

Environment & Sustainability **STRATEGY 2016-2040** Our Environment, Our Climate, Our Future



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Wyndham City Council acknowledges the traditional owners and custodians of Wyndham, the Wathaurung, Bunurong and Boon Wurrung peoples of the Kulin Nation.



Introduction

This strategy for environmental sustainability is an active document, which sets the environmental agenda for our municipality until 2040. It provides short and long term pathways and targets as we endeavour to move toward a genuinely sustainable future.

While global issues such as climate change, traffic congestion, population growth and consumption patterns will affect us, we also have the opportunity to provide local responses unique to Wyndham.

Wyndham has significant environmental assets that feature rare flora and fauna, expansive grasslands, natural coastline, sites of international migratory importance and unique waterways and wetlands. Many of these assets are under the care of Wyndham Council.

Our resident's affinity with renewable energy is widely recognised as one of the nation's leaders in household solar panel numbers. Further, we are strategically positioned to provide a robust commercial response to green energy and resource recovery job growth through new commercial development and an alliance of Councils to deliver the Low Carbon West Strategy.

The Strategy aligns with our vision for the community (Wyndham 2040) and this has informed development of our environmental aspirations and destinations.

The development of this Strategy takes into consideration the current status of our environment and natural assets and takes strategic steps to address specific issues confronting the municipality. These issues include the health of our waterways, the bay and our coastline, the preservation of vast grasslands and local biodiversity, much of which is at risk of encroachment from residential development.

The Strategy also addresses our community's ambition to build a healthy, sustainable city that supports public amenity and natural values while minimising the environmental impacts of a rapidly growing urban population and city.

The views, ideas and opinions from many stakeholders were incorporated in the development of this Strategy, including internal Council departments, State government departments and authorities, regional interest groups and Wyndham residents. The outcome is a Strategy that reflects our community and will serve as a roadmap for improving Wyndham's environmental future.

Vision and Principle

“Wyndham is renowned for its unique and iconic natural environment. As a community, Wyndham has embraced renewable energy, waste and water conservation practices and is committed to combatting climate change.”

The following guiding principles have been used in the development of this document and will inform preparation of action plans to achieve the Strategy targets:

- Wyndham City will engage with, consult with and strengthen the community’s ability for sustainable stewardship of the environment, including indigenous communities in accordance with Wyndham’s Statement of Commitment.
- All Council decision making will be balanced through triple bottom line assessment to achieve quality of life outcomes.
- All relevant evidence based scientific data will be considered when determining long term sustainable outcomes.
- The Precautionary Principle will be applied to environmental decision-making processes; a lack of full scientific certainty will not be used as a reason for postponing measures to prevent environmental degradation.
- Our natural environment will be prioritised in balance with urban growth.
- We will care for our natural environment because it sustains our lives and the lives of future generations.
- We will work with government, business and other stakeholders in order to maximise environmental benefits throughout the region.
- We will continually assess and reassess the state of our environment and implement programs to maintain and improve it.



Wyndham demographics at a glance 2015

How we get to work



66%
car

Wyndham City's
area **542km²**

Average Rainfall
Historical 538mm/year
Last decade 468mm/year
= **13% decline**

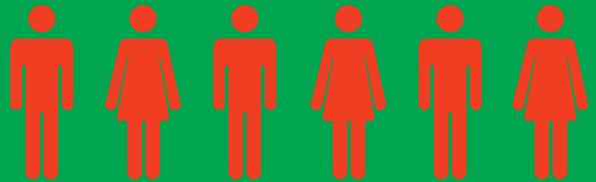


12%

public transport



Estimated Population



209,768 (2016)

359,542 (2031)



248 residents
cycled to work

Wyndham has
27km of Coastline
312km of Waterways



34% of the population
are born overseas

Council spent
\$6,496,000
on sustainable
goods and services

Wyndham City
manages
144 hectares
of conservation
reserves



37%

of Wyndham's
waste is diverted
from landfill

Council generated
62,000 kWh
of renewable
energy

Wyndham City Council's Environmental Framework

The Environment and Sustainability Strategy sets the strategic direction for Council's environmental management in the short term (2016-2020) and provides long term (2020-2040) visionary targets within three broad themes:

- **Sustainable City** – Progressing towards a sustainable City.
- **Valuing nature** – Conserving and improving natural values, rural areas and the urban environment.
- **Council leadership** – Guiding Council's functions and governance.

The Strategy forms part of Council's Environmental Framework (shown in Figure 1), with Council's City Plan as the overarching document which sets Wyndham's community vision. The Strategy references various Council policies and plans including the Wyndham 2040 Future Statement.

Some targets will rely heavily on Council being able to advocate to other levels of government in order for them to be achieved. For other targets Council will be able to influence the outcome by working with stakeholders. Only a portion of the targets are under Council's direct responsibility (i.e. Council can achieve them by actions we take alone). The targets are not classified by these categories as Council's ability to advocate, influence or control the outcome may change over time.

The targets listed in this Strategy can be compared against the baseline information provided in Appendix B, which provides an overview of Wyndham's current progress with environmental management. Subject specific action plans will be used to determine the actions required to achieve the Strategy targets. These are listed in Appendix C and remain subject to change as the Strategy progresses.



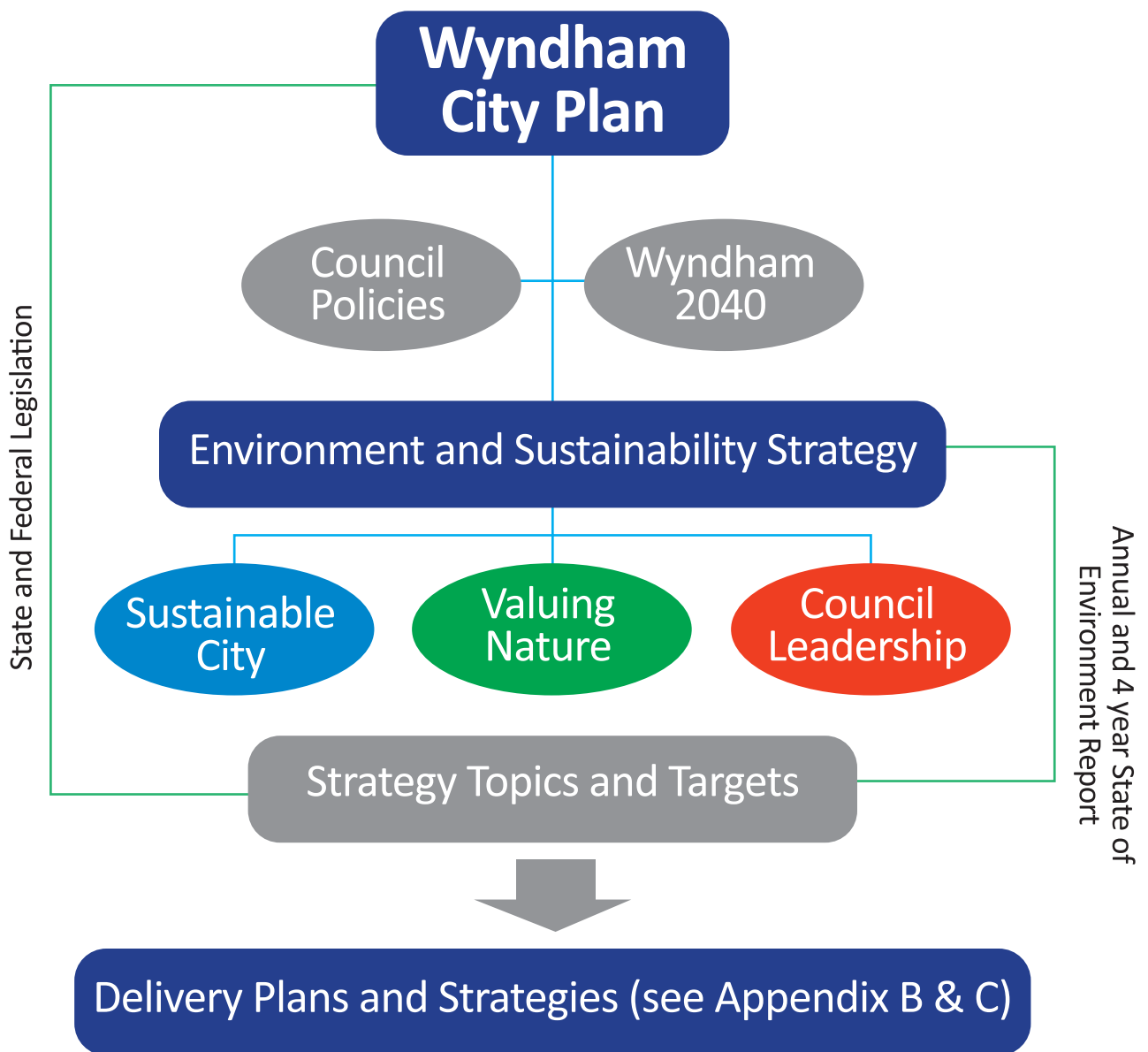


Figure 1 - Wyndham City's Environmental Framework



Sustainable City

Overview

Rapid growth and urban expansion has led to a number of environmental challenges facing the City, including forecasted rises in greenhouse gas emissions, growing congestion on road networks, increases in waste generated and gaps in planning for a changing climate. In order to address these changes a collaborative approach with community, regional groups, business and government agencies is required to achieve consistent and broad reaching improvements that will provide benefits to Wyndham and the surrounding area.

The targets below will provide insight and direction into how these urban challenges will be addressed with the aim of creating better quality of life, environmental and economic savings and improving the general well-being of the community.

Targets

Topic Statement	Short Term Targets (Working towards 2020)	Long Term Targets (Working towards 2040)
1.1 Community Energy and Greenhouse Gas Reduction Assisting our residential community and business/industrial sectors to save energy and use alternate power sources will have long term financial and environmental benefits for our region.	<ul style="list-style-type: none"> • At least 55,000 tonnes of greenhouse emissions (CO2 eq) avoided from residential and business sectors through the Low Carbon West Strategy • A Wyndham postcode is ranked in the top 10 in Australia for the number of residential solar photovoltaic systems installed • At least 1 Greenstar or equivalent rated community within the municipality 	<ul style="list-style-type: none"> • Zero net greenhouse emissions from electricity use in the municipality • A Wyndham postcode is ranked top 5 in Australia for the number of residential solar photovoltaic systems installed • At least 10 Greenstar or equivalent rated communities within the municipality • At least 20 Greenstar rated or equivalent business premises within the municipality
1.2 Refuse Disposal Facility (RDF) The Werribee RDF has been declared a waste hub of state-wide significance in Victoria's State-wide Resource Recovery Infrastructure Plan. Advancements in infrastructure and technology can ensure the RDF is a best practice operation leading the way in resource recovery, job creation, renewable energy and greenhouse gas abatement.	<ul style="list-style-type: none"> • Newly developed and operational Transfer Station established • Increase in collected recycled materials from the Transfer Station of 15% • 75% of landfill gas generated at the RDF is captured for renewable energy generation and flaring 	<ul style="list-style-type: none"> • Newly developed and operational Resale Shed & Education Centre established • Waste pre-sorting technology and/or other feasible alternative waste treatment technologies maximising resource/energy recovery established at the RDF
1.3 Waste and Recycling Services There are many benefits to diverting waste from landfill; including preservation of natural resources, reduced energy and water use and reductions in greenhouse gases. Education campaigns are required to ensure Wyndham's diverse and growing community is well informed on waste avoidance and diversion methods.	<ul style="list-style-type: none"> • Contamination rates in residential recycling bins to be under 15% (average of audited sample) • Contamination rates in residential green waste bins to be under 3% (average of audited sample) • Uptake of green waste bins 35% of resident base 	<ul style="list-style-type: none"> • Landfill diversion rate of 90% (recyclables, green organics, hard waste and drop off materials) • Uptake of green and/or food waste bins at 95% of resident base • Household yield of garbage collected reduced by 50%

Topic Statement	Short Term Targets (Working towards 2020)	Long Term Targets (Working towards 2040)
1.4 Planning Controls and Growth An efficient way to protect Wyndham's environmental values and reduce environmental impact is by implementing effective statutory planning requirements. Strong policy and planning controls relating to environmentally sustainable design (ESD) will significantly reduce the impact of development on the broader environment.	<ul style="list-style-type: none"> • Review Environmental Significance Overlays (ESOs) to increase the area of protection for significant habitat and incorporate into the Wyndham planning scheme • Wyndham ESD policy is developed and implemented through the Wyndham planning scheme and processes 	<ul style="list-style-type: none"> • No loss of area protected by ESOs in Wyndham and all ESOs retain significant environmental values • All development in Wyndham is consistent with the Wyndham ESD Policy and compliance is monitored • No expansion to the 2015 Urban Growth Boundary
1.5 Urban Ecology Urban habitat for flora and fauna is essential for community interaction with nature and providing corridors that connect with larger natural areas inside and outside the municipality. These areas will be protected through statutory planning controls, community action and management.	<ul style="list-style-type: none"> • Wyndham Habitat Plan developed and implemented through the Wyndham Planning Scheme, identifying key ecological values and natural places within Wyndham, and linkages between values • At least 12% tree canopy cover within urban public open space 	<ul style="list-style-type: none"> • All recommendations of the Wyndham Habitat Plan have been implemented, and the plan has been reviewed and updated • At least 25% tree canopy cover within urban public open space
1.6 Transport With rapid population growth and development pressures, Wyndham's road network is increasingly congested, driving the need for more sustainable transport options and alternative ways to travel across, in and out of the City.	<ul style="list-style-type: none"> • Increase weekday train patronage from Wyndham stations to the City to 15% of Wyndham's population • Increase weekday bus patronage to 10% of Wyndham's population • A minimum of 3 km of new bike lane/ pathway is constructed each financial year 	<ul style="list-style-type: none"> • The Regional Rail Link is electrified, new train stations are established and form part of the wider metropolitan train network • The average distance that Wyndham residents travel to work aligns with the Metropolitan Melbourne average • Wyndham has the highest number of bike users for travelling to work for middle and outer Melbourne municipalities
1.7 Community Engagement Community engagement leads to more connected neighbourhoods and districts, and a stronger sense of place. There are many benefits for having targeted and planned involvement with the community; such as building capacity and leadership, reaching 'disengaged' individuals and to instil positive behaviour change amongst the community.	<ul style="list-style-type: none"> • Triple community reach of environment & sustainability engagement activities • That the environment is seen as a priority issue by the community in all Wyndham 2040 districts and current district plan environmental issues have been addressed • Establish and maintain a community and business environmental leaders forum to support community led projects • Finalise policy and procedures to support the establishment of community gardens • Support home food gardening via a dedicated education and behaviour change program 	<ul style="list-style-type: none"> • The community governs the direction of major environment and sustainability initiatives in the municipality • All Wyndham 2040 districts have a community hub for environmental information and to support community action • The community considers Council activities promoting environment & sustainability to be of high satisfaction and high importance • Wyndham has an established pool of trained volunteers to assist with environment and sustainability programs • Wyndham residents have access to a wide range of local food initiatives to raise awareness of the links between food, health and sustainable living

Valuing Nature

Overview

Wyndham is home to a number of significant waterways, wetlands, coastal areas and native grasslands, including the Werribee River, Little River, Skeleton Creek, the coastline, Truganina Cemetery remnant grassland, Point Cook Coastal Park and Western Treatment Plant Wetlands. The security of these significant sites cannot be taken for granted as most native vegetation types they support have been cleared elsewhere and are now classified as endangered, vulnerable or depleted.

Our coastlines, plains grasslands and river environments face continuous pressure from urban expansion and climate change. However, the opportunities to enhance and showcase Wyndham's unique natural features are immense. With a largely undeveloped coastline, significant natural river systems including the iconic Werribee River and Victoria's largest proposed grassland national park we are in an exciting position to offer unique natural environment experiences for our community and visitors. The targets below build toward this.

Targets

Topic Statement	Short Term Targets (Working towards 2020)	Long Term Targets (Working towards 2040)
2.1 Coast Wyndham's coastline is likely to experience increasing use and visitors over the coming years. Increasing access and climate change will present varied issues, and will need to be well managed and supported to ensure the quality of coastal natural assets is maintained and enjoyed by all.	<ul style="list-style-type: none"> • Wyndham Coastal Strategy developed and implemented through the Planning Scheme • Conduct an audit of assets, infrastructure and environmental values along Wyndham's coastline to assess current and future risks from coastal processes • Wyndham coastline remains undeveloped and its environmental values protected 	<ul style="list-style-type: none"> • Ensure coastal natural assets are protected and maintained, with no encroachment on the green wedge zone • Wyndham coastline remains undeveloped
2.2 Land Management Wyndham's rural land and natural areas need to be maintained and managed to reduce the impacts of weeds and feral animals on environmental and agricultural values.	<ul style="list-style-type: none"> • Increase in area of private rural land managed through the Land Protection Grant Scheme or equivalent land management program by 20% • Increase in weed control awareness and accountability among rural landowners through local education programs 	<ul style="list-style-type: none"> • All private rural land is actively managed by landowners for noxious and highly invasive weeds • No tiger pear or other emerging noxious weeds in Wyndham

Topic Statement	Short Term Targets (Working towards 2020)	Long Term Targets (Working towards 2040)
2.3 Biodiversity Wyndham's rural land and natural areas need to be maintained, enhanced and protected as destinations of enjoyment and appreciation for the community. Showcasing the unique natural features for Wyndham will instil a sense of pride and contribute to a positive quality of life for our community.	<ul style="list-style-type: none"> • Increase in overall extent and condition of native habitat conservation sites on Council land whilst protecting cultural heritage and being informed by indigenous land management practices • Commence an enhanced biodiversity monitoring program on Council managed conservation sites • All Council managed conservation sites to have a site action plan prepared, implemented and reviewed annually • Protect the entire Western Grassland Reserve from development or encroachment • Advocate for dedicated State resources to manage pest plant and animals in the Western Grassland Reserve and surrounding areas 	<ul style="list-style-type: none"> • All significant flora and fauna species in Council conservation reserves to have a conservation action plan • No decline in conservation rating of locally indigenous species • The Western Grassland Reserve is fully established and functioning as a grassland national park • The Western Treatment Plant remains a Ramsar site
2.4 Litter Litter is Wyndham's most visible form of pollution; it is imperative that a combined approach of education, infrastructure and enforcement is utilised to tackle this issue.	<ul style="list-style-type: none"> • Increase in number of community litter reports by 25% • Develop baseline on infringements issued against illegal dumping events by 2018 • Develop robust reporting and classification of littering data (e.g. separation of street sweeping, litter bins, dumping, roadside litter figures). • 25% reduction of litter at 15 regularly monitored locations including rural, urban, industrial, developing, waterways and coastal areas 	<ul style="list-style-type: none"> • No incidents of illegal dumping in Wyndham • 50% reduction in the total weight of collected litter (per capita) • Customer Satisfaction Survey demonstrates increased satisfaction and importance around litter and illegal dumping • Waterways and beaches to be free from litter • Functioning and well serviced litter abatement systems are installed on all stormwater outlets across the municipality • Use of the Local Litter Measurement Tool across all of Council
2.5 Waterways Wyndham's waterways are some of our community's most valued natural areas, providing habitat for a diversity of native plants and animals, they are highly frequented places of recreation and wildlife appreciation.	<ul style="list-style-type: none"> • Completion of an audit of all gross pollutant traps (GPT's) within the municipality, measuring the design, maintenance and source of litter for each outlet • Water quality monitoring locations and/or modelling to measure and report water quality status on the lower reaches of the Werribee River • Agreement from all relevant authorities to increase environmental flows to lower reaches of Werribee River, including the water resources to be used • Improved environmental flow compliance as reported in the Melbourne Water seasonal watering proposal • Decrease in the frequency and duration of summer blue green algae blooms in the lower Werribee River 	<ul style="list-style-type: none"> • The Werribee River, Little River and Skeleton Creek are healthy, functioning waterways providing high quality habitat for native species • The condition of Wyndham's waterways improved to 'moderate' or higher (based on Index of Stream Condition) • Environmental flow allocation to Werribee River lower reaches increased to at least 20%

Council Leadership

Overview

As an organisation which provides multiple and varied services including; buildings, open spaces, facilities and community events, Wyndham is in a position to role model and showcase environmental principles and practice across a broad range of functions. With residents accessing facilities and events on a regular basis, there are many opportunities to inspire and share learnings on enhancing the environmental benefits of building design and operational programs which the community can adopt and use in homes and businesses. Further, embedding a more sustainable approach to how we operate our facilities will result in a longer life of assets and significant long term cost savings in relation to energy and water use.

The targets below outline how in a dry and changing environment, Council can provide inspiration and leadership through programs developed to reduce emissions, conserve waste, energy and water resources and promote sustainable purchasing.

Targets

Topic Statement	Short Term Targets (Working towards 2020)	Long Term Targets (Working towards 2040)
3.1 Greenhouse Gas and Air Pollution Reduction Improving energy efficiency of Council's buildings, fleet, facilities and operations will result in long term financial savings and reduce Council's carbon footprint.	<ul style="list-style-type: none"> • Reduce Council's corporate greenhouse emissions (CO2 eq.) by 12% below a 2014/2015 baseline, excluding the RDF • 85% of Council's fleet cars and utes will be 4 cylinder engine capacity • 80% of Council's passenger vehicles will be powered by a source other than diesel including a review of diesel vehicle air quality emissions • An alternative fuel (e.g. electric) passenger vehicle trialled for consideration in Council's future fleet purchases 	<ul style="list-style-type: none"> • Reduce Council's greenhouse emissions (CO2 eq.) by 95% • Wyndham will be carbon neutral for corporate greenhouse emissions, as defined by the National Carbon Offset scheme, through the purchase of local offsets (excluding the RDF) • 95% of Council's cars and utes will meet best practice emission standards • At least 40% of passenger fleet vehicles will use a carbon neutral power source
3.2 Integrated Water Management As a significant user of water and stormwater manager, Council has an important role to play in saving water and supporting healthy waterways.	<ul style="list-style-type: none"> • Achieve Council water use efficiency (mains and recycled) of 2.3 KL/per resident/per year • At least 32% of Council's water use demand to be from alternative water sources • At least a 10% increase in the number of Council stormwater treatment wetlands that meet Melbourne Water's Constructed Wetlands Design Manual best practice design standards (2015) 	<ul style="list-style-type: none"> • Maintain Council water use (mains and recycled) at 2.3 KL/per resident/per year • All of Council's non-potable water use is supplied from alternative water sources • At least a 50% increase in the number of Council stormwater treatment wetlands that meet Melbourne Water's Constructed Wetlands Design Manual best practice design standards (2015)

Topic Statement	Short Term Targets (Working towards 2020)	Long Term Targets (Working towards 2040)
3.3 Environmentally Sustainable Design (ESD) Council owns and operates a number of buildings of varying size and functionality. Operational costs and environmental impacts demonstrate the necessity for environmentally sustainable design.	<ul style="list-style-type: none"> • All major new buildings and refurbishments achieve a minimum of 5 Star Green Star • All minor new buildings and refurbishments achieve a minimum 50% score using the CASBE Built Environment Sustainability Scorecard • All furniture and equipment upgrades and building maintenance meets Council ESD Framework Standards 	<ul style="list-style-type: none"> • All new Council buildings will be carbon neutral and meet the highest level of Green Star rating or equivalent
3.4 Council Facilities Operational Waste With growing financial and environmental costs associated with landfilling waste, Council facilities and events need to apply measures to limit waste generated and increase resource recovery.	<ul style="list-style-type: none"> • All sports buildings will have recycling facilities • 30% of Wyndham Civic Centre organic waste (by weight) diverted from landfill • Contamination rates in the comingled, paper and cardboard recycling will be no higher than 5% at the Wyndham Civic Centre 	<ul style="list-style-type: none"> • All Council facilities to have a landfill diversion rate of 95% • No landfill waste to be generated at major Council events
3.5 Climate Change Adaptation Uncertainties around climate and extreme weather events ensure we must plan, design and implement facilities, which can withstand increases in temperature, droughts, storms and flood risks. Ensuring our community is responsive to these events will contribute to future prosperity and wellbeing.	<ul style="list-style-type: none"> • Wyndham will complete all of the actions in the Climate Change Adaptation Strategy 	<ul style="list-style-type: none"> • All new Council assets and upgrades are built to respond to a changing climate • The community understands and is prepared to manage climate risks • Climate change is considered in all Council decision making
3.6 Sustainable Procurement Reducing the environmental impact of Council's purchases by selecting environmentally sound goods and services, including locally provided products is important. As a large purchaser of goods and services (capital and operating) Council has the potential to provide a significant positive impact on supply chains.	<ul style="list-style-type: none"> • 5% of all Council procurement to meet sustainable procurement standards. • All tenders above \$500,000 to have an environmental schedule within the tender specifications that is weighted and scored during the selection process. 	<ul style="list-style-type: none"> • 25% of all Council procurement to meet sustainable procurement standards. • All tenders to have an environmental schedule within the tender specifications that is weighted and scored during the selection process.

Strategy Review and Reporting

The Environment and Sustainability Strategy will be systematically reviewed to ensure the document remains up-to-date with changing priorities and legislative requirements.

The Strategy targets and the issue specific plans will be reviewed every four years, including setting new short term targets for the following 4 years. This will enable Council to continually work towards achieving the vision and principles set out in the Strategy.

The review will also provide Council with the opportunity to revisit emerging trends and changing needs in environmental priorities from a local, national and global perspective as well as new policy positions.

An annual report will be prepared on progress towards the Strategy targets and the actions within the issue specific plans. Reporting mechanisms include the annual State of Environment Report and issue specific programs such as green procurement, greenhouse reporting and externally funded grants.}

Baseline data in Appendix B will be used to assess whether the targets in the Strategy are being achieved and environmental sustainability is improving, declining or remaining constant. Monitoring and reporting on the targets and actions will provide quantifiable data that can be compared to the baseline to show trends, successes and lessons.



Appendix A: Definitions and Acronyms

Biodiversity: Measured by the number of native species and population size inhabiting an area

CASBE: Council Alliance for a Sustainable Built Environment

Carbon neutral: When all greenhouse gas emissions from a company or facility are offset by the purchase of carbon credits or renewable energy

CO2 eq.: A measure of greenhouse gas emissions that converts other greenhouse gasses into an equivalent amount of carbon dioxide (CO2)

Contamination: In waste management this term is used to define the quantity of material placed in recycling bins that cannot be recycled (i.e. waste has been placed in the wrong bin)

DELWP: Victorian Department of Environment, Land, Water and Planning

Diversion: In waste management this term is used to define the amount of material diverted from landfill for recycling, compared to the total waste volume generated

ESD: Environmentally Sustainable Design - Building construction or urban planning standards designed to minimise the impact of development on environmental values

ESO: Environmental Significance Overlay - An instrument of the State wide planning scheme to protect significant environmental values

GWZ: Green Wedge Zone planning control that protects rural and natural areas

Greenstar: A sustainable design measure developed by the Green Building Council of Australia

Litter: Includes any solid or liquid domestic or commercial waste, refuse, debris or rubbish (including illegal dumping)

NGERS: National Greenhouse and Energy Reporting Scheme

Photovoltaic: Refers to rooftop solar systems that capture the sun's energy and convert it to electricity. Excludes solar hot water systems that convert the sun's energy into heat.

Potable: Water that is suitable for human consumption

Ramsar: Refers to the Convention on Wetlands of International Importance. Australia is a signatory to this Convention and has agreed to protect important wetlands particularly for migratory birds

Sustainability: Meeting the needs of the present without compromising the ability of future generations to meet their own needs, generally includes 3 pillars being; environment, economic and social sustainability

UGB: Urban Growth Boundary. The extent of permitted urban development surrounding the existing Melbourne metropolitan area, as set by the State government.

WGR: Western Grasslands Reserve. A state reserve on the western edge of the UGB to protect rare volcanic grasslands as an offset for habitat lost through urban growth.



Appendix B: Target Baselines and measurement

Baseline information has been provided as an indication of Wyndham's progress at the time of preparing the Strategy. Most baseline information is sourced from the 2014/2015 financial year –being the last complete year prior to this Strategy. In some cases baseline data relies on information gathered periodically by state or federal agencies and the most recent data may be older. There are also some cases where baseline information has yet to be established. If no date or year is specified then the baseline information should be considered as current as of January 2016.

Sustainable City Baseline Information

Topic	Baseline Information for 2020 targets	Baseline Information for 2040 targets	Delivery Methods
1.1 Community Energy and Greenhouse Gas Reduction	<ul style="list-style-type: none"> • Low Carbon West: Greenhouse gas savings through Low Carbon West will be measured directly from projects undertaken. • Residential Solar: As at September 2015 Postcode 3029 ranked 13th (5,395 units) & 3030 ranked 23rd (4832 units). Photovoltaic systems only, excludes solar hot water. • Greenstar communities: There is 1 Greenstar community (Australand) registered in Wyndham. 	<ul style="list-style-type: none"> • Zero net emissions: Low Carbon West estimates 4,660KT CO2 emissions in the municipality in 2020 of which 3,200 KT would come from electricity use. To achieve zero net emissions this energy would need to come from renewable sources by 2040 or be offset. • Residential Solar: As at September 2015 Postcode 3029 ranked 13th (5,395 units) & 3030 ranked 23rd (4832 units). Photovoltaic systems only, excludes solar hot water. • Greenstar communities: There is 1 Greenstar community (Australand) registered in Wyndham. • Greenstar business premises: Currently 4 Greenstar businesses (Wyndham Vale and Tarneit Train Stations, Kathmandu Distribution Centre and Select Entry School). 	<ul style="list-style-type: none"> • Low Carbon West Strategy • Greenhouse Gas Action Plan (in development)
1.2 Refuse Disposal Facility (RDF)	<ul style="list-style-type: none"> • Transfer Station Upgrade: Initial background and options studies are underway • Transfer Station Recycled materials: 2014/15 collected items- <ul style="list-style-type: none"> • E-waste – 27239 items • Mattresses – 18166 items • Green Waste – 1578.78 tonnes • Tyres – 27.18 tonnes • Plastic Recycling – 12 cages • Batteries – 3462kg • Metal – 858,770 tonnes • Fluorescent tubes – 524 items • Gas Cylinders – 4094 items • Landfill gas capture: Captured 44% of the landfill gas generated (2014/15). 	<ul style="list-style-type: none"> • Resale Shed & Education Centre: Initial concept studies have yet to start • Waste pre-sort or Alternative Waste Technology: Full feasibility study to be completed prior to installation to ensure best option is selected. 	<ul style="list-style-type: none"> • RDF Strategic Plan and Vision 2040 • RDF Transfer Station Master Plan (in development) • Waste & Litter Strategy 2016 – 2040 (in development)

Topic	Baseline Information for 2020 targets	Baseline Information for 2040 targets	Delivery Methods
1.3 Waste and Recycling Services	<ul style="list-style-type: none"> • Residential recycling: Recycling contamination 22.58% (2014) • Residential green waste: Green waste contamination 2.49% (2014) • Green Waste: 20,653 green waste users, 30% of resident base (as at Oct 2015) 	<ul style="list-style-type: none"> • Landfill diversion rate: Landfill diversion rate 36.8% (2014/15 kerbside recycling and green waste as a percentage of total waste and recycling collected) • Green and/or food waste bins: 20,653 green waste users, 30% of the resident base (as at Oct 2015) • Household garbage: Household yield for garbage 582 kg per year (2014/15) 	<ul style="list-style-type: none"> • Waste & Litter Strategy 2016 – 2040 (in development)
1.4 Planning Controls and Growth	<ul style="list-style-type: none"> • Review ESOs: In 2015, six different ESOs exist in Wyndham and apply to WGR (RCZ), GWZ land surrounding the WGR, most lengths of Wyndham's major waterways, Truganina Cemetery and Kororoit Creek. In total, Wyndham's ESOs cover 19,056 hectares. • Wyndham planning ESD policy: Yet to be developed, principles are outlined in the Wyndham Housing and Neighbourhood Character Strategy and Municipal Strategic Statement. 	<ul style="list-style-type: none"> • No loss of ESOs: The ESO baseline will be developed through the 2020 target. • All development consistent with the ESD Policy: Requires policy to be developed first. • Urban Growth Boundary: as defined by the State planning scheme in 2015. UGB expansion in Wyndham would involve a change to this boundary extending south, west or north west. 	<ul style="list-style-type: none"> • Planning scheme Environmentally Sustainable Design Policy (in development) • Planning Scheme Schedules and Overlays • Landscape Context Guidelines
1.5 Urban Ecology	<ul style="list-style-type: none"> • Wyndham Habitat Plan implemented: This plan is in development. • Canopy cover – Wyndham has 7.3% tree canopy cover within public open space (including street trees, parks, waterways and gardens). 	<ul style="list-style-type: none"> • Wyndham Habitat Plan completed reviewed and updated: This plan is in development. • Canopy cover: Wyndham has 7.3% tree canopy cover within public open space (including street trees, parks, waterways and gardens). Future actual canopy cover is dependent on a revised planting regime and associated funding. 	<ul style="list-style-type: none"> • Habitat Plan (in development) • Planning Scheme Schedules and Overlays • Street Tree Strategy (in development)
1.6 Transport	<ul style="list-style-type: none"> • Weekday train patronage: 21,228 Average Weekday Boardings by Train (prior 21 June, 2015) – PTV Victoria (10.6% of current population). • Weekday bus patronage: 13,448 Average Weekday Boardings by Bus (prior 21 June, 2015) PTV Victoria (6% of current population). • New bike lane/pathway constructed: The City Plan 2013-2017 sets a target of 3 Km of cycle path constructed plus an additional 2 km designed by 2017. This is in addition to bike paths built as part of new subdivisions. 	<ul style="list-style-type: none"> • The Regional Rail Link electrified: The State government does not currently have a timeline for electrifying this rail line. • Average distance residents travel to work: Average distance to travel to work for Wyndham residents is 25.2 Km, Metropolitan average is 13km (Department of Transport, VISTA 09/10). • Journey to work bike use per municipality: In the 2011 Census 246 Wyndham residents used a bicycle to commute to work, compared to Bayside which had 713 (the highest for a middle or outer Melbourne municipality). 	<ul style="list-style-type: none"> • Integrated Transport Strategy (in development)

Topic	Baseline Information for 2020 targets	Baseline Information for 2040 targets	Delivery Methods
1.7 Community Engagement	<ul style="list-style-type: none"> • Community reach of engagement activities: Current reach is 6,046 people measured as 14/15 total of newsletter (1,239), Facebook (1,127), Green Living Series (1,200), School events (2,380), and community planting days (100) • The environment is a priority issue in all Wyndham 2040 districts: Currently an identified priority in Wyndham West, Wyndham East and Wyndham Rural. • Environmental leaders forum: 29 residents graduated from the Environment Building Blocks course in 15/16. • Community Gardens: Wyndham has a draft policy in development • Home food gardens: Wyndham provides a free Home Harvest guide and gardening workshops for residents as part of the Green Living Series 	<ul style="list-style-type: none"> • Community governance: Model to be developed based on the Wyndham 2040 Plan. • All Wyndham districts have an established community environment hub: Currently there is the Eco Living Centre in the Wyndham West district. • Council activities promoting environment & sustainability: 7.14 average satisfaction and 8.19 average importance in the 14/15 Community Survey. • Wyndham has an established pool of environment volunteers: to be developed. • Local Food Initiatives: Wyndham provides a free Home Harvest guide and gardening workshops for residents as part of the Green Living Series. There are also a number of community led programs available. 	<ul style="list-style-type: none"> • Community Engagement Action Plan (in development) • Community Gardens Policy (in development)



Valuing Nature Baseline Information

Topic	Baseline Information for 2020 targets	Baseline Information for 2040 targets	Delivery Methods
2.1 Coast	<ul style="list-style-type: none"> • Coastal Strategy: Work is underway with regional partners. • Audit of coastal assets and values: Audit yet to be undertaken. • Wyndham coastline remains undeveloped: Currently protected by the Green Wedge Zone, Western Treatment Plant and Council land. 	<ul style="list-style-type: none"> • No encroachment on the green wedge zone: As defined by the current 2015 Wyndham planning scheme. • Wyndham coastline remains undeveloped: Measured by no new coastal developments approved in Wyndham through the planning scheme. 	<ul style="list-style-type: none"> • Coastal Strategy (in development) • Association Of Bayside Municipalities Bay Blueprint (in development)
2.2 Land Management	<ul style="list-style-type: none"> • Land Protection Grant Scheme: 14/15 area of land managed through the Land Protection Grant Scheme is 553 ha. • Weed control awareness: 2 community events for rural land management, approx. 200 attendees total in 14/15. 	<ul style="list-style-type: none"> • Private rural land managed for noxious weeds: 14/15 area of land managed through the Land Protection Grant Scheme is 553 ha. • No tiger pear or emerging noxious weeds: Tiger pear currently present. 	<ul style="list-style-type: none"> • Weed Management Framework
2.3 Biodiversity	<ul style="list-style-type: none"> • Extent and condition of conservation areas on Council land: Approximately 144 ha currently managed for conservation through the Conservation Team Strategic Plan (excludes roadsides, weed control and minor amenity sites). Baseline will be developed through the monitoring program below. Increasing condition will be measured as the net improvement across all monitored sites. • Monitoring program on Council managed conservation sites: Current monitoring includes flora species presence and fauna species presence/ numbers. The enhanced program will include vegetation quality and fauna species presence/ numbers as a minimum in order to measure targets on improving habitat condition. • Council conservation sites to have a site action plan: C: Currently 28 of 53 conservation sites have a site action plan (excludes roadsides, weed control and minor amenity sites). • Western Grassland Reserve size: Proposed area of Western Grassland Reserve in Wyndham is 11,826 hectares (as of 2015). • Management of the Western Grassland Reserve: Advocacy underway. 	<ul style="list-style-type: none"> • Significant species action plans: As of 2015, Council has no specific significant species action plans for its conservation reserves, although legal requirements to protect these species are met. The Habitat Plan will define significant species requiring action plans. • No decline in conservation rating of locally indigenous species: Conservation ratings as listed under the Environment Protection and Biodiversity Conservation Act 1999 • The Western Grassland Reserve is fully established: Proposed area of Western Grassland Reserve in Wyndham is 11,826 hectares (as of 2015). • The Western Treatment Plant remains a Ramsar site: Currently a listed Ramsar site under the Environment Protection and Biodiversity Conservation Act 1999. 	<ul style="list-style-type: none"> • Habitat Plan • Conservation Team Strategic Plan 2013-2017 • Biodiversity Policy

Topic	Baseline Information for 2020 targets	Baseline Information for 2040 targets	Delivery Methods
2.4 Litter	<ul style="list-style-type: none"> • Community litter reports: 2009 litter reports to Council in 2015 • Baseline on infringements issued: 569 Litter Infringements issued in 14/15 (including EPA infringements, Building Site litter, vacant land litter). • Reporting of littering data: report to be developed. • Reduction & monitoring of litter levels at 15 designated locations: Currently sites are monitored on an ad hoc basis. Baselines to be established in 2016 for both Council and community run sites in order to track reductions. 	<ul style="list-style-type: none"> • Illegal dumping: 1941 tonnes of dumped rubbish collected in 2014. • Total weight of collected litter (per capita): 3768t in 2014 (3768t / 199,715 residents = 18kg per resident) • Customer Satisfaction on litter and illegal dumping: 7.35 Customer Satisfaction rating 2014/2015. • Waterways and beaches to be free from litter: Currently Council and community groups regularly clean up litter at these sites. • Litter abatement systems are installed on all stormwater outlets: Work is underway to determine the current proportion of outlets needing improvement, including outlets owned by Melbourne Water. • Use of the Local Litter Measurement Tool across all of Council: Currently this tool is only used at 4 locations (Hacketts Lane, Homestead Road, Leakes Road and Penrose Promenade) 	<ul style="list-style-type: none"> • Waste & Litter Strategy 2016 – 2040 (in development) • Stormwater Management Plan
2.5 Waterways	<ul style="list-style-type: none"> • Audit of gross pollutant traps (GPT's): Initial audit underway but will be further developed. • Werribee River Water quality monitoring: Currently there is one temporary monitoring location along the lower reaches of Werribee River. • Increase to Werribee River environment flow entitlement to lower reaches: Intention to increase environmental flows has been expressed in Melbourne Water's Draft Werribee River Environmental Water Management Plan and DELWP's Draft Victorian Water Plan. Current (2015) allocation for lower Werribee River is 10% of the yearly water flow into Merrimu Reservoir. • Environmental flow compliance: The Melbourne Water Seasonal Watering Proposal for 2015-2016 shows that six out of the seven objectives for environmental flows to the river's lower reaches (Reach 9) were not met in 2014. • Blue Green Algae Blooms: The 2015/2016 summer saw two recorded blooms in the lower Werribee River, one of which lasted for more than 6 weeks. 	<ul style="list-style-type: none"> • Waterway health: See Waterway condition information below. • Waterway condition: Werribee River rated as "poor" or "very poor" environmental condition in the lower reaches (201 & 1) and upper Reach 5. Little River is rated "poor" or "very poor" in all reaches. Skeleton Creek rated as "poor" upstream of Sanctuary Lakes (reaches 22 & 23). Ratings based on the current (2010) Index of Stream Condition (ISC) report by the Victorian DELWP. • Environmental flow entitlement for Werribee River: Current (2015) allocation for lower Werribee River is 10% of the yearly water flow into Merrimu Reservoir. Future environmental flows may also come from other sources (e.g. treated stormwater). 	<ul style="list-style-type: none"> • Integrated Water Management Strategy (in development) • Stormwater Management Plan • Waste & Litter Strategy 2016 – 2040 (in development) • Health of Werribee River Report

Council Leadership Baseline Information

Topic	Baseline Information for 2020 targets	Baseline Information for 2040 targets	Delivery Methods
3.1 Greenhouse Gas and Air Pollution Reduction	<ul style="list-style-type: none"> • Corporate greenhouse emissions: 25,956 tonnes excluding RDF (Planet Footprint NGERs Scope 1 & 2 + Street lighting Report Emissions 2015) • Council's fleet cars and utes: In 2015, light vehicles, buses and trucks make up 50% (222 vehicles) of the total fleet. Of this, 82% are 4 cylinders (182 vehicles). (6% are 5 cylinder, 12% are 6 cylinder). • Diesel Passenger vehicles: In 2015, 57% (127) of Council's 223 passenger fleet vehicles are powered by diesel, 2% (5) by LPG, 8% (17) by premium unleaded petrol and 33% (74) by unleaded petrol. • Alternative fuel Vehicle: Council does not currently own any electric vehicles (fleet already includes petrol/electric hybrids). Future electric vehicles should be powered by renewable energy. 	<ul style="list-style-type: none"> • Corporate greenhouse emissions: 25,956 tonnes excluding RDF (Planet Footprint NGERs Scope 1 & 2 + Street lighting 2015). • Carbon neutral for corporate greenhouse emissions (excluding the RDF): Wyndham does not currently offset its emissions using carbon credits or green power. • Vehicle Emissions Standards: Baseline to be developed. Best practice is viewed as the top 2 tiers of emission standards at the time (e.g. Euro 5 and Euro 6 in 2015, as listed in the Australian Green Vehicle Guide). Two tiers are allowed for as often only luxury vehicles meet the top tier. • Carbon neutral vehicle power: Council does not currently operate any vehicles with a carbon neutral power source (e.g. biodiesel or solar powered electric). 	<ul style="list-style-type: none"> • Greenhouse Gas Action Plan (in development) • Council ESD Framework • Green Procurement Action Plan • Street Lighting Policy (in development) • Motor Vehicle Policy
3.2 Integrated Water Management	<ul style="list-style-type: none"> • Council water use efficiency: Currently 2.57 KL per resident per year in 2014/2015 (excludes use of stormwater/rainwater) • Alternative water sources: 29% of Council total water use in 2015. • Stormwater treatment wetlands: Initial assessment is underway to develop a baseline. 	<ul style="list-style-type: none"> • Council water use efficiency: 29% of Council total water use in 2015. • Alternative water sources: A baseline has yet to be developed separating potable and non potable uses. • Stormwater treatment wetlands: Initial assessment is underway to develop a baseline. 	<ul style="list-style-type: none"> • Water Action Plan • Integrated Water Management Strategy (in development) • Stormwater Management Plan
3.3 Environmentally Sustainable Design (ESD)	<ul style="list-style-type: none"> • Green Star major buildings: This standard has been set for building design beginning in 2015/2016. • BESS standard minor buildings: This standard has been set for building design beginning in 2015/2016. • Furniture and equipment upgrades: This standard has been set for upgrades beginning in 2015/2016. 	<ul style="list-style-type: none"> • Council buildings carbon neutral/ Green Star: New buildings are not currently required to be carbon neutral. 	<ul style="list-style-type: none"> • Council ESD Framework • Climate Change Adaptation Strategy
3.4 Council Facilities Operational Waste	<ul style="list-style-type: none"> • Sports buildings recycling facilities: There are currently 46 buildings, with 93 waste bins and 36 recycling bins in total. • Civic Centre organic waste: Minimal food waste is diverted via a worm farm system, with 60% of the waste stream (by weight) made up of organic material (2015) • Civic Centre recycling contamination rates: Contamination rates - paper stream 6.7%, recycling stream 12.5% (2015) 	<ul style="list-style-type: none"> • Council Facilities resource recovery: 66% diversion at the Civic Centre (2015 recycling and paper waste as a percentage of total waste and recycling collected). No current baseline for other buildings. • Waste at major Council events: Recycling and waste bins are provided but waste volumes are not currently monitored. 	<ul style="list-style-type: none"> • Waste & Litter Strategy 2016 – 2040 (in development)

Topic	Baseline Information for 2020 targets	Baseline Information for 2040 targets	Delivery Methods
3.5 Climate Change Adaptation	<ul style="list-style-type: none"> • Climate Change Adaptation Strategy: Council adopted the Strategy in December 2015 and implementation has begun. 	<ul style="list-style-type: none"> • New council assets and upgrades: to be delivered through the adaptation strategy future revisions. • Community awareness: Current levels of climate change awareness have not been surveyed within the municipality. • Council decision making: To be delivered through risk management processes 	<ul style="list-style-type: none"> • Council climate change risk register
3.6 Sustainable Procurement	<ul style="list-style-type: none"> • Council procurement standards: 5% Sustainable Procurement in 2014/15 as measured by EcoBuy reporting. The percentage is calculated as the ratio of green expenditure (products only) to total expenditure (products and services excluding staff salaries). • Tenders above \$500,000: The environment tender schedule was introduced in 2015 for most capital works tenders. 	<ul style="list-style-type: none"> • Council procurement standards: 5% Sustainable Procurement in 2014/15 as measured by EcoBuy reporting. The percentage is calculated as the ratio of green expenditure (products only) to total expenditure (products and services excluding staff salaries). In future this measure may be changed to include green services in the total “green spend”. • All tenders: The environment tender schedule was introduced in 2015 for most capital works tenders. 	<ul style="list-style-type: none"> • Green Procurement Action Plan • Procurement Policy



Appendix C: Strategy Delivery Plans and Methods

The table below provides a list of the key Council strategies, plans and methods that will be used to achieve the Environment and Sustainability Strategy targets. These items are also listed in Appendix B (delivery methods), to show how they relate to each Strategy topic. Each item is identified as 'in development', or 'complete' (i.e. implementation has already begun). Items that are public or will be public when complete are also identified. Items not identified as public typically relate only to internal Council processes/operations. Note that the names of some documents may change if they are currently in development.

Strategy Delivery Plans and Methods	Status (March 2016)		Public Document
	In development	Complete	(if/when complete)
Association Of Bayside Municipalities Bay Blueprint	Y		Y
Biodiversity Policy		Y	Y
Climate Change Adaptation Strategy		Y	Y
Climate change risk register		Y	
Coastal Strategy	Y		Y
Community Engagement Action Plan	Y		
Community Gardens Policy	Y		Y
Conservation Team Strategic Plan		Y	
Council ESD Framework		Y	Y
Green Procurement Action Plan		Y	
Greenhouse Gas Action Plan	Y		Y
Habitat Plan	Y		Y
Health of Werribee River Report		Y	Y
Integrated Transport Strategy	Y		Y
Integrated Water Management Strategy	Y		Y
Landscape Context Guidelines		Y	Y
Low Carbon West Strategy		Y	Y
Motor Vehicle Policy		Y	
Planning scheme Environmentally Sustainable Design Policy	Y		Y
Planning Scheme Schedules and Overlays	Y		Y
Procurement Policy		Y	
RDF Strategic Plan and Vision 2040		Y	Y
RDF Transfer Station Master Plan	Y		Y
Stormwater Management Plan		Y	Y
Street Lighting Policy	Y		Y
Street Tree Strategy	Y		Y
Waste & Litter Strategy 2016 - 2040	Y		Y
Water Action Plan		Y	Y
Weed Management Framework		Y	Y
Western Alliance for Greenhouse Action (WAGA)		Y	Y