

# Climate Change Adaptation Plan

## Summary

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### Introduction

Responding to climate change requires action from governments, businesses, communities and individuals. We need to reduce greenhouse gas emissions to minimise the extent of climate change and also adjust the way we do things to adapt to the already changing climate.

Council has developed a *Climate Change Adaptation Plan* which identifies the actions Council will take to reduce climate change risks to Council and adapt to climate change. An update of the Plan was undertaken in 2018/19. Council also undertake projects to reduce our greenhouse gas emissions which are not covered here.

#### Wingecarribee Community Strategic Plan

**Goal 4.4** Wingecarribee addresses, adapts, and builds resilience to climate change.

### Climate change and our region

Australia's climate is already changing<sup>1</sup>. Our region will continue to see higher temperatures and less cold nights. We will also see more frequent and prolonged heatwaves and spend more time in drought. There will be an increased risk of bushfire and the bushfire season will last longer. There will also be seasonal changes in rainfall.<sup>2</sup> These changes are likely to affect our community, our places and our economy.

### Climate change adaptation actions

The climate change adaptation actions outlined in the following pages are actions that reduce or avoid the climate impact on Council operations primarily. The actions were developed by staff in a series of workshops. Some community focused actions were also included for the first time and will be expanded in future updates. Progress on the actions will be reviewed annually and an update of the plan will be undertaken every four years. Other opportunities that may arise will also be included in the Plan.

### Projected changes for our region by 2070



There will be more hot days and less cold nights. Maximum temperatures will increase by 2.1 degrees



There will be another 5 to 10 days above 35 degrees each year



Rainfall will decrease over winter and spring and increase over summer and autumn



Average fire weather and severe fire days will increase in spring and summer

Source: *South East and tablelands Climate Change Snapshot*, Office of Environment and Heritage.

## Community

Building community resilience is a key part of adapting to climate change. Council has a role to play in supporting the community. Recent years have seen more hot days and longer heatwaves. Many places in the Shire, including buildings, public spaces and homes are designed for cooler conditions and are not well adapted to increasing heatwaves. This may put vulnerable people at risk during heatwaves. Our retail street shopping precincts may attract less people under higher temperatures and our current tourism opportunities that are based on a cool climate landscape and streetscapes may be reduced.

### Actions to support the community

#### 1. Community knowledge and awareness

Develop a community engagement strategy and program.

#### 2. Heatwaves

- a. Identify heatwave response actions such as 'cool places' that could be used by the public such as buildings, open space and town centres.
- b. Research opportunities for streetscape and town centres renewals that could contribute to cooler urban centres.

#### 3. Economic Development and Tourism

Include climate change risks in the tourism and economic development strategy.

## Emergency Management

Council is a partner with other agencies and the Local Emergency Management Committee to prepare for and respond to emergencies. Council also has responsibilities for bushfire management on Council land, such as managing fire trails. With increased fire weather and extended fire seasons there will be more to do to maintain our bushfire preparedness. The frequency of other extreme weather events may also require increased emergency management responsibilities. This will require additional resources for planning, preparedness and response.

### Actions for emergency management

#### 1. Bushfire management

- a. Increase resourcing for bushfire management.
- b. Undertake a review of fire trails, management actions and systems for existing private development.
- c. Advocate for consistent emergency road closures between agencies through the Local Emergency Management Committee.

#### 2. Emergency management (M)

- a. Monitor emergency management resourcing and

systems.

- b. Regularly review and test business continuity plans.
- c. Document road closure procedures.

## Land Use Planning

Council is responsible for strategic land use planning and making decisions about development within Wingecarribee. Current planning documents and strategies that are based on the past climate may not be suited to future conditions. There may also be a need to monitor standards that already include climate change considerations, such as flood study criteria, to see if any changes are needed.

### Actions for land use planning

#### 1. Land used planning actions

- a. Incorporate climate change predictions into planning instruments, strategies and plans.
- b. Monitor changes to the Australian Rainfall and Runoff design standards, engineering standards and flood study criteria.
- c. Monitor water availability and identify opportunities for water capture and reuse in new development areas.

#### 2. Productive agricultural land

Advocate for protection of productive agricultural land.

## Environmental Protection

Biodiversity has intrinsic value and our environment also provides ecosystems services such as pollination and water filtration.

Council manages public land and partners with the community to protect biodiversity on private land. Higher temperatures and changes in rainfall patterns are likely to create changes to our Shire's unique biodiversity and the region may become unsuitable to some species. While some species are capable of adapting, the rate of climate change is a key limiting feature on the ability of many species to adapt in time.

Changes in land use will increase fragmentation of habitat exacerbating climate change risks. We are also likely to see new weeds entering our region.

### Actions for protecting biodiversity

#### 1. Biodiversity

- a. Include consideration of climate change in



biodiversity strategies and management plans.

- b. Develop knowledge of the likely impact on species, areas of refugia, species that will continue to be suitable for planting, new weed species and biodiversity indicators to monitor changes.
- c. Implement the Green Web strategy for connectivity.
- d. Include likely climate impacts in the Local Weed Strategy and monitor occurrences of new weed species.

## Assets and Infrastructure

Assets and infrastructure are a significant part of Council's operations, from water supply, buildings and pools, to roads and bike paths. Our streetscapes and open spaces also contribute to the shire's character and cool the urban environment.

Assets are designed to certain standards which may need to be adjusted under a changing climate. Higher temperatures and changes in rainfall can affect water quality and water and sewer treatment processes. Some infrastructure is on fire prone land and may be at increased risk of direct fire impact. The Resource Recovery Centre and Southern Region Livestock Exchange are also likely to be affected by climate change impacts.

Many sportsgrounds rely on irrigation to maintain good playing surfaces and this can be expensive. As temperatures continue to increase, some trees and plants currently used in parks and streetscapes may become unsuitable, especially cold climate species. Trees also have a long life span and decisions made now will have an effect over a number of decades.

## Actions for assets and infrastructure

### 1. Energy efficiency and security

- a. Continue to improve energy efficiency and implement renewable energy projects.

### 2. Buildings

- a. Implement the Civic Centre upgrade.
- b. Investigate minimum standards for building components targeting building performance and develop supporting information to assist decision making.
- c. Identify actions to upgrade high priority buildings to reduce the risk of direct bushfire impact.

### 2. Open space

- a. Identify climate change impacts on street tree suitability and incorporate into the Street Tree Master Plan.
- b. Expand and update the Tree Inventory Database and monitor trends in tree health.
- c. Develop clear guidelines for cancelling events on bushfire prone land and monitor updates to signs in reserves and parks on bushfire prone land.
- d. Continue to monitor opportunities for water efficiency and reducing potable water use on sports fields.

### 3. Roads and other infrastructure

- a. Monitor changes to the Australian Rainfall and Runoff design standards and review engineering and construction standards for inclusion of climate change impacts.
- b. Identify opportunities to reduce risk of exposure for low lying or repeatedly damaged infrastructure.
- c. Continue to undertake flood studies and implement flood management plans.
- d. Monitor new asphalt mixes suitable for higher temperatures.
- e. Consider the IPWEA practice note 12.1 in asset re-evaluation program.

### 4. Waterways

- a. Improve knowledge, systems and integration of waterway management and associated water sensitive design assets.

### 5. Water and Sewer services

- a. Undertake a review and options for Bundanoon and Wingecarribee water treatment plants.

- b. Implement sewer treatment plant upgrades.
- c. Review the *Drought Management Plan*.
- d. Undertake water quality modelling for the reticulation system.
- e. Undertake scheduled improvements to water treatment and reticulation system.
- f. Construct a permanent generator for Wingecarribee Water Treatment Plant and develop design standards for alternative power supply for sewer pump stations.
- g. Undertake a feasibility study for a mobile emergency water treatment plant.
- h. Reduce bushfire risk for pump stations, reservoirs and treatment plants including incorporating bushfire risk into design standards for assets on fire prone land.
- i. Undertake sewer and manhole renewals, preventative maintenance to reduce stormwater infiltration and scheduled maintenance of low lying sewer assets
- j. Implement actions to reduce risk from odour for sewer systems

#### **6. Resource recovery centre**

- a. Monitor site capacity for additional green waste processing following storms
- b. Monitor performance of water management systems

#### **7. Southern Regional Livestock Exchange**

- a. Implement improvements to the security system to improve tracking of stock
- b. Plant additional trees for shade as part of the refurbishment program
- c. Monitor new biosecurity risks
- d. Monitor performance of water management systems
- e. Monitor the livestock markets for regional climate change impacts

## **Further information**

### **Footnotes:**

1. *State of the Environment 2018*, CSIRO and Bureau of Meteorology
2. *South East and Tablelands Climate Change Snapshot*, 2014, Office of Environment and Heritage

## **Contact us**

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