



DRAFT Climate Response Plan

2026-31

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Cover image: Local family strolling through Reg Robinson Reserve, Mansfield Park



Mayor's Message

To be added following consultation.

Claire Boan
Mayor, City of PAE



Kurna Acknowledgment

We would like to acknowledge and pay respect to the Traditional Owners of the land on which we stand, the Kurna People of the Adelaide Plains. It is upon their ancestral lands that the Port Adelaide Enfield Council meets. It is also The Place of the Kardi, the Emu, whose story travels from the coast inland. We pay respect to Elders past and present. We respect their spiritual beliefs and connections to land which are of continuing importance to the living Kurna people of today. We further acknowledge the contributions and important role that Aboriginal people continue to play within our shared community.

*Artist credit: NHARLA, Colleen Raven, 2024.
Ngapartji Ngapartji roughly translates to 'I give, you give'.*

Our Plan at a Glance

Clean and Green City – a city that values its natural environment

Climate change is already affecting the City of PAE. Rising temperatures, more intense storms, coastal hazards and increasing energy costs create risks for our assets, services and community wellbeing.

This plan outlines how we will reduce emissions, strengthen resilience and make climate considerations part of everyday decision making.

Energy Efficient Council Operations	Circular and Low Emissions Supply Chain	Climate Resilient Organisation and Community
PAE's reliance on fossil fuels for fleet and buildings exposes us to rising costs, service disruption and future non-performing or obsolete assets. Electrification and energy efficiency reduce these risks.	Materials, construction and procurement are a growing share of our emissions. Better data and circular design will support us to reduce emissions.	Heat, flooding and coastal hazards threaten infrastructure, workforce safety and service delivery. Strong governance and climate-informed planning are essential.
• Optimise energy use at our sites • Invest in energy technologies for our buildings • Electrify the vehicle fleet and other equipment • Deliver smart electric vehicle (EV) charging infrastructure to support our EV fleet • Optimise public lighting operations and smart controls • Transition council facilities away from fossil fuels	• Expand sustainable design and procurement practices • Reduce emissions in civil works (roads, footpaths, infrastructure) • Strengthen supply chain emissions data and supplier engagement • Improve operational resource recovery and waste-related data	• Manage and report on climate risks • Strengthen governance and accountability • Build workforce readiness and capability • Integrate climate into business decision making • Improve data, reporting and decision-making tools • Share our climate progress and lead by example
• Reduce Scope 1 and 2 emissions by at least 65% by 2030–31 from a 2020–21 baseline • Strive towards net zero emissions by 2050	• Develop and implement a realistic guiding framework for suppliers that supports emissions data availability and quality and enables us to set a credible Scope 3 target by 2030–31	• Embed climate risk management principles across relevant policies, strategies and operations by 2031 • Develop and introduce a climate literacy training module for staff
Significant reductions in our Scope 1 and 2 emissions, achieved through reduced reliance on fossil fuels, increased renewable energy use and improved energy efficiency, leading to lower operational costs and a more sustainable organisation.	Improved Scope 3 data quality and stronger supplier engagement enable us to set credible emissions targets and reduce Scope 3 emissions through sustainable design and procurement.	Climate change is factored into everyday decisions across the council, supported by staff who understand climate risks and how to manage them.

Introducing the Climate Response Plan

The City of PAE declared a climate emergency in 2019 and committed to reducing organisational emissions through the 2021 **Net Zero Emissions Plan**. That plan set targets of a 30% reduction by 2025 and 60% by 2030. We have already exceeded the first target, achieving a 45% reduction by 2025.

The **Climate Response Plan 2026–31** builds on this foundation. It brings together reducing emissions and responding to climate impacts in one clear plan. It supports PAE's **Clean and Green City Strategy** and **Living Environment Plan 2026–31** and helps deliver the **City Vision**. It replaces the current Net Zero Emissions Plan.

This plan sets out the practical steps that we will take to further reduce emissions and prepare for a changing climate, so that services remain reliable and our neighbourhoods remain liveable. This may result in more trees and shade, energy-saving upgrades to council buildings and street lighting, more electric vehicles and equipment, and planning that helps roads, parks and community facilities cope with heat, storms, flooding and coastal hazards.

Purpose of the Plan

This plan outlines how we will:

- Further reduce greenhouse gas emissions from operations
- Improve resource efficiency and support a circular economy
- Include climate risks in how we plan, manage assets and make decisions
- Strengthen the climate resilience of buildings, fleet, infrastructure and essential services

The plan focuses on what we can directly control or influence. This means we can lead by example through how we run facilities, deliver services, manage assets and make decisions. It also helps us manage key organisational risks, including environmental sustainability, good decision making, asset management, community participation and workforce safety.

Nature-based actions, biodiversity and water management are addressed through:

- The **Urban Greening and Biodiversity Plan 2026–31**
- The **Integrated Water Management Plan 2026–31**

These plans will be delivered in conjunction with the Climate Response Plan and contain their own actions, targets and measures.

How the Plan Works

Delivery is supported by:

- A detailed internal implementation plan that sets out timing, resourcing and who is responsible for delivery
- Annual monitoring, reporting and reviewing against agreed performance targets and measures

The plan will be updated over time as new information, technology or requirements emerge. Actions are delivered through annual business planning, with progress monitored and reported to support accountability and continuous improvement.

A glossary of technical terms and acronyms is provided in Appendix 1.

What has Changed in this Plan

The previous Net Zero Emissions Plan focused primarily on emissions reduction. Since then:

- Climate risks have increased in frequency and intensity
- Expectations for governance and transparency have increased
- New state and national frameworks have emerged
- Emissions from suppliers (Scope 3) now make up a bigger share of the council's overall emissions profile as we reduce our Scope 1 and 2 emissions

This plan responds to those changes by expanding beyond greenhouse gas emissions to include climate risk, resilience and organisational capability.

It also adjusts our emissions targets by:

- Increasing our Scope 1 and 2 emissions reduction ambition
- Recognising that more accurate data is required to be able to set an informed and reliable Scope 3 target (see Appendix 2 for more detail)

Introducing the Climate Response Plan

Figure 1 provides an explanation of the differences between Scope 1, Scope 2 and Scope 3 emissions and what this means for the City of PAE. Further detail on our greenhouse gas emissions accounting methodology is included in Appendix 2.

Figure 2 shows how emissions reduction (the focus of our previous Net Zero Emissions Plan) and climate risk management (now included in this Climate Response Plan) differ from each other and interact to create a clean and green city.

Figure 3 shows how related PAE plans, policies and guidelines, along with relevant regional plans, support delivery of outcomes established in the Climate Response Plan.

Approach to Carbon Offsets

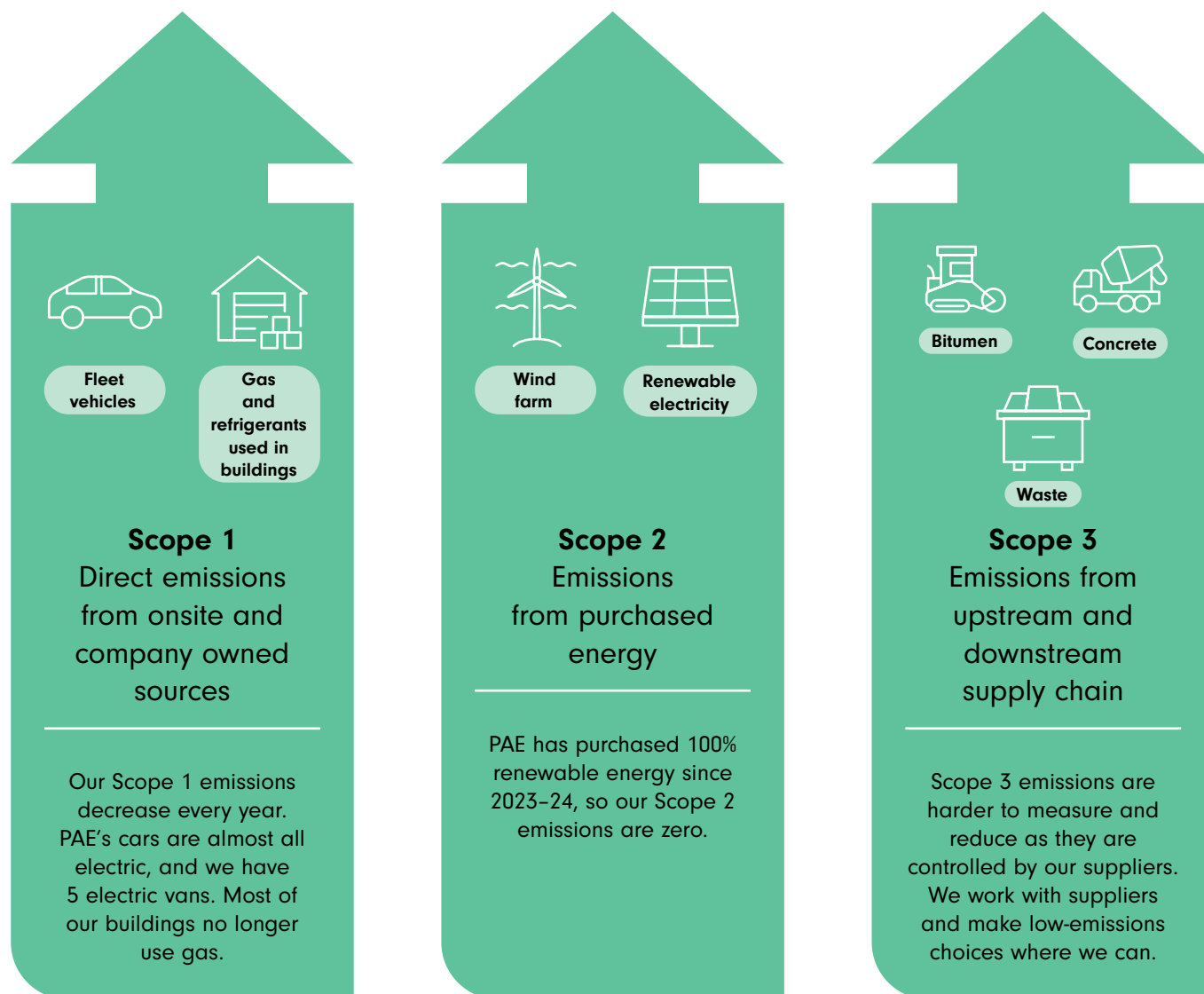
Carbon offsets are a way to balance out emissions by supporting projects that reduce greenhouse gases or remove carbon from the atmosphere.

Our priority is to reduce emissions at the source. We will not rely on offsets to meet our targets.

We also support practical local actions that store carbon and improve our neighbourhoods, such as planting trees, urban greening and restoring biodiversity (see the Urban Greening and Biodiversity Plan). These activities are not counted as offsets, but they help strengthen natural carbon sinks and deliver benefits like cooler streets, healthier ecosystems and a more liveable city.

Offsets may be used only in limited, clearly defined situations where they deliver specific environmental or community benefits. This helps avoid long-term dependence on offsetting.

Figure 1: Scope 1, 2 and 3 emissions with PAE examples

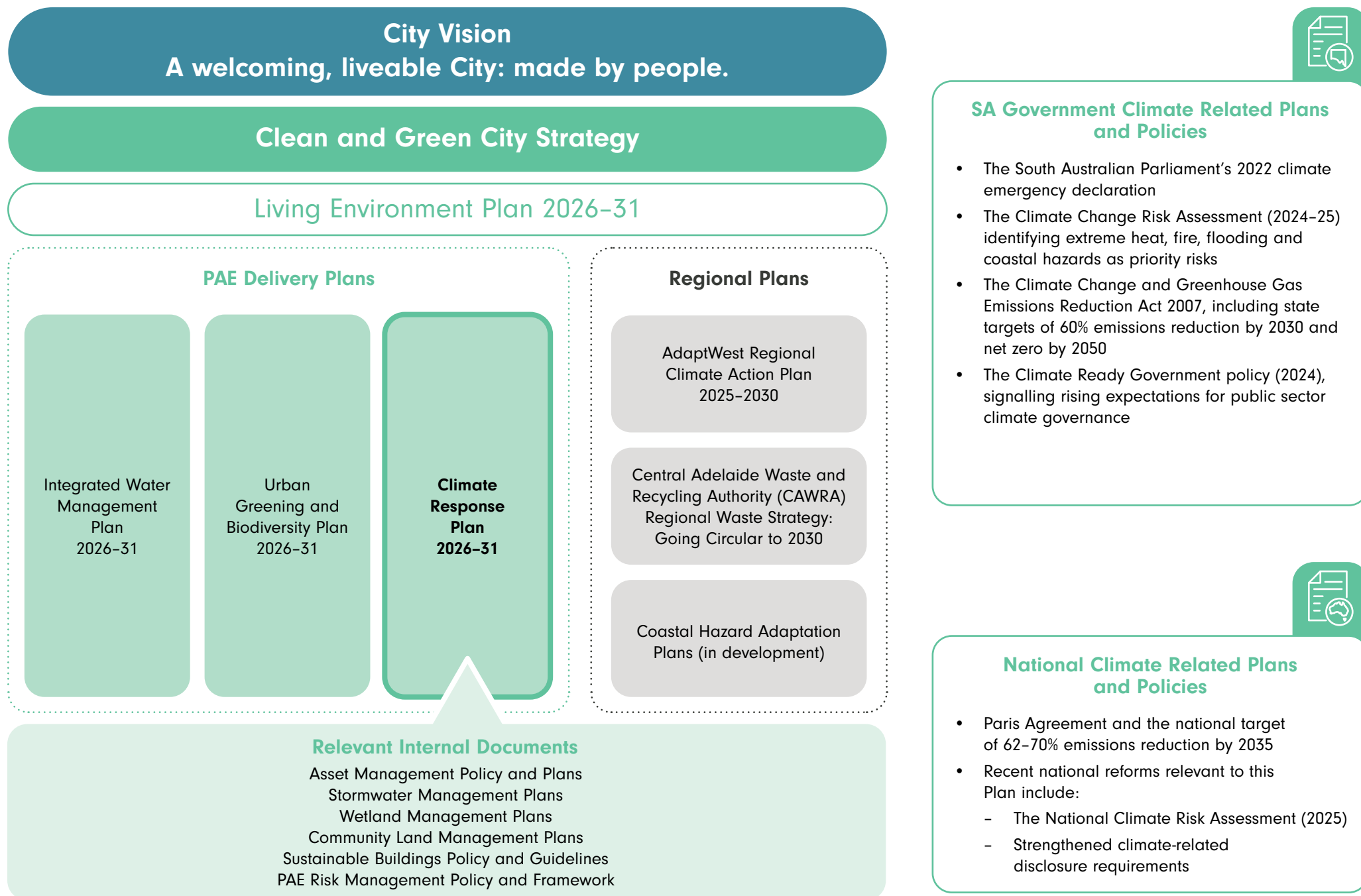


Introducing the Climate Response Plan

Figure 2: Adaptation vs mitigation with PAE examples



Figure 3: The CRP is supported by other local, state and federal government plans, policies and guidelines



Climate Change Impacts and Opportunities

Expected Future Climate Conditions

Climate change is already affecting the City of PAE. Western Adelaide is experiencing hotter temperatures, more very hot days, changing rainfall patterns and ongoing sea level rise. These trends will intensify over coming decades.^{1,2}

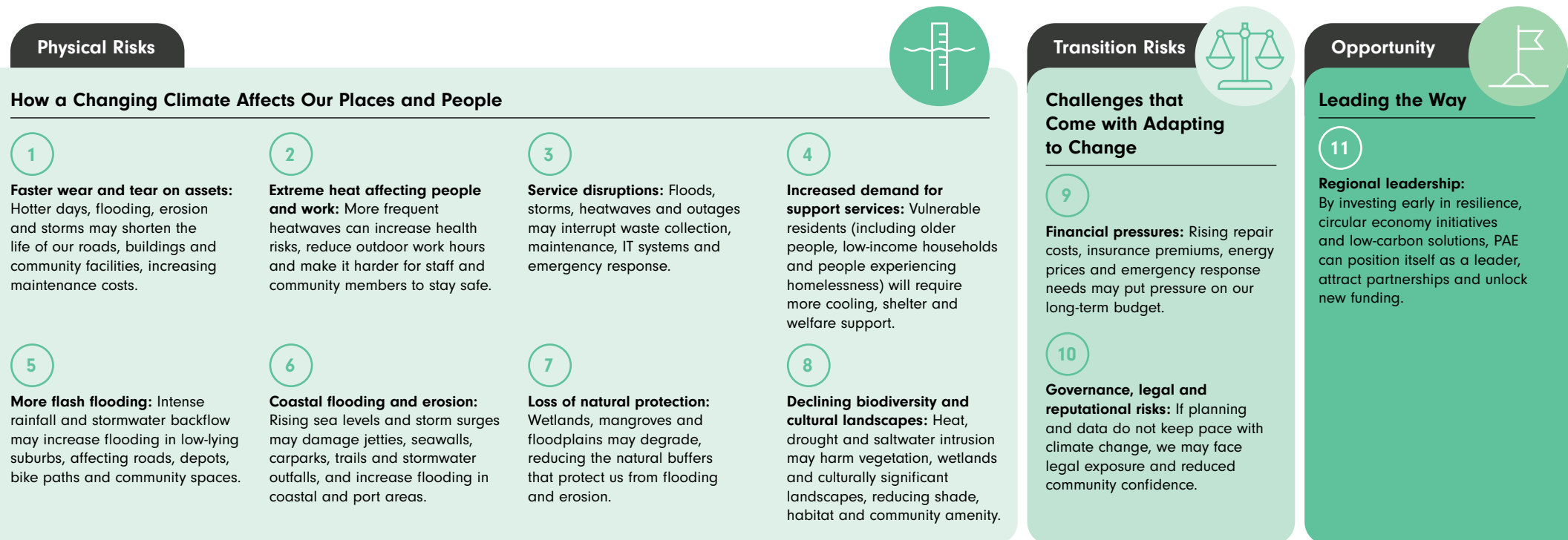
We use the climate models developed for South Australia to understand future conditions and guide long-term planning. These scenarios help identify vulnerabilities and inform decisions about assets, services and investment.

Further detail on the climate projections and risk management process used to inform actions in this plan is included in Appendix 3.

Climate Risks

A recent assessment has helped us identify 10 major climate risks and one important opportunity for PAE (refer to Figure 4). These risks could affect the community, our services, our staff and the assets we all rely on. We still have more work to do to fully understand these risks and how best to respond, which is outlined in Focus Area 3 on page 19.

Figure 4: Climate Risks and Opportunities for PAE.



1 CSIRO – *State of the Climate 2024*. Download at <https://www.csiro.au/en/research/environmental-impacts/climate-change/State-of-the-Climate>

2 Department of Environment and Water SA – *Guide to Climate Projections for risk assessment and planning in SA 2022*. Download at <https://www.environment.sa.gov.au/topics/climate-change/climate-science-knowledge-resources/latest-climate-projections-for-sa>



Action Plan

The Action Plan outlines the practical steps we will take between 2026 and 2031 to reduce emissions, strengthen resilience and embed climate considerations across operations. Actions are grouped into three outcome areas:

1. Energy-Efficient Council Operations
2. Circular and Low-Emissions Supply Chain
3. Climate-Ready Organisation and Community

Detailed internal implementation schedules, budgets and responsibilities sit outside this public-facing plan.

1.

Energy-Efficient
Council Operations

We have made strong progress by electrifying most of our passenger vehicles and switching to 100% renewable electricity. As a result, our heavy vehicle fleet and plant now make up the majority of our remaining direct (Scope 1) emissions.

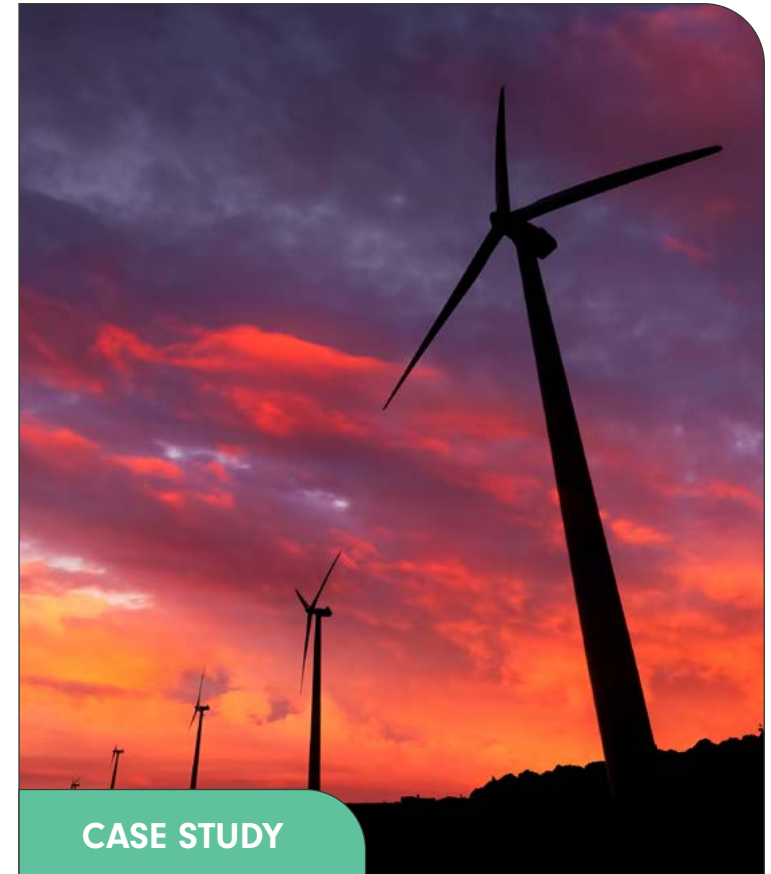
Electrifying heavy vehicles such as tippers and street sweepers, and plant such as mowers, is essential for meeting our emissions-reduction targets. However, this transition needs to be staged to ensure reliability, safety and financial sustainability.

Further reductions in Scope 1 emissions will also come from completing our transition away from gas.

Our move to 100% renewable electricity in 2025 eliminated all Scope 2 emissions. Even so, there are still opportunities to improve energy performance, manage exposure to changing energy prices and ensure we continue to deliver reliable services for the community.

To improve the energy efficiency and reduce emissions of council operations, we will continue to:

- Upgrade council buildings through energy efficiency, solar and battery programs
- Transition the council away from gas through electrifying heating, cooking and other equipment in stages
- Electrify council vehicles and equipment (such as vans, tippers and mowers) through the Light and Heavy Fleet Transition Plans
- Expand our smart electric vehicle (EV) charging infrastructure to support fleet electrification
- Improve energy monitoring, analytics and performance tracking across council sites
- Apply 'all-electric' principles to new council buildings and major refurbishments



CASE STUDY

Purchasing renewable electricity

We worked with five other South Australian councils to negotiate a long-term Power Purchase Agreement (PPA). Almost 70% of our electricity is purchased directly from Goyder South Wind Farm in SA's mid-north, with the remainder purchased from the wholesale market. Renewable energy certificates are also purchased to ensure the additional electricity can be classified as renewable. The PPA gives us access to cheaper renewable electricity, reduces exposure to short term contract price volatility, and helps achieve our emissions targets.

○ Energy-Efficient Council Operations

Our next steps:

1.1 Optimise energy use at our sites

We will improve our energy performance and manage our electricity costs by using systems to shift our electricity use where possible to take advantage of our renewable energy agreement and support heatwave resilience.

1.2 Invest in energy technologies for our buildings

We will expand solar, battery storage and energy efficiency upgrades in our buildings, guided by modelling and whole-of-life business cases.

1.3 Electrify the vehicle fleet and other equipment

We will continue to electrify the council's light fleet, heavy vehicles and equipment (e.g. mowers, brush cutters) in a staged manner, using trials, business needs and market developments to prioritise vehicle classes and equipment for transition.

1.4 Deliver smart EV charging infrastructure to support our EV fleet

Across our sites, we will design and install charging infrastructure systems which can grow and adjust as needed to support our fleet electrification requirements, manage site loads and integrate with solar and battery systems.

1.5 Optimise public lighting operations and smart controls

We will develop a streetlighting Asset Management Plan (AMP) and explore options to optimise public lighting to balance safety, amenity (to both humans and wildlife) and emissions reduction.

1.6 Transition council facilities away from fossil fuels

We will complete the transition of council facilities (including leased facilities) away from gas and refrigerants with high global warming potential to efficient all-electric technologies.



○ Energy-Efficient Council Operations



FOUNDATION INITIATIVE

Preparing Kilburn Depot for an Electric Fleet

We are committed to transitioning our heavy vehicles like tippers and street sweepers to cleaner electric alternatives. Two things currently stand in the way: limited availability of suitable electric heavy vehicles and the capacity of our depot's existing electrical infrastructure.

While we have no control over when new electric heavy vehicles come onto the market, we can ensure that our sites are ready. Current modelling shows that the Kilburn Depot will reach its electricity limit within the next two to three years. Without upgrades, this will slow our ability to electrify the fleet.

To keep our transition on track, we will begin planning in 2026–27 by:

- Reviewing how our vehicles operate and what their charging needs will be
- Working with SA Power Networks to confirm the depot's electricity capacity and the cost of any transformer upgrades
- Exploring future opportunities for solar power and battery storage
- Incorporating expected upgrade costs into the council's Annual Business Plan and Long-Term Financial Plan

These steps ensure that we are preparing responsibly, investing wisely and positioning our organisation for a cleaner, more sustainable fleet.

Circularity and Low Emissions Supply Chain



For PAE, circularity means planning, designing, building and maintaining our infrastructure in ways that keep materials in use for longer and reduce waste throughout the entire life of an asset, from construction to replacement. This includes choosing durable, low-emissions materials, designing assets so that components can be reused or recovered during renewals, and improving how we manage construction and operational waste to reduce what goes to landfill.

Material use and disposal make up a significant portion of PAE's Scope 3 emissions. The embodied emissions in new and renewed buildings, roads, stormwater assets and other capital works are also becoming a larger share of our overall emissions profile.

By incorporating resource-efficient, low-emissions and climate resilient standards into design, construction, operations and procurement, we avoid locking in future emissions and ensure that our facilities will remain safe, functional and comfortable as the climate changes. This approach also delivers broader community benefits from public investment.

Because supply-chain emissions data is still limited, engaging directly with suppliers is one of the most effective ways to improve investment decisions and strengthen resilience to future supply risks.

To support circularity and a low emissions supply chain, we will continue to:

- Partner regionally through Central Adelaide Waste and Recycling Authority (CAWRA) and other collaborators to improve waste planning, education, infrastructure and data
- Deliver flagship sustainable projects to demonstrate best practice low-carbon and circular design
- Embed circular and low-emissions standards through our Sustainable Buildings Policy, Guidelines and Checklist
- Reduce embodied emissions in construction by increasing recycled content, trialling low-emissions materials and improving waste recovery across capital works
- Support circular economy initiatives through economic development and regional partnerships



CASE STUDY

Australia's First 6-Star Green Star Community Building

Yitpi Yartapuultiku (the Soul of Port Adelaide) is a landmark community space developed by the City of PAE in partnership with the Yitpi Yartapuultiku Aboriginal Working Group and project partners. The Centre is Australia's first community building to achieve a 6-Star Green Star Buildings rating, representing world leadership in sustainable design, construction and operation.

The all-electric facility is powered by 100% renewable energy. Compared to a standard build, Yitpi Yartapuultiku's design achieved a 61% reduction in operational energy, a 99% reduction in potable water use through rainwater and recycled water for irrigation and a 33% reduction in upfront carbon. 98% of the construction waste was diverted from landfill. The project integrates biodiversity restoration, a 'living shoreline' and a Healthy Country Plan, delivering strong environmental, cultural and community outcomes.

Our next steps:

2.1 Expand sustainable design and procurement practices

We will review, update and embed our Sustainable Building guidelines, expanding them to include asset maintenance and purchasing. This will improve our implementation of low-emissions materials and methodologies, circular design principles and climate resilience.

2.2 Reduce emissions in civil works (roads, footpaths, infrastructure)

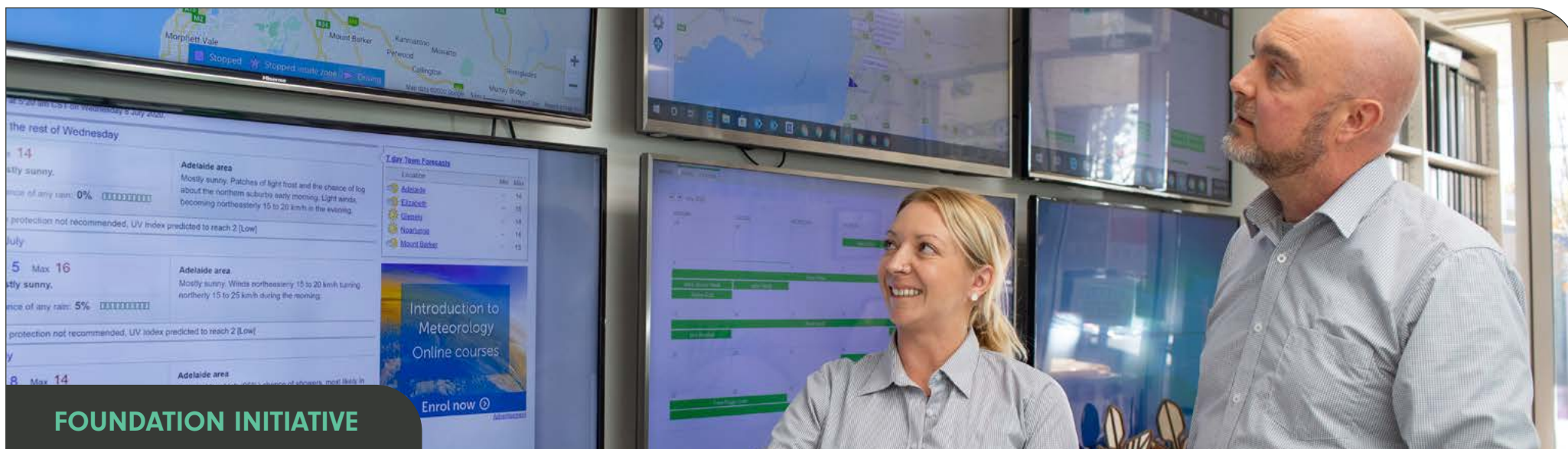
We will reduce the embodied emissions of our civil works program by shifting to verified lower-carbon materials and methodologies as business-as-usual.

2.3 Strengthen supply chain emissions data and supplier engagement

We will improve the accuracy of our supply chain (Scope 3) emissions data, with a focus on high-emissions categories. We will work with suppliers to build capability and transparency in our supply chain, as well as to drive better data, market signals, stronger partnerships and real reductions in supply chain emissions.

2.4 Improve operational resource recovery and waste-related data

We will strengthen waste separation and resource recovery for our construction projects and operations and improve tracking and reporting in partnership with CAWRA.



FOUNDATION INITIATIVE

Supplier Engagement For Improved Scope 3 Emissions Data

To enable us to set a meaningful Scope 3 emissions target, we need to better understand our emissions sources and available data. This is a challenge faced by all organisations aiming for Net Zero. We will begin this process by working with two distinct supplier groups: companies obliged to report under AASB S2 and suppliers based in our city.

AASB S2 is Australia's mandatory climate reporting standard for large entities, some of which are suppliers to PAE. We will obtain relevant information on emissions and climate risk from these entities to enable more accurate emissions reporting and supply chain management.

Local suppliers are typically small-to-medium enterprises that are not obliged to report and often do not have the capacity to develop their own emissions inventory or provide other detailed data. We will engage closely with these local small suppliers to build their capability and understanding of climate reporting in ways that provide value to both PAE and the supplier, and that align with the goals of our Prosperous Economy Strategy and Economic Development Plan.

Climate Resilient Organisation and Community

Council assets, services and day-to-day operations are increasingly exposed to extreme heat, flooding, coastal inundation and more frequent, disruptive storms. These events can impact how we deliver services and how well our assets perform, as well as the wellbeing of our workforce and our long-term financial sustainability.

Building organisational resilience means taking proactive steps to manage climate risks. This includes training and supporting our workforce so that staff can operate safely under changing conditions and ensuring that all new and renewed assets are designed and planned to perform reliably in a hotter, drier and more variable climate.

Strong governance, skilled staff, clear investment frameworks and transparent reporting are essential for effective climate action. By embedding climate considerations into governance, risk management, procurement, business planning and everyday decision making, we can stay well-prepared for changing climate conditions, new regulatory requirements and evolving community expectations.

To build a climate resilient organisation and community, we will continue to:

- Embed climate commitments and risk considerations into key strategies, policies and plans, including the City Vision, Four-Year Business Plan and Asset Management Frameworks
- Measure and publicly report our organisational Scope 1 and 2 emissions annually
- Collaborate regionally with coastal councils and state agencies on climate adaptation planning, community education and Coastal Hazard Adaptation Planning (CHAP) initiatives
- Maintain service continuity during extreme events through standby power generation and emergency preparedness
- Build internal capability through targeted training programs, projects and partnerships, including sustainable buildings initiatives
- Share progress and encourage action through council communications and community engagement activities



CASE STUDY

AdaptWest Regional Climate Partnership

The AdaptWest Regional Climate Partnership is a collaborative initiative between the Cities of Charles Sturt, Port Adelaide Enfield and West Torrens, aimed at enhancing climate resilience in western Adelaide.

For more than a decade, the three councils have been working together to understand how climate change affects our region by running investigations, workshops, seminars and community events, and giving residents and businesses the tools to respond.

Recent initiatives include:

- **Cool Spaces** – Places for the community to stay cool during hot weather and heat waves
- **Mobile Cooling Hub Trial** – Offering shade, misting fans and a welcome break from the heat at community events
- **Electrify Everything** – Community workshops to help people identify how they can become more energy-efficient and transition away from fossil fuels at home

Learn more about this partnership at the AdaptWest website www.adaptwest.com.au



Our next steps:

3.1 Manage and report on climate risks

We will identify, assess and manage climate-related risks and opportunities across council operations and establish a consistent approach to managing, tracking and reporting these publicly.

3.2 Strengthen governance and accountability

We will embed climate considerations into our Strategic Risk Register, Business Continuity Plans, emergency management, communication plans and other key documents to ensure that climate risk, resilience and emissions reduction become a routine part of decision making and accountability across the organisation.

3.3 Build workforce readiness and capability

We will strengthen climate understanding across all staff and leaders by developing a structured induction and training program so that climate risk, resilience and emissions considerations are understood and applied where appropriate. We will continue to manage workforce climate risks by monitoring climate impacts on staff wellbeing and productivity, as well as by planning for climate-related workforce disruptions.

3.4 Integrate climate into business decision making

We will integrate climate considerations into business decision making by establishing criteria which consider potential long-term value implications, avoided risks ('cost of doing nothing') and emissions reduction outcomes.

3.5 Improve data, reporting and decision-making tools

We will improve the accuracy, accessibility and transparency of climate-related data to support better planning, reporting and decision making. This includes integrating climate data into relevant existing systems and modelling Scope 3 emissions reduction opportunities, when data allows, to support Scope 3 target setting.

3.6 Share our climate progress and lead by example

We will increase our communications on climate information and actions in collaboration with AdaptWest and other partners to build transparency, accountability and community awareness, and to help inspire others to act.



FOUNDATION INITIATIVE

Climate Risk Assessment and Integration

To best protect the council and the community from the worst impacts of climate change, we need to act urgently and effectively to understand and manage the risks. We have started this process by reviewing the National and State Climate Risk Assessment and identifying 10 climate risks and one opportunity (see 'Climate Change Impacts and Opportunities' on page 9).

In 2026–27 we will complete the ratings of these risks by determining:

- How soon and how likely the risk is to materialise (urgency)
- The potential harm or impact that could result from a hazardous event (severity)
- The degree to which the risk multiplies other risks (complexity)
- Our capacity to reduce the risk (capacity)

We will also conduct training to ensure organisation-wide awareness, integrate these risks into our Strategic Risk Framework and Asset Management Plans, and stress-test our Long-Term Financial Plan against the risks.

These actions will build a strong foundation for us to understand and manage physical and transition climate risks and take advantage of opportunities arising from assessing climate risks to our organisation and community.

Appendix 1: Glossary of Technical Terms and Acronyms



This glossary provides simple explanations of key terms and acronyms used in the Climate Response Plan.

Term	Definition
Adaptation/Climate Change Adaptation	Actions that help people, assets and services cope with the impacts of climate change (e.g., heat, flooding, storms)
AdaptWest	A regional climate partnership between the cities of PAE, Charles Sturt and West Torrens councils that is focused on building climate resilience in western Adelaide
ASRS (AASB S2)	The Australian Accounting Standards Board (AASB) issues the Australian Sustainability Reporting Standards (ASRS), known as AASB S1 and AASB S2 – AASB S1 (general requirements) is voluntary, while AASB S2 (climate-related disclosures) is mandatory for certain entities and requires them to assess and disclose information about their climate-related risks and opportunities, with a focus on improving consistency, comparability and transparency of reported information. Phased rollout from 2025 for larger commercial entities.
Baseline Emissions Inventory	The emissions inventory established at a fixed point in time that is used to monitor progress of emissions reductions over time – for PAE the baseline is 2020–21
Climate Considerations	Factors relating to climate which may affect decision making, including likely climate impacts and future conditions (like hotter days, storms or flooding), potential greenhouse gas emissions outcomes, and compliance requirements
Carbon Emissions/Greenhouse Gas Emissions	Gases released into the atmosphere that contribute to climate change – in this plan, ‘carbon’ and ‘emissions’ are generally used interchangeably to refer to all greenhouse gases converted to carbon dioxide equivalent (CO ₂ -e)
Climate Literacy	Understanding climate change and what it means for our work, so that staff can recognise climate risks and emissions issues and make informed decisions
Carbon Offsets/Offsetting	A way of compensating for emissions of carbon dioxide or other greenhouse gases, by reducing, removing or avoiding emissions elsewhere – one carbon offset typically represents an emission reduction or removal of one metric tonne of CO ₂ -e
CAWRA	CAWRA is the Central Adelaide Waste and Recycling Authority
Climate Change	Climate change is any change in the climate, lasting for several decades or longer, including changes in temperature, rainfall or wind patterns – while there are natural processes which lead to changes in climate, in this plan ‘climate change’ refers to human-induced climate change additional to natural processes
Climate Emergency	A declaration recognising that climate change poses serious risks and requires urgent action

Term	Definition
Circular Economy	An approach that keeps materials in use for as long as possible through reuse, repair, recycling and better design
Climate Projections	Data showing how temperature, rainfall and sea levels are expected to change in the future under different global emissions scenarios
Climate Resilience	The ability of people, places and systems to withstand, adapt to and recover from climate impacts
Climate Risk	The potential for climate change to cause harm to people, assets, services or finances
CO ₂ -e	Carbon dioxide equivalent: a standard unit used to measure and compare the climate impact of all greenhouse gases (e.g. methane, nitrous oxide) by converting them into the equivalent amount of carbon dioxide (CO ₂) that would produce the same global warming potential over 100 years
Electrification	Replacing equipment that uses fossil fuels (e.g. gas heaters, diesel vehicles) with electric alternatives
Embodied Emissions	Emissions created during the production, transport and disposal of materials (e.g. concrete, asphalt, steel)
Emissions Inventory	A measurement of emissions produced by council operations, i.e. an accounting of the amount of pollutants discharged into the atmosphere – usually contains the total emissions for one or more specific greenhouse gases or air pollutants, originating from all source categories in a certain geographical area and within a specified time span, usually a specific year
EV (Electric Vehicle)	A vehicle powered by electricity rather than petrol or diesel
Fossil Fuels	Energy sources such as coal, oil and gas that produce greenhouse gas emissions when burned
Mitigation/Climate Change Mitigation	Actions that reduce greenhouse gas emissions, often used interchangeably with ‘abatement’
Net Zero	Achieving a balance between emissions produced and emissions removed from the atmosphere
Potable Water	Water that is safe to drink, mains water
Renewable Electricity	Electricity generated from sources that do not run out, such as solar and wind
RCP (Representative Concentration Pathway)	Climate change scenarios formally adopted by the International Panel on Climate Change, projecting future greenhouse gas concentrations. These span from a low emission scenario characterised by active mitigation (RCP 2.6), through two intermediate scenarios (RCP 4.5 and RCP6.0), to a high emission scenario (RCP 8.5). Each RCP is associated with plausible combinations of projected population growth, economic activity, energy intensity and socioeconomic development. The RCP scenarios were named based on their total radiative forcing by (or after) 2100 and are being replaced by Shared Socioeconomic Pathways (SSP).
Scope 1 Emissions	Direct emissions from council operations (e.g. fuel used in fleet and plant)
Scope 2 Emissions	Indirect emissions from electricity used in council buildings and facilities
Scope 3 Emissions	Emissions from the council’s supply chain, construction materials, waste and other indirect sources
Smart Charging	Technology that manages when and how electric vehicles are charged to reduce costs and emissions
Transition Risk	Risks arising from changes in policy, technology, markets or expectations during the shift to a low-carbon economy

Appendix 2: Greenhouse Gas Emissions Accounting Methodology

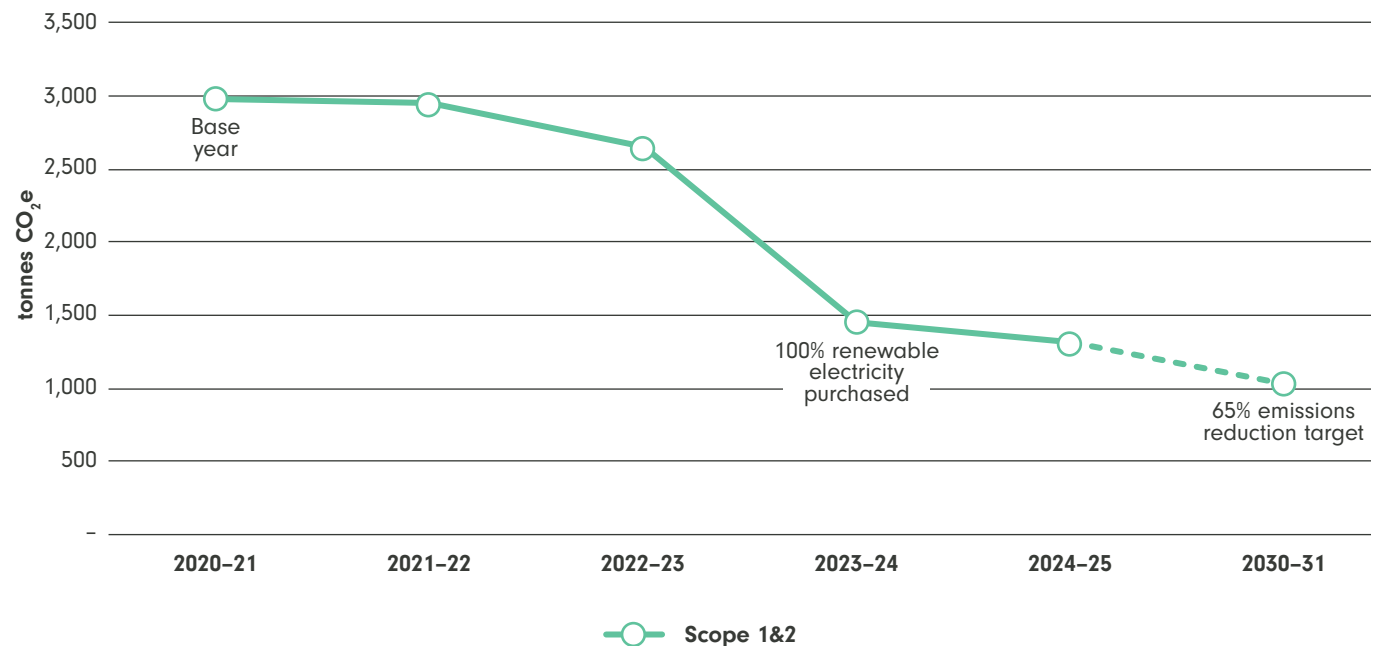


When considering organisational greenhouse gas emissions, it is important to be clear about what is included and excluded. This is what is known as an ‘emissions boundary’.

At PAE we use an ‘operational control’ approach, only including activities that are in our direct control. Community emissions, including waste to landfill, are excluded but are an important consideration when developing programs for households and businesses. Subsidiaries (e.g. Central Adelaide Waste and Recycling Authority (CAWRA)) are excluded but are encouraged to track their own emissions and align with PAE’s overall emissions reduction aims.

The emissions inventory is based on activity data (kilowatt hours (kWh) of electricity, kilolitres (kL) of vehicle fuel, \$ spent, etc.), which is converted to carbon dioxide equivalent (CO₂-e) based on industry data and averages (called emissions factors). Emissions factors are sourced from a range of resources and updated annually to reflect the latest industry trends, such as decarbonising the electricity grid and supply chain.

Figure 5: Scope 1 and 2 emissions from 2020–21 baseline and 2030 target.





1

Energy-Efficient Council Operations (Scope 1 and 2 Emissions)

A comprehensive greenhouse emissions inventory is prepared for us for each financial year and compared with the 2020-21 base year to track our progress on commitments against targets established in the Net Zero Emissions Plan (refer to Figure 5).

Since establishing a corporate greenhouse gas emissions baseline inventory in 2020-21 under the Net Zero Emissions Plan, we have made strong progress in reducing emissions.

We have already implemented many of the most cost-effective and readily achievable Scope 1 emissions reduction measures and purchased 100% renewable energy. Future Scope 1 reductions primarily depend on electrifying heavy vehicles and equipment that use fossil fuels. Progress will be tracked through the council's annual corporate emissions inventory.

The council's emissions dashboard is publicly available here: <https://www.cityofpae.sa.gov.au/environment/our-climate/emissions-tracking>



reduced by
20%

Scope 1 emissions have reduced by 20% since 2020-21, with transport remaining the dominant source and heavy fleet now accounting for most remaining direct emissions.



reduced to
Zero

Scope 2 emissions have reduced by 100% following the procurement of renewable electricity, with street lighting representing the largest share of electricity demand.

Circularity and Low Emissions Supply Chain (Scope 3 Emissions)

Most of our **Scope 3 emissions** come from the things we build and maintain such as roads, footpaths and stormwater drains, as well as from the professional services we use, such as consultants and legal support.

We don't currently have detailed greenhouse gas information from many of our suppliers, and so we estimate most of our Scope 3 emissions using **financial spending** data. This 'spend-based' method matches how much we spend in different categories with standard emissions factors. This method is efficient and works with the data we already have, but it's not very precise. That means it is difficult to clearly understand how many tonnes of greenhouse gases are created through our supply chain, construction materials, waste and other indirect sources.

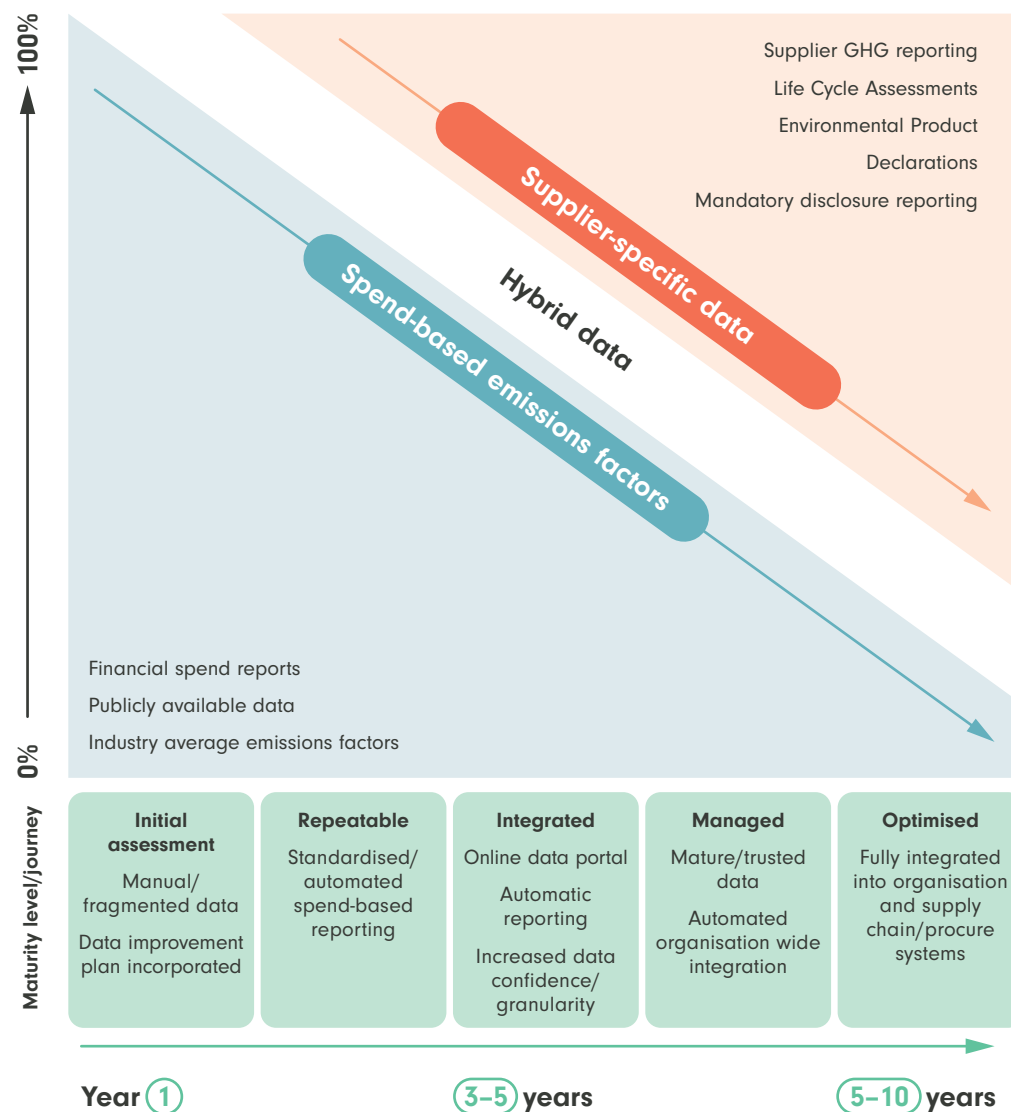
A more accurate method is an **'activity-based' approach**, which uses real-world data like kilometres travelled, tonnes of concrete used or litres of fuel consumed. This method gives more reliable results where good data exists, but it takes more time and coordination within Council and with our suppliers. Most councils use a hybrid approach, combining activity-based data where it's strong and spend-based data where gaps remain. This balances accuracy with practicality (refer to Figure 6).

Over time, we intend to **improve the quality and reliability** of our Scope 3 data. Our initial focus will be on our larger contracts and on businesses already reporting climate-related information under national requirements. We will also continue to identify ways to reduce emissions through better design and more strategic purchasing.

Improving our data will help us understand the emissions created throughout the **entire lifecycle** of the materials we use, from production to use to disposal. This will allow us to set credible and informed Scope 3 reduction targets during the life of this plan.

We also recognise that suppliers, including small local businesses, are at different stages in their ability to measure and report emissions. To ensure that no supplier is unfairly disadvantaged, we will adopt a **fair, practical and staged approach**. This will support local procurement, help local small businesses build skills over time, and strengthen emissions outcomes in a way that works for everyone.

Figure 6: Financial spend data versus supplier-specific data.



Appendix 3: Climate Projections and Risk Assessment



Climate Scenarios Used in This Plan

We use nationally consistent climate scenarios to guide our priorities over the life of this plan. Figure 7 shows two possible futures:

- **RCP4.5:** Global emissions go down
- **RCP8.5:** Emissions stay high

Together, these scenarios give us a realistic range of what future conditions in PAE could look like.

These projections help us understand how heat, rainfall and sea levels may change, so that we can plan for services, buildings and infrastructure.

What does RCP mean?

RCP stands for 'Representative Concentration Pathway'.

An RCP is a standard 'what if' scenario used by climate scientists to model different levels of future global emissions and their likely impacts.

Newer scenarios called Shared Socioeconomic Pathways (SSPs) combine emissions levels with different assumptions about population, technology and economic growth, but they are not yet widely used for detailed local planning.

The Two Scenarios We Use

- **RCP4.5 – Moderate emissions:** A future where global climate action increases and warming is limited compared with high-emissions pathways
- **RCP8.5 – High emissions:** A future where emissions continue to rise, leading to more severe climate impacts and higher costs to recover or adapt

Australia's observed temperature changes are currently tracking toward the upper end of the RCP8.5 temperature projections.³

Figure 7: Climate scenarios⁴

Climate Variable	RCP 4.5 medium emissions scenario	RCP 8.5 high emissions scenario
 Average temperature	Mean daily maximum temperature increases by 2.1 degrees	Mean daily maximum temperature increases by 3.6 degrees
 Days over 40°C	Average number of days per year above 40 °C will be 3 days by the year 2090.	Average number of days per year above 40 °C will be 9.6 days by the year 2090.
 Average rainfall	A decrease in mean annual rainfall by -7% to 2090	A decrease in mean annual rainfall by -29% to 2090
 Sea level rise	The Coast Protection Board advises most developments to allow for a sea level rise of 0.3 metres (to the year 2050) and development should also be protected against a further sea level rise and erosion of 0.7m from the year 2025 to 2100.	
 Sea temperature	Average sea surface temperature continues to rise. Rising temperatures impact marine ecosystems and biodiversity, increase the risk of harmful algal blooms, fish kills, and changes in species distribution, leading to impacts of other industries e.g. fisheries, aquaculture and tourism industries.	
 Ocean acidity	The pH of our oceans is decreasing as a result of increased carbon dioxide in the atmosphere, placing further challenges on marine ecosystems.	

³ Department of Environment and Water SA – *Guide to Climate Projections for risk assessment and planning in SA 2022*. Download at <https://www.environment.sa.gov.au/topics/climate-change/climate-science-knowledge-resources/latest-climate-projections-for-sa>

⁴ Adapted from the AdaptWest Regional Climate Action Plan 2025–2030. Download from <https://www.adaptwest.com.au/about>

Our Climate Risk Foundations

PAE already has a strong base for managing climate risk. We participate in AdaptWest and we completed a Climate Change Risk and Governance Assessment in 2020 with Climate Planning and Edge Environment.

The assessment found PAE to be in the **top 10% of councils nationally** for climate adaptation governance, with strengths in strategic planning. It also highlighted opportunities to improve risk management and asset management and to develop a dedicated climate change policy.

In 2025, staff completed a qualitative climate risk assessment and scenario analysis to inform the Climate Response Plan 2026–31.

Risk Assessment Framework

Our climate risk assessment and scenario analysis follow the Australian Government's **Climate Risk and Opportunity Management Program (CROMP)**, PAE's enterprise risk framework, the **AASB S2 Climate-related Disclosures** and the Federal Government's **National Climate Risk Assessment**. The 2024 South Australian Climate Risk Assessment was released too late to be included.

What we completed:

- Steps 1 – 3: Scope, context and risk identification
- Partial Step 4: Prioritisation

What comes next: Steps 4 – 7: Prioritise, plan and act, monitor and evaluate, and report – these steps will embed climate risk management into everyday council operations.

Climate Risk Drivers

Five key climate risk drivers were identified for PAE (see Figure 8).

These are based on the National Climate Risk Assessment and reflect the hazards most relevant to our region. While these hazards are not new, climate change is increasing their frequency, severity and reach.

Identified Climate Risks and Opportunities

From these drivers, we identified 10 priority climate risks and one opportunity for PAE. These risks represent potential disruptions to our ability to deliver services, maintain assets and protect community wellbeing.

Strategic risks are threats or opportunities that could significantly affect PAE's long-term success. We considered risks across short-term (two-year) and long-term (10-year) time frames, as well as broader national and sector-specific risks.

The climate risks identified for this plan (see Figure 4) will be incorporated into PAE's strategic risk framework in 2026–27, as outlined in Focus Area 3.

Figure 8: Five key climate risk drivers for PAE, modified for context from the National Climate Risk Assessment Report (2024).

