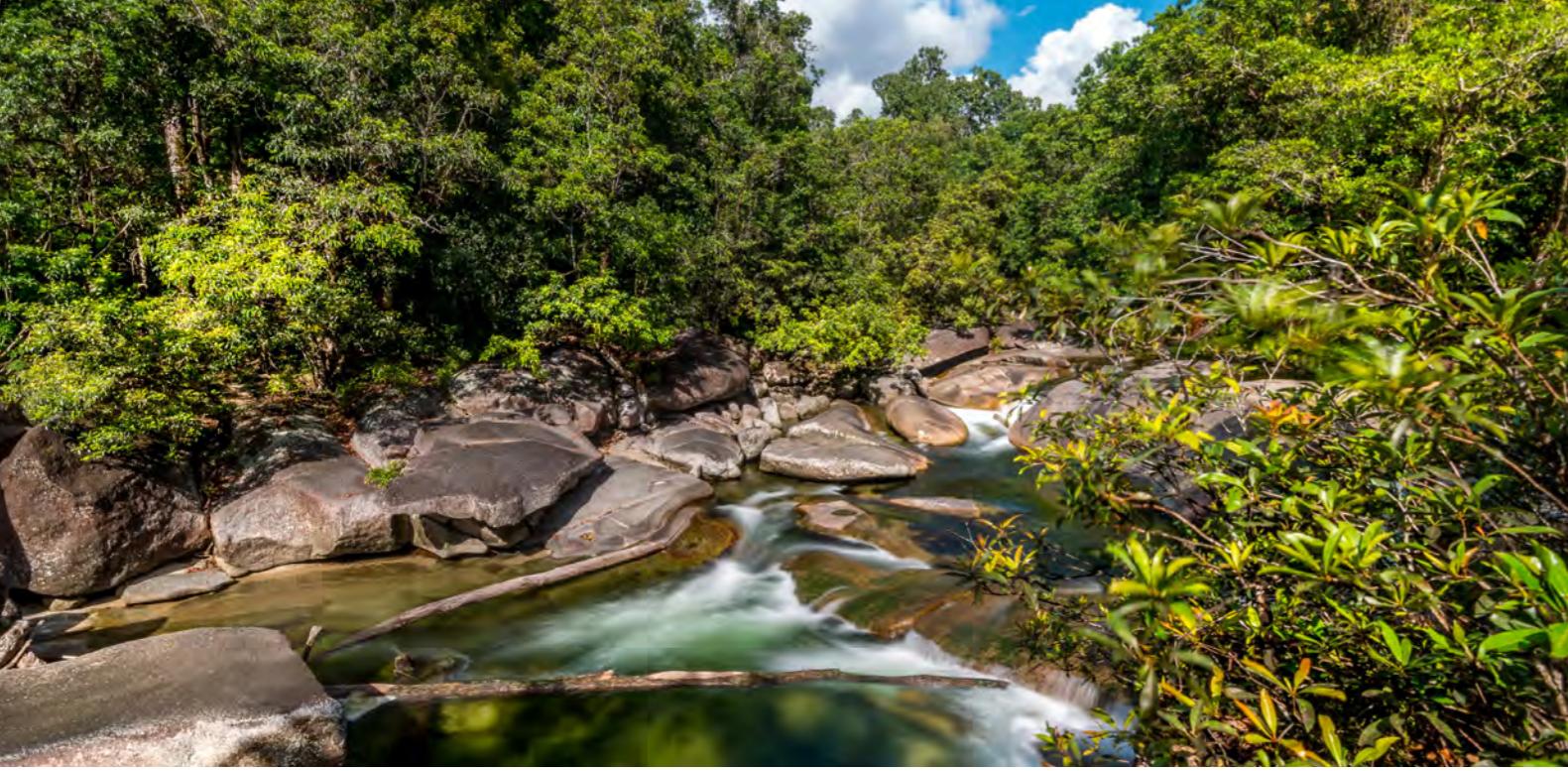
The Cairns region is particularly vulnerable to the impacts of climate change. Cairns Regional Council, in collaboration with local communities, Traditional Custodians, other levels of government and local industries, must take responsibility for addressing climate change to adapt to and mitigate the impacts of climate change and move to transition to a Smart Green Economy. The longer we wait, the more difficult and costly it will become.

As a region we are fortunate to be guardians of a unique natural environment and World Heritage-listed natural assets. With a passionate community, strong industry and a diverse economy, we are perfectly positioned to build environmental, social and economic resilience to the impacts of climate change and to harness the opportunities associated with the transition to a Smart Green Economy.



*The greatest threat to our planet is the belief that someone else will save it*

Robert Swan, Environmental leader, first person to walk both Poles



## climate change in cairns

The natural environment, particularly the two World Heritage Areas of the Great Barrier Reef and Wet Tropics Rainforest, have immeasurable intrinsic value. They are also the foundation of the region's prosperity.

Unfortunately, these areas of outstanding universal value are under increasing threat from climate change. As a result of climate change, land-based heatwaves are driving species to the brink, with many Wet Tropics species, such as Lemuroid

possum and Spectacled Flying Fox unable to withstand extreme heat.

Reef bleaching events are also becoming more frequent and severe due to rising sea temperatures and ocean heatwaves. The resulting impact on marine biodiversity and reef-tourism is well documented. Urgent action is required to address the impacts of climate change and improve the resilience of our local environment, community and economy.

Cairns is facing many climate-related risks in 2021, as well as opportunities.

### PHYSICAL RISKS

Physical climate change-related risks are caused by changes in the physical climate and include both increasing frequency and severity of extreme weather events (acute risks), and increasing intensity of continuous, on-going climate hazards (chronic risks).

#### PHYSICAL RISKS IN CAIRNS

- Higher temperatures
- More intense tropical cyclones
- Hotter and more frequent hot days
- Rising sea levels
- More intense downpours
- More frequent sea level extremes
- Warmer and more acidic seas

### TRANSITION RISKS

Climate change transition risks are caused by changes in the economy due to a transition (or a delayed transition) to a net zero emissions economy, and include community, policy and legal impacts, technology, market and reputation risks.

#### TRANSITION RISKS IN CAIRNS

- Technology disruption (e.g. renewables, EVs)
- Reputational risks (e.g. tourism)
- Speed of transition failing to keep pace with community expectations
- Policy uncertainty and associated investment hesitancy
- Insurance affordability and accessibility concerns
- Skills shortages

### OPPORTUNITIES

Climate change opportunities are created by the global transition to a net zero emissions economy and adaptation, including increased resilience, diversified energy sources, resource efficiency, access to new and emerging markets, and demand for low emissions products and services.

#### CLIMATE-RELATED OPPORTUNITIES IN CAIRNS

- Zero emissions transport
- Workforce opportunities
- Nature-based solutions
- Renewable electricity and hydrogen
- Green finance
- Energy, waste and water efficiency
- Increasing private and public sector investment in green economy initiatives
- Partnering with Traditional Custodians

If we don't protect our gorgeous natural environment then we lose the region's greatest asset and both our economy and health suffer. SURVEY RESPONDENT

## climate change is the greatest threat to the great barrier reef

The Great Barrier Reef Marine Park Authority (GBRMPA) is an Australian Government agency and the lead management agency for the Great Barrier Reef. According to GBRMPA, climate change is the greatest threat to the Reef, and emissions reductions are the strongest and fastest possible action to reduce these impacts to the reef.



# consultation & engagement

During two years of consultation and engagement, the community has been appealing to all levels of government and industry to take action to address climate change in our region. Over 88% of survey respondents in the Cairns community said they wanted Council to show leadership and action on climate change. Additionally, polls held at the Cairns Show and Ecofiesta, showed that 91% of respondents said they were concerned about the impacts of climate change on the Cairns Region.



Throughout the consultation and engagement process, Council spoke with and listened to subject matter experts, industry representatives, climate action advocates, community members, Traditional Custodians, youth representatives and researchers in the tertiary sector.

## COMMIT & GET READY

**NOV 2019** Cairns Youth Climate Summit #1 (35 students from 15 schools)

**AUG - OCT 2020** Our Cairns Community and Youth surveys (8065 respondents)

**NOV 2020** Clean Jobs Forum (60 attendees)

**2021** In-house engagement with subject matter experts and elected representatives

**MAY 2021** Community and Industry Workshops (130 engaged in 11 sector-based workshops)

**MAY - JUN 2021** Community Climate Change Survey (571 respondents)

**2021** Cairns Ecofiesta and Cairns Show (1402 people engaged)

## COLLECT INPUTS AND SHAPE THE STRATEGY

## OBTAIN FEEDBACK, VALIDATE AND REFINE

**SEPT 2021** Cairns Youth Climate Summit # 2 (30 students, 16 schools)

**SEPT 2021** Community and Industry Climate Summit (~60 people)

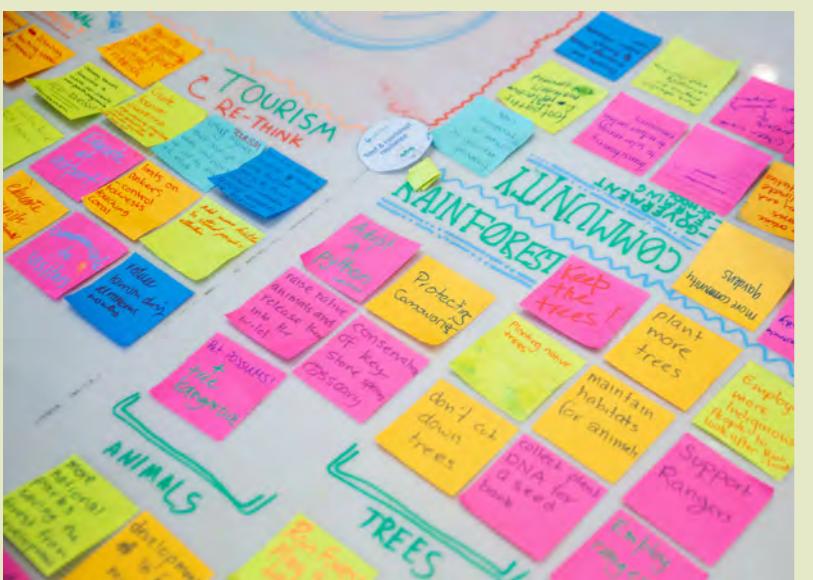
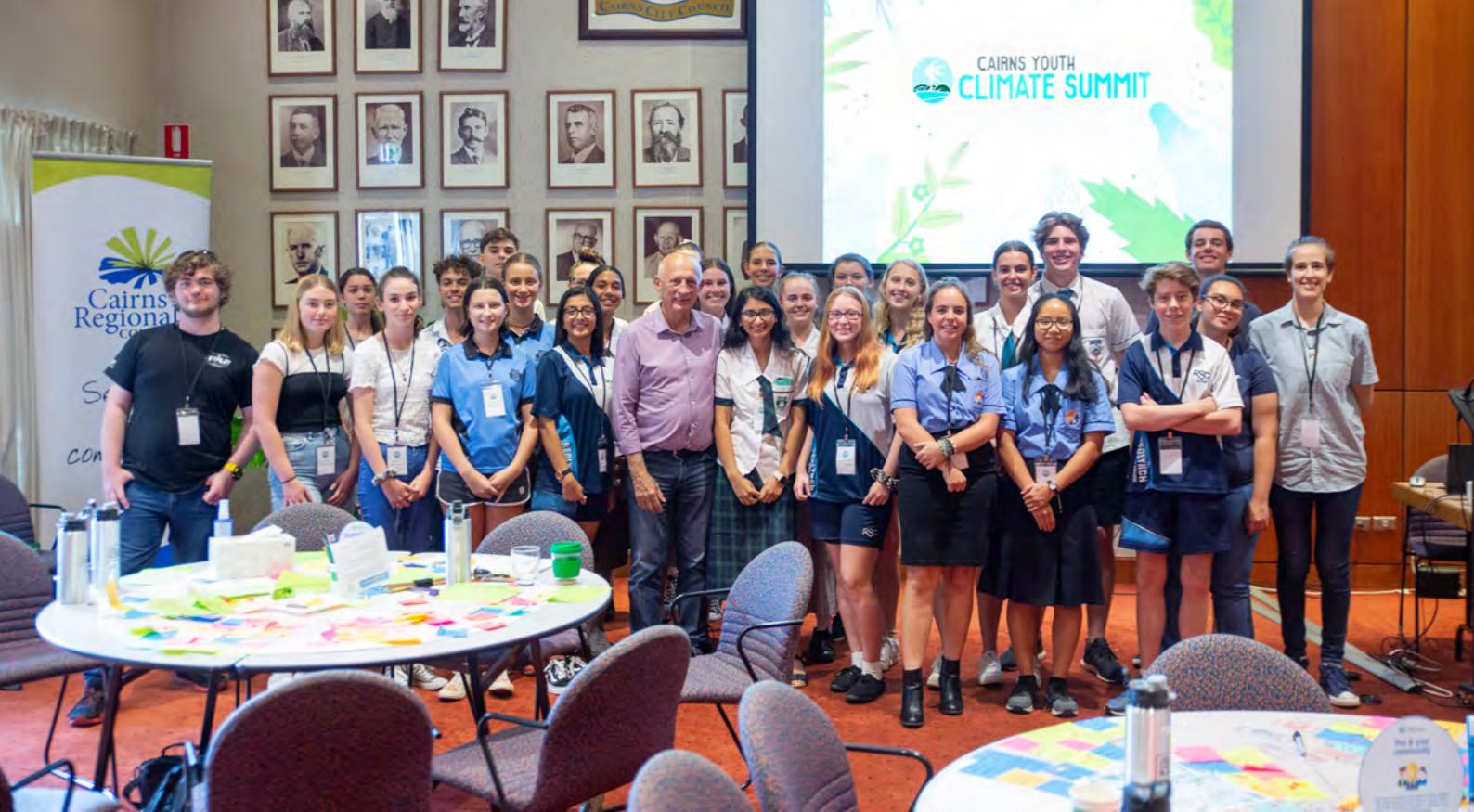
**SEPT 2021** Climate Change Public Forum (~50 people)

**DEC 2021 - JAN 2022** Draft Strategy community review



**88%** OF RESIDENTS WHO COMPLETED THE OUR CAIRNS SURVEY...  
WANT COUNCIL TO SHOW LEADERSHIP AND ACTION ON CLIMATE CHANGE





## youth climate summits

Through two Youth Climate Summits in 2019 and 2021, the young people of Cairns highlighted the need for action and showed a strong desire to contribute to the solutions. As these students graduate and enter the workforce, they will lead, take their own climate action and better our communities to the year 2030. Their ideas and passion can inspire us to build a better future for our community so we can, in their words... ‘Let future generations live in a beautiful world’.

### YOUTH CLIMATE CHANGE ASPIRATION

*Our hope is that by 2030 Cairns will be a place where everyone feels empowered, fuelled with passion and moving forward with obligation. Amid this global crisis, we will be the light in the dark, leading by example, as we transition to a more sustainable and climate-conscious future.*

*Climate action must begin with our own mindsets. How can we progress if what we do and say contradict? Without community, any individual effort will be futile.*

*We hope to see Council transition to 100% renewable energy by 2030 and implement an effective education system that ensures that climate-awareness is not disproportionate in our society.*

*We are all responsible, but we can all be part of the solution.*

*Let's work together to build Cairns into a city of the present, driven by the future, using knowledge of the past.*

*Let future generations live in a beautiful world.*



## climate action 101

The following terms are used throughout this document:

**Baseline and target years:** For this Climate Strategy, the 2018 baseline year refers to 2018/19, or the period 1 July 2018 to 30 June 2019 and the target year of 2030 refers to 2030/31, or the period 1 July 2030 to 30 June 2031.

**Carbon offsets and sequestration:**

Carbon offsetting means using processes that reduce greenhouse gases already in the atmosphere, such as planting trees and increasing soil carbon. This reduction is known as carbon sequestration.

**Climate Active:** Australia’s certification process for businesses and organisations that have made net zero emissions (carbon neutral) commitments. The Climate Active

means reducing emissions as far as possible and balancing remaining emissions by offsetting carbon. We need to get as close as possible to a real zero and only rely on offsetting as the final step in the path to net zero.

**Path to net zero:** a term used to describe how an organisation will transition to net zero emissions. The path typically consists of a staged approach of managing fugitive emissions, switching to electricity from 100% renewable energy, electrifying vehicles, machinery and tools that previously ran on fossil fuels, purchasing carbon neutral products and services to reduce scope 3 emissions and finally, offsetting any remaining emissions with high integrity carbon credits.



### SCOPE 1 EMISSIONS

Emissions as a direct result of an activity such as fossil fuel combustion in vehicles



### SCOPE 2 EMISSIONS

Emissions from the indirect consumption of an energy commodity such as purchased electricity



### SCOPE 3 EMISSIONS

Indirect emissions that are generated in the wider economy, such as the production and transport of goods and services

## CAIRNS REGIONAL COUNCIL – OPERATIONAL AND COMMUNITY TARGETS

A target of net zero emissions by 2030 for Council's own operations is underpinned by reducing Council consumption of electricity and fuel, as well as reducing supply chain emissions. Our net zero emissions target also sends a strong policy signal that Cairns is making an active transition to a net zero emissions economy.

- However, most of the region's emissions (~98%) comes from electricity and fuel consumption in the residential, commercial and industrial sectors.

Council alone does not have the control or resources to directly influence community electricity use (~65% of the region's emissions) or transport decisions (~29% of the region's emissions). However, Council plays an important role in the delivery of local emissions reduction initiatives that help the community to reduce emissions across residential, commercial and industrial sectors. This helps to strongly position the community in a changing climate and economy, as we progress to state targets of 30% emissions reduction by 2030 and net zero emissions by 2050.

## SUSTAINABLE DEVELOPMENT GOALS

Council recognises the United Nations' Sustainable Development Goals (SDGs), which provide a framework in which to drive development in an environmentally, socially and economically responsible manner. Emissions reduction and climate change adaptation contributes to a number of sustainable development goals.

- Affordable and clean energy (SDG7)
- Decent work and economic growth (SDG 8)
- Industry, innovation and infrastructure (SDG9)
- Sustainable cities and communities (SDG11)
- Responsible consumption and production (SDG 12)
- Climate action (SDG13)
- Life below water (SDG14)
- Life on land (SDG15)

## GLOBAL EMISSIONS REDUCTION TARGET

The Paris Climate Agreement sets a global goal of net zero emissions no later than 2050. As part of international agreements, some countries have committed to earlier targets and investments to curb emissions. Regions with high exposure and vulnerability to climate risks, such as Far North Queensland, should consider the social and economic impacts of delayed emissions reductions, as well as the advantages of a proactive economic transition prior to 2050.

## AUSTRALIA'S EMISSION REDUCTION TARGETS

As a signatory to the Paris Climate Agreement, Australia has committed to reducing emissions by between 26% and 28% below 2005 levels by 2030. In 2021 at the UN Climate Change Conference (COP26) in Glasgow, the Federal Government announced a target of net zero emissions for Australia by 2050.

## QUEENSLAND EMISSION REDUCTION TARGETS

Queensland's climate targets and programs are critical in driving the investment and action needed to transition Queensland's economy to a zero emissions future. As outlined in the Climate Action Plan 2030, Queensland has set targets of:

- 50% renewable energy by 2030
- 30% emission reduction below 2005 levels by 2030
- Net zero emissions by 2050

These targets are being advanced by:

- Queensland Climate Transition Strategy
- Queensland Climate Adaptation Strategy
- CleanCo, the QLD Government Owned Corporation established to drive sector investment and pathways for QLD corporations and councils to power their businesses with 100% renewable energy.

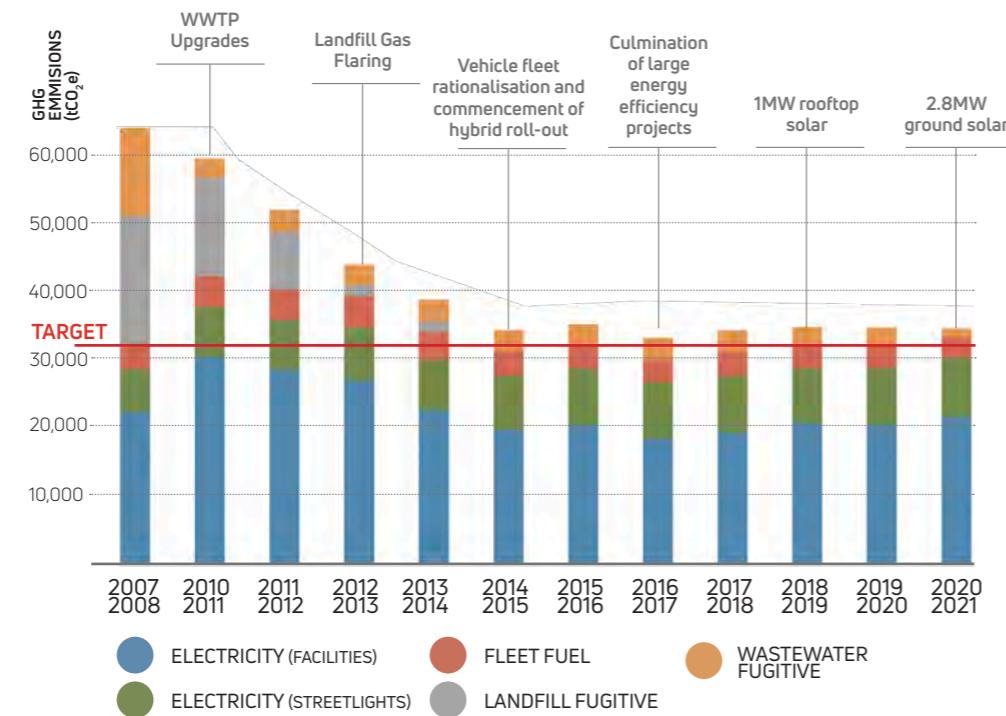
# the policy landscape

The State Government's targets and investment in renewable energy projects facilitates Council's uptake of renewable energy, a major pillar in our net zero emissions journey.

## 2. towards net zero emissions

### COUNCIL'S SCOPE 1 AND 2 EMISSIONS REDUCTION TO 2020

Between 2010 and 2020 Council reduced its greenhouse gas emissions by 46% through a raft of measures including: wastewater treatment plant (WWTP) upgrades, landfill gas management, 2.8 megawatts of solar installations, fleet optimisation including the rollout of hybrid cars extensive energy management program for facilities and infrastructure. During that time, progress was tracked in accordance with the National Greenhouse Energy Reporting Scheme, which only accounted for Scope 1 and Scope 2 emissions.



### COUNCIL'S EMISSIONS

5%

#### Scope 1 Emissions

- Landfill Gas
- Wastewater Gas
- Vehicle and Machinery Fuels

15%

#### Scope 2 Emissions

- Grid sourced electricity generated from coal and gas

80%

#### Scope 3 Emissions

- Embody emissions associated with:
- Purchased goods
- Waste processing
- Construction
- Leased facilities

### looking forward

Looking to the next decade of emissions reduction, Council is following the Climate Active process, which requires Scope 3 emissions to be included in the journey to net zero. By including emissions from purchased goods, construction, leased facilities and waste processing Council recognises the full scope of emissions to deliver its services to the community. Reaching net zero is a much greater challenge with the inclusion of Scope 3 emissions, but it is a more accurate reflection of Council's true emissions profile. The inclusion also creates significant opportunity to green Council's supply chain, influence local markets and accelerate the transition to a zero emissions economy in our region.

### COUNCIL'S PATHWAY TO NET ZERO

2022

Annual surrender of Australian Carbon Credit Units from landfill gas flaring

Energy efficiency

100% renewable electricity

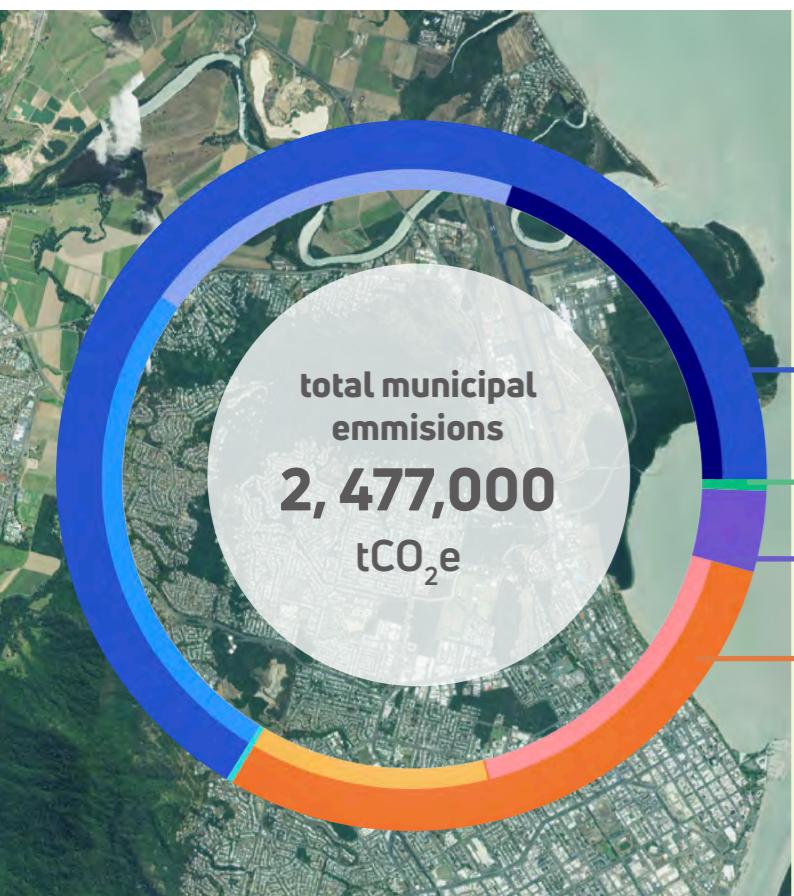
Pilot fleet electrification for vehicle categories

Embed Scope 3 emissions reduction into decision making

Staged implementation of Scope 3 offsetting via Australian Carbon Credit Units

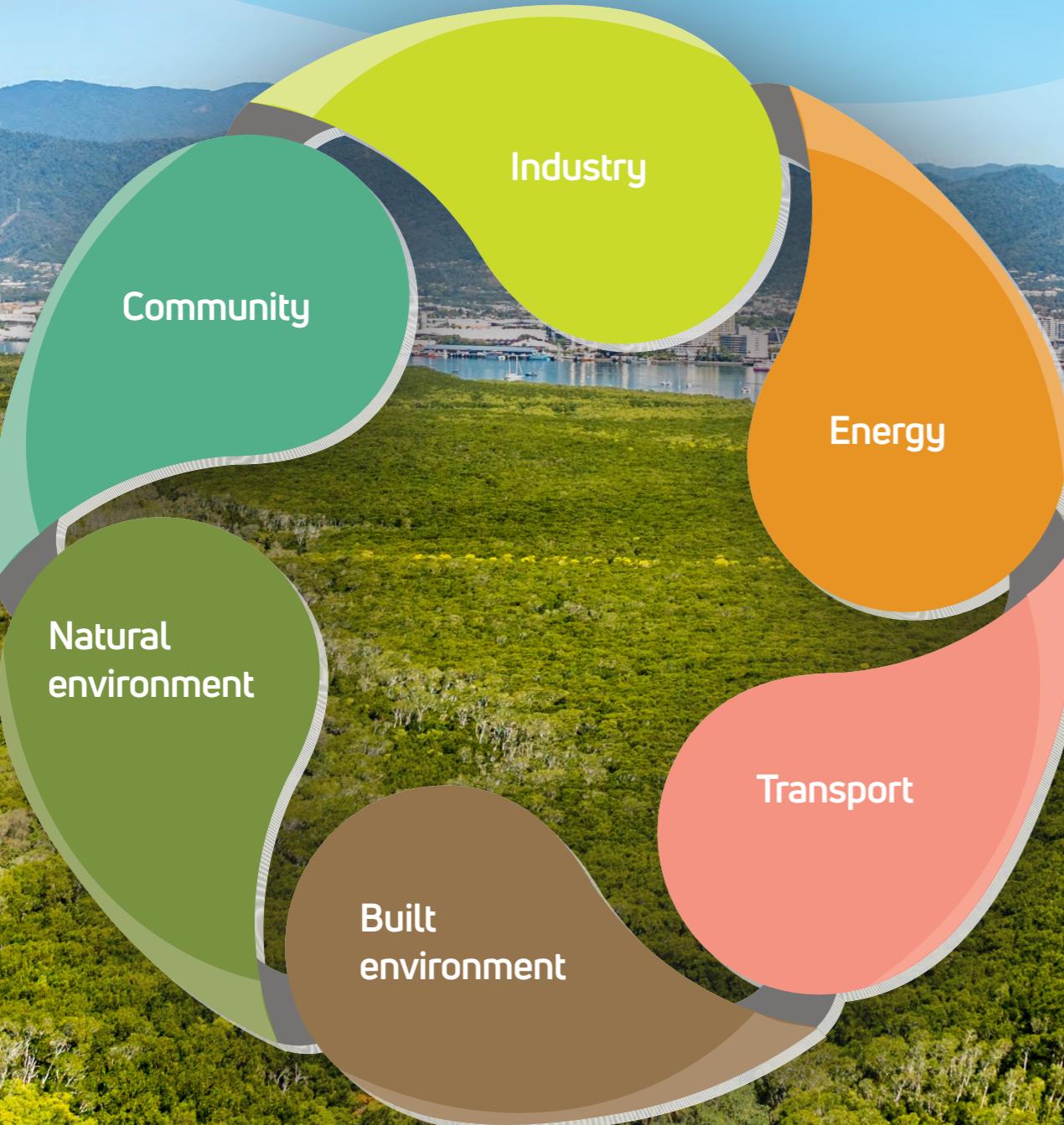
2030

Net Zero emissions and climate active certification



### 3. climate change objectives

Our six focus areas for climate action in the Cairns local government area are: community, industry, energy, transport, built environment and natural environment.



# community

Community refers to the individuals and groups within the Cairns Local Government Area



The community of the Cairns region is concerned about the impacts of climate change on their family, the environment and their work. The community also want Council to lead by example and take strong action on climate change.

Council's commitment to the community is to deliver local initiatives that accelerate our regions progress towards State government targets while simultaneously working to strengthen the resilience of vulnerable communities, ensuring they are not disproportionately impacted by climate change risks / impacts.

*A community that is proud of its city's action on climate change, informed about risks and actively engaged in supporting their homes, natural environment - with opportunities for clean jobs* – SURVEY RESPONDENT

## Community focused initiatives include:

- Community Sustainability Grants
- Nature-based Learning Grants
- Workplace Giving Program for Cairns
- Turtle Rehabilitation Centre
- Plastic Free Cairns
- Great Northern Clean Up
- Cairns EcoFiesta
- Sustainable House Day
- Tropical Tree Day
- Green Space Our Place
- Walking and cycling infrastructure
- Public place recycling



## community objectives & actions

Objective	Success looks like	Actions to achieve success
Progressing to net zero emissions communities	Accelerated community progress towards Queensland's emissions reductions target of 30% reduction by 2030 and net zero emissions by 2050	<ul style="list-style-type: none"><li>• Develop an emission inventory for the Cairns local government area</li><li>• Collaborate with climate action stakeholders to deliver targeted community emission reduction education, resources and initiatives</li><li>• Encourage uptake of locally produced goods and services</li><li>• Support community emission reduction initiatives through grants and events</li><li>• Advocate for State and Federal support for local climate action</li></ul>
Climate resilient communities	A community that is resilient to the physical, transition, social and economic impacts of climate change	<ul style="list-style-type: none"><li>• Identify acute shocks and long-term stressors of climate change and plan and empower Council and the community to address these</li><li>• Implement the Local Disaster Management Plan and raise awareness through disaster management programs and initiatives</li><li>• Develop a social resilience strategy and collaborate to address social impacts of climate change</li><li>• Build resilience of food supply system through initiatives to strengthen local food supply chains and improve food security</li><li>• Deliver education and engagement to identify and address climate risk and build resilience e.g. citizen science</li><li>• Support and establish partnerships with communities to be connected, adaptive and resilient to the impacts of climate change</li></ul>
	A collaborative approach to empower community groups to plan for and address climate change	<ul style="list-style-type: none"><li>• Strengthen networks to develop collaborative solutions for climate resilience</li><li>• Involve traditional custodians and value their expertise and input</li><li>• Involve youth in climate change planning, education and action</li></ul>
	Understand and addressing the local health impacts of climate change	<ul style="list-style-type: none"><li>• Collaborate with the health sector on research, education and emergency response to better understand and address health impacts of climate change in the Cairns region</li><li>• Develop a heatwave action plan in collaboration with partners</li></ul>
We will measure our success through:	<ul style="list-style-type: none"><li>• Municipal emissions snapshot</li><li>• # of sustainability grant projects with a climate action focus</li><li>• # of workshops or engagement events</li></ul>	

# industry



## All sectors of the economy produce

emissions and are vulnerable to climate change disruption, from service industries, including tourism, health, retail and education, to manufacturing and construction.

Industry accounts for 45% of the region's electricity related emissions.

In capitalising on the opportunity to work together to innovate and reduce emissions, Cairns can position itself as a leader in the Smart Green Economy, creating jobs of the future while improving resilience. Carbon neutral products and services, tropical expertise, environmental resilience,

renewable energy and low emissions transport will all make Cairns an attractive region for innovation, investment and tourism.

In addition to reducing emissions, industries will need to address climate change risks and opportunities to improve their resilience. Potential risks from climate disruption can be mitigated by planning for contingencies such as increasing input costs related to technology changes, fragmented supply chains due to severe weather events, and health and safety concerns.

Industry refers to all sectors of the economy, from small to large businesses in the region



## CASE STUDY: Supporting a smart green economy

Wedged between the blue of the GBR and the green of the Wet Tropics Rainforest, Cairns businesses have a competitive advantage when it comes to environmental authenticity. Through its economic development program Council supports existing business and industry sectors to maximise these advantages while also attracting new investment into the region

## industry objectives & actions

Objective	Success looks like	Actions to achieve success
Transition to net zero emissions communities	A green Council supply chain and a reduction of our scope 3 emissions profile	<ul style="list-style-type: none"> <li>Develop and regularly update a Scope 3 emissions inventory for Council operations</li> <li>Embed emissions considerations into Council procurement and decision making and develop a sustainable procurement policy</li> <li>Work with local suppliers to measure and manage embodied emissions from their products, services and supply chains</li> <li>Advocate for support to assist business and suppliers to accelerate transition to a net zero emissions economy</li> </ul>
Accelerated industry progress towards Queensland's emissions reductions target of 30% reduction by 2030 and net zero emissions by 2050		<ul style="list-style-type: none"> <li>Collaborate with industry sectors to deliver targeted industry emission reduction resources and initiatives.</li> <li>Advocate for State and Federal support for local business climate transition.</li> </ul>
Recognise and respond to climate risks and opportunities	Industry is supported to identify and respond to the physical, transition and economic risks of climate change	<ul style="list-style-type: none"> <li>Work with local industry to identify and address climate risks and opportunities</li> <li>Support business resilience planning and promote resources and tools</li> <li>Collaborate on a local climate resilience network</li> </ul>
A leading Smart Green Economy	Position Cairns and Far North Queensland as a leader in the Smart Green Economy	<ul style="list-style-type: none"> <li>Deliver Smart Green Economy (SGE) strategic planning study</li> <li>Conduct situational and economic analysis of the green economy sector</li> <li>Develop a Smart Green investment prospectus</li> <li>Develop a sustainability charter in collaboration with business and industry</li> <li>Collaborate with key stakeholders to identify and progress Smart Green opportunities</li> <li>Advocate for business programs and financial support to transition to a SGE</li> </ul>
Circular economy principles embedded within Council's operations and support wider adoption in community and industry		<ul style="list-style-type: none"> <li>Continue to implement Council's Waste and Resource Recovery Strategy</li> <li>Investigate circular economy opportunities and new technologies for council operations and municipal streams</li> <li>Embed circular economy considerations into Council procurement and decision making</li> <li>Advocate and provide education and guidance for businesses</li> </ul>
We will measure our success through:	<ul style="list-style-type: none"> <li>Municipal emissions snapshot</li> <li>Circular projects from Council's waste streams</li> <li>Gross value added of Smart Green Economy sector</li> </ul>	<ul style="list-style-type: none"> <li>Value of SGE sector</li> </ul>

*Cairns should be strongly advocating for green and circular economic structural change in order to address Climate Change – SURVEY RESPONDENT*

# energy

Energy is the supply of electricity and fuels to power our homes and businesses. We are excluding transport fuels, which are addressed in their own focus area.

Energy underpins economic activity and represents a significant component of operational costs for businesses and households. A rapid transition to renewable energy is underway in the Cairns region and is accelerated by Queensland's Northern Renewable Energy Zone.

With electricity consumption accounting for 66% of the region's total emissions in 2019, Council is taking the lead in this focus area by committing to 100% renewable electricity supply for its operations and continually driving-down its energy demand through efficiency measures and energy management.

**Cairns needs to engage and be on the front foot of the renewable energy process in order to attract new business, employment and sustainable and renewable energy projects and initiatives**

—SURVEY RESPONDENT



## CASE STUDY: Renewable Energy

In 2021 Council switched on 1.8 megawatts of ground-mounted solar at five wastewater treatment plants, adding to the 1.2 megawatt of rooftop solar already in operation. Each year Council's 3 megawatts of solar generates over 4.5 gigawatt hours of renewable energy and reduces emissions by 3,600 tonnes of CO<sub>2</sub>(e).

## energy objectives & actions

Objective	Success looks like	Actions to achieve success
<b>Improve energy efficiency and transition to renewable energy</b>	<b>Best practice energy efficiency of Council facilities</b>	<ul style="list-style-type: none"><li>Support Asset Managers to monitor, manage and report facility energy consumption</li><li>Apply best practice control of buildings and facilities</li><li>Apply Minimum Energy Performance Standards (MEPS) to all Council assets in delivery of capital projects, renewals, and maintenance</li><li>Implement a LED bulk replacement program for streetlights</li></ul>
	<b>Lead by example to source Council's energy from 100% renewable sources</b>	<ul style="list-style-type: none"><li>Continue to install behind the meter solar PV where feasible</li><li>Purchase electricity via a Renewable Power Purchase Agreement</li><li>Consider alternative renewable energy supply options at Council facilities</li><li>Maximise utilisation of renewable energy by deploying operational changes, smart controls, and storage technologies where feasible</li><li>Electrify fuel consuming equipment where feasible</li></ul>
	<b>Community and businesses are supported to improve energy efficiency and uptake of renewable energy in the region</b>	<ul style="list-style-type: none"><li>Deliver community, business and school resources, education and programs</li><li>Support programs to encourage adoption of energy efficiency measures and renewable energy</li><li>Support community and business advocacy for transition to renewables</li></ul>
	<b>All levels of government and the energy industry are working together to accelerate transition to renewable energy in region</b>	<ul style="list-style-type: none"><li>Advocate to ensure renewable energy developments in the region deliver local benefits and minimise local environmental impacts.</li><li>Partner with government and the energy industry to support integration of new technologies (e.g. battery storage) into the electricity network to complement renewables, and improve reliability</li><li>Support and participate in relevant State and Federal Government programs</li><li>Participate in Ergon Energy's network planning consultation</li><li>Support consumer advocacy groups to advocate for affordable and reliable energy supply</li></ul>
<b>We will measure our success through:</b>		<ul style="list-style-type: none"><li>Council's total annual electricity consumption (kWh)</li><li>% of Council annual electricity use supplied from renewable sources</li><li>% of Ergon community and business customers with solar installed</li></ul>

# transport

Transport refers to the movement of goods and people from one place to the next and includes all modes and associated infrastructure as well as public, shared and active travel.



Transport is third largest source of emissions in Australia, and the fastest growing. While transport emissions are rising due to population and economic growth in Cairns, the transport sector offers some of the most achievable emissions reduction opportunities.

Transport emissions (i.e. from fuel consumption) accounts for 9% of Council's operational emissions (scope 1&2) and approximately 29% of community emissions in 2019.

Accelerating transition to net zero emissions in the transport sector requires a collaborative effort to build the right infrastructure at the right time, switch to vehicles powered by renewable energy and increase the usage of public, shared and active transport options.

Improving climate resilience of transport also creates socio-economic and environmental benefits, allowing our communities to be more connected and move more efficiently.

## transport objectives & actions

Objective	Success looks like	Actions to achieve success
<b>Accelerate transition to zero emissions transport</b>	Lead by example to deliver low and zero emissions transport options for Council operations	<ul style="list-style-type: none"> <li>Develop a Green Mobility Strategy for Council to deliver low/zero emissions vehicles and alternative mobility options</li> <li>Improve coordination of service delivery through data and navigation systems to improve efficiency of vehicle-based operations</li> <li>Deliver staff behaviour change initiatives and facilities to encourage use of active, public, shared and electric transport</li> </ul>
	Facilitate community and industry uptake of electric vehicles powered by renewables	<ul style="list-style-type: none"> <li>Collaborate to plan for public charging infrastructure and parking for electric vehicles (EV's)</li> <li>Support initiatives to increase EV availability and affordability</li> </ul>
	Increase uptake of public, shared and active transport	<ul style="list-style-type: none"> <li>Work with stakeholders to encourage uptake of low emissions transport</li> <li>Support active transport through events, incentives and targeted activation initiatives</li> <li>Encourage provision of end-of-trip facilities</li> <li>Support uptake through appropriate planning mechanisms</li> <li>Improve comfort and safety of active and public transport users by planting shade trees, providing shelter, use of cool surfaces and considering crime prevention through environmental design (CPTED).</li> </ul>
<b>An integrated and sustainable regional transport network</b>	Advocacy and collaboration with key internal and external stakeholders to deliver an integrated sustainable regional transport network that is resilient to climate impacts	<ul style="list-style-type: none"> <li>Partner with key stakeholders to develop an Integrated Transport Strategy including considerations of mobility</li> <li>Advocate for sustainable transport options</li> </ul>
	Improve public and active transport infrastructure, connectivity, safety and accessibility	<ul style="list-style-type: none"> <li>Partner with key stakeholders to deliver infrastructure and services that improve connectivity of active and public transport methods</li> <li>Implement Council's Active Travel Strategy</li> <li>Consider transport oriented design in appropriate locations in future planning</li> </ul>
<b>We will measure our success through:</b>		<ul style="list-style-type: none"> <li>Total annual fuel consumption (ULP and diesel) by Council</li> <li>Percentage of hybrid and electric vehicles in Council's vehicle fleet</li> </ul>

### CASE STUDY: Fuelling Change

Council's fuel use fell by 36% between 2010 and 2020, an annual emissions reduction of 1,481 tonnes CO2(e). Hybrid passenger vehicles, fleet rationalisation and GPS monitoring were significant contributors to these outcomes.



# built environment



The built environment refers to all public and private buildings, urban spaces and infrastructure, including above and below-ground services.

**M**uch of Cairns' built environment is exposed to the physical impacts of climate change. These risks include sea level rise and increased temperatures, as well as the acute impacts of extreme weather events such as cyclones.

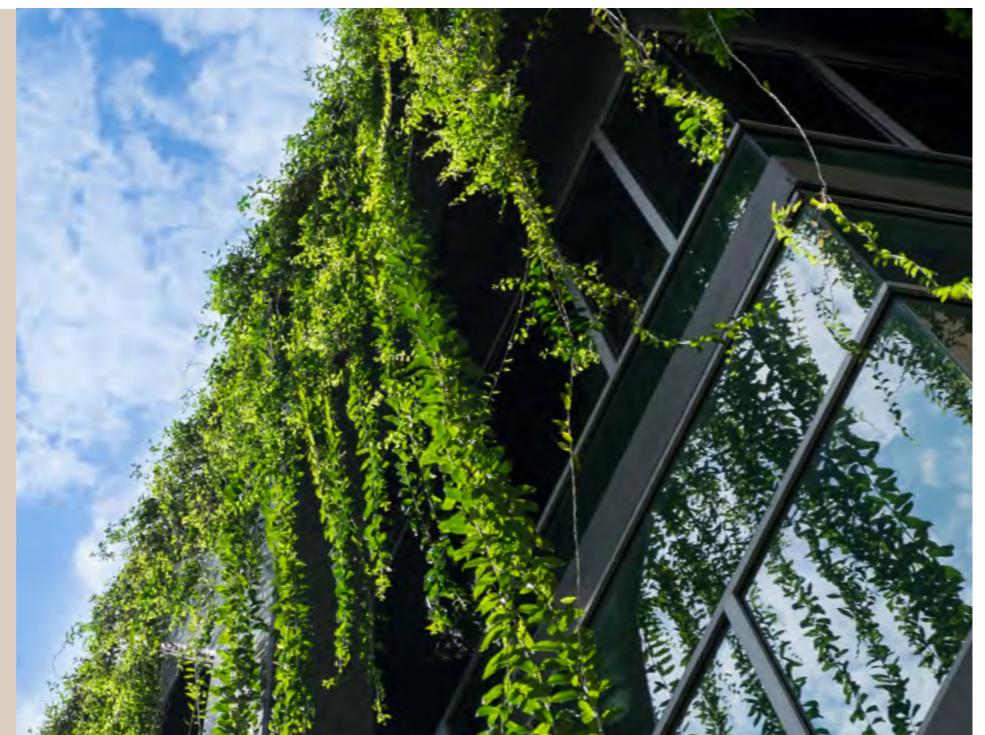
Reducing emissions in the built environment can be addressed by reducing embodied emissions in construction materials such as steel, bitumen and concrete, as well as the energy related emissions associated with powering our homes, businesses and community infrastructure.

Through urban and tropical building design and greening, there is great potential for improving energy efficiency and encourage active transport. Climate-responsive planning and development also helps us to improve the resilience of our cities and suburbs to the physical risks of climate hazards.

*Built environment needs to respond to climate, but also needs of population: being easily accessible to main centres while also responding to natural environments. – WORKSHOP PARTICIPANT*

## CASE STUDY: Tropical Urbanism

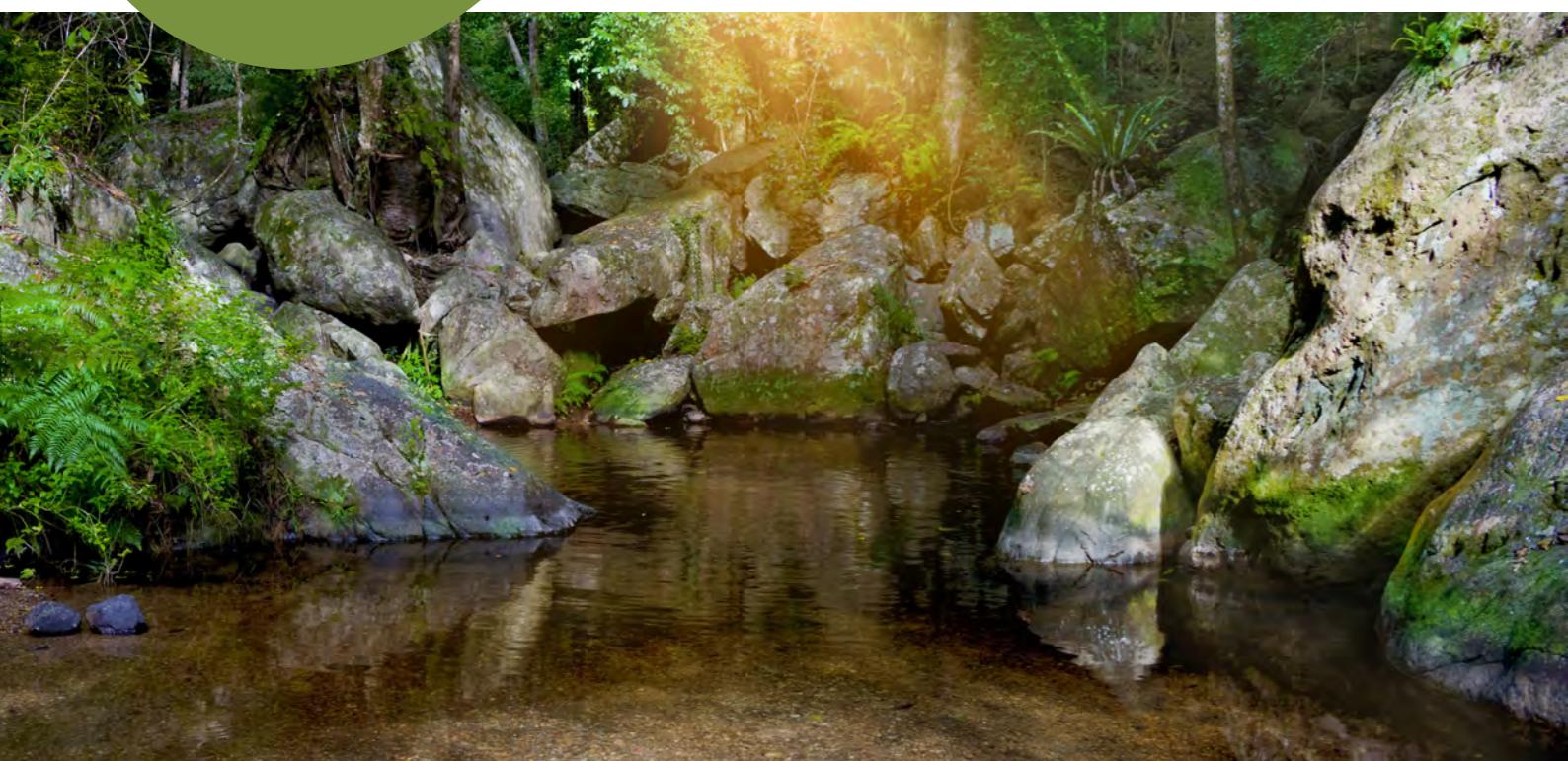
Tropical urbanism is the integration of landscaping and tropical design elements into the built environment. In place since 2016, Council's Tropical Urbanism policy seeks to ensure that development is locally appropriate and responds to the tropical climate and identity of Cairns. The policy encourages designs that better reflect the sense of place and Biophilia, or connection with nature, which can energise residents and the experience of tourists visiting Cairns' unique tropical



## built environment objectives & actions

Objective	Success looks like	Actions to achieve success
<b>Accelerate transition to a net zero built environment</b>	<b>Low and zero emissions Council buildings and infrastructure</b>	<ul style="list-style-type: none"> <li>Apply environmentally sustainable design principles to Council facilities</li> <li>Apply best practice energy efficiency standards to Council built assets</li> <li>Utilise low emission construction materials through sustainable procurement</li> <li>Investigate benefits of light-coloured roofs and roads to reduce urban heat island impacts and improve efficiency</li> </ul>
	<b>Community and industry are supported to reduce emissions from housing and development</b>	<ul style="list-style-type: none"> <li>Progress implementation to support sustainable buildings and housing e.g. Sustainable House Day, Cool Homes Guide</li> <li>Collaborate to provide information on low emissions building materials and methods</li> </ul>
	<b>Improved design standards, codes and other support for low / zero emissions and climate resilient buildings and infrastructure</b>	<ul style="list-style-type: none"> <li>Provide input into national, state and regional policy and planning instruments</li> </ul>
<b>A climate resilient built environment</b>	<b>Council assets and infrastructure are resilient to extreme weather events and the expected impacts of climate change</b>	<ul style="list-style-type: none"> <li>Deliver Our Cairns Coast Strategy</li> <li>Conduct a risk assessment of Council's exposure to physical climate change risks</li> <li>Plan for and deliver climate resilient assets and services</li> </ul>
	<b>Climate risk considerations are incorporated into planning, development and management of new and existing buildings, streetscapes and urban spaces</b>	<ul style="list-style-type: none"> <li>Consider climate change risks as part of the preparation of Council's new planning scheme and master planning</li> <li>Identify and address urban heat affects to cool our cities and suburbs</li> <li>Implement tropical urbanism policy and prepare other guidance and initiatives to build resilience</li> <li>Advocate for climate risk support at a regional, state and federal level</li> </ul>
	<b>Working with nature to protect and restore our city and suburbs</b>	<ul style="list-style-type: none"> <li>Develop a strategic approach to urban greening and increase city and suburb canopy cover</li> <li>Develop policy and guidance on nature-based solutions to address climate hazards such as sea level rise, storm surge, flooding, erosion, heat and fire.</li> <li>Develop integrated catchment management plans</li> <li>Build resilience into city and suburbs through water sensitive urban design</li> <li>Identify biodiversity corridors and connect and incorporate these into planning for future growth</li> </ul>
<b>Plan for sustainable growth</b>	<b>Climate risks are managed through planning for future growth</b>	<ul style="list-style-type: none"> <li>Deliver Towards 2050 Growth Strategy that supports the sustainable growth of the Cairns region in a way that builds resilience to the long-term impacts of Climate change.</li> <li>Take an all-hazards approach to growth and land use planning for a resilient built environment</li> </ul>
	<b>Critical infrastructure is efficient, sustainable and meets the needs of a growing population while minimising the impact on or enhancing our natural environment</b>	<ul style="list-style-type: none"> <li>Deliver Water Security Strategy and demand management initiatives to reduce water use.</li> <li>Deliver Waste and Resource Recovery Strategy</li> <li>Plan and deliver infrastructure that reduces emissions and demand on our natural resources</li> </ul>
<b>We will measure our success through:</b>	<ul style="list-style-type: none"> <li>% change in energy use of Council's top 10 energy consuming buildings and infrastructure</li> <li>% of canopy cover in CBD and suburbs</li> </ul>	

# natural environment



Cairns' natural environment is under increasing pressure from climate change, prevalent impacts in recent history being more frequent and severe reef bleaching events from increased temperatures and heatwaves.

The natural environment, as a carbon sink, is an important resource in achieving net zero emissions. There are growing opportunities in the carbon market through the generation of Australian Carbon Credit Units from agriculture, vegetation and fire management.

Local offsets can improve resilience and accelerate opportunities for restoration and sustainable land management.

We can improve our resilience to climate change by enhancing the health of our natural environment and minimising the impacts of our lifestyle and resource use on our ecosystems. As well as improving biodiversity, maintaining healthy natural environments can increase opportunities for carbon sequestration.

## CASE STUDY: Reef, rainforest & healthy waterways

The Cairns region is globally renowned for its two remarkable world heritage areas, the Great Barrier Reef and the Wet Tropics Rainforest. Council helps to ensure the resilience of these natural assets by taking strong action on

emissions reduction, supporting healthy catchments and reducing the impacts of human activity. Council is an active member of the Wet Tropics Waterways Partnership. The Partnership, comprises more than 50 organisations, aims to improve the condition of freshwater and estuary waterways that flow into the Great Barrier Reef. An initiative of the Reef 2050 Long-Term Sustainability Plan, the partnership provides a means of measuring the effectiveness of land management practices across the catchment, their cumulative benefit on water quality, and the prioritisation of further actions.

### COUNCIL INITIATIVES THAT SUPPORT OUR REEF & RAINFOREST INCLUDE:

- Net zero emissions by 2030
- Reef Guardian Action Plan
- Integrated catchment management plans
- Biodiversity, revegetation and restoration
- Cleaner Seas program for our waste water
- Working in collaboration with key stakeholders including Terrain, Great Barrier Reef Marine Park Authority, Wet Tropics Management Authority, Cairns and Far North Environment Centre, Rivers to Reef Climate Alliance and others
- Managing biosecurity risks through coordinated programs and projects.

Refers to the reef, rainforest and rivers of Cairns. It is also the loved big tree in the local park, agricultural land, fisheries, forests and other natural resources.

## natural environment objectives & actions

Objective	Success looks like	Actions to achieve success
<b>A protected, valued and thriving natural environment</b>	Impacts of land-based activities are managed and the resilience of the Great Barrier Reef is enhanced	<ul style="list-style-type: none"> <li>• Active participation in the Reef Guardian Council Program and Wet Tropics catchment management partnerships.</li> <li>• Management of point-source discharges from the region's Wastewater Treatment Plants.</li> <li>• Management of diffuse-source discharges from the region's urban stormwater network</li> <li>• Revegetate Council managed riparian areas, drains and waterways to filter runoff</li> </ul>
<b>Leaders in land, biodiversity and catchment management</b>	Leaders in land, biodiversity and catchment management	<ul style="list-style-type: none"> <li>• Collaborate with land managers and key stakeholders to revegetate riparian zones, restore degraded landscapes and improve the connectivity of ecosystems</li> <li>• Develop Integrated Catchment Management Plans</li> <li>• Reduce and manage the impacts of biosecurity risks</li> <li>• Develop a strategic approach to vegetation and natural assets management to improve resilience and biodiversity</li> </ul>
<b>Species at-risk from climate change impacts have access to habitat required for their resilience and survival</b>	Species at-risk from climate change impacts have access to habitat required for their resilience and survival	<ul style="list-style-type: none"> <li>• Manage the conservation values of Council's natural assets</li> <li>• Collaborate to identify and respond to pressures on at-risk species</li> </ul>
<b>Indigenous land management knowledge is applied to restore ecosystems, connect landscapes and promote connection to country</b>	Indigenous land management knowledge is applied to restore ecosystems, connect landscapes and promote connection to country	<ul style="list-style-type: none"> <li>• Collaborate with traditional custodians to design and deliver climate action initiatives that manage and improve the natural environment</li> </ul>
<b>Carbon sequestration in our natural environment</b>	Carbon sequestration in our natural environment	<ul style="list-style-type: none"> <li>• Prioritise the purchase of carbon credits from local projects to offset emissions from Council operations</li> <li>• Develop an offset policy that prioritises projects that deliver co-benefits for local communities, businesses and ecosystems</li> <li>• Collaborate to support regional carbon credit markets through initiatives including the Smart Green Economy</li> </ul>
<b>Increased adoption of local agriculture systems that regenerate soil and sequester carbon</b>	Increased adoption of local agriculture systems that regenerate soil and sequester carbon	<ul style="list-style-type: none"> <li>• Collaborate with land managers and key stakeholders to support initiatives that build soil carbon and improve agricultural productivity</li> <li>• Consider options for best utilisation of Council managed organic waste streams in agriculture</li> </ul>
<b>We will measure our success through:</b>	<ul style="list-style-type: none"> <li>• Area of bushland under active land management</li> <li>• Number of carbon credits purchased by Council</li> <li>• Number of trees planted by Council and land care groups.</li> </ul>	

## 4. implementation and reporting



### council's role in climate change policy and action

Cairns Regional Council plays an important role in supporting the region to reduce greenhouse gas emissions, prepare for the unavoidable impacts of climate change and transition to a net zero emissions economy.

#### COUNCIL'S CURRENT CLIMATE PARTNERSHIPS INCLUDE:

- Climate Council's Cities Power Partnership Coalition (CPP)
- Queensland Climate Resilient Councils (QCRC)
- LGAQ Climate Advisory Committee
- Coastal Councils Adaptation Taskforce (C-CAT)
- QCoast2100 Councils Leading Coastal Adaptation
- ICLEI Oceania – Local Governments for Sustainability
- United Nations Office for Disaster Risk Reduction (UNDRR) - Making Cities Resilient Campaign (MCRC)



### governance and transparency

Actions outlined in this Strategy cover all areas of Council responsibility and, as such, sound governance is required for implementation. Governance refers to having well-aligned risk management procedures to proactively analyse, mitigate and adapt to climate risk and impacts, and to ensure progress is being made across Council. Key performance indicators (KPIs) will be set against our climate targets to drive implementation, particularly where responsibilities are beyond business as usual or require additional investment.

To keep track of the Strategy and communicate progress, Council will regularly evaluate and report on delivery of the broader objectives of this strategy.

#### Council's climate change governance Leadership:

- Transition Council's operations to net zero emission
- Encourage and support the establishment of a detailed community emissions inventory
- Monitor the latest climate science and international best practice standards for addressing climate change and update Council's response accordingly

#### Communication:

- Work with business and industry to communicate and support Council's commitment to emissions reduction through robust processes
- Improve engagement with Cairns' communities on what Council is doing in the climate change space and how everyone can be involved

#### Improved governance and risk management:

- Develop an internal implementation plan addressing corporate planning procedures, risk register, procurement procedures and assets
- Incorporate climate change considerations in development of

strategies, policies and plans

- Establish an internal Sustainability Advisory Group to oversee implementation of the Strategy, with representatives from each key department of Council, meeting quarterly. The Advisory Group will be accountable to the Council Executive and Councillors.

This strategy will be supported by an implementation plan covering the next decade. The implementation plan is a live working document keeping track of each initiative, outlining how and when actions will be implemented, and who will be responsible for implementation and governance.

The purpose of the implementation plan is to hold Council accountable for its commitments and allow actions to be reviewed if stronger and more meaningful opportunities arise. The implementation plan will be a tool to communicate to internal staff Council's commitments and plans to reach net zero emissions by 2030 and drive the incorporation of climate change considerations into decision-making.

### measuring & reporting

Council will track the implementation of this Strategy and monitor progress to net zero emissions.

#### CLIMATE ACTIVE PROCESS

Climate Active certification is awarded to businesses and organisations that have credibly reached net zero emissions (carbon neutrality). Council considers Climate Active certification as leading practice in demonstrating a commitment to net zero emissions. Hence, once we achieve our target of net zero emissions, we will apply for Climate Active certification and publicly disclose our emissions.

#### OUR STATE OF THE ENVIRONMENT REPORT

Council's State of Environment Report (SoE) provides an overview of Cairns Regional Council's environmental and urban sustainability initiatives and performance. Through the SoE, we report on the condition, the pressure on the environment, and the response to that pressure. This approach provides context for identified pressures on the environment and outlines the relevant management responses from Council. The State of the Environment report will be our primary channel for reporting on progress of this Climate Change Strategy.



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