City of Albany
Strategy

Carbon Footprint Reduction Strategy

(Shared responsibility for climate action – 2021)

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INTRODUCTION

Everything the City needs for survival and well-being depends, either directly or indirectly, on our natural environment. There are many definitions of sustainability but **it** incorporates balancing the social, economic and environmental outcomes for current and future generations. Reducing carbon emissions is just one aspect of sustainability and ensuring our City's resilience.

The key themes and strategic objectives within this document will enable us to maintain and renew our City assets in a sustainable manner, by ensuring that City Asset Management Policies reflect local government best practice, and that maintenance and service scheduling, and asset renewal in a timely manner maximises the life and performance of the City's infrastructure.

This document provides the direction and framework to assist in reducing the City's carbon footprint and rising energy prices.

STRATEGIC ALIGNMENT

Historical Alignment:

The City of Albany's Community Strategic Plan (Albany 2023) adopted in 2013, has as one of its key themes, to work towards a 'Clean, Green and Sustainable City'. Our community has identified it would like to see

- renewable energy and energy efficiency practices introduced by the City of Albany
- sustainable waste practices
- development and maintenance of relevant and functional infrastructure.

The challenge for the City is to focus on its own operations (which include a wide variety of facilities - heritage, community facilities, administration, waste and depot) , with the key themes being:

- energy efficiency
- water management
- fleet and plant management
- carbon offset
- waste management.

Diagram – Strategic Alignment - 2014

New Alignment:

The new Strategic Community Plan 2032 recognises:

Priorities shift over time in response to what is happening locally and globally. To provide quality of life outcomes, the City of Albany must stay abreast of and adapt to changes in the political, environmental, social, technological, economic and legal landscape. We must also respond to changing community expectations.

Global Priorities

The United Nations Sustainable Development Goals (SDGs) have been politically committed to on the global stage by the Australian Government. Alignment and adoption by Local Governments is of great benefit as all levels of government have a shared responsibility in working towards the goals. This plan shows how the City of Albany's outcomes are aligned with 17 SDGs.

Learn more about these goals at https://sdgs.un.org/goals

State Priorities

In 2020, the COVID-19 pandemic exposed worldwide vulnerabilities, drawing attention to the need for healthy communities and resilient economies. The State Government of Western Australia responded with a WA Recovery Plan. Learn more about the Government of Western Australia's priorities at www.wa.gov.au/government/wa-recovery

Diagram – Strategic Alignment - 2021

City's Revised Strategic Plan (adopted in 2021):

Pillar:

- **Planet:** We are leaders in sustainability with a shared commitment to climate action and protecting our beautiful, natural environment.
- **Outcome:** Shared responsibility for climate action.
- **Objectives:**
    - _Reduce water usage.
    - _Work towards net zero greenhouse gas emissions.
    - _Develop a sustainable, low waste, Circular Economy.

Energy Efficient

Many developed countries, including Australia, are now showing declines in power demand as the rapid growth in energy-efficient appliances and buildings start to dominate the market.

As governments are significant users of energy in the community, there is an opportunity to increase energy efficiency within the City's operations and to demonstrate to the community it's efforts in reducing energy consumption.

As part of this Strategy, energy has been broken down into 4 key areas where the most energy is currently consumed and where the biggest savings can be made.

These areas include

- heating, ventilation and air conditioning (HVAC)
- street lighting
- internal building lighting
- alternative energy supply.

By encouraging improved energy practices relating to the 4 identified key areas, the City will be able to provide improved services and amenities, while reducing the City's energy use and carbon emissions.

Clearly and concisely, present the current situation with any contributing history, and any trends, cycles, changes or future developments that are relevant.

Energy Efficiency:

Objective	How we'll make it happen	We'll know we're succeeding
1.1 To maintain and renew building assets in a sustainable manner	By scheduling maintenance, servicing, and renewal in a timely manner, that maximises the life and performance of the City's building assets. By working with external relevant agencies to develop an integrated approach. By regular auditing and inspections.	When the operation and maintenance of existing assets are incorporated with energy management practices. When energy efficiency has improved across the City's assets and are comparable with other benchmarked government sectors. When energy audits indicate environmental and financially sustainability, so that building assets continue to function effectively as they age.
1.2 To advocate for alternative energy sources within our building infrastructure	By investigating alternative energy sources such as Solar energy systems. By adoption of best practices to reduce energy consumption while maximising our building assets. By sourcing external funding opportunities to support these alternative energy-building initiatives.	When alternative energy sources are applied that prove to be financially and environmentally sustainable. When the City is seen as a local government, which is a leader in using alternative energy sources within our local community. When we secure external funding opportunities to assist in building upgrades.
1.3 To promote energy efficiency technologies and energy conservation	By reviewing and assessing the City's community based buildings current energy usage. By setting an example in constructing new buildings and upgrading current infrastructure with energy efficiency technology. By educating the community about energy efficiency.	When we achieve energy, efficiency projects that significantly enhance our community based City buildings. When energy efficiency technology has been incorporated into new City buildings and upgraded infrastructure. When local government legislation such as the Town Planning Scheme / Local Planning Scheme is revised.

Water Management:

Water is essential for life, and with the growing pressures on water resources from population growth and the effects of climate change, it is critical for local governments to effectively manage this precious resource.

An increase in the capacity to reduce the City's water consumption and improve local water quality can be successful through a number of options in which the City can manage their water use more sustainably. This generally includes but is not limited to:

- improving overall water use efficiency in City facilities
- improved irrigation systems and scheduling practices
- improved turf maintenance practices and planting regimes
- accurate measuring and recording of current water use
- support for the principles of Water Sensitive Urban Design (WSUD) guidelines within the City's subdivisional developments and new infrastructure.

By establishing a Water Management Plan, this will benefit the City by providing direction for potential water reduction, financial savings, improved efficiency and conservation.

Water Management:

Objective	How we'll make it happen	We'll know we're succeeding
2.1 To improve water efficiency within City's buildings and facilities	By partaking in a water wise program to assist in identifying areas of significant water use within City building and facilities. By identifying where opportunities for Improvements exist through the auditing of water use within City infrastructure. By installing equipment, that has water efficient technology features.	When the City becomes an endorsed water wise council through a recognised local government program. When the City implements water wise improvement programs. When there are demonstrated water efficiency and financial savings within the City's buildings and community facilities.
2.2 To improve water management through maintenance and renewal of City assets	By conducting water auditing to adequately assess the City's water usage and the development of water reduction targets. By scheduling maintenance, servicing and renewal of City assets in a timely manner, that maximises the whole of life cost. By prioritising upgrades, retrofits and replacements of City assets within its capital works programs and maintenance schedules.	When a review of the City's water audits on its assets demonstrates areas of improvement in water usage. When it can be demonstrated, there is an improvement in overall water use in all City assets. When the City develops its annual capital works and maintenance programs with a focus on WSUD.
2.3 To promote water management and efficiency through education and awareness	By encouraging staff through education programs such as water wise training, to assist in identifying where water can make saving efforts. By promoting the use of water wise vegetation, irrigation techniques and WSUD as part of the City's capital works and maintenance programs.	When staff are motivated and inspired to assist in the conservation of water within their own daily work practices. When the City has implemented water management practices when conducting its operational programs.

Fleet and Plan Management

The need to reduce Greenhouse Gas (GHG) emissions from transport is becoming a major challenge for business and the community, with transport contributing more than 80% of the CO_2 emissions across Australia.

The City of Albany owns, controls, manages and maintains an extensive range of fleet and plant which currently includes 66 fleet vehicles and 85 pieces of plant, with 2014/15 replacements totalling approximately $1.64 m.

There are a number of strategies that the City already incorporated in it's operations to achieve a reduction in GHG emissions such as:

- vehicle performance through fuel efficiency measures
- maintenance, service, and renewal programs
- driver behaviour programs
- replacement programs
- green fleet initiatives.

The City a adopted Fleet Management Guidelines in 2013 but is yet to formalise a Plant Management Guideline that also addresses GHS emission standards and green initiatives.

Fleet and Plant Management:

Objective	How we'll make it happen	We'll know we're succeeding
3.1 To maintain and renew plant assets sustainably	By scheduling maintenance, servicing and renewal in a timely manner, that maximises life and performance of plant. By developing plant management guidelines. By optimising plant, replacement to ensure the asset value is maintained.	When the maintenance, servicing and renewal of the City's plant become financially sustainable. When the City adopts and implements plant management guidelines. When the City undertakes regular reviews and recognise opportunities for fleet and plant disposal and replacement (10-year replacement plan).
3.2 To advocate for 'Green' initiatives within our fleet and plant management guidelines	By ensuring that any fleet or plant purchased, emit minimal carbon emissions. By establishing carbon emission reduction targets for fleet and plant. By endeavouring to comply with the Australian Vehicle Carbon Emission Standards in accordance to the Green Vehicle Guide (Environment) ratings.	When the City priority is to purchase fleet and plant that is focused on 'Green' initiatives. When fleet and plant measure the environmental footprint on an ongoing annual basis. When the City has set and endorsed a carbon reduction target for its fleet and plant assets.
3.3 To develop and implement employee driver awareness	By investigating programs for driver awareness and driver safety such as 'Eco Driving' to assist in reducing carbon emissions. By developing an in house program to improve the City's, staff driver behaviour, attitude, awareness, motivation and skills. By budgeting for and sourcing external funding opportunities to support these initiatives.	When the City has adopted a program for driver safety that addresses driver behaviour related to the reduction of carbon emissions. When staff have attended driver awareness programs or workshops aimed at implementing vehicle and driver awareness strategies. When adequate resources are allocated to ensure ongoing training for employee driver awareness.

Carbon Offset

Most people recognise that trees play an essential role in the environment by providing oxygen and absorbing carbon in the atmosphere. Depending on the type, size and condition of a tree, the average single tree can absorb as much as 22 kilos of carbon in a year.

Tree planting initiatives such as street tree planting can also add value to our community by:

- providing shade and protection from the elements;
- reducing heat and glare;
- improving mental health and well-being;
- providing habitats for a diversity of fauna;
- adding moisture and oxygen to the air; and
- enhancing aesthetics within the streetscape.

The City is currently developing a street tree database that will include a citywide audit of street tree specimens.

This information will be used to formulate a tree management and planting strategy throughout the City.

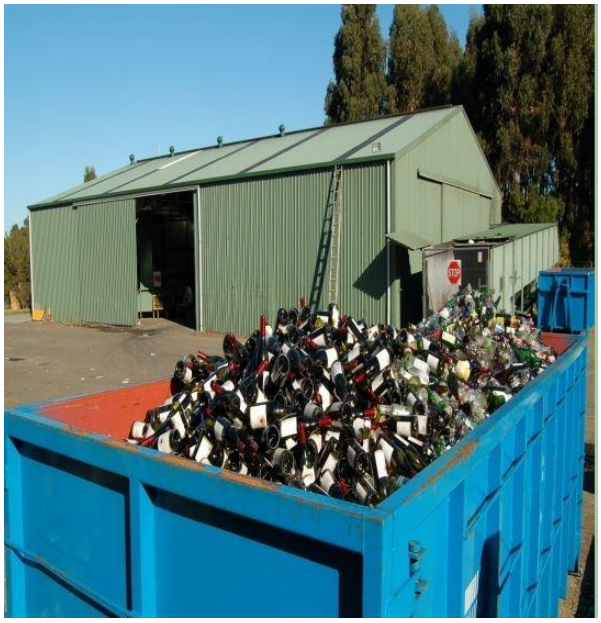
The planting strategy will enable the City to develop and retain attractive and sustainable streetscapes, while reducing our carbon footprint.

Carbon Offset:

Objective	How we'll make it happen	We'll know we're succeeding
4.1 To enhance, beautify and 'Green' the City of Albany	By collecting data about street trees through an independent audit to establish asset value. By developing a tree strategy to address streetscape tree planting regimes, maintenance requirements, and heritage and significant trees. By generating local interest in the character of streetscapes by consulting with the community.	When the City has a detailed report on the asset value and condition of street trees to assist in the development of the tree strategy. When a tree strategy is adopted which is inclusive of a street tree-planting program that enhances and beautifies the City. When the social, cultural and wellbeing needs of our community are part of the planning for the streetscape planting process.
4.2 To improve tree health and safety through maintenance schedules	By investigating the impacts of maintenance and capital works programs on trees within the City's streetscape. By identifying and complying with Australian Standard for Amenity of Trees requirements. By scheduling maintenance and renewal programs to enhance the health and safety of the trees.	When the maintenance and capital works programs are aligned to minimise the impact on tree health and safety. When the City applies the best practice arboriculture principles, according to the Australian Arborists Association, and the Australian Standard for Amenity of Trees. When staff are adequately resourced, skilled and supported to conduct regular tree maintenance according to Australian Standards.
4.3 To identify, register and protect heritage and significant trees	By identifying and collecting data on the heritage and significant trees within the local community. By establishing a heritage and significant tree management plan within the tree strategy.	When we have established a tree register including the identification of heritage (National Trust), significant and commemorative trees. When maintenance works are undertaken on identified trees under the guidance of a qualified Arborist.

Waste Management:

The waste sector GHG emissions accounted for 3 per cent of Australia's total domestic emissions in 2009 (Dept. of Environment). Waste management involves the monitoring, collection, transport, processing and disposal of waste materials to deliver cost-effective and environmentally sustainable waste management solutions.



The Strategic Waste Plan (2014) analyses the current operations and develops action plans to improve services and reduce waste to landfill. The actions identified within the City's Waste Strategy include

coordinate a regional approach with adjacent local governments:

- review of landfill data collection systems
- increase recycling to minimize waste stream to landfill
- facilitate education programs
- manage City waste management facilities to environmental best practice
- Continual improvement of the City's waste services and operational requirements and processes
- investigation into new waste technology.

This Strategy will continue its alignment with the Waste Management Board of Western Australia's Zero Waste Plan Development Scheme, and therefore it is important the City maintain its efforts to reduce the waste stream to landfill.

Waste Management:

Objective	How we'll make it happen	We'll know we're succeeding
5.1 To develop waste minimisation strategies for the reduction of general waste to landfill	By reviewing the current levels of service for waste management. By implementing improved landfill operational practices. By investigating new waste technologies.	When action plans are developed to improve the service and reduction of waste to landfill. When the City manages its waste management facilities to environmental best practice. When there are identified efficiencies that highlight viable options for the reduction of general waste to landfill.
5.2 To collaborate with other municipalities to develop a regional strategic waste plan	By establishing a coordinated working group with other municipalities to investigate new regional facilities and initiatives. By investigating potential sites for the development of a regional waste facility. By collaborating with adjacent municipalities for joint funding applications and regional tendering.	When a regional strategic waste plan has been adopted by adjoining municipalities. When a potential site for the regional waste facility has been identified and a feasibility study completed confirming its viability. When there is a collaborative approach to the establishment of regional waste facilities, tendering, and funding opportunities.
5.3 To promote community awareness through education	By utilising the role of an education officer to develop awareness of community recycling. By promoting the AWARE Centre (Albany Waste and Recycling Education) to raise awareness of recycling and waste minimization in the community. By encouraging and promoting recycling strategies within the industrial and commercial sector.	When there is an increased proportion of material recovered from the waste stream and a reduction in waste destined for landfill. When we continue to support the development and delivery of green initiatives. When education programs within the industrial and commercial sector are demonstrating successful recycling waste practices.

Carbon Footprint Reduction – ACTION PLAN

1. Energy Efficiency				
Actions delivered or underway				
Ref:	**Action**	**Responsibility**	**Due**	**Status**
1.1	Undertake financial analysis for LED conversion of all City managed streetlights.	Assets	N/A	Commenced / Completed in 2021.
1.2	Conduct lighting audit of North Road Administration building.	Assets	N/A	Completed.
1.3	Conduct financial analysis for Solar Panel installation at North Road Administration building.	Assets	N/A	Completed and included in the 10-year financial plan.
1.4	Mechanical Engineer Assessment of ALAC's HVAC Unit.	Manager ,Albany Leisure and Aquatic centre	N/A	Completed.

1. Energy Efficiency				
New Actions				
Ref:	**Action**	**Responsibility**	**Due**	**Status**
1.5	Undertake financial analysis of all City of Albany street lighting for LED conversion.	Assets	N/A	Completed.
1.6	Conduct financial analysis for the conversion of court lighting to LED (lighting scheduled for renewal).	ALAC/ Assets	N/A	Completed and additional works planned.
1.7	Undertake financial analysis of selected COA building lighting for LED conversion- VAC, Library, Day Care and Mercer Road Depot.	Assets	N/A	Completed and additional works planned.
1.8	Undertake financial analysis of possible installation of Solar Panels at various City buildings including ALAC.	Manager ,Albany Leisure and aquatic centre and Assets	N/A	Completed.
1.9	Mechanical Engineer Assessment of selected COA Buildings –Day Care, library and North Road.	Assets	N/A	Completed and works planned.

2. Water Management				
Actions delivered or underway				
Ref:	**Action**	**Responsibility**	**Due**	**Status**
2.1	Not applicable (N/A).	N/A	N/A	N/A
New Actions				
Ref:	**Action**	**Responsibility**	**Due**	**Status**
2.2	Development of Water Management Working Group (COA Staff).	Assets	N/A	Completed.
2.3	Review Reserves department - water management practices.	Reserves	N/A	Completed – Achieved Gold Waterwise Status.
2.4	Review building water management practices for the VAC.	VAC	N/A	Completed.

3. Fleet and Plant Management				
Actions delivered or underway				
Ref:	**Action**	**Responsibility**	**Due**	**Status**
3.1	Fleet Management Guidelines	Manager Operations	N/A	Completed. Previously reported completed in 2013, revised and updated in 2021.
3.2	Plant Management Guidelines	Depot and Heavy Fleet Coordinator	2022	Assets liaising and investigating with Co-ordinator Depot and Heavy Fleet.
New Actions				
Ref:	**Action**	**Responsibility**	Due	**Status**
3.3	Investigate Driver Awareness Programs	Manager Operations	N/A	Completed.

4. Carbon Offset				
Actions delivered or underway				
Ref:	**Action**	**Responsibility**	**Due**	**Status**
4.1	Collection of Street Tree Data	Assets	N/A	Completed and procedure in place for ongoing planting.
New Actions				
Ref:	**Action**	**Responsibility**	**Due**	**Status**
4.2	Development of Tree Strategy	Assets	N/A	Completed and implemented. Due for review 2022
4.3	Tendering of services of an Arborist for data collection and condition assessments	Assets	N/A	Completed for significant trees.
4.4	Development of tree register	Assets	N/A	Completed.

5. Waste Management				
Actions delivered or underway				
Ref	**Action**	**Responsibility**	**Due**	**Status**
5.1	Strategic Waste Management Plan	Manager, Engineering and Sustainability	N/A	Completed.
5.2	Review services Waste contract/Implementation of new waste contract services	Manager, Engineering and Sustainability	N/A	Completed.
New Actions				
Ref	**Action**	**Responsibility**	**Due**	**Status**
5.3	Prioritise actions as per recommendations from Waste Management Strategy	Manager, Engineering and Sustainability	N/A	Completed and ongoing. Quarterly report issued to Elected Members.
5.4	Food scrap kerbside collection	Manager, Engineering and Sustainability	N/A	Completed. FOGO implemented in 2021.
5.5	Public Place recycling - The placement of increased numbers of recycling bins in the CBD area	Manager, Engineering and Sustainability	N/A	Completed.
5.6	Provide Higher Profile Education Programmes for Waste Minimization Using the AWARE Centre as a base, ensure the community is better educated about waste	Manager, Engineering and Sustainability	N/A	Completed and ongoing.