



# CITY OF HOLDFAST BAY **ENVIRONMENT STRATEGY**

**2020–2025**



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*There is no culture without country.*

..... Jeffrey Newchurch

#### Acknowledgement of Country

The City of Holdfast Bay acknowledges that we are situated on the traditional lands of the Kaurna People and recognise the Kaurna People as the traditional owners and custodians of the land. We respect the deep and continuing spiritual relationship with Country that has developed over thousands of years, and the cultural heritage and beliefs that remain important to the Kaurna People today.





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# MESSAGE FROM THE MAYOR

As a community, we are privileged to live, work and play in a beautiful and unique natural environment. Our stunning coastline and dunes welcome thousands of local, interstate, and international visitors every summer.

Holdfast Bay has a long, rich history with the traditional owners, the Kaurna People of the Adelaide Plains, as a place where they would frequent and camp during the summer months. The area was also known as a meeting place for cultural celebrations, ceremony and trade. Old records, oral histories and shared memories provide us with insights into the landscape and the connection the Kaurna People had with the land.

Our coast is home to endangered hooded plovers and many other wildlife. Our nature reserves are characterised by steep gullies, cliffs, ancient waterways and dreaming stories of the Kaurna People. Our public gardens and more recent natural heritage reflect the history, development and joy of life by the sea.

Changes in climate are shaping our way of life, in what the City of Holdfast Bay acknowledges as a climate emergency. This acknowledgement compels us to work urgently with the whole community – not just limiting further damage but enhancing our environment so it can continue to sustain the nature and people who call this place home, long into the future.

This Environment Strategy is the path to our shared vision for the City of Holdfast Bay: Environment and Community: Thriving Together. It reflects the community's aspirations, strengths and values. It is sensitive to the social and economic needs of the community, as well as the promotion of our community's health and wellbeing.

Particular thanks are extended to all who have contributed to this strategy: the Council staff and Councillors, partners, the Kaurna Nation, and to the many community members who provided input. Our challenge is to now implement this strategy, ensuring the protection and enhancement of our precious natural environment now and into the future.



**Amanda Wilson**  
Mayor  
City of Holdfast Bay



# INTRODUCTION

“

*Sustainability is no longer about doing less harm. It's about doing more good.*

• Jochen Zeitz

## TOWARDS THRIVING

The Holdfast Bay region is unique. It has its own distinctive bioregional and cultural characteristics. Our region is valued for its rich and diverse environment – especially its clean beaches, green spaces, and cultural heritage.

As the council responsible not only for the people of our community, but also its cultural and environmental aspects, we are committed to a plan for environmental care and management that extends beyond the idea of ‘do less harm’, and instead challenges us to recognise that the health of the natural environment and the health and wellbeing of our community are intrinsically linked. A critical part of this is our Environment Strategy.

This new strategy includes actions that are integrated, meaningful and action-oriented – creating positive benefits to both nature and people. Through this plan, we will commit to actively manage, rejuvenate and regenerate the health and integrity of the living systems that we rely upon with respect, creativity and long-term thinking.

This strategy indicates ways in which collaboration, guided by a shared vision, can help us work together as a whole community, as we strive to provide a healthy, clean, diverse and cool environment.

## THE NEED FOR ACTION

In 2020, the world is watching Australia go through a range of environmental crises from wildfires to floods to hailstorms and severe coastal erosion, with potential species and ecosystem extinction looming.

Over the last few decades, the City of Holdfast Bay has been pro-actively responding to a variety of environmental challenges at a local level, such as coastal management, reducing the amount of waste that goes to landfill, reducing our greenhouse gas emissions and more.

This Environment Strategy provides a roadmap to continue our journey towards and beyond environmental sustainability, and to drive the City of Holdfast Bay’s goal to becoming a *‘carbon neutral, sustainable city, with environmental responsibility enshrined across its operations’*<sup>1</sup>.

The City of Holdfast Bay is focused on creating a thriving natural system for current and future generations. However, such goals can only be achieved through strong partnerships with our stakeholders, the involvement of our community, and our own commitment as an organisation.

## WHAT THE COMMUNITY SAID

The Environment Strategy was developed through a broad and inclusive consultative process with our community, key stakeholders, the Kaurna Nation, staff and elected Members. Community engagement took place between November 2019 and January 2020, and was used to guide the plan's themes, objectives and actions.

It gave us important insights into what people value, how they see our environment today and into the future, and what actions they believe we need to take now to provide benefits for the longer term.

We learned that the community places great importance on our natural landscapes, the coast, and our local reserves, while the impacts of climate change, loss of biodiversity, coastal pollution, and a reduction in green spaces due to development, were seen as the biggest environmental challenges.

Our community wants to see:

- more trees planted
- increased and healthier biodiversity
- strategies to cool the urban environment in an ever-warming climate
- improved waste management
- greater community education around environmental practices.

With this in mind, twenty years from now our community envisages a council area with more trees, more open and green spaces, increased biodiversity, and a healthy coast.

Organisational stakeholders and our neighbouring councils have told us that, through volunteering, nature connection programs, education, partnerships, incentives, green business, good design, research such as citizen science, and environmental monitoring, there are great possibilities for taking joint action on the environment.

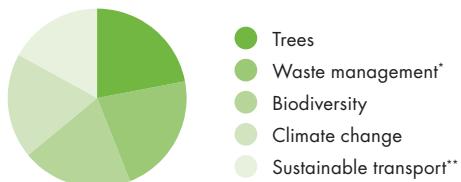


Figure 1 – Planning with Our Community – Engagement Methods

### TOP 5 ENVIRONMENTAL CHALLENGES



### TOP 5 TOPICS MENTIONED IN ALL ENGAGEMENT



This important community feedback will help to:

- inform the vision, key themes and actions of this strategy
- review and confirm the value of existing Council activities and programs
- identify gaps

\*includes comments about plastic pollution, marine debris, recycling and bins

\*\*includes comments about less vehicle traffic, electric vehicle charging points, more public transport and more walkability

# ENVIRONMENTAL ACTION THEMES

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## OUR CLIMATE

Towards a sustainable, carbon neutral, and climate-proofed city. Implementing actions to reduce carbon emissions from both Council operations and the wider community. Addressing our adaptability and resilience to a changing climate.



## OUR COAST

Promoting a healthy coastal system through measures to support the coast's adaptability to climate change, protect our dunes and beaches, and improve marine water quality.



## OUR NATURE

Improving biodiversity, enhancing and connecting with our natural landscapes and greening our urban environment.



## SUSTAINABLE RESOURCES

Creating a thriving future and healthy environment through effective management of waste and resources.



## WORKING TOGETHER

Collaborating to rejuvenate and regenerate the environment and promote active participation and partnership.

## COUNCIL'S ROLE

Council plays a variety of roles in managing and improving the local environment. These range from being a direct provider of services, to facilitating action across the broader community, partnering with others, and advocating for action from higher levels of government.

While all Council decisions and activities consider regional, statewide and national priorities, we will always work in partnership at the local level to address local issues. This is essential if we are to effectively meet the challenges of ensuring a sustainable future, safeguarding our remaining natural areas, and enhancing biodiversity.

## OUR ENVIRONMENT

The City of Holdfast Bay is located 11 kilometres south-west of the Adelaide CBD, and is known for its cultural heritage, popular beaches, exciting attractions and diverse environment. Holdfast Bay has some of Australia's most popular beaches.

At our northern boundary, the Patawalonga Creek connects with Warriparri (Sturt Creek) and Willawilla<sup>2</sup> (Brown Hill Creek). The western border consists of nine kilometres of sandy beaches and significant sections of dunes. To the south, lie hills and gullies, including sites that are culturally significant to the Kaurna community, and to the east we have connecting corridors to the Adelaide Hills.

The centre of Holdfast Bay was once a low-lying flood plain with coastal lagoons sitting behind large dunes. These diverse places were havens for native flora and fauna.

Traditionally, during the spring and summer, the Kaurna People would hunt and fish along the beaches, wetlands and estuaries. There are also several sites of important cultural and spiritual significance to the Kaurna and the wider Aboriginal communities that remain to this day, including Tjilbruke Springs and Minda Dunes.

However, over the last 200 years or so, increased human activity has significantly altered the natural environment, impacting on areas of valuable habitat and biodiversity.

Most recently, the City has started to experience the effects of climate change, and we recognise that a healthy urban forest will be one of the keys to creating a more liveable, cooler urban environment in the future.



**91ha**  
(approx.) of coastal land



**70ha**  
of community open space



**75**  
parks



**9km**  
of coastline



**4**  
natural areas  
(gullies and cliff face)



**14.6km<sup>2</sup>**  
comprises  
City of Holdfast



**8.5ha**  
of reserves managed  
for remnant vegetation



**First**  
SA coastal council to  
recognise a climate  
emergency in 2019



**>70**  
native plant species at  
Kingston Cliff Face



**28**  
bird species inhabit  
Minda dunes



**128**  
indigenous  
plant species



**40**  
environmental  
volunteers



**1**  
Bush for Life site at  
Kingston Cliff Face



**273**  
tonne reduction in  
waste sent to landfill  
in 2018-19



**Leading**  
SA local government  
in waste reduction



**2.3%**  
decrease in Council's  
CO<sub>2</sub> greenhouse  
emissions from  
fuel per year



**19%**  
increase in landfill  
diversion rate  
since 2013



**Award-**  
**winning**  
compostable bag trial  
with local businesses



**38**  
indigenous  
plant species in  
Minda Dunes,

**20**  
listed as near Threatened,  
Rare or Vulnerable at  
a regional level



**13.6%**  
(259 tonne) decrease in Council's  
CO<sub>2</sub> greenhouse emissions through  
changing streetlights to LED



## COUNCIL'S STRATEGIC PLANNING FRAMEWORK

The 'Our Place 2030' strategy sets out five key pillars to map our long-term direction, and provides objectives for maintaining, improving and celebrating our city into the future:



### COMMUNITY

A healthy, creative, connected community



### ENVIRONMENT

A community connected to our natural environment



### ECONOMY

A diverse and resilient local economy



### PLACEMAKING

An accessible, lively and safe coastal city that celebrates our past to build for our future



### CULTURE

An effective customer-centred organisation

The Environment Strategy has links to a number of other Council strategies and plans including:

- Asset Management Plans
- Open Space and Public Realm Strategy 2018
- Cities of Holdfast Bay and Marion Stormwater Management Plan
- Community Land Management Plans
- Resilient South Regional and Local Adaption Plans
- Tourism Plan 2020
- Economic Activation Plan 2018
- Biodiversity Action Plan for Minda Dunes 2018
- Dune Biodiversity Action Plan 2019
- Youth Action Plan 2018



Figure 2 – The inter-relationship between our Environment Strategy and Council's strategic pillars

## PLAN SCOPE

This Environment Strategy is a ‘living document’ with a long-term vision that sets the direction for Council’s activities and resource allocation – primarily over the next five years – as we strive to protect and enhance the region’s environment for future generations.

The plan takes a holistic approach to environmental management and focuses on what we, as a council, can realistically do to enhance the natural environment, and how we can best support the efforts of our stakeholders, partners and community groups.

The following principles were developed to guide the selection of the actions in this plan:

PRINCIPLE	DESCRIPTION
<b>Environmental Responsibility</b>	The action supports Council’s commitment to environmental responsibility, carbon neutrality and sustainability. The environmental benefits of the action are based on sound evidence.
<b>Strategic</b>	The action has a positive outcome beyond environmental improvement, and may support multiple aspects of Council’s strategic pillars: community, environment, economy, placemaking and culture.
<b>Community Capacity</b>	The action builds capacity for community groups and/or businesses to drive a program.
<b>Funding and/or Partnering Opportunity</b>	Resourcing may be available to help a project through partnering or funding.
<b>Cost Benefit</b>	The action results in triple bottom line outcomes – society, economy and environment – and overall net benefit.
<b>Legislative Requirements</b>	Council has resolved, or is legally obliged, to undertake an action.
<b>Leadership</b>	The action results in Council leading by example or being an early adopter of successful innovation.



# STRATEGIC PLAN





# OUR CLIMATE

*This is not just about the environment, it's about the community*

Eddie Bautista

## THE STATE OF OUR CLIMATE

The City of Holdfast Bay recognises that climate change is the most complex problem of this generation. As the first coastal council in South Australia to recognise that the world is in a climate emergency,<sup>8</sup> we believe that we have an urgent responsibility to act by becoming a community leader in climate change adaptation and mitigation.

Driven by an increase in greenhouse gases released into the atmosphere, climate change is predicted to have long-term impacts on the environment, community and economy. Energy, heavy industry, transport and agriculture are the biggest contributors of greenhouse gas emissions<sup>3</sup>, and as the human population increases, activities that contribute to climate change also increase.

The last 70 years have seen an increase of approximately 1°C in warming in South Australia<sup>4</sup>. This is expected to increase to nearly 3°C over the next 50 years<sup>5</sup>. In the same time frame, it is predicted that the frequency of consecutive days over 40°C is also expected to increase.

Within the City of Holdfast Bay, these predicted rises in temperatures will have a direct impact on our natural and built environments. Importantly, they also have the potential to affect public health, especially for vulnerable members of the community.

Council is therefore committed to preventing these impacts through real and effective action on climate change mitigation and adaptation.

Being a coastal city, we are particularly vulnerable to the impact that climate change has on oceans and coastal areas<sup>7</sup>. Sea levels are influenced by ocean temperatures. Currently, ocean surface temperatures are predicted to increase between 1.0° and 1.5°C<sup>7</sup>. This means that sea levels could rise by almost 0.8m by the year 2100<sup>6</sup>. Furthermore, it is expected that climate change will create more acidic oceans and larger, more intense waves. All of these will have an effect on our coastline, particularly as greater frequency and intensity of storms, coastal inundation and recession<sup>7</sup> cause damage to coastal infrastructure and increase beach erosion.

The community has a critical role in tackling the impacts of climate change. For example, actions such as:

- recycling and composting to reduce waste to landfill, which in turn, reduces greenhouse gas emissions
- lowering energy use
- reducing private vehicle use
- planting trees and gardens
- reducing consumption and packaging

Not only do these contribute to addressing climate change, but they also establish social norms and expectations that are a vital part of creating a sustainable future.

*solar buses and cars operating along the beach front*

..... Student – Glenelg Primary School .....

## PROGRESS, ISSUES AND COMMUNITY PRIORITIES

### THE PROGRESS WE'VE MADE

- 273 Tonne reduction in waste sent to landfill in 2019
- Sourcing the majority of our electricity from renewable energy providers since January 2020, with 60% provided from wind generation<sup>9</sup>
- Reducing greenhouse emissions from electricity by 13.6% by converting streetlights to LED
- Reducing greenhouse emissions from fuel by 2.3%
- Continuing to transition our vehicle fleet to hybrid vehicles
- Maintaining and increasing beach width
- Expanding tree canopy
- Partnering with neighbouring councils to develop a regional climate change adaptation plan (Resilient South)
- Working with Resilient South and the Australian Red Cross, we support the award-winning *Climate Ready Communities Project* to assist the community in preparing and adapting to climate change

### THE ISSUES WE FACE

- Sea level rise
- Increased rate of beach erosion through coastal inundation and recession
- Increased temperatures
- Greater frequency and duration of heatwaves
- Reduced rainfall and increase in drought conditions
- Damage to our sea walls from the greater frequency and intensity of storms and flooding

### ACTION - WHAT OUR COMMUNITY IS TELLING US

- Create more green areas and plant trees to offset carbon emissions and provide cooling to protect against rising temperatures
- Promote energy efficient housing
- Support a community green power program and be a climate-ready community
- Safeguard against sea level and temperature rises
- Support sustainable transport options for example, electric vehicles, more walk, ride and scoot options
- Support use of renewable energy
- Be a carbon neutral city

## OUR VISION

*A council and community that takes environmental responsibility and climate change seriously and acts with urgency and innovation in order to be carbon neutral by 2030. A council that supports its community to make changes to habits, homes and lifestyles that create a healthy, low carbon community. Our community will benefit from these changes through new economic opportunities and savings, and the sense of purpose and satisfaction in making a contribution to a greener, cooler environment.*

## OBJECTIVES

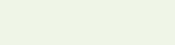
- Become a carbon neutral council by 2030
- Work towards becoming a carbon neutral community by 2030
- Increase tree canopy in the City of Holdfast Bay by 10% from 15.3% to 16.8% by 2030
- Install a minimum of 5 electric vehicle charging stations by 2025

# ACTION PLAN FOR OUR CLIMATE



STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
<b>Reduce carbon emissions from Council operations</b>	Investigate greenhouse gas reduction options (e.g. carbon offsets, increased renewable energy, etc.), then develop, implement and monitor an emissions reduction strategy for urgent carbon neutrality.	Provider	Other councils	
	Implement the energy reduction recommendations from Council's energy audit of Council buildings and infrastructure.	Provider	SA LGA	
	Develop a fleet transition plan to continue transition of Council's vehicle fleet to non-fossil fuel vehicles	Provider	SA LGA	
	Use technology and carbon offsets to reduce travel carbon emissions	Provider		
	Investigate the use of battery operated tools.	Provider		
<b>Reduce carbon emissions attributable to the broader community</b>	Develop, implement and monitor strategy for urgent carbon neutrality.	Provider	Other councils	
	Support a community energy program	Facilitator	Residents	
	Establish a community emissions profile	Provider		
	Enforce the energy efficiency provisions of the Building Code of Australia for all new developments and renovations	Regulator	SA Department of Energy and Mining	
	Deliver a community education and behaviour change program to support carbon mitigation	Provider, Facilitator	Green Adelaide – Living Smart	
	Encourage major events to be carbon neutral	Facilitator	Event organisers	
	Promote the state government's home battery scheme	Facilitator	SA Department of Energy and Mining	
	Monitor and contribute to the National Electric Vehicle Strategy.	Advocate and Provider	Commonwealth Department of the Environment and Energy	
	Install infrastructure for energy efficient transport and electric vehicles in the Council area	Provider		
	Advocate for energy efficient public transport networks within the Council area.	Advocate	DIT	
	Provide commercial property support to promote sustainable building upgrades and/or operations (Building Upgrade Finance)	Facilitator	SA DEW	

# ACTION PLAN FOR OUR CLIMATE

STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
<b>Plan for an urban and natural environment that is resilient to climate change</b>	Implement the Resilient South Local Action Plan	Provider and Partner	Resilient South councils	
	Undertake a climate adaptation risk assessment of Council governance systems and infrastructure	Provider		
	Investigate opportunities for urban cooling as part of all major Council place-making, urban development and infrastructure upgrade projects	Provider	DIT, PlanSA	
	Continue Council's program to increase tree canopy	Provider	Green Adelaide	
	Continue liaison with the state government and LGA on climate adaptation standards	Partner and Advocate	State government, SA LGA	
	Investigate an Adopt-a-Tree program.	Provider	Residents	
	Advocate to state government around the protection of existing urban trees.'	Advocate	PlanSA	
<b>Support community resilience to climate change</b>	Continue to support Red Cross Climate Ready Communities Program	Partner and Facilitator	Resilient South councils, Red Cross	
	Develop a community-based emergency management plan	Provider and Facilitator	SA LGA	
	Promote climate-ready housing design	Provider and Facilitator	Green Building Council of Australia Adelaide Sustainable Building Network	
	Raise community awareness of Council's Heat Wave Response Policy	Provider and Avocate		



# OUR COAST

”

*Life takes you down many paths, but my favourite ones lead to the beach.*

Anon

## THE STATE OF OUR COAST

Without doubt, our coastline is one of the major attractions for tourists and locals. Stretching from Glenelg North to Kingston Park, Council manages over 90 hectares of coastal land.

This includes, around nine kilometres of sandy beaches, the Kingston Park Cliff Face – which offers walking trails and magnificent views while surrounded by significant coastal cliff vegetation – and three vitally important dune systems: the Glenelg dunes, the Minda dunes at Somerton Park, and those from Brighton to Seacliff. Our coast also includes sites of great cultural and spiritual significance for the Kaurna People, such as Tjilbruke Springs and Minda Dunes.

Minda Dunes is now one of only two remnant dunes along Adelaide's coastal fringe<sup>12</sup>. It is an important refuge for an array of fauna and flora species, many of which are considered to be either Near Threatened, Rare or Vulnerable at a regional level.

Our dunes are important assets that provide protection from storms and tides, habitat for birds, reptiles and insects, and they rely on vegetation to keep them stable. Unfortunately, coastal dune vegetation along Adelaide's coastline has been substantially affected by the high level of development and urbanisation.

Our coastline faces many natural and human impacts including natural erosion, encroachment of infrastructure and development, unmanaged paths, recreational activities, pollution, and impacts from pest plants and animals. Pollution caused by untreated stormwater entering the gulf, as well as recreational activities on and in the water have caused major impacts to the seagrass that historically proliferated within Holdfast Bay waters<sup>10</sup>.

To address these challenges, Council works closely with the state government and the Coast Protection Board to ensure that our significant sand management activities are effective, native vegetation is preserved or increased, and environmental impacts are minimised.

The state government's Blue Carbon Strategy aims to harness marine ecosystems' ability to capture and store carbon. Seagrass meadows are a good example of this. There is the potential for blue carbon demonstration projects to be located in the coastal waters off the Holdfast Bay area.

*I really want you to put more bins at the beach*

..... Student – St Leonard’s Primary School

## PROGRESS, ISSUES AND COMMUNITY PRIORITIES

### THE PROGRESS WE’VE MADE

- Supporting the Friends of Minda Dunes – a growing volunteer group dedicated to rehabilitating the dunes
- Establishing the Coast Park at Minda Dunes, allowing the community to walk safely through remnant dunes and enjoy its significant flora
- Installing sand groynes and sand drift-fencing
- Undertaking sand carting and pumping, with the Coast Protection Board, to prevent erosion and increase beach width
- Implementing stormwater management measures to decrease the volume of water that enters the ocean
- Constructing coastal pathways to help prevent damage and limit access to the dunes

### THE ISSUES WE FACE

- Sea level rise
- Increased rate of beach erosion through coastal inundation and recession, and increased frequency and severity of storms
- Pollution from stormwater, litter and some recreational activities
- Decline in the volume of sand along the Adelaide beach system
- Urban development encroaching on the coast
- Need for ongoing restoration and maintenance to improve dunes
- Sustainable management of Tjilbruke Springs
- Protection of seagrass meadows and the rocky reef off Kingston Park

### ACTION - WHAT OUR COMMUNITY IS TELLING US

- The beach and coastal dune systems are highly valued
- Address sand erosion, pollution and litter along the coast
- Improve shade with more trees on the foreshore
- Educate the community
- Restore the dunes
- Improve coastal biodiversity

## OUR VISION

*Clean beaches and ocean water providing healthy habitat for marine plants, animals and for our community. Planning and infrastructure that keeps our homes and built environment safe from the impacts of sea level rises. Innovative capture, reuse and cleaning of stormwater. Awareness and appreciation of the importance of the dune system, as well as maintenance and community participation to keep the dunes and their inhabitants safe.*

## OBJECTIVES

- Complete the first stage of a coastal adaptation plan by 2022
- Complete all future stages of a coastal adaptation plan by 2029
- Commence implementation of the coastal adaptation plan by 2030
- Ensure the volume of stormwater discharged to the coast does not increase due to continued urbanisation

# ACTION PLAN FOR OUR COAST



STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
Manage risks and impacts of future sea level rise	Develop a Coastal Adaptation Plan and implement key recommendations	Provider	SA DEW, SA Coast Protection Board, Kaurna Nation	5 leaf icons
	Manage beach erosion through sand pumping and sand groynes	Provider	SA Coast Protection Board	5 leaf icons
	Improve coastal infrastructure to better deal with future sea level rise	Provider	SA Coast Protection Board	5 leaf icons
Maintain and improve beach and dune systems	Manage beach and dune access by ensuring designated access points are adequately signed and maintained, and restricted areas are fenced	Provider	SA Coast Protection Board	4 leaf icons
	Maintain existing sand-drift fencing	Provider	SA Coast Protection Board	3 leaf icons
	Continued maintenance and upgrades of sea walls	Provider	SA Coast Protection Board	3 leaf icons
	Install new sand drift fencing throughout the dunes	Provider	SA Coast Protection Board	3 leaf icons

# ACTION PLAN FOR OUR COAST

STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
<b>Monitor, improve and maintain marine water quality</b>	Reduce volume of stormwater discharge into Gulf St Vincent	Provider	SMA, Other Local Governments	
	Install more gross pollutant traps	Provider		
	Advocate for the minimisation of wastewater directly from boats into marine waters	Advocate	DIT EPA	
	Promote awareness of the impacts of pollution and litter in the marine environment	Provider and Facilitator	KESAB	
<b>Increase support for coastal councils</b>	Lobby state and federal government for funding and/or programs for coastal protection and adaptation	Partner and Advocate		
	Continue participation in Metropolitan Seaside Councils Committee	Partner		
	Continue participation in SA Coastal Councils Alliance	Partner		





# OUR NATURE

..... ‘’ .....

*bringing cities to life by bringing life into cities*

..... Richard Louv .....

## THE STATE OF OUR NATURAL ENVIRONMENT

As mentioned, the City of Holdfast Bay has a rich and diverse environment of waterways, cliffs, dunes, beaches, nature reserves and of course, the sea.

These environments help support a wide range of plants and animals including many regionally rare and vulnerable species.

Within the City of Holdfast Bay, there are four designated natural areas: Barton Gully, Gilbertson Gully, Pine Gully and, our area of greatest biodiversity, the Kingston Park Cliff Face.

Gilbertson, Barton and Pine Gullies are home to 71, 81 and 61 indigenous plant species respectively<sup>13</sup>. Kingston Park Cliff Face has 95 indigenous plant species, with 15 considered regionally rare or vulnerable and requiring protection. The main pressures on these natural areas are introduced pests and weeds, loss of genetic diversity, altered water regimes, recreational usage impacts, illegal activities, and urban development and infrastructure.

Environmental wellbeing and human wellbeing are not separate, but in fact fundamentally linked. Therefore, having access to natural landscapes provides opportunities for the community to connect with nature for relaxation, exercise, volunteering, hobbies, and spiritual enrichment. A large and growing body of research shows that having a psychological connection with nature, and spending regular time in nature improves not only physical but also mental health and wellbeing<sup>11</sup>.

This is not new knowledge. Connection to land has always been highly significant to the traditional custodians of the region. For the Kaurna People, connectedness to the land is about connecting emotionally and spiritually, and embodying reciprocity with the natural elements that keep us all alive. This land contains the Dreaming ancestors such as Tjilbruke, after whom the sacred Tjilbruke Springs site is named. The Kaurna Nation is an important partner for our environmental work because it's their land.

We are fortunate to have a community that is active in protecting and enhancing the natural environment within the City of Holdfast Bay. Volunteers, residents and community groups regularly help with environmental activities and workshops that enhance and raise awareness about the importance of our local environment.

.....‘‘.....

## Increase biodiversity corridors

..... Participant – Stakeholder Workshop

## PROGRESS, ISSUES AND COMMUNITY PRIORITIES

### THE PROGRESS WE'VE MADE

- Conducted biodiversity baseline surveys in 2018
- Increasing biodiversity from Seacliff to Brighton dunes with volunteers
- Working the Natural Resource Management Board and BirdLife Australia to safeguard the hooded plovers
- Revegetating Minda Dunes with 10,000 natives plants in 2019
- Putting weed control programs in place for all natural areas
- Planting 584 street trees in 2019
- Commencing the Warriparri (Sturt Creek) biodiversity corridor in 2019
- Developing a Dune Biodiversity Action Plan

### THE ISSUES WE FACE

- Pest plants and animals
- Lack of biodiversity
- Impacts of pollution, urban development, illegal activities and recreational activities on natural areas
- Altered natural regimes
- Habitat fragmentation
- Erosion
- Lack of space for street trees and new green spaces

### ACTION - WHAT OUR COMMUNITY IS TELLING US

- Include the Kaurna Nation in biodiversity decision-making
- Increase the number of trees
- Promote healthy biodiversity and dune systems
- Promote private gardens – green space and trees
- Promote increased green space – a lush garden city, clean, green and cool
- More community gardens
- Better access to natural areas via walking/cycling tracks
- Protection of the Patawalonga Lake's ecosystem and dolphins

## OUR VISION

*Corridors of flourishing biodiversity in natural, built and coastal areas. More trees for shade, shelter, beauty and habitat. A community that appreciates the importance of having an abundance and diversity of different animal, plant and insect species for the health and wellbeing of our human and natural communities.*

## OBJECTIVES

- Complete implementation of the Dune Biodiversity Action Plan by 2024
- Increase average biodiversity score from 12.8 in 2018 to 14 by 2025
- Complete implementation of the Gully Master Plans by 2025
- Complete the Sturt Creek biodiversity corridor by 2025

# ACTION PLAN FOR OUR NATURE



STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
Improve and increase biodiversity	Increase biodiversity corridors: continue development of Sturt Creek greening project, and identify additional areas for connectivity	Provider	Green Adelaide, Friends of Sturt River, Kaurna Nation	5 leaf icons
	Implement biodiversity sensitive urban design measures, and integrate with Council place-making projects	Provider	Green Adelaide	4 leaf icons
	Implement a biodiversity plan for parks and ovals	Provider		4 leaf icons
	Increase plant biodiversity through revegetation programs	Provider and Facilitator	Green Adelaide, DIT, Kaurna Nation	4 leaf icons
	Increase native animal habitat through revegetation, nestbox and bird bath programs	Provider and Facilitator	Green Adelaide, DIT, Kaurna Nation	4 leaf icons
	Prevent introduction of, and reduce extent of introduced plants	Provider and facilitator	Green Adelaide, DIT	3 leaf icons
	Encourage use of indigenous plants in home gardens	Advocator	Green Adelaide, Kaurna Nation Residents	3 leaf icons
Improve coastal biodiversity	Continue to implement Dune Biodiversity Action Plan	Provider	Green Adelaide, Coast Protection Board, Kaurna Nation	5 leaf icons
	Continue beach patrols for compliance with new dog by-law to protect hooded plovers	Provider		5 leaf icons
	Continue to support hooded plover breeding success	Partner	Green Adelaide, Birdlife Australia	4 leaf icons
	Monitor and manage inappropriate dune access to minimise impact on native plants and animals	Provider and Facilitator		4 leaf icons

# ACTION PLAN FOR OUR NATURE

STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
Manage natural reserves for biodiversity	Implement Gully Master Plans	Provider	Kaurna Nation, Green Adelaide	
	Develop a biodiversity management plan for Kingston Cliff Face	Provider	Kaurna Nation	
	Conduct follow-up to the 2018 baseline biodiversity surveys on the health of natural reserves in 2023	Provider		
	Protect and increase rare and vulnerable native plant species	Provider	Green Adelaide, Kaurna Nation	
	Conduct invasive plant and animal control	Provider		
Protect our trees	Continue to increase net tree numbers and improve tree health	Provider	Residents	
	Conduct comprehensive audit on all council street trees	Provider		
	Develop and implement an Urban Forest Strategy	Provider	Kaurna Nation	
	Continue the street tree planting program, particularly in treeless streets	Provider	DIT, PlanSA	
	Continual implementation of Council's Tree Management Policy	Provider		
	Implement Norfolk Island Pine Management Strategy	Provider		
	Consider options to remove bare power cables from tree canopies, through undergrounding of power lines or installation of aerial bundled cables (ABC)	Provider and Facilitator	SA Power Networks	



# SUSTAINABLE RESOURCES

## THE STATE OF OUR WASTE MANAGEMENT

Resource consumption and waste generation go hand-in-hand. In Australia, we have generally relied on landfill to take care of our waste. However, as the population increases, so too does the volume of waste produced and resources consumed.

To address unsustainable waste generation, the state is embracing the concept of a more circular economy as an alternative to the wasteful traditional ‘linear’ economy based on ‘take, make, use and dispose’. It is a self-sustaining system driven by renewable energy and an aim to keep material resources in use, or ‘circulating’ for as long as possible<sup>14</sup>.

With over 37,000 residents, almost 2 million visitors to the City of Holdfast Bay<sup>15</sup> and a number of major events every year, we need effective services and community education to maximise recycling and minimise disposal to landfill<sup>16</sup>.

Reducing the amount of waste going to landfill that could otherwise be recycled or composted is a major priority.

The City of Holdfast Bay is a state leader in sustainable waste management with a high landfill diversion rate of 59%. Despite this, there are still many ways we can improve our diversion levels and achieve targets set by both the state government and Council’s Strategic ‘Our Place 2030’ Plan.

A joint initiative between the City of Holdfast Bay and Green Industries SA to replace produce bags at two local supermarkets with compostable bags was very successful. Bin audits showed a 300% increase in food scraps being placed in green bins using compostable bags – significantly reducing the amount of green waste going to landfill<sup>17</sup>. This project won the 2019 Local Government Professionals SA Excellence Award for Excellence in Environmental Leadership and Sustainability.

At the Southern Region Waste Resource Authority, the City of Holdfast Bay, along with the Cities of Marion and Onkaparinga, is committed to maximising reuse of recyclables with a new Materials Recovery Facility. This new plant will provide certainty of access to local processing facilities for multiple councils, support a circular economy and provide local employment.

## THE STATE OF OUR RESOURCE MANAGEMENT

The City of Holdfast Bay is fortunate to have good air quality, partly because of our coastal location and partly because our local topography ensures that smoke and dust is not trapped. In addition, as the number of electric vehicles increases, we will see a reduction in vehicle emissions, thus contributing to ongoing improvements in air quality.

Improving the management of natural resources or using resources in a more conscious way is a pressing issue for Council. This includes:

- continual investment in efficient water and waste management
- reducing energy consumption and emissions outputs
- undertaking a circular economy audit
- reducing stormwater runoff while increasing the quality and efficient reuse of stormwater.

.....‘‘.....

*A sustainable society doesn’t just consume less, recycle more, use renewable energy and take the train. It is also more community-focused, less prejudiced, equal, healthy and happier – because it values people and the environment.*

..... Common Cause

*Support a circular economy – use recycled materials  
for public benches and road base.*

Elected Member Feedback – Council Workshop

## PROGRESS, ISSUES AND COMMUNITY PRIORITIES

### THE PROGRESS WE'VE MADE

- Significantly increasing landfill diversion to 59% since the introduction of the kitchen organic baskets (Food Organics Green Organics) in late 2013
- Supporting Jetty Road Brighton as a Plastic-Free Precinct
- Increasing food waste efficiency by 300% through the compostable bags in supermarket pilot
- Upgrading to stormwater infrastructure
- Installing more than 200 TreeNet Inlets to divert stormwater to street trees
- Removing, on average, 428 tonnes of pollutants each year from gross pollutant traps
- Implementing waste education programs

### THE ISSUES WE FACE

- Polluted stormwater
- Increasing carbon emissions
- General litter, especially along the coast
- Litter and waste generation from single use plastics
- Increasing cost of waste disposal
- Waste management at major events

### ACTION - WHAT OUR COMMUNITY IS TELLING US

- Reduce single-use plastics
- Increase recycling and reduce waste to landfill
- More community education
- Improve organic waste management

## OUR VISION

*All waste generated by Council and the community is reused, repurposed, reimaged, recycled or composted. Stormwater is valued, collected, and used to green our environment.*

## OBJECTIVES

- Increase waste diverted from landfill from 59% to 70% between 2020 and 2025
- Reduce Council potable water use by 10% by 2025
- Increase the volume of stormwater diverted from the coast through installation of rain gardens and TreeNet Inlets

# ACTION PLAN FOR SUSTAINABLE RESOURCES



STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
Reduce waste to landfill	Review and strengthen the environmental sustainability and buy local criteria of the Procurement Policy	Provider	LGA, Green Industries SA	4 leaf icons
	Deliver community education programs	Provider, Facilitator and Partner	Green Industries SA, KESAB, Green Adelaide Living Smart	4 leaf icons
	Implement a weekly Food Organics Green Organics trial	Provider and Facilitator	Green Industries SA, Solo Resource Recovery, local business, Residents	4 leaf icons
	Support the continuation of the supermarket compostable bag trial	Provider	Green Industries SA, local business	4 leaf icons
	Reduce amount of single-use plastics in key business precincts and Council business	Provider, Facilitator and Advocate	Trading precincts, Green Industries SA	4 leaf icons
	Reduce single-use plastics at major events	Provider, Facilitator and Advocate	Green Industries SA, Event organisers	4 leaf icons
	Contribute to the new Materials Recovery Facility at the Southern Region Waste Resource Authority	Partner	City of Onkaparinga, City of Marion	4 leaf icons
	Review the community recycling station and pilot an additional location	Provider	Green Industries SA	3 leaf icons
Promote recycling and waste reduction	Continue to implement best practice waste management programs, including planning for high visitation periods	Provider	Green Industries SA, KESAB	3 leaf icons

# ACTION PLAN FOR SUSTAINABLE RESOURCES

STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
Improve water efficiency	Implement Water Sensitive Urban Design Master Plan	Provider	Green Adelaide, Water Sensitive SA	
	Develop and implement a corporate water savings plan	Provider		
	Expand corporate water use monitoring	Facilitator and Provider	SA Water	
Improve stormwater quality and reuse	Continue to implement water-sensitive urban design measures	Provider	SMA, DIT	
	Continue to implement the Stormwater Management Plan	Provider	City of Marion, SMA	
	Identify opportunities to use treated stormwater and wastewater for Council irrigation.	Provider	SA Water	
	Investigate measures to improve stormwater quality.		EPA, SA Water, Green Adelaide	
Keep streets, beaches and waterways clean	Identify priority locations and roll-out the installation of more cigarette butt bins	Provider	KESAB	
	Investigate and advocate for seabins for local marinas	Partner	DEW, private marina owners	



# WORKING TOGETHER

”

*If you want to go fast, go alone. If you want to go far, go together.*

African proverb

Building a thriving community can only be achieved through collaboration between residents, businesses, stakeholder agencies, other levels of government, neighbouring councils, the Kaurna Nation and the City of Holdfast Bay.

There is no question that the City of Holdfast Bay community is active and passionate. It's a community that values the environment and recognises its role in ensuring a sustainable future for the region.

Weekly working bees are held with a band of dedicated volunteers contributing hundreds of hours to environmental projects within the Council area. This includes dune and bush regeneration in areas including the Brighton to Seacliff dunes, Minda dunes, Pine, Barton and Gilbertson Gullies, railway corridors and the Kingston Cliff Face.

Council also works with the Friends of Pine Gully and the Friends of Minda Dunes – both of which put in many hundreds of hours to help these places thrive. Volunteers also contribute to the success of other environmental initiatives, such as monitoring and protecting the hooded plovers, without which, the survival of these birds would probably not be possible. Furthermore, the Trees For Life organisation provides volunteers for the Kingston Cliff Face.

We have a good working relationship with the Kaurna Nation through the Kaurna Nation Cultural Heritage Association. Regular meetings are held with traditional owners to discuss Council projects and initiatives, and to seek advice, guidance and decision-making authority. The development of a Heritage Research and Procedures Report has introduced procedures for practical Aboriginal and European heritage management.

The City of Holdfast Bay has also introduced several initiatives and mechanisms for engaging the community in environmentally conscious practices. Our Green Living program continues to offer residents a range of sustainable living subsidies and workshops, and we support the Living Smart program to help with sustainable behaviour change. There are also wholly community-led events and activities such as the North Brighton and Glenelg North Community Gardens and the monthly Seacliff Community Produce Swap, both supporting localised food systems, allowing the sharing of local produce, gardening knowledge and developing social connectedness and inclusion.

Council also delivers various environmental initiatives, working in partnership with local schools, community groups and neighbouring councils. This has involved:

- rehabilitating natural and coastal areas
- protecting habitats for native flora and fauna
- grants for environment and sustainability projects
- community education for sustainable living
- waste minimisation
- reducing carbon emissions
- litter reduction

These initiatives would not have been possible without our strong base of local volunteers.

Keep connected to local schools, educate the future

Community Feedback – Seacliff Sustainability Markets

## PROGRESS, ISSUES AND COMMUNITY PRIORITIES

### THE PROGRESS WE'VE MADE

- Planting 13,000 native species in dunes and gullies in 2019
- Hosting 26 waste information talks and tours in 2019
- Organising Clean Up Australia Day activities with 62 volunteers in 2018-19
- Facilitating National Tree Day activities with 200 community volunteers planting 500 native plants in 2019
- Hosting 18 environmental volunteering events in 2018/19
- Volunteers giving more than 700 hours of time to improving our environment in 2018-19
- Providing local community organisations with a total of \$165,843 in grant funding for environmental projects between 2012-2020
- Holding Council and community-led environmental and sustainable activities e.g. Sustainable Saturday Market, local produce swaps
- Engaging Integrated Heritage Services to develop a 'Heritage Research and Procedures Report'
- Supporting staff and volunteers to undertake Aboriginal cultural heritage training with the Kaurna Nation

### THE ISSUES WE FACE

- We need to build environmental responsibility, awareness, appreciation and connection
- Need greater participation in "green" and public transport, and reduced reliance on private vehicles
- Balancing community values and expectations

### ACTION - WHAT OUR COMMUNITY AND STAKEHOLDERS ARE TELLING US

- Kaurna People need to be part of the decision-making
- Being connected with nature is a top priority
- Foster an inclusive community that is environmentally responsible
- Support environmental volunteering and nature workshops
- Support research partnerships

## OUR VISION

*A community who see themselves as stewards of nature. We are informed, caring, connected and actively engaged in day to day and collective actions that improve the natural world. A council that supports other agencies to achieve better environmental outcomes for Holdfast Bay. The Kaurna Nation is a joint decision-maker with Council in managing our environment.*

## OBJECTIVES

- Increase uptake of Green Living subsidies by 100%
- Conduct at least 30 environmental community activities per year
- Implement a Local Business Sustainability Award Program by 2021
- Implement at least one circular economy initiative by 2021/22
- Increase number of environmental volunteers by 50% between 2020 and 2025

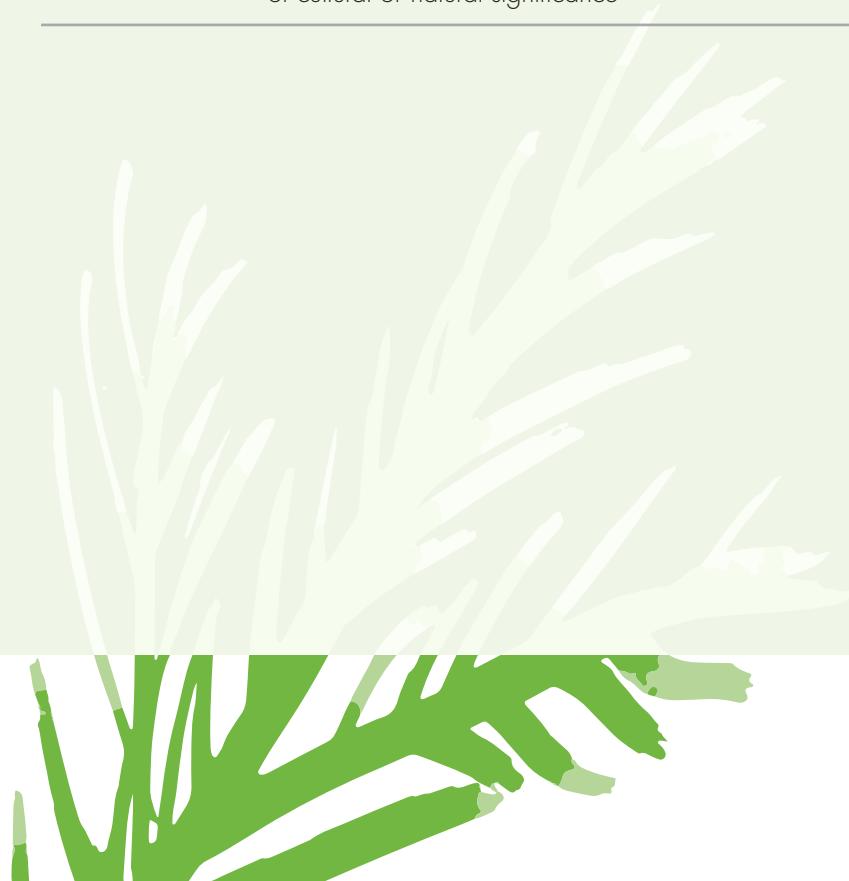
# WORKING TOGETHER ACTION PLAN



STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
Supporting sustainable living	Promote public transport, walkability and bike paths	Facilitator	DIT	
	Continue community education programs, workshops, events and tours	Provider and Facilitator	Green Industries SA, Green Adelaide, KESAB, Kaurna Nation	
	Continue to provide Green Living subsidies	Provider	Residents	
Support our community to implement environmental and sustainability initiatives	Continue to provide Greening Our Community Grants	Provider	Community groups, Schools	
	Support and promote community gardens and local food swap programs	Provider, Facilitator and Regulator	Community Gardens SA, Residents	
	Identify other opportunities for new community gardens	Provider, Facilitator and Regulator	Community Gardens SA	
Support our local businesses to implement environmental and sustainability initiatives	Review and strengthen the environmental sustainability and buy local criteria of the Procurement Policy	Provider	LGA	
	Investigate circular economy and shared services/resources opportunities	Provider/Partner	LGA, Neighbour Councils	
	Implement a local business sustainability award and recognition program	Facilitator	Green Industries SA	

# WORKING TOGETHER ACTION PLAN

STRATEGY	PRIORITY ACTIONS	COUNCIL'S ROLE	PARTNERS AND STAKEHOLDERS	BENEFIT RANKING
Connect our community with nature and cultural heritage	Collaborate with the Kaurna Nation to protect and promote locations of cultural significance	Partner	Kaurna Nation	
	Increase environmental volunteering	Provider and Facilitator	Green Adelaide, DIT, Trees for Life, Surf LifeSaving Clubs, Yacht Clubs, Residents	
	Provide resources, promote and implement activities to actively promote and develop nature connection	Advocate and Provider	Healthy Parks Healthy People (SA Health and DEW)	
	Develop an annual program of nature play activities	Advocate and Provider	Nature Play SA, Trees for Life	
	Continue to run community events (e.g. Clean Up Australia Day, National Tree Day)	Provider	KESAB, Toyota, Planet Ark	
	Install interpretive signage in areas of cultural or natural significance	Provider	Kaurna Nation	



# OUR COMMITMENT

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*The journey of a thousand miles begins with one step.*

Lao Tzu

The Environment Strategy provides a roadmap for our activities that will deliver a more sustainable future and greater recognition of the connection between environmental and human wellbeing.

Whilst this is a five-year plan, it is a commitment towards Council's long-term vision of:



We will create and foster effective working relationships with our community, neighbouring councils, regional associations, the Kaurna Nation and the state government, to implement action, facilitate research, develop policy and enforce legislation that benefits the environment.

Of course, to achieve environmental improvement for our current and future generations, an investment of time and resources will be required. An accelerated rate of improvement will require a higher investment by Council, stakeholders and the community.

As this Environment Strategy is a whole-of-Council document, resources and funding allocation for actions will be sought through Council's annual budgeting process. In addition, Council will continually look for opportunities, such as grants, partnerships, and projects that provide a positive return on investment.

Council is committed to evaluating performance, and undertaking transparent reporting on progress, which will be incorporated into Council's annual report.

Opportunities to improve or refine the Environment Strategy will be considered as part of the annual reporting process to ensure that the plan is continually improved. A strategic review and update of the plan will be undertaken after four years of implementation.

Our Senior Leadership Team will be responsible for reviewing all corporate and operating procedures to enshrine 'environmental responsibility' across our operations.

Ultimately, if we are to achieve the environmental goals that Council and the community have set, then every decision and every aspect of City governance must genuinely consider the environmental impact of that decision, because what affects our environment, affects our community.



Figure 3 - Governance for Sustainability

#### PRIORITY ACTIONS

Develop and implement a management system to embed the principles of environmental responsibility; mitigate environmental risks; and, create sustainability across Council's operations by 2025.

## ENDNOTES

- 1 Motion on Notice – Environmental Responsibility – Councillor Chabrel
- 2 [https://en.wikipedia.org/wiki/Brown\\_Hill\\_Creek](https://en.wikipedia.org/wiki/Brown_Hill_Creek)
- 3 <https://www.environment.sa.gov.au/topics/climate-change/south-australias-greenhouse-gas-emissions>
- 4 Steffen, W., & Hughes, L. (2011). The critical decade: South Australian impacts. Canberra: A.C.T. Climate Commission Secretariat.
- 5 Resilient South (2014b) Regional Climate Change Adaptation Plan, prepared by URPS and Seed Consulting Services
- 6 Resilient South (2014b) Regional Climate Change Adaptation Plan, prepared by URPS and Seed Consulting Services
- 7 Resilient South (2014) Climate Change Scenarios Report- Resilient South, prepared by SKM
- 8 Minutes of the Ordinary Meeting of Council of the City of Holdfast Bay held in the Council Chamber, Glenelg Town Hall, Moseley Square, Glenelg, on 8 October 2019 at 7:00pm <https://cdn.holdfast.sa.gov.au/agendas-minutes/minutes/19-10-08-Council-Minutes.pdf>
- 9 LGA Electricity Supply Contract <https://www.lga.sa.gov.au/page.aspx?u=7363>
- 10 Adelaide's Living Beaches (2005) A Strategy for 2005-2025, Prepared by Natural and Cultural Heritage Department for Environment and Heritage for the Government of South Australia
- 11 van den Bosch, M. and Bird, W. (2018) Oxford Textbook of Nature and Public Health: The role of nature in improving the health of a population. Oxford University Press.
- 12 Biodiversity Action Plan for Minda Dunes 2018-2022 (2018), prepared by T & M Ecologists for the City of Holdfast Bay
- 13 Biodiversity baseline assessment (2018), prepared by T & M Ecologists for the City of Holdfast Bay; past collection records.
- 14 Green Industries SA. Benefits of a Circular Economy in South Australia. Summary
- 15 Annual Business Plan 2019-20 (2019) Our Plan for Our Place
- 16 Arbulu, I., Lozano, J., Rey- Maquieira, J. (2016) Waste Generation Flows and Tourism Growth, A STIRPAT Model for Mallorca, Journal of Industrial Ecology, Vol 21:2, pp 272:281
- 17 Rawtec (2019). Compostable Bag Supply via Supermarket Pilot City of Holdfast Bay and Green Industries SA.

# REFERENCES

1. Adelaide and Mount Lofty Ranges NRM Board Regional Plan Volume 1 Part 2 Strategic Plan 2014-15 to 2023-24 (2013)
2. Adelaide's Living Beaches (2005) A Strategy for 2005-2025, Prepared by Natural and Cultural Heritage Department for Environment and Heritage for the Government of South Australia.
3. Annual Business Plan 2019-20 (2019) Our Plan for Our Place <https://cdn.holdfast.sa.gov.au/general-downloads/Council/annual-business-plan.pdf>
4. Arbulu, I., Lozano, J., Rey- Maquieira, J. (2016) *Waste Generation Flows and Tourism Growth, A STIRPAT Model for Mallorca*, Journal of Industrial Ecology, Vol 21:2, pp 272:281
5. Barrett and Stanley (2008), *Moving People: Solutions for a Growing Australia*, ARA, BIC, UITP
6. City of Holdfast Bay (2018) *Open Space and Public Realm Strategy 2018-2030*
7. City of Holdfast Bay Tourism Plan 2020 (2019) <https://cdn.holdfast.sa.gov.au/general-downloads/Council/Holdfast-Bay-Tourism-Plan-2020.pdf>
8. City of Holdfast Bay (2018). Economic Activation Plan 2018 – 2023.
9. City of Holdfast Bay Open Space and Public Realm Strategy 2018-2030 (2018) [https://cdn.holdfast.sa.gov.au/general-downloads/Council/1809-CoHB-Open-Space-Strategy\\_v1FA\\_digital.pdf](https://cdn.holdfast.sa.gov.au/general-downloads/Council/1809-CoHB-Open-Space-Strategy_v1FA_digital.pdf)
10. City of Prospect. Environmental Management Plan 2018 – 2022
11. City of Onkaparinga (2014) IVA Technical Report prepared by URPS and Seed Consulting Services as part of the Resilient South consultancy led by URPS, for the Cities of Onkaparinga, Holdfast Bay, Marion and Mitcham in association with the Government of South Australia and the Australian Government.
12. Climate Change (online), City of Holdfast Bay, <https://www.holdfast.sa.gov.au/development-and-infrastructure/environment/climate-change>
13. Climate Change policy (2009), <https://cdn.holdfast.sa.gov.au/general-downloads/Council/Policies-and-procedures/Policies-under-review/Climate-Change-Policy.pdf>
14. Compostable Bag Supply via Supermarket Pilot City of Holdfast Bay and Green Industries SA (2019), Rawtec.
15. Dog Management Policy (2017) <https://cdn.holdfast.sa.gov.au/general-downloads/Council/Policies-and-procedures/Dog-Management-Policy.pdf>
16. Environmental Protection Authority South Australia (2004). State of Environment Report 2004 City of Holdfast Bay.
17. Green Industries SA. Benefits of a Circular Economy in South Australia. Summary
18. Heatwave Response Policy (2017) <https://cdn.holdfast.sa.gov.au/general-downloads/Council/Policies-and-procedures/Heatwave-Response-Policy.pdf>
19. Herriman, J (2011). Local Government and Community Engagement in Australia. Working Paper No 5. Australian Centre of Excellence for Local Government, University of Technology Sydney.
20. <https://unfccc.int/cop3/fccc/climate/fact22.htm>
21. Managing Adelaide's Beaches (online), Department of Environment and Water <https://www.environment.sa.gov.au/topics/coasts/managing-adelaides-beaches>
22. Mohajerani, A., Bakaric, J., Jeffery-Bailey, T., (2017) The urban heat island effect, its causes, and mitigation, with reference to thermal properties of asphalt concrete, *Journal of Environmental Management*, vol. 197, pp. 522:538
23. Mott, D. 2018 *Heritage Research & Procedures Report, City of Holdfast Bay Council, Adelaide, South Australia*. Confidential report to City of Holdfast Bay Council under contract with Integrated Heritage Services Pty Ltd.

# ACRONYMS

24. Our Place 2030 Strategic Plan, <a href="https://cdn.holdfast.sa.gov.au/general-downloads/Council/Our-Place-2030-Strategic-Plan.pdf">https://cdn.holdfast.sa.gov.au/general-downloads/Council/Our-Place-2030-Strategic-Plan.pdf</a>	DEW	Department for Environment and Water (SA Government)
25. Resilient South (2016) Airborne Thermal Imagery and Analysis 2016, prepared by ArborCarbon as part of the Resilient South consultancy led by URPS, for the Cities of Onkaparinga, Holdfast Bay, Marion and Mitcham in association with the Government of South Australia and the Australian Government	DIT	Department of Infrastructure and Transport (SA Government)
26. Resilient South (2014) Climate Change Scenarios Report– Resilient South, prepared by SKM as part of the Resilient South consultancy led by URPS, for the Cities of Onkaparinga, Holdfast Bay, Marion and Mitcham in association with the Government of South Australia and the Australian Government.	KESAB	Keep South Australia Beautiful
27. Resilient South (2014b) Regional Climate Change Adaptation Plan, prepared by URPS and Seed Consulting Services as part of the Resilient South consultancy led by URPS, for the Cities of Onkaparinga, Holdfast Bay, Marion and Mitcham in association with the Government of South Australia and the Australian Government.	LGA	Local Government Association
28. Steffen, W., & Hughes, L. (2011). The critical decade: South Australian impacts. Canberra: A.C.T. Climate Commission Secretariat.	SMA	Stormwater Management Authority
29. Stormwater Drainage Policy (2017) <a href="https://cdn.holdfast.sa.gov.au/general-downloads/Council/Policies-and-procedures/Stormwater-Drainage-Policy.pdf">https://cdn.holdfast.sa.gov.au/general-downloads/Council/Policies-and-procedures/Stormwater-Drainage-Policy.pdf</a>		
30. Southern Region Resource Authority Material Recycling Facility Plan <a href="https://www.holdfast.sa.gov.au/council/news/federal-funding-commitment-sought-for-a-new-recycling-plant-in-adelaides-south">https://www.holdfast.sa.gov.au/council/news/federal-funding-commitment-sought-for-a-new-recycling-plant-in-adelaides-south</a>		
31. Tree Management Policy (2015) <a href="https://cdn.holdfast.sa.gov.au/general-downloads/Council/Policies-and-procedures/Tree-Management-Policy.pdf">https://cdn.holdfast.sa.gov.au/general-downloads/Council/Policies-and-procedures/Tree-Management-Policy.pdf</a>		
32. T & M Ecologists for the City of Holdfast Bay (2018). Biodiversity Action Plan for Minda Dunes 2018-2022.		

# GLOSSARY

## Biodiversity

Biodiversity is the variety of all life on earth, consisting of three components:

1. the different plants, animals and micro-organisms
2. the ecosystems (or habitats) of which they are a part
3. the genetic diversity of all species.

Species depend on their habitat for survival, and that habitat depends on the dynamic complex of plants, animals, fungi, and micro-organisms that are present. Biodiversity is most often used in relation to plants and animals that are native to an area, but it also underpins human life and the resources upon which we depend. A highly diverse and complex system is a sign of health and is critical to the functioning of essential services such as maintaining and regulating atmosphere and climate, the provision of clean fresh water, soil formation, the cycling of nutrients and disposal of wastes.

## Coastal Inundation

The temporary and permanent flooding of a portion of land within the coastal zone.

## Coastal Recessions

A progressive ongoing retreat of a shoreline due to multiple erosion events over a period of years or decades.

## Climate Change

Changes in climate that are attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.

## Climate Change Adaptation

Climate change adaptation helps individuals, communities, organisations and natural systems to deal with those consequences of climate change that cannot be avoided. It involves taking practical actions to manage risks from climate change impacts, protect communities and strengthen the resilience of natural environments and the economy. Adaptation can involve gradual transformation with many small steps over time, or major transformation with rapid change. An example of adaptation is increasing street tree numbers and canopy cover for more cooling during increasingly hot summers.

## Climate Change Mitigation

Addresses the causes of climate change by reducing greenhouse gas emissions.

## Water Sensitive Urban Design

Water-sensitive urban design (WSUD) promotes the sustainable use and re-use of water in urban settings and buildings. This type of design integrates the total water cycle and water from all sources – including rainwater, storm water, groundwater, mains water and wastewater – into urban development and building processes.

WSUD measures and tools can be applied to residential, commercial and industrial developments and buildings. They range from the storage, treatment and use of runoff to water-efficient landscaping. WSUD can help communities achieve greater water sustainability and become more pleasant places to live and work.



**REPORT**  
City of Holdfast Bay  
Environment Strategy

**LEAD CONSULTANT**  
Healthy Environ Pty Ltd

**PREPARED FOR**  
City of Holdfast Bay

All web links are correct at time  
of publication, October 2020.



CITY OF  
**HOLDFAST BAY**