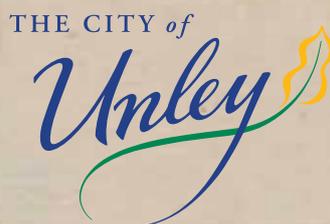
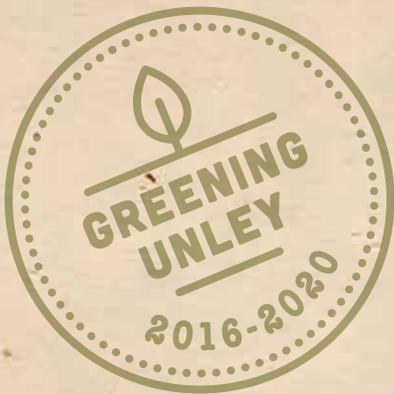




Environmental Sustainability Strategy

Pursuing,
supporting & creating
a sustainable
environment for the
Unley community





Greening Unley: Environmental
Sustainability Strategy 2016-2020
The City of Unley

August 2016

Design: Flux Visual Communication

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Introduction

Council is committed to pursuing, supporting and creating an environment that will sustain both current and future generations. This goal is shared by our community and is a primary objective of most governments across the world. We are committed to using fewer of our precious resources and looking for smarter ways to achieve this objective.

Our City is a great place for families, with quiet suburban streets and a supportive community – but this must be balanced against the need for more housing choices, increased density of living and commercial growth on our main streets.

Conservation, pollution remediation and environmental sustainability are growing concerns for both the residential and business sectors, particularly in the areas of open spaces, parks and reserves; watercourses and underground water; soil; air; noise; waste management and recycling.

The Environmental Sustainability Strategy 2016-2020 is the lead strategy to guide the Council's efforts implementing the Greening goals identified in the Community Plan 2033. The strategy is divided into five key themes that guide our direction and inform our priorities for environmental projects;



GREEN UNLEY

Improving and maintaining Unley's Urban Forest



WATERWISE UNLEY

Efficient, effective and sustainable water management



RESILIENT UNLEY

Increasing resilience for changes in climate



RESOURCEFUL UNLEY

Excellence in waste management, through diversion, avoidance and re-use



ENERGYWISE UNLEY

Increasing the energy efficiency of the City

For each theme, one Council target and one community target has been defined. This reflects Council's direct influence and its key role in supporting and enabling improved community outcomes for a shared responsibility.

City of Unley staff developed this strategy, with input from the Infrastructure and Sustainability Committee, external stakeholders and our community.

This document outlines the key objectives and targets for each of the five environmental themes and includes some of the specific initiatives which have already been identified.



Raingarden at Randolph Ave



Public Place Litter Bin



Solar at Unley Swimming Centre



Windsor Street Linear Reserve

Summary of Achievements

While planning for continuous improvement, it is important to reflect and acknowledge past achievements and established initiatives.

This document builds on the significant works already undertaken and underway within the City of Unley including:



GREEN

115 artificial habitat boxes installed since 2009 for birds, possums and micro bats.

Development of native biodiversity corridor plantings including Windsor Street and Charles Walk.

Since 2011, the planting of community fruit tree orchards in Morrie Harrell, Fullarton, Soutar and Henry Codd Reserves



WATERWISE

The installation in 2015 of rain gardens in Randolph Ave to improve the quality of stormwater before it travels to our local creeks and the sea.

The capturing of water in verges and street kerbs with TreeNet Inlet system, to help supply water to both the street trees and understory plants.

Since 2009 recycled water options have been provided to most of the parks and reserves through the Glenelg to Adelaide Parklands Recycled Water Project (GAP) and Managed Aquifer Recharge (MAR) schemes. This includes a MAR built in Heywood Park to harvest up to 60 megalitres.



RESOURCEFUL

The installation in 2015 of dual recycling bins in key parks and reserves including Unley Oval.

Since 2013 Council offices and community centres improved to three bin recycling system using colour coded Ecobins.

Information and education campaigns for residents to use recycling options to full potential including "all food scraps are good to go" and "take the pledge".



RESILIENT

The construction in 2015 of Ridge Park Dam as a key aspect for flood mitigation for Brown Hill Keswick Creek. The dam has the dual role of stormwater detention during large storm events and winter harvesting for irrigation purposes on Council reserves in summer.



ENERGYWISE

Energy consumption reduction by 26 per cent in 2011, the equivalent to 158 tonnes greenhouse gas savings, at the Unley Civic Centre and Town Hall through a Building Management System upgrade

In 2015, 10kW solar panels were installed at the Unley Swimming Centre to increase our use of renewable energy sources.

Shared Responsibility

Creating a more environmentally sustainable City of Unley is achievable through the whole City's involvement.

The Council is taking direct action to create change through initiatives such as installing solar panels on Council owned property and incorporating Water Sensitive Urban Design (WSUD) into infrastructure development. Many opportunities for environmental improvement rely on Council/community partnerships where Council can provide a service enabling the community. For example, Council provides a range of recycling services (bins, collection and education) and the community participates by using the service to its full potential.

Council can also seek to encourage community behaviour change through providing information, guidance and financial incentives.

To reflect this shared responsibility, each key objective in the strategy has one Council target and one community target (see Figure 1).



FIGURE 1
Dual community & Council targets working to a common objective



THE UNLEY COMMUNITY CENTRE
KITCHEN GARDEN

ALL PRODUCE GROWN HERE
IS USED TO CREATE TASTY
MEALS FOR OUR DAILY
MEAL SERVICE



Strategic Context

The City of Unley Community Plan 2033 provided an opportunity to identify, reflect and envision the priorities for our City over the next 20 years.

The “A Community of Possibilities” initiative asked our community to think about smart and creative ideas that the City of Unley could potentially incorporate into the Plan.

Over six weeks in June and July 2012, 1,200 people provide their ideas to “A Community of Possibilities”. This was the Council’s largest ever community engagement initiative to date. Four main themes emerged about inspirational and innovative differences we could bring to our City:

EMERGING

new activities and technologies that would support our business and residential communities

LIVING

reflecting issues of culture, diversity and lifestyle

MOVING

concerning accessibility and transport, and

GREENING

covering concerns about environmental initiatives and sustainability.

This Environmental Sustainability Strategy is focussed on implementing the Greening goal of the 2033 Plan. Figure 2 (page 11) illustrates how the Strategy is envisaged in a strategic context. While not intending to be a complete representation of all existing and planned lead strategies, supporting strategies, programs and projects, the diagram shows how this lead Strategy seeks to provide direction to these other relevant initiatives. It is also acknowledged that there are numerous cross-connections and integration across the range of initiatives that are undertaken by Council, for example Open Space within the Living goal, and Transport which sits with the Moving goal.

The City of Unley will continue to seek opportunities to work collaboratively with relevant organisations on joint projects where possible.



Unley Open Space Staff Member

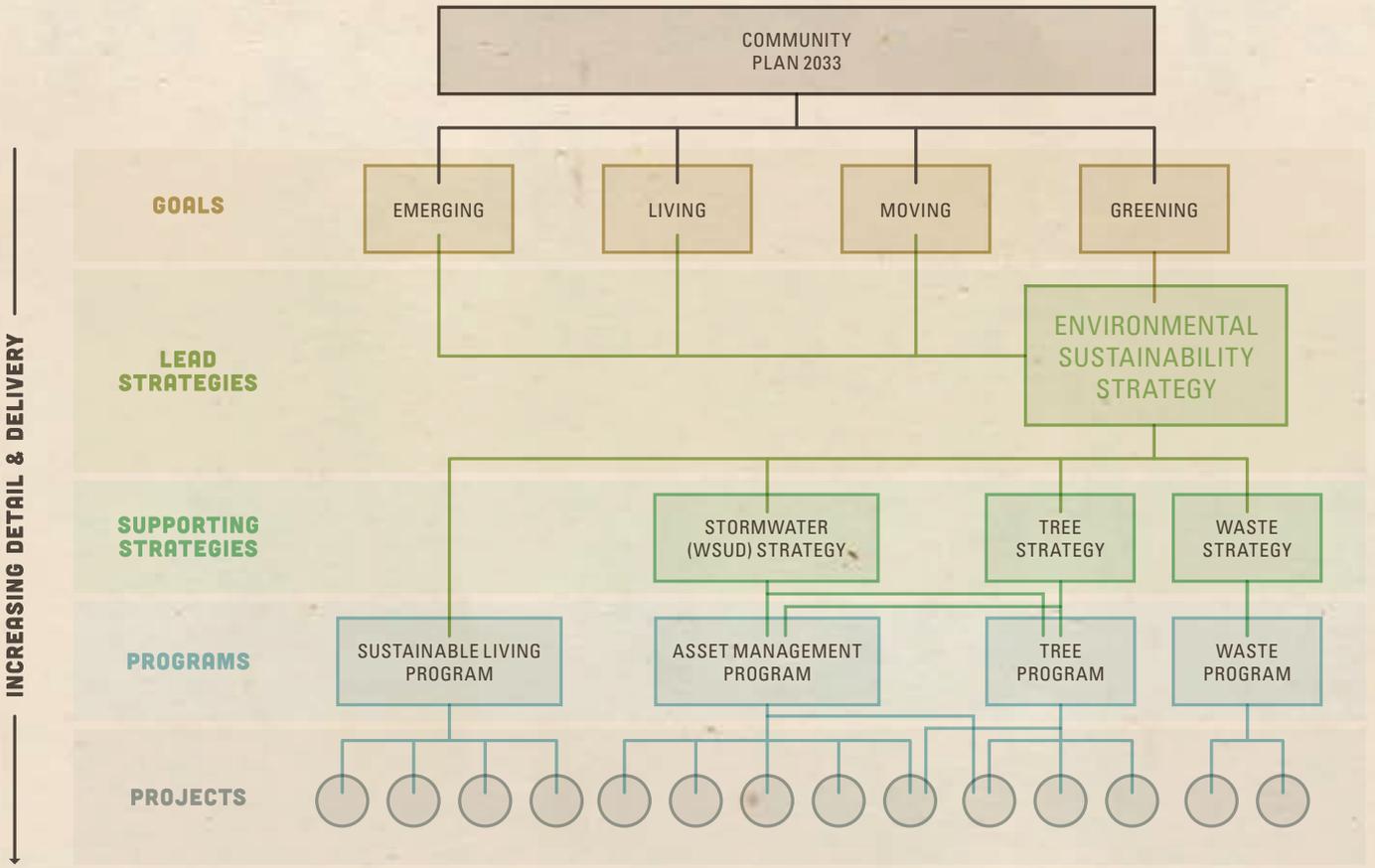


FIGURE 2
Strategic Context

Vision & Pathways to an Environmentally Sustainable City

The development of this document follows the strategic direction set by the Community Plan 2033 with a particular focus on achieving Goal 4: Greening Our Path to a Sustainable City.

The Greening goal aims for the City of Unley to be renowned for its lifestyle and environmental balance, leaders in waste management and functional open green space throughout.

Five key themes have been identified for achieving the Greening goal:



We acknowledge that environmental systems are intrinsically linked and there is overlap between the themes, however these themes classify the work into manageable sections to focus our efforts. For example, a project capturing stormwater to water street trees would fall under the Waterwise theme, but would also be contributing to aims within Green, Resilient, Resourceful and indeed broader community liveability and economic factors.

Implementation

The accountability for implementing this strategy is assigned across the City of Unley's resources. The primary responsibility sits with the Assets and Environment division through Council's Annual Business Plan and Budget over the next four years. Collaborative partnering projects with other sections of Council, relevant organisations and community groups will be actively sourced.

The strategic directions will be progressed through Council's Annual Business Plan and Budget over the next four years. While the life of this document is four years, it is intended that it be part of an ongoing framework that provides for a consistent approach to match the ongoing commitment required to deliver our 20 Year Community Plan.

Measuring Progress

The City of Unley is committed to an evidence based approach to environmental management and has developed a number of indicators and targets to measure success over time within each of the five themes. Each theme considers both a Council and community target as outlined in the Shared Responsibility section on page 8. These will provide a good indication of progress against the key objectives. Progress will be assessed annually in September and reported through the City of Unley's Infrastructure and Sustainability Committee.

As new initiatives are developed, the City of Unley can refine and improve these indicators, particularly for the community targets that are more challenging to measure at a Council-wide scale.



Cyclist on Randolph Ave





Green Unley

OBJECTIVE

*Improving and maintaining
Unley's Urban Forest¹*

COUNCIL TARGET

*Maintain the City's tree canopy cover
at 26 per cent²*

COMMUNITY TARGET

*Minimum 400 street verges converted from
dolomite to loam and planted*

The City of Unley is an urban environment noted for its tree-lined streets, parks and private gardens. The protection of Unley's trees and street trees is particularly important to mitigating the impacts of climate, the urban heat island effect and a range of other benefits. This work is guided in detail by the City of Unley Tree Strategy.

There is also an excellent opportunity to encourage more of the verges to be planted. Most are currently dolomite which is not water permeable. If these are replaced with loam and low plantings or with lawn maintained by the residents, it will help improve soil moisture, reflected heat and add to the cool, green feel of the City.

While the key targets for the next four years focuses on trees and improving the greening of our streetscapes, ongoing work in parks, reserves, residential gardens and the encouragement of local food production is still very significant and ongoing.

Key initiatives that fall under this theme include;

- Trees
- Habitat boxes
- Verge gardening by residents
- Biodiversity native plantings
- Maintenance of parks and open space
- Encouragement of private plantings
- Food security including encouraging local food production
- Community gardens

1. An Urban Forest is defined as the management of trees, shrubs and other vegetation in urban areas (Tree Strategy, Unley).

2: 26% Based on Unley Canopy Cover from Page 17, Institute for Sustainable Futures (2014) Benchmarking Australia's Urban Tree Canopy: An i-tree Assessment.





Waterwise Unley

OBJECTIVE

Efficient, effective and sustainable water management

COUNCIL TARGET

Minimum 40 streets with stormwater improvements

COMMUNITY TARGET

Inform and educate residents on water saving measures in conjunction with relevant authorities

The City of Unley is committed to have water sensitive urban design as a feature and reducing its dependency on River Murray water, while also maintaining its parks, reserves and street trees.

Rain gardens and other Water Sensitive Urban Design measures are important to both conserve water and improve water quality by reducing stormwater pollution.

There has been excellent progress in recent years to waterproof the City, by providing recycled water options to most of its parks and reserves through the Glenelg to Adelaide Parklands Recycled Water Project (GAP) and Managed Aquifer Recharge schemes (MAR). While efforts will continue on water efficiency to parks and reserves, the focus for improvement for the next four years will be on the streetscapes through stormwater capture and reuse.

There are also a range of Waterwise actions that residents can take such as installing rainwater tanks, selecting water wise plants, mulch and wicking beds, and the time of day gardens are watered.

Key initiatives that fall under this theme include;

- Water Sensitive Urban Design (for example, diversions for watering street trees, bio swales, rain gardens, permeable paving)
- Continue expansion of MAR and GAP networks and the use of their recycled water
- Information for residents – reducing water use, planting water wise plants, capture and reuse of water
- Council water capture and use
- Waterproofing parks and gardens





Resilient Unley

OBJECTIVE

Increasing resilience to changes in climate

COUNCIL TARGET

Maintain and increase our open space. Create a minimum of three new spaces, which can include vertical and rooftop gardens

COMMUNITY TARGET

Minimum 2 information sessions on positive actions residents can take to improve resilience to climate change

The City of Unley has partnered with the other Eastern Region Alliance (ERA) Councils and Adelaide City Council to develop a Climate Change Adaptation Plan for the eastern region called Resilient East. The plan outlines key vulnerabilities to climate change across the eastern region and a range of adaptation decision making and planning options at a regional and individual Council level. For The City of Unley key vulnerabilities are anticipated from increased heatwave frequency and duration and more intense periods of rainfall.

Resilient East provides a number of preferred options for the eastern region to increase our resilience to climate change. The implementation of aspects relevant to Unley include;

- Improve stormwater management to maximise amenity and water reuse
- Increase community education and awareness regarding climate hazards
- Increase planting across urban areas
- Increase the area of open space in strategic locations

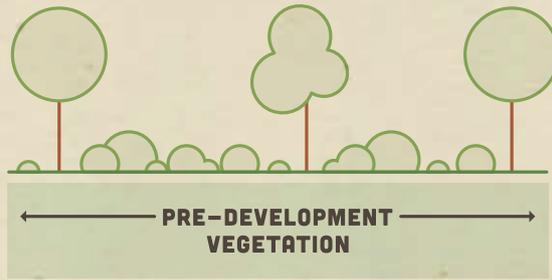
However many of the proposed actions already align with other theme objectives in this strategy (eg Green and Waterwise). City of Unley already incorporates environmental considerations and opportunities into all of its capital renewal planning.

Initially the targets for this theme have been set around increasing vegetation (or green infrastructure) to help lower the overall temperature of our City. These can include vertical and rooftop gardens. See Figure 3 (page 22) which shows how new spaces can be found while also increasing housing density.

Key initiatives that fall under this theme include;

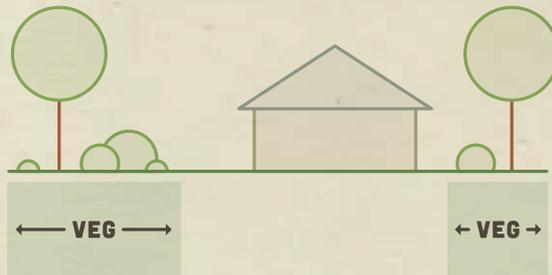
- Implement Resilient East
- Innovate/new ideas
- Heatwave management
- Mitigating the urban heat island effect
- Green infrastructure
- Flood management (Brown Hill Keswick Creek)
- Building strategies

1



Vegetation and biomass before any residential building development

2



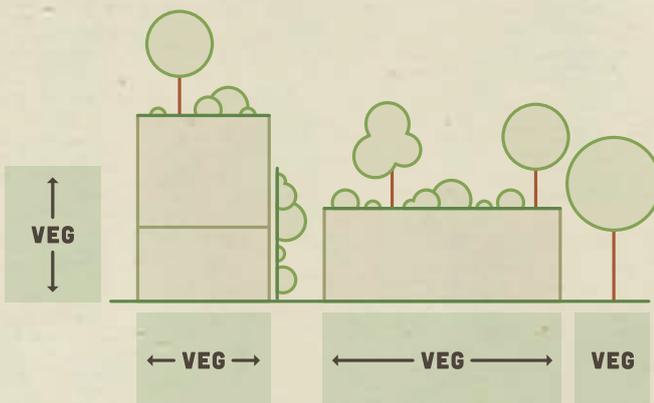
Traditional residential development of single dwelling gives 25-30% of original vegetation

3



Tilt up backyard into living wall retains same amount of vegetation and bio-mass but reduced area

4



Use vacant space for extra dwellings with green roofs resulting in more vegetation than original and higher number of dwellings

FIGURE 3

Increase Open Space while Increasing Housing Density, (Graeme Hopkins, Living Architecture Presentation, Sept 2015).



Unley residents vegetable garden



**Bottles, Cans
and Cartons
ONLY**

-  Steel and aluminium cans
-  Plastic bottles (no lids, no straws)
-  Glass bottles (no lids, no straws)
-  Cartons (no lids, no straws)



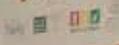
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-  Glass bottles (no lids, no straws)
-  Cartons (no lids, no straws)



**Waste
ONLY**

-  Food scraps
-  Food packaging
-  Plastic bags and packaging
-  Picnic ware
-  Nappies





Resourceful Unley

OBJECTIVE

Excellence in waste management, through diversion, avoidance and re-use

COUNCIL TARGET

Divert from landfill 75 per cent of material from Council facilities and events

COMMUNITY TARGET

Divert from landfill 70 per cent of residential material presented at kerbside

The City of Unley is committed to reducing waste, from both its own operations and the community, and to the management of waste in a sustainable manner. Council offers several options for recycling and waste disposal including kerbside collections, hard rubbish collections and a range of other services and education programs to support our community. In 2015, 54 per cent of residential material presented at kerbside was diverted from landfill.

This work is guided by the Waste Management Strategy 2013-2017 which includes activities to provide innovative and responsive waste management practices that promote recycling and reduce waste. It incorporates best management practices to manage the waste collected by Council. Efficient use and management of our other resources like water and energy are also important but come under other themes.

The waste management sector is continuing to improve and innovate, so it is important that the City of Unley works closely with industry to adopt current thinking and technology, and that we educate our community on new options as they arise.

Key initiatives that fall under this theme include;

- Domestic Waste – education, re-use, organics, hard rubbish
- Commercial Waste – organics, recycle construction
- Council leader in waste management – alternate recycling, operations, our usage





Energywise Unley

OBJECTIVE

Increasing the energy efficiency of the City

COUNCIL TARGET

*Reduce net total of grid based energy use
by 5 per cent*

COMMUNITY TARGET

*Provide information on energy efficiency
to encourage improvements including
increase of residential buildings with solar
panels to 35 per cent*

Our modern Australian lifestyle is very energy intensive. We have become high electricity users. Our homes, which are now larger, commonly contain air-conditioning and many electrical appliances which rely heavily on fossil fuels that contribute to greenhouse gas emissions. Electricity prices have increased over the last few years, resulting in increased operation expenses.

There are ranges of old fashioned and improved technology steps we can take to reduce our energy usage. Renewable energy technologies such as solar and wind are clean sources of energy that have a much lower environmental impact than conventional energy technologies and their costs have been declining.

By combining reduction of energy usage with uptake of renewable sources, we can make a big difference in reducing electricity consumption, reduce carbon footprint, contribute to climate change mitigation and reduce risk against future electricity price rises.

Key initiatives that fall under this theme include;

- Renewable energy (solar, wind, battery storage)
- LED lighting
- Improving energy efficiency of buildings (eg insulation, management systems, heating/cooling upgrades)

Summary of Objectives & Targets

	OBJECTIVE	COUNCIL TARGET BY 2020	COMMUNITY TARGET BY 2020
 GREEN UNLEY	Improving and maintaining Unley's Urban Forest	Maintain minimum canopy cover of 26 per cent	Minimum 400 verges converted from dolomite to loam and plants
 WATERWISE UNLEY	Efficient, effective and sustainable water management	Minimum 40 streets with stormwater improvements	Inform and educate residents on water saving measures in conjunction with relevant authorities
 RESILIENT UNLEY	Increasing resilience for changes in climate	Maintain and increase our open space by creating a minimum 3 new spaces	Minimum 2 information sessions on positive actions residents can take to improve resilience to climate change
 RESOURCEFUL UNLEY	Excellence in waste management, through diversion, avoidance and re-use	Divert from landfill 75 per cent of material from Council facilities and events	Divert from landfill 70 per cent of residential material presented at kerbside
 ENERGYWISE UNLEY	Increasing the energy efficiency of the City	Reduce net total of grid based energy use by 5 per cent	Provide information on energy efficiency to encourage increase of residential buildings with solar panels to 35 per cent.

Further Reading

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