



Greening Our Future

**Frankston City's
Environment Strategy**

2014 – 2024

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Mayor's Foreword

I am pleased to present to the community Council's environment strategy, *Greening Our Future*. The development of this strategy has been a real collaboration between Council and the community incorporating input from over 1,000 residents plus on-going guidance from residents who have served on the Frankston Environment Advisory Committee.

This strategy provides an overarching framework for preserving and protecting the environment of Frankston City for the next decade. While it provides the community with details of what has been achieved over the past decade by Council and community in our environmental endeavours, it also assesses where we are at now and what opportunities there are for us to pursue into the future.

The strategy also aims to inspire us with visions of a "greener future" which can be achieved if we all continue with sensible, steady and continuous improvements and sometimes bold and courageous efforts to make the future environment for our children and their children, as good as what we know, if not better.

MAYOR

Cr Sandra Mayer

Table of Contents

MAYOR'S FOREWORD	3
INDEX OF FIGURES	6
DEFINITIONS	8
EXECUTIVE SUMMARY	10
CHAPTER 1	11
1.1 Reason for the Strategy	11
How to use this strategy.....	11
1.2 Policy Context	13
1.3 Consultation	15
1.3.1 Environment Survey & Community Forums	15
1.3.2 Frankston Environmental Advisory Committee	20
1.3.3 External Expert Advice	20
1.3.4 Councillor and Staff Input	20
1.4 Green Futures – the community's visions	20
CHAPTER 2	25
2.1 State of the Environment	25
2.2 Protecting and enhancing natural assets	28
2.2.1 Biodiversity	28
2.2.2 Trees	33
2.2.3 Open Space and Bushland	35
2.2.4 Waterways and Beaches.....	37

2.3	Wise use of natural resources.....	41
2.3.1	Water.....	41
2.3.2	Energy and Greenhouse Gas Emissions	43
2.3.3	Waste.....	47
2.4	Minimising environmental impacts	50
2.4.1	Litter and Illegal Dumping.....	50
2.4.2	Climate Change.....	52
2.4.3	Built Environment.....	53
2.4.4	Transport.....	56
2.5	Educating and engaging the community	59
2.5.1	Households.....	59
2.5.2	Schools.....	64
2.5.3	Businesses.....	65
2.5.4	Volunteers	68
CHAPTER 3	IMPLEMENTATION.....	70
3.1	Roles and responsibilities	70
3.2	Targets and Indicators	72
3.2.1	Targets	72
3.2.2	Indicators.....	73
3.3	Monitoring and Evaluation, Reporting and Review.....	75
3.4	Action Plan	76
REFERENCES	94
	Appendix 1: International agreements, Federal and State legislation, policies and strategies	97
	Appendix 2: Achievements.....	99

Index of Figures

Figure 2: Greening Our Future Strategy – framework of existing sub-plans and strategies [blue], ones to be reviewed [green] and future [pink] action plans.....	14
Figure 3: Comparison of Environmental Concerns between Survey respondents and Forum participants	17
Figure 4: Top Ten Priorities the Community wanted Council to address - Environment Survey 2011	18
Figure 5: A green city of the future.....	21
Figure 6: Sweetwater Creek.....	24
Figure 7: Annual Household Water Use, Frankston City	25
Figure 8: Annual Household Electricity Use	26
Figure 9: Household Waste and Recycling Trends from 2000 to 2010.....	27
Figure 10: Heathy Woodland – Bunanrong Park	28
Figure 11: Photo: Coastal Dune Scrub, Seaford Foreshore.....	29
Figure 12: Riparian scrub, Little Boggy Creek, Studio Park, Langwarrin.....	29
Figure 13: Swamp scrub – Paratea Reserve.....	30
Figure 14: Estuary – Kananook Creek.....	30
Figure 15: Natural bushland and trees are essential to the survival of most local faunal species in Frankston City such as these Koala and Tawny Frogmouth.....	31
Figure 16: Frankston is home to some amazing wildlife, though many are vulnerable, threatened, or locally extinct	32
Figure 17: People dining outside under tree canopies	33
Figure 18: Images of tree canopy cover.....	34
Figure 19: Sketch of stylised bushland plantings along a residential street to form a green way (Elevation view) (Courtesy of Zöe Metherell)	35
Figure 20: Map showing public open space (light green areas)	36
Figure 21: Belvedere Reserve (left), Sweetwater Creek (right).....	37
Figure 22: Indigenous Australians hunting in Carrum Carrum wetland	38
Figure 23: Map of Drainage Catchments	39
Figure 24: Protection of coastal dunes (above left), Kananook Creek (above right).....	40
Figure 25: Blue Ways and Green Ways (Dr. Tony Wong) (above left); Water Sensitive Urban Design at Beauty Park (above right)	41

Figure 26: Mains water use by sector (above left); Mains water use trend in Frankston City (above right).....	42
Figure 27: Council's emissions 2000-01 (above left), Council's emissions 2012-13 (above right)	44
Figure 28: Changing Frankston's streetlights halved energy consumption; community solar programs	46
Figure 29: Household Waste generated and diverted over past ten years (tonnes), Frankston city.....	48
Figure 30: Average Household Waste per year (kg).....	49
Figure 31: Encouraging home composting and vegetable growing is valuable in reducing food waste	50
Figure 32: Litter continues to pose challenges in a disposable society.....	51
Figure 33: Example of litter education signs at Frankston Waterfront	52
Figure 34: Storm damage and erosion of foreshore infrastructure and beaches at Frankston foreshore	53
Figure 35: Map showing land use and zoning.....	54
Figure 36: Left to right - Green Curtain in Japan, green wall in Melbourne; Singapore's municipal offices; illustration of a green city vision	56
Figure 37: Case study of Copenhagen cyclability (images 1-3 from left); Frankston community participates in Ride to Work Day (far right).....	58
Figure 38: Honda Electric Vehicle Charging Station using solar panels in Europe.....	58
Figure 39: Sources of Household Greenhouse Gas Emissions [Consuming Australia].....	59
Figure 40: Sources of Household Water Consumption [Consuming Australia].....	60
Figure 41: Eco Footprint of Average Australian [Consuming Australia].....	61
Figure 42: Frankston cloth nappy workshops teach parents how to reduce waste; Environmental forums, Environment at community events	62
Figure 43: Joy of the Earth Community Garden Volunteers, Community engagement at events and festivals	63
Figure 44: Frankston City non-residential water use 2012.....	66
Figure 45: Frankston Traders.....	67
Figure 46: Left to right - Volunteers around Frankston municipality.....	68

Definitions

Biodiversity	Diversity among and within plant and animal species in an environment or geography
Blueways	Connected passages of surface water that improves amenity, manages stormwater and cools the local environment of urban areas
CCHP/ TriGen	TriGen - Trigenation or combined cooling, heat and power (CCHP) refers to the simultaneous generation of electricity and useful heating and cooling from the combustion of a fuel or a solar heat collector.
CHP/ CoGen	CoGen – Cogeneration or combined heat and power (CHP) is the use of a heat engine or power station to simultaneously generate electricity and useful heat.
CO2-e	Equivalent of Carbon dioxide gas – the amount of global warming that a greenhouse gas may affect.
Community	Includes households, businesses, schools, volunteers
Ecosystems	A community of living organisms (plants, animals and microbes) in conjunction with the nonliving components of their environment such as air, water, minerals, soils – all interacting as a system.
Environmental Sustainability	The ability and capacity of an environment to allow all living things to live well, maintain diversity and prosper now and into the future
ESD	Ecologically Sustainable Design also known as Environmentally Sustainable Design – design ideas for the building environment that supports environmental protection, reduced use of natural resources and results in enhanced indoor thermal comfort
EVCs	Ecological vegetation classes – associated vegetation communities within an environmental niche of the landscape and indicates the vegetation communities that are and were present prior to European settlement
FCC	Frankston City Council
FEAC	Frankston Environmental Advisory Committee (FEAC)
GHG	Greenhouse gases
GL	Gigalitre – a measure of fluid such as water equal to 1,000 mega litres
Global hectares (gha)	The number of hectares per person that a) the planet can support (1.8 gha) and b) that humans demand through current lifestyles.
Greenways	Using vegetation to line streets, link areas, and create wildlife corridors, as well as combat the urban heat island effect.
kWh	Kilowatt hour – a measure of electricity equal to 1,000 watts

La Niña / El Niño	A coupled ocean-atmosphere phenomenon that is the counterpart of El Niño as part of the broader El Niño-Southern Oscillation climate pattern. During a period of La Niña, the sea surface temperature across the equatorial Eastern Central Pacific Ocean will be lower than normal by 3–5 °C. La Nina generally results in greater rainfall in the Southern Hemisphere with drier conditions in the Northern Hemisphere and El Niño result in the reverse conditions. [reference: Dr. Karl Braganza]
MJ	Megajoule – a measure of energy equal to 1000 kilojoules [1 kilojoule = 1000 joules]
ML	Megalitre – a measure of fluid equal to 1000 kilolitres [1 kilolitre = 1000 litres]
MWh	Megawatt hours - a measure of energy equivalent to 1000 kilowatts used per hour - [1 kilowatt-hour = 3.6 Megajoules]
Peak Oil	Major oil companies have disclosed that the discovery of major oil reserves peaked in 1964 (ExxonMobil, 2002). Since then, generally less oil is found each year and it is now at the point where humanity is using about four barrels of oil for every one discovered (ExxonMobil, 2002). With oil use increasing, including that of the emerging economies of India and China, and a global failure to match growing demand with new discoveries, the world is likely to experience a spiralling of oil prices.
PVs	Photovoltaics (solar panels/systems)
T (tonnes)	A measure of weight commonly used for waste and gases - equivalent to 1000 kilograms [1 kilogram = 1000 grams]
WSUD	Water Sensitive Urban Design

Executive Summary

The *Environment Strategy: Greening Our Future* supports Frankston City Council to achieve an innovative and environmentally sustainable future and to be a leader in environmental management. It aims to action Council's Sustainability Policy and Environmental Sustainability Policy.

Extensive consultation, with Frankston City's community, councillors and council staff, the Frankston Environment Advisory Committee, external stakeholders and six external experts who provided advice on their areas of expertise, has helped inform the strategy and determine priorities for action.

The Strategy is an overarching framework and encompasses many sub-plans and strategies which have already been adopted by Council and identifies various sub-plans which need to be developed or renewed. Key areas covered are protecting and enhancing the natural environment, wise use of natural resources, minimising environmental impacts and engaging with the community. The Strategy highlights what has already been achieved in these areas, provides details on existing conditions and opportunities for future efforts. The opportunities are captured in a 10 year Action Plan.

A set of environmental targets are pulled together from existing sub-plan which are used to monitor annual progress towards Council adopted goals for greenhouse gas emissions, alternative and renewable energy installations, water conservation and waste reduction. These targets will be reviewed and revised as the various sub-plans and strategies are updated.

A range of environmental indicators have also been developed to measure the health of the natural and built environment including monitoring sightings of koalas, frogs and woodland birds; tree canopy cover; uptake of green roofs and walls in the community; community energy use and solar power uptake; creek water quality and extreme weather trends. Data on these indicators will be available in a bi-annual State of the Environment report.

The Strategy will be reviewed every ten years.



Chapter 1

1.1 Reason for the Strategy

Humankind is completely dependent on the resources and productive health of the natural world. For the first time in history, humans are altering the functioning of the global ecology. In 2007 research found that humanity’s demand for natural resources was 2.7 global hectares (gha) per person, whereas the planet only has 1.8 gha bio-capacity available per person¹. This means that humankind is taking more from the earth in one year than it can produce in a year. This deficit has been getting bigger each subsequent year.

Frankston City’s Footprint calculated for 2009 was 5.81 gha, which is smaller than the average Victorian or Australian.² However it is much bigger than the Earth’s bio-capacity. If the entire world lived as we do, four Earths would be needed. There are many well-off countries with smaller footprints because they use resources in smarter ways.

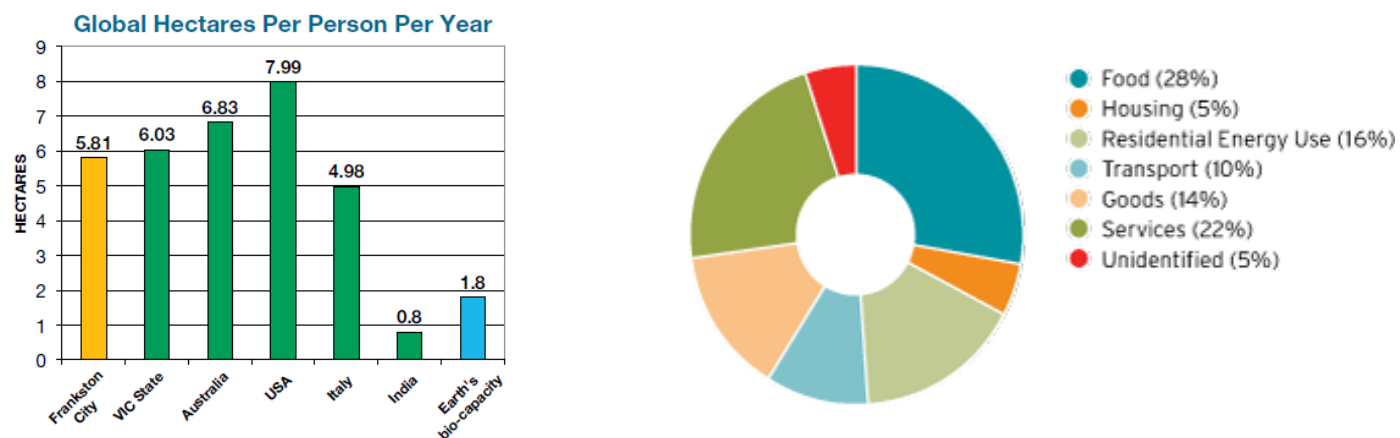


Figure 1: Victoria's Ecological Footprint size and by consumption category

¹ National Footprint Atlas 2010, by Global Footprint Network pg 18

² Consumption Atlas Australian Conservation Foundation

How to use this strategy

Greening Our Future is divided into three sections for easy use.

Chapter 1 explains the reason of the strategy, policy context, community input and poises visions for a “green” and sustainable future.

Chapter 2 explores current conditions (State of the Environment) and opportunities related to key environmental priorities for Frankston City, Council's operations and Community initiatives

Chapter 3 defines roles and responsibilities, targets and indicators, the monitoring and evaluation process and Action Plan

Appendices contain relevant Policies, Legislation, Achievements to Date and other reference documents.



Greening Our Future – Frankston City’s Environment Strategy

Council has acknowledged through its Environmental Sustainability Policy that it has a responsibility as a steward of community land and resources to operate in a way that minimises its environmental footprint, to work with the community to protect the natural environment and to help the community to reduce their environmental impact. The development of this strategy titled *Greening Our Future* aims to action the Policy and gives an overarching framework for achieving an innovative, environmentally sustainable future.

Environmental Sustainability is the concept of humans living in such a way that their use of resources is balanced with the ability of the natural world to generate these resources and enhances the balance of all life on Earth.

Environmental Sustainability Policy 2010

1.2 Policy Context

Relevant policies developed by Council over the past five years are a Sustainability Policy and an Environmental Sustainability Policy. The Sustainability Policy embeds triple bottom line decision-making and practices into the organisation to ensure environmental protection, promotion of local economic prosperity and support for community development, diversity and culture into the future. The Environmental Sustainability Policy gives more explicit directions to council regarding environmental actions including enhancing and protecting the natural environment, using material resources in a highly efficient manner and wherever possible replacing non-renewable resources with renewable resources and processes.

Frankston City Council adopted its first environment strategy titled *Local Conservation Strategy: "Think Globally Act Locally"* in 1991. This strategy was indicative of the growing awareness by the community of the damage being done to the natural world and its ecosystems from over consumption of natural resources. Further environment strategies were adopted by council in 1994 and 1998. The goals of these early strategies were to institute good environmental management practices within council and to introduce consideration of the environment into the decision-making process.

A number of detailed environmental sub-strategies, action plans and guidelines have been developed and adopted over the past seven years to support council in managing a range of issues including waste and litter, stormwater, water conservation, greenhouse gas emissions, climate change, tree management and protection, ESD design, etc. Figure 2 below shows council's existing strategies and plans [blue boxes], ones that need to be reviewed [green boxes] and plans that need to be developed [pink boxes].



Greening Our Future – Frankston City’s Environment Strategy

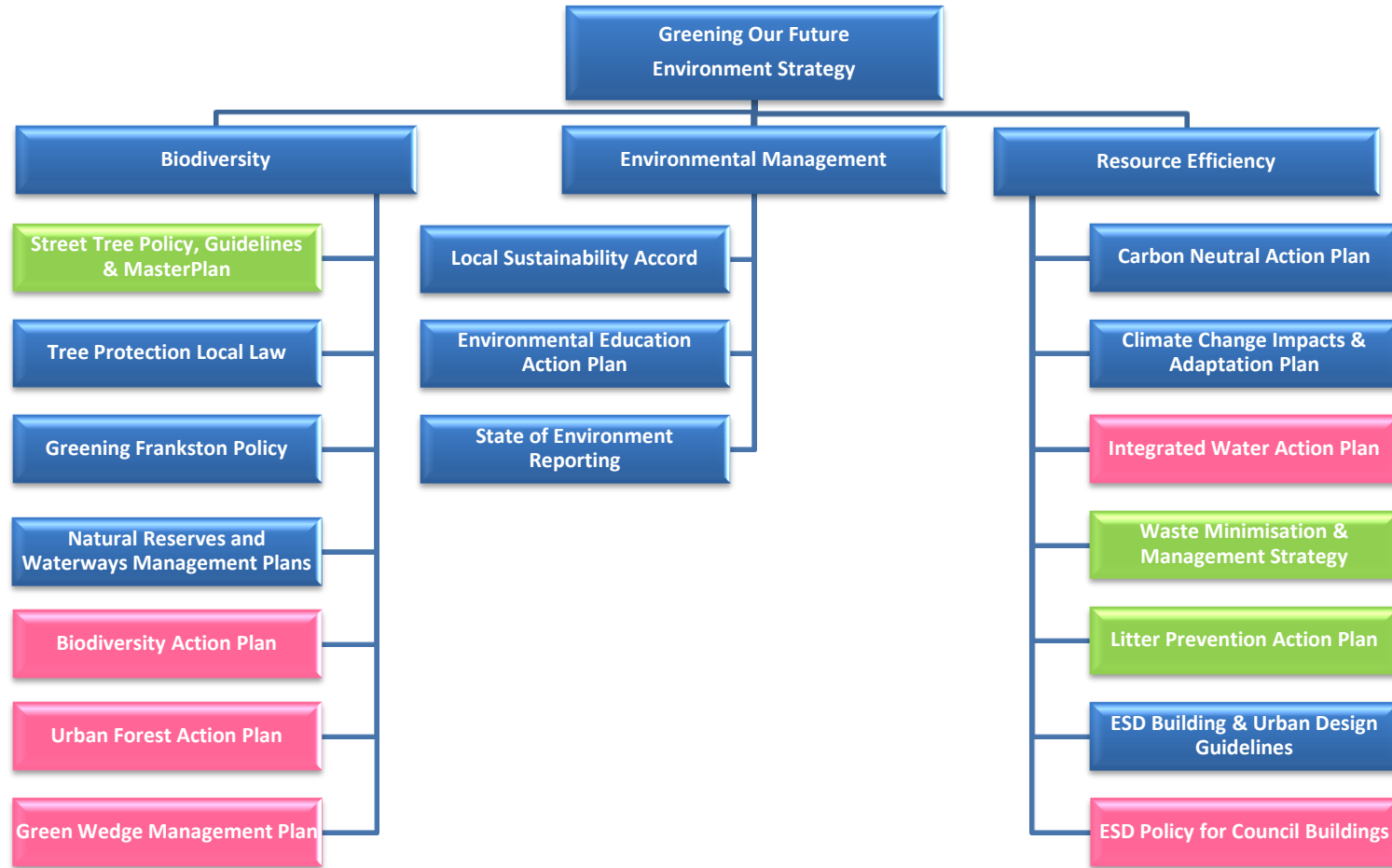


Figure 2: Greening Our Future Strategy – framework of existing sub-plans and strategies [blue], ones to be reviewed [green] and future [pink] action plans



Greening Our Future – Frankston City’s Environment Strategy

In addition a number of key strategies have been adopted by Council, such as the Health and Wellbeing Plan, Flood Management Plan, Frankston Housing Strategy, Local Area Plans, Economic Development Strategy and Integrated Transport Strategy, which support the delivery of a number of environmental priorities discussed in Chapter 2.

A number of Federal and State policies and legislation affect Council's environmental practices in areas such as waste management, water, biodiversity protection, tree management, greenhouse gas emissions, ecologically sustainable development (ESD) design and urban development. A list of these policies and legislation can be found in **Appendix 1**. Council has statutory responsibilities to fulfil to protect the environment under a range of State and Federal legislation.

Council seeks to demonstrate best practice in environmental management, and where practical, to exceed best practice through innovative and cost effective methods. Experience has shown that good environmental management has multiple benefits including protecting the environment, saving money, improving the comfort, health and wellbeing of people and supporting the local economy. For example since 2007 improved environmental practices have saved Council over \$1,000,000 from utility rebates, refunds and savings - the result of installing energy and water efficiency measures.

1.3 Consultation

Extensive upfront internal and external consultation has been undertaken to inform the development of this *Strategy* including:

- Community forums and Creative Conversation workshops
- Sustainability Victoria's *Green Light Report* in which over 250 Frankston residents were surveyed on their environmental behaviours
- An environmental survey of residents at shopping centres, on council's webpage and posted out to 3000 residents with the result of over 1,100 surveys filled-in and returned
- Environmental ideas developed at 6 local area planning sessions held across the municipality
- Greening Our Future seminar with over 100 residents and 6 subject matter experts
- Environmental ideas from the Community Plan survey with over 940 responses and a community forum
- Internal input from Councillors, staff and managers from relevant departments

1.3.1 Environment Survey & Community Forums

Council conducted an environment survey in shopping centres across the municipality in 2011 to obtain community input from residents who might not normally engage in formal consultation. They were asked about their level of concern about the environment, what they viewed as priority issues for Council to address, what they were doing themselves or willing to do to protect the environment and what were the barriers and benefits of those actions. Over 1,100 surveys were completed and provide a confident indication as to community sentiment. Overall 98% of respondents were concerned or very concerned about the environment.

In addition, a community forum was held in 2011 which was promoted to residents and a wide range of business and community groups were invited. About 65 people attended and provided advice as to their environmental concerns.



Greening Our Future – Frankston City’s Environment Strategy

Figure 3 below is an analysis of the environmental concerns raised by residents in the Environmental Survey and residents who attended a Community Forum. Areas of concern are compared between the Survey and Forum participants. Related concerns have been grouped together and coloured. The various colours represent beach cleanliness; water quality and waterways; waste and recycling; sustainable transport; biodiversity protection; population and land use; climate change; noise and community education. There are many similar concerns between the two groups with the Forum participants giving priority to education and involvement of the community and schools in environmental protection.



Greening Our Future – Frankston City’s Environment Strategy

Environment Survey - Concerns

23%	Litter/graffiti/anti-social behaviour/poor maintenance in area	17%	Loss of natural spaces (native vegetation)/ preserve natural spaces
7%	Clean beach/rubbish at the beach	11%	Loss of native animals/control pets/ care for animals
11%	Beach - keep maintained/erosion/sea levels	6%	Greening/loss of trees/replant trees
		15%	Maintaining green spaces/walking tracks
8%	Water quality in creeks/clean waterways/rubbish in waterways		
7%	Waterways - better looked after/keep more natural	13%	Concerned about growth/overdevelopment
15%	Waste/recycling	6%	Climate change
		4%	Energy/build energy efficient houses/ new use of resources
9%	Roads/bike lanes/parking/traffic/ public transport	2%	Mosquitoes/mosquito management
9%	Air quality	2%	Fire/bushfire
5%	Lack of water/quality of drinking water/need dams/saving water	4%	Noise

Community Forum - Concerns

9%	Litter/Vandalism/ Health of Beach	16%	Biodiversity Protection/ Habitat loss/ Preserving Green Wedge/Protecting trees
		3%	Sustainability/Frankston 2025/ Environmental protection for itself not for human utility
10%	Water Quality/ Conservation/Rainwater tanks/155 Campaign		
3%	Reducing pollution/Safe cleaning products	7%	Land Use/Erosion/ Enforce Council Overlays/ Use of nature strips
9%	Sustainable transport/ Public Transport/ Bike Riding/Walking	9%	Renewable Energy/ No Nuclear
1%	Air Quality	6%	Greenhouse Gas Emissions/ Adapting to Climate Change
		6%	Responding to Peak Oil/Community Gardens /Local food production
10%	Educating Community/ Working with Schools		
6%	Involving community/ community decision-making	1%	Noise pollution

Figure 3: Comparison of Environmental Concerns between Survey respondents and Forum participants



Greening Our Future – Frankston City’s Environment Strategy

The community was asked in the Environment Survey which areas of environmental management they think Council should prioritise. Figure 4 below is the result of over one thousand responses.

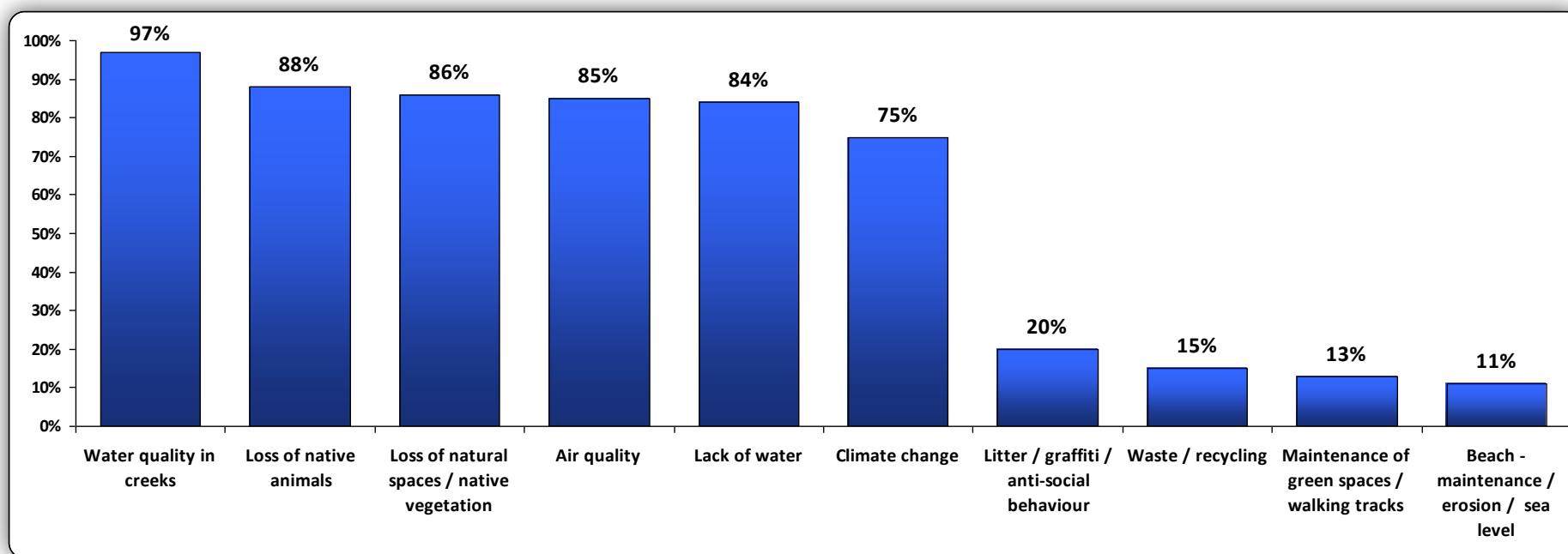


Figure 4: Top Ten Priorities the Community wanted Council to address - Environment Survey 2011

1.3.2 Local Area Plans and Community Survey 2013

Council has completed six Local Area Plans and conducted a Community Survey in 2013 with over 900 responses for development of a new Community Plan. Results of this consultation reinforce the results of the environmental community consultation undertaken in 2011. Residents expressed a strong desire to protect remnant native vegetation and to create links between reserves for biodiversity and walking tracks. In addition, residents are keen to see environmentally friendly buildings become “the norm” and to support the installation of renewable energy particularly solar.



Greening Our Future – Frankston City’s Environment Strategy

In the Community Survey 2013, residents indicated that some of the key things they valued about where they live are the beach, the quietness of the area and the city’s natural areas. When asked what they hoped for Frankston’s future nearly 200 residents mentioned aspects identified in the Environment Survey 2011 including the city continuing to focus on environmental sustainability; having clean and beautiful beaches, parks and city centre; more tree-lined streets; better public transport and walking tracks; and solving the problems of waste and litter.

“We love living near the beach. We like the friendly and relaxed holiday feel of living by the bay. We like being able to look up the street or drive through the hills and seeing the stunning ocean views. We like the sea breeze and pleasant surroundings. Our tree lined foreshore is striking as is the natural fauna and flora and native vegetation by the beach. We like that our beaches are beautiful, well maintained, reasonably clean and regularly patrolled.”

“We value having quiet, clean and peaceful neighbourhoods that are spacious, leafy and lively, but not over-crowded. We enjoy our local hidden treasures, natural reserves and open spaces that make us forget we are in suburbia. In Frankston City, we adore our green and leafy suburbs, relatively spacious tree-lined streets and natural attractions. We like being in areas that have lovely street landscaping, flourishing community gardens, and well maintained playgrounds and reserves. We value the established trees, pines and banksias, native and indigenous plants, natural vegetation, flora and fauna in our City. We love our open spaces, green wedge areas, parks and gardens, botanical gardens, nature reserves and bushland and cherish our birdlife and wildlife.”

“Our wetlands, creeks, lakes, beaches and foreshore are wonderful natural attractions for our City. We enjoy the bike paths, walking trails and footpaths that carefully move us around and appreciate the community groups that clean up and care for our valuable natural resources.”

“We will recognise the diverse views about the pace and shape of development in and around our foreshore precinct and acknowledge the need to preserve our diverse natural assets. Our decision-making will be careful, long-ranging and informed by meaningful community consultations and conversations.”

“The water quality and environment of our beaches, creeks and waterways will be pristine and lush, surrounded by greenery, indigenous vegetation and walking trails.”

“We will continually explore emerging and sustainable ways of minimising our impact on the environment, addressing the need for a local tip and reducing our reliance on private vehicles for moving around the municipality.”

Excerpts from the Report on the Community Survey 2013



Greening Our Future – Frankston City’s Environment Strategy

1.3.2 Frankston Environmental Advisory Committee

The Frankston Environmental Advisory Committee (FEAC) was established by council in 2011 to advise on the development of the environment strategy and other environmental issues. It comprises residents with environmental expertise and community networks, councillor representatives and relevant staff. FEAC has provided input and guidance to every aspect of this strategy.

1.3.3 External Expert Advice

Frankston City Council engaged six subject-matter experts to provide background papers and participate in a *Greening Our Future* seminar (2012). The experts explored future visions for Frankston City that related to their areas of expertise. A community seminar was held where residents were able to ask questions following presentations from each expert on their advice. The experts and their topics were:

- Alan Pears – energy sustainability
- Dr. Tony Wong – water sensitive cities
- Dr Amy Hahs – native vegetation and urban ecology
- Dr Peter Ellyard – sustainable futures
- Dr Peter Newton – sustainable urbanism
- Dr Rodney van der Ree – fauna conservation and biodiversity

The background papers and videoed seminar are available on Council’s website www.frankston.vic.gov.au under the Environment page.

1.3.4 Councillor and Staff Input

Councillors and staff have been consulted in the development of this strategy through briefing sessions, workshops with managers and one-on-one consultation with relevant departments.

1.4 Green Futures – the community’s visions

Dr. Peter Ellyard’s advice was that to be a “leader” you must create a vision of the future. FEAC also requested that the strategy contain innovative, positive visions of the future to inspire the community. Below are a set of Green Future statements developed by FEAC incorporating the community’s input.

- Frankston City is a vibrant and prosperous coastal community with significant areas of remnant bush and rich biodiversity
- Frankston is a showcase of how to protect the natural environment while supporting a thriving urban hub enjoyed by a thoughtful, diverse, connected community



Greening Our Future – Frankston City’s Environment Strategy

- Frankston boasts excellent air quality, beautiful clean beaches and waterways and connected corridors of green and blue which softens and cools , avoiding urban heat island effect and the extremes of climate change
- Water and energy efficiency is second nature to all and are incorporated into all homes, businesses and schools
- A significant amount of the city’s energy is supplied by clean renewable energy
- Frankston mastered its community’s waste problems through community education and innovative systems and technology
- Green technology companies and business hubs are major contributors to the economic prosperity of the city and are supported by training and research from local respected education institutions.



Figure 5: A green city of the future³

³ *DestinyFlorida*



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A future visioning workshop with the community resulted in the following aspirational statements: Frankston City is internationally renowned for environmental sustainability. People come from all over the world to see, experience and learn what Frankston City is doing. Here is what they discover:

1. Whilst the city centre is vibrant, the surrounding suburbs are restful and peaceful at night. The air is fresh, the sky is clear and stars glisten in the night sky without interference from unnecessary light and air pollution. There is a relaxed sense of living in our urban environment.
2. Across the city there are extensive connected greenways and waterways that link and protecting bushland and provide habitat for remnant indigenous flora and native fauna. The local schools, as part of their standard curriculum, monitor the health and abundance of the local wildlife. Our children grow up with a love of nature.
3. The streets are leafy and shady and bustling with colourful birds and butterflies. The municipality appears green from the air with extensive tree canopy cover, living roofs and walls, urban gardens and thriving nature strips, protecting the community from urban heat island effect and the extremes of climate change.
4. Everywhere you look you see healthy, smiling pedestrians walking and cycling to work, schools and shops. There are more bikes on the streets than cars as it is easier, cheaper, and in some cases faster to get around.
5. The streets, parks, beaches, Bay and public spaces are clean and litter free.
6. The community is mindful of the value of resources and there is an active culture of reduce, repair, reuse and recycling.. What was formerly “household waste” is now fully reused for fuels and minerals.
7. The city is prosperous due in part to the contribution of a world class local green industry that supports Australia’s economy by providing products and services for sustainable lifestyles locally and abroad.
8. Many more of our residents work and study locally at universities and training facilities that are renowned for their breadth of offerings including being centres of “green” innovation.
9. Highly productive agricultural enterprises operate in the Green Wedge showcasing world class environmental practices that provide organic, nutritious food and products while sequestering carbon and providing habitat corridors.





Greening Our Future – Frankston City’s Environment Strategy

10. Frankston is a food-rich community with residents valuing home-grown and locally grown foods, having veggie patches, fruit trees, backyard chooks, and swapping produce with neighbours.
11. Waterways are fresh, clean, litter free, safe to play in and full of native fish, frogs and tortoises. They contribute to a clean, safe beach and Bay with exceptional water quality.
12. As a water-wise city, there is extensive safe use of stormwater, recycled and grey water in parks and gardens. Waterways are protected through water sensitive urban design with native vegetation all along their banks.
13. The city is renowned for its beautiful green buildings that blend into the natural environment with innovative designs using passive systems for enhanced comfort and reduced energy use and enhanced water conservation.
14. As a solar city, the municipality has a secure supply of renewable energy and produces more electricity than it uses.



Dreams at first seem impossible, then seem improbable, and finally, when we commit ourselves, become inevitable.

Mahatma Gandhi



Greening Our Future – Frankston City’s Environment Strategy

According to futurists, true leadership is about expanding the focus from “just fixing problems” to “creating opportunities”. Chapter 2 explores current environmental conditions of the City and the opportunities for creating a green future.

I and my family would like all government buildings to take on the fight for the environment and become showcases to the general public as what can be done to existing homes and businesses to become sustainable. We have put on a 3kw solar power system onto our house and have noticed a huge difference in power bills. I would like to see such systems put on all schools, council offices, recreation centres and pools and other public buildings owned by council or part owned such as shopping centres like Bayside shopping centre. Imagine the huge reduced cost of cooling and lighting such buildings.

I would also like to see incentives put in place to encourage all households and businesses to all take action and install solar power systems. I would also love Frankston to have eco-homes and self sustaining home developments and communities being built and developed in the Frankston area. This could incorporate all aspects of living with minimal impact on the environment e.g. grey water recycling, sewerage recycling, growing your own food, high insulation and double glazed windows, etc. It could be a wonderful showcase to the rest of Australia to show how sustainable living is done in the modern 21st century.

Frankston Resident



Figure 6: Sweetwater Creek



Chapter 2

2.1 State of the Environment

The state of our local environment is critically important to those fortunate enough to live and/or work in Frankston City. In 2008, Frankston City was named as Australia’s most sustainable city for the many ways the community and council work together to protect our special environment. A list of environmental achievements to-date is in [Appendix 2](#).

Council developed a *State of the Environment* report in 2012 to show progress against a number of environmental indicators over the decade from 2000 to 2010. The report showed that real progress is evident in reducing annual household water consumption in Frankston City. Usage dropped by 40 percent from a high of 247 kilolitres per household per year in 2001 to 148 kilolitres per household per year in 2010.

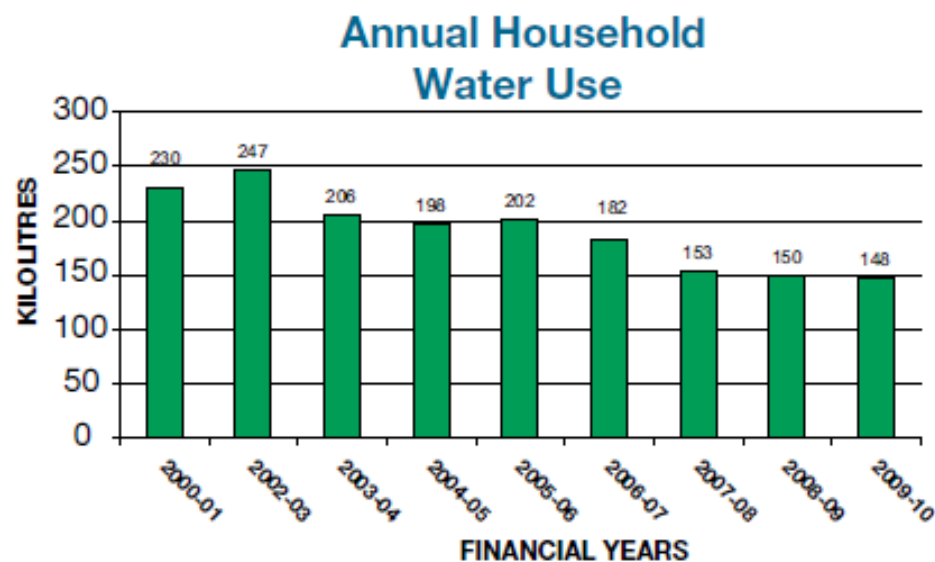


Figure 7: Annual Household Water Use, Frankston City



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However in other areas of environmental stewardship, the trends are either mixed or declining. A comparison of household electricity consumption per year between 2004 to 2007 shows two distinct trends. Electricity consumption in the established eastern suburbs has been trending fairly steady at around 5.2MWh (megawatt hours) per year which is about 10% less than the State average. However, the newer western suburbs show a steady increase in usage from 5.5MWh per year in 2004 to 5.8MWh per year in 2007. Analysis of electricity demand has shown that the higher consumption is in part due to greater reliance on air conditioners for maintaining comfort levels.

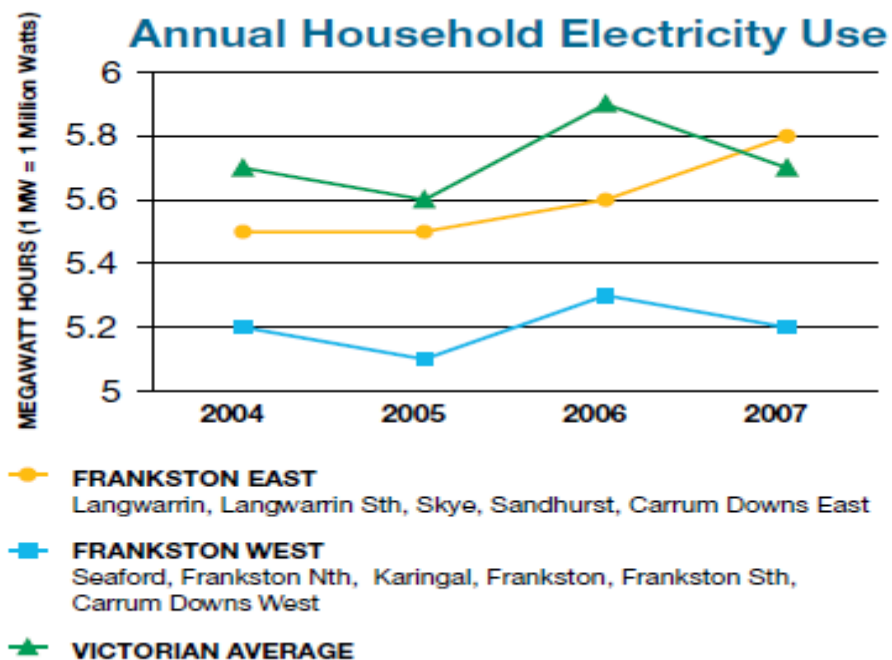


Figure 8: Annual Household Electricity Use

A real challenge for Frankston City, and also across the State, is a decline in positive household action on waste and recycling since 2006-2007. More waste is now being sent to landfill and there is also a decrease in the amount of materials being recycled. While it is not certain what has specifically led to this negative trend, further research and intensive community education is being undertaken by both State Government and Council to help the community get back on track. In addition, Council has been advocating for the rollout of new comprehensive waste management solutions and technology.



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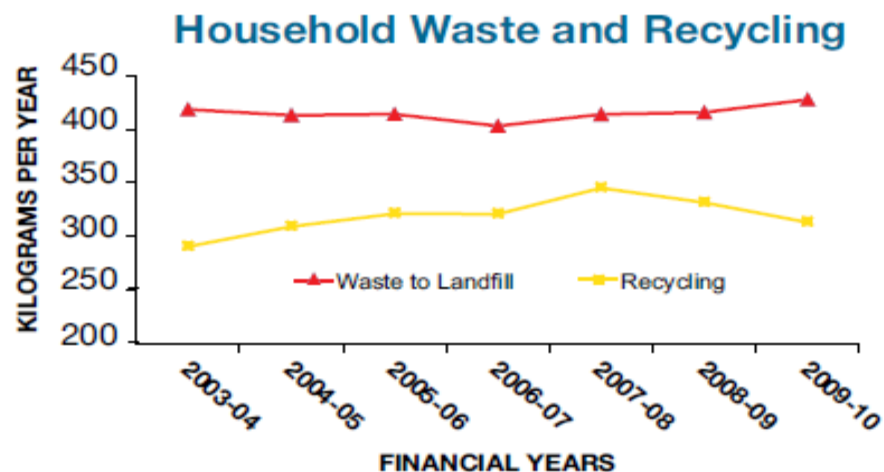


Figure 9: Household Waste and Recycling Trends from 2000 to 2010

Additional indicators in the State of Environment report looked at the extent of protection and retention of Frankston City’s native plants and animals and the quality of our local creeks and streams. Neither of these indicators showed positive trends and will be explored in the following pages in more depth.

The evidence from the State of Environment Report supports the community’s input and has helped determine the priorities for action explored in the following sections of Chapter 2. Each subsection focuses on a specific priority area - addressing the current conditions and recommending opportunities for improvement. The opportunities are then developed into a detailed Action Plan in [Chapter 3](#).



Greening Our Future – Frankston City’s Environment Strategy

2.2 Protecting and enhancing natural assets

2.2.1 Biodiversity

2.2.1.1 Current Condition

Before European settlement in 1835, the municipality was covered with a highly diverse mix of native vegetation including heathlands, woodlands, grasslands, riparian, wetlands and estuarine. There are 26 different Ecological Vegetation Classes (EVCs) i.e. major native plant communities within the city.⁴ The diversity of the vegetation classes reflects the variations of soil, water availability, topography and other factors.

The area supported an abundance of Australian wildlife including habitat for migratory birds that fly cross the globe to spend part of their year in the wetlands of Frankston City. This diversity and abundance of the plants and animals was integral to the diet and lifestyle of the traditional Aboriginal custodians. Frankston City is part of the country of the Bunurong and Boonwurrung tribes.



Figure 10: Heathy Woodland – Bunanrong Park

⁴ Native Vegetation Study 2006



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Figure 11: Photo: Coastal Dune Scrub, Seaford Foreshore



Figure 12: Riparian scrub, Little Boggy Creek, Studio Park, Langwarrin

Kangaroo and emu were to be found among the growth along the sand dunes, while hundreds of aquatic birds and other birdlife populated the area on or near the swamp. In addition there were large quantities of black eels squirming in the swamp’s muddy waters. The Aborigines lived in mia mias on the banks of the Kananook where pure fresh water could be obtained about two kilometres from its entrance to the bay *Source: <http://localhistory.kingston.vic.gov.au/htm/article/191.htm>*



Figure 13: Swamp scrub – Paratea Reserve



Figure 14: Estuary – Kananook Creek

Support for the parks, bushland areas, the council ensuring that all native wildlife are protected from cats, dogs, foxes, intrusive human intervention such as bikes, fishing, and unsupervised partying. That large native plant filled parks are developed and protected. The sea and sand presented in good order with presence of officers to ensure it stays that way.

GREENING OUR
FUTURE SURVEY
RESPONSE, 2011



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By 2011, 85 to 90 percent of native vegetation has been cleared resulting in a significant reduction in biological diversity. Of the remaining native vegetation, 90 percent is on State and Council-managed land. Unfortunately, not even these areas are immune from degradation and clearing. In recent years the requirements for developments and bushfire protection has seen major losses of native vegetation from the city. The introduction of weeds and pathogens has also had an impact on the health of the local vegetation.

The loss of native vegetation since European settlement has led to habitat loss for native animals resulting in the local extinction of large iconic species such as Kangaroos, Emus, Wombats, Goannas and Dingos. Some well loved natives such as Koalas, Swamp Wallabies and Echidnas are now vulnerable to local extinction as native vegetation is continuing to be cleared. These animals struggle to find enough food, mates and homes, and they are vulnerable to road kill and predation. The introduction of foreign carnivorous animals by Europeans including the Red fox, cats, dogs and rats that prey on small native animals has seen the loss of many more native species including the Southern Brown Bandicoots, Hopping Mice, several birds, reptiles, frogs, bats, Platypus, Potoroos, Quolls, and the New Holland Mouse. This has had a significant impact on the diversity of local native wildlife with 28 of 37 original species either now locally extinct or endangered (76%)⁵



Figure 15: Natural bushland and trees are essential to the survival of most local faunal species in Frankston City such as these Koala and Tawny Frogmouth

⁵ Malcolm Legg from Southern Peninsula Flora and Fauna Association www.spiffa.org



Greening Our Future – Frankston City’s Environment Strategy

2.2.1.2 Opportunities

We want to see more protected environments for our native flora and fauna and more regulations to promote biodiversity; more environmental educational experiences - including at the foreshore; development of Frankston as an 'environmental centre' with real leadership and educational opportunities in this area, involving local universities/tafe; better/safer public transport supportive of initiatives to reduce carbon emissions; expansion of indigenous plant nursery; more local employment of environmentally trained staff/grants for education and capacity building.

GREENING OUR FUTURE SURVEY, 2011

A range of opportunities have been identified to support biodiversity in the municipality, especially the development of a Biodiversity Action Plan. The action plan will address many issues such as threatening processes, creating biolinks and filling knowledge gaps.

Further opportunities include:

- Develop a Biodiversity Action Plan
- Establish and implement local recovery plans for endangered flora and fauna utilising State Government recovery plans
- Enhance the protection of remnant native vegetation in the Frankston Planning Scheme
- Investigate a 24 hour cat curfew and cat exclusion zones around key conservation reserves
- Increase fox control on Council land and encourage private property owners to eliminate foxes
- Work with the community to increase appreciation of biodiversity and what they can do to support it, e.g. actions in their own backyards and help with fauna counts
- Support volunteer initiatives such as the Friends Groups and local wildlife rescue services
- Create and protect habitat corridors including installing fauna movement structures across linear barriers such as roads, improving habitat along known corridors, enlisting private property owners and establishing Landcare groups
- Investigate methods to secure vital linkages i.e. covenants and grants
- Advocate to the State Government for greater protection of local native flora and fauna and improved management of Crown land



Figure 16: Frankston is home to some amazing wildlife, though many are vulnerable, threatened, or locally extinct

Left to right: Southern Brown Bandicoot, Tawny Frogmouth, Swamp Wallaby, Powerful Owl, Growling Grass Frog, Australian Fur Seal, Short-Beaked Echidna



Greening Our Future – Frankston City’s Environment Strategy

2.2.2 Trees

2.2.2.1 Current Condition

Many suburbs have high tree cover and are valued for their green leafy character. Trees provide environmental, social and economic benefits to residents and the broader community. High tree density provides for clean air, water and protects against “urban heat island effect” [see definitions].

Trees also provide habitat to animals such as birds, bats, koalas, sugar gliders, and possums and act as habitat corridors allowing animals to move from area to area. Having a street lined by trees has a demonstrable positive economic impact on the value of homes on the street. There is also a proven positive relationship between living with trees and physical and psychological health.⁶



Figure 17: People dining outside under tree canopies

⁶ [Going Green Benefits Physical, Mental Health](#) By Rick Nauert PhD, Reviewed by John M. Grohol, Psy.D. April 20, 2011 University of Illinois College of Agricultural, Consumer and Environmental Sciences



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There has been a significant loss of trees on private property in recent years due to urban development, State Government’s 10/30 Right and fire protection measures. On-going development pressures continue to cause the loss of trees and vegetation.



Figure 18: Images of tree canopy cover

2.2.2.2 Opportunities

The community has expressed a strong desire to further green the municipality and to protect trees. Establishing more trees and green vegetated spaces, especially in built up areas, will protect the city from the effects of extreme heat, improve air quality, slow stormwater runoff, keep more moisture in the soil, and increase biodiversity.

Opportunities include:

- Review the Street Tree Master Plan, Tree Policy, Tree Guidelines and develop an Urban Forest Action Plan
- Continue enhanced street tree planting and replace inappropriate street tree species as per the Street Tree Master Plan
- Significantly increase tree canopy cover across the city to appear “green from the sky”
- Use street tree plantings to establish beautiful iconic entrances to the city
- Use tree plantings in streets and parks to link conservation zones where appropriate
- Advocate to the State government for the removal of the 10/30 Right from the urban areas of Frankston City

- Develop a method of measuring tree canopy cover across the municipality and undertake bi-annual reporting
- Investigate methodology to assess levels of urban heat island effect and hotspots
- Educate the community on the value of trees
- Run training programs for local tree removal companies and developers on Council’s tree regulations and Australian Standards on Trees
- Support the owners of declared Significant Trees with advice on maintaining healthy trees



Figure 19: Sketch of stylised bushland plantings along a residential street to form a green way (Elevation view) (Courtesy of Zöe Metherell)

2.2.3 Open Space and Bushland

2.2.3.1 Current Condition

Open space is land set aside as an open area for the purposes of leisure and nature conservation. There are 1,619 hectares (ha) of public open space on Crown, public authority and council-owned land in Frankston City. This gives 13.3 ha of public open space per one thousand residents, compared with a median of 7 ha for metropolitan Melbourne.



A recent study⁷, that compares urban fringe (interface) councils such as Frankston City, found an average of 204 ha of public open space per 1,000 residents, and a median of 32 ha per 1,000 residents. This leaves Frankston City (13.3 ha) well below average.

Open space is not evenly distributed across the city and not all open space is owned by council. A significant portion of the eastern edge of the municipality has low population and is open agricultural land of the Green Wedge which provides important amenity and environmental benefits.

Council manages a large number of parks (400+), gardens (2), recreation reserves/sporting ovals (33), golf course (1), natural bushland reserves (55) and about 10 kilometres of foreshore. There are many parks and gardens throughout the city that have bushland on them and are not protected specifically for their conservation value.

Council is developing an Open Space Strategy which will provide a strategic framework for the provision and use of open space across suburbs with actions and priorities for open space management.

2.2.3.2 Opportunities

- Complete and implement the Open Space Strategy
- Improve connections between open spaces with corridors of green (trees) and blue (waterways) for better amenity for people and to improve environmental values.
- Improve amenity of open space with more trees and plantings of native vegetation where appropriate
- Support volunteers in the care of open space, define their roles/responsibilities and provide training and supervision

Figure 20: Map showing public open space (light green areas)

⁷ State of the Sector Report – Urban Parkland Provision, August 2012



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Figure 21: Belvedere Reserve (left), Sweetwater Creek (right)

2.2.4 Waterways and Beaches

2.2.4.1 Current condition

There are a number of wetlands and waterways in the municipality and about 10 kilometres of beautiful beach and foreshore reserves. Seaford Wetlands is the largest wetland in the city and is a remnant of the former extensive Carrum Carrum swamp that covered 5000 hectares known as Karrum Karrum⁸, between Mordialloc and Frankston and inland towards Dandenong. The wetland supports endangered migratory birds that are part of an internationally protected flyway

⁸ <http://localhistory.kingston.vic.gov.au/htm/article/191.htm>



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and is protected under several international treaties [RAMSA, JAMBA, CAMBA and ROKAMBA]. There are several other smaller wetlands in Frankston City that are less well known, but play a vital role in recharging underground aquifers and preserving native flora and fauna.

These are located at Willow Road Wetland (colloquially known by locals as “pobblebonk” after the frog population), Flame Robin Reserve and Acacia Heath Wetland, PARCS⁹ Wetland and Boggy Creek Wetland at the Eastern Treatment Plant, Banyan Fields Reserve and Frankston Nature Conservation Reserve.



Figure 22: Indigenous Australians hunting in Carrum Carrum wetland

Eight natural creeks flow through the municipality which are Boggy Creek, Tamarisk Creek, Kananook Creek, Sweetwater Creek, Langwarrin Creek and small portions of Kackeraboite, Balcombe and Watson creeks. Three channelized waterways also flow through the city: Eastern Contour Drain, Taylors Drain and Eel Race Drain.

⁹ Named after the Peninsula Aeronautical Radio Control Society (PARCS) that uses the space

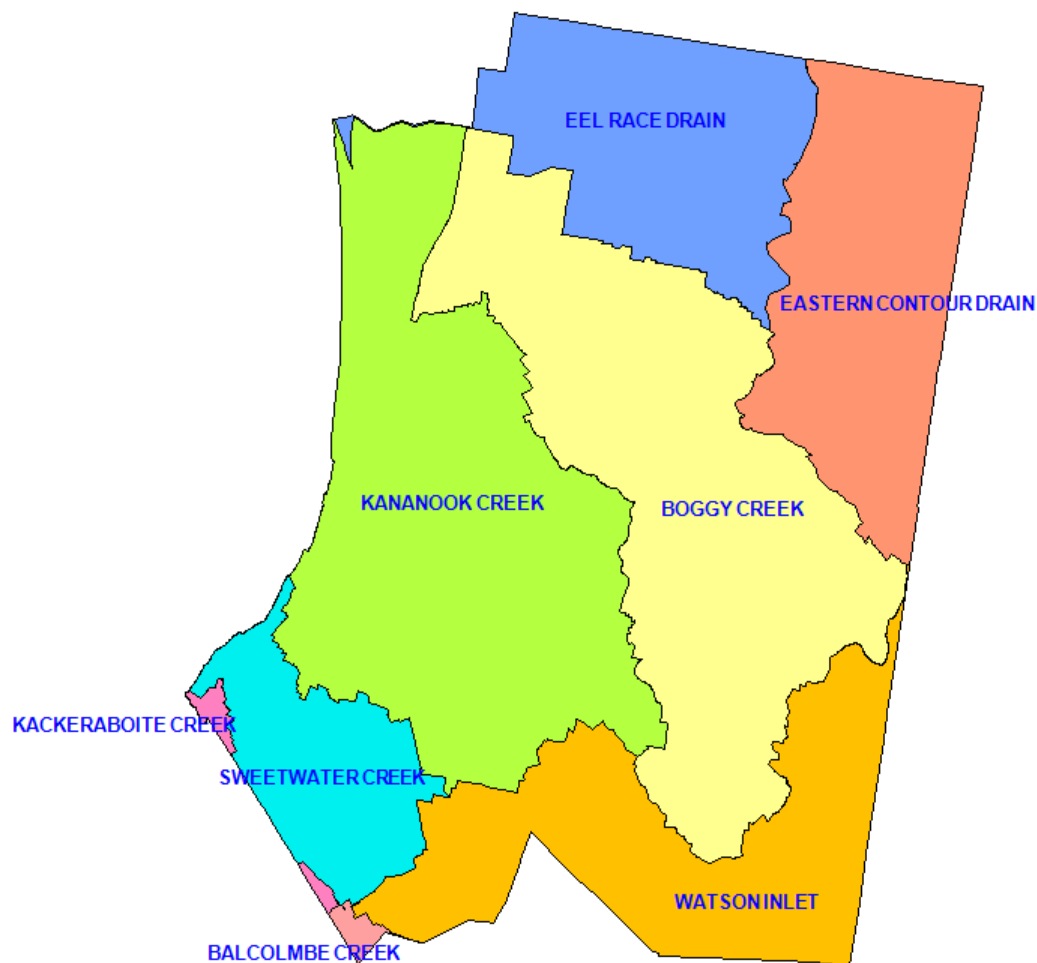


Figure 23: Map of Drainage Catchments

The municipality is unique in that most of the rain water that falls in the city flows through stormwater drains into our creeks and out to Port Phillip Bay at Seaford and Frankston beaches. Whatever ends up on the streets and footpaths ends up at the beach and affects the water quality of the city’s favourite recreation and tourist locations.

Melbourne Water is responsible for the Seaford Wetlands and PARCS Wetland (Eastern Treatment Plant) and the bed and banks of the creeks in Frankston City. It has been implementing its five year Regional River Health Strategy and the Better Bays and Waterways 2009-2014 plan. This includes testing water quality monthly at a number of locations on each creek. Community members have also been testing water quality at a number of sites through the WaterWatch program. Melbourne Water runs a grant program to support landowners to improve and enhance native vegetation along its waterways.

Frankston City Council owns parcels of land on Boggy, Kananook and Sweetwater Creeks, Seaford Wetlands{ XE "Seaford Wetlands" } and Willow Road Wetland. Council manages these reserves with support from Melbourne Water and many dedicated volunteer groups and community members (See Volunteers section for further information).

The nine kilometres of Frankston’s foreshore is one of the major recreational attractions of the city as well as supporting highly significant Coastal Banksia Woodland and habitat to an array of native animals. Hundreds of thousand people visit the foreshore each year for major events, swimming, boating, walking and relaxing.

The water conditions at the foreshore are largely the result of what happens across the suburbs of the City. Litter and pollutants in waterways and beaches is a major concern of the community as expressed in the Environmental Survey 2011. Over the past two years there has been an increase in summer beach closures due



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to high bacteria levels tested over the summer months by the EPA. While these closures are short term incidences that resolve themselves in a day or two, they highlight the issue of pollution in our waterways.

All of the waterways in Frankston City have been classified as “very poor” quality by Melbourne Water’s Index of River Conditions. This index assesses water quality plus stream bed and bank conditions. While the upper reaches of some creeks may have reasonably good water quality, pollutants accumulate as the water travels downstream. Native vegetation along the creek banks filters out pollutants. Lack of this vegetation in many areas can negatively affect the health of the creek.



Figure 24: Protection of coastal dunes (above left), Kananook Creek (above right)

2.2.4.2 Opportunities

- Complete an Integrated Water Action Plan to support a holistic approach to water management incorporating water efficiency, flood control, water quality improvement and use of alternative water supplies
- Implement the Kananook Creek Corridor Management Plan and work with Melbourne Water to review plans for Sweetwater and Boggy creeks
- Undertake a comprehensive water pollution testing regime to discover the causes and sources of pollution in waterways and beaches
- Utilise more Water Sensitive Urban Design (WSUD) in Council infrastructure and promote to developers



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- Implement the Flood Management Plan and an enhanced Drainage Cleaning Program
- Develop a Coastal Management Plan
- Design in Blue Ways and Green Ways¹⁰ and increase the coverage of native vegetation along waterways



Figure 25: Blue Ways and Green Ways (Dr. Tony Wong) (above left); Water Sensitive Urban Design at Beauty Park (above right)

2.3 Wise use of natural resources

2.3.1 Water

2.3.1.1 Current condition

A significant change has occurred over the past decade in the way that Council and the community value and consume water. The ten year drought from 2000 to 2010 that resulted in water restrictions galvanised Council and the community to save water and invest in alternative water sources. Since 2000 mains water consumption in Frankston City reduced by 31% - from 12,001 Megalitres (ML) to 8,273 ML between 2000 and 2011 (see Figure 26 below). This includes water usage for both residential and non-residential properties.

¹⁰ Tony Wong blueprint 2011: Stormwater Management in a Water Sensitive City, Wong, T.H.F, Allen, etc., Centre for Water Sensitive Cities, Monash University



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Households in 2010-11 made up 86% of the total mains water consumed in the city, followed by commercial/industrial use (12.6%) and Council use (1.5%) (see **Figure 26** below).

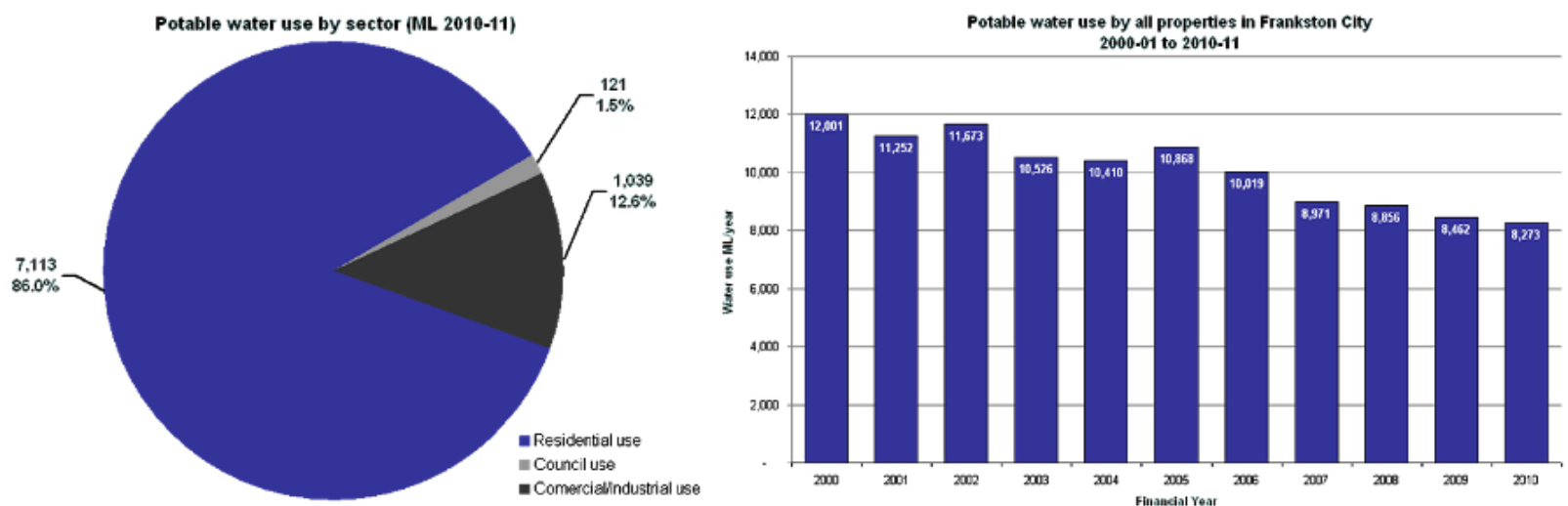


Figure 26: Mains water use by sector (above left); Mains water use trend in Frankston City (above right)

Substantial rainfall between 2010 and 2013 – greater than 1 in 100 years – has replenished Melbourne’s water storages from an all-time low of nearly 25% to over 80%. With the construction of the Wonthaggi Desalination Plant there is less uncertainty regarding the future of Melbourne’s water supply in the face of increasing population growth and a changing climate. However use of the water from this plant will be much more costly and result in some level of ocean pollution. The State Government has developed a new water strategy, *Melbourne’s Water Future*. This strategy moves away from new large infrastructure projects and proposes capturing the rainwater that falls over metropolitan Melbourne, retaining more water in the landscape and supporting regions to establish Integrated Water Cycle Management Plans.

With population growth expected to continue in Frankston City, there will be ongoing demand for increased housing. New housing trends have bigger buildings with more impermeable surfaces per block resulting in increased stormwater flow into local waterways. Installation of evaporative coolers and swimming pools may have impacted further increases in potable water consumption in the community.

Environmental Sustainability Survey 2011

34% of respondents have implemented water saving equipment in their household, and more than half (52%) will put in water saving equipment in the next 12 months.



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Climate change is expected to result in changes to rainfall patterns with more frequent and extreme weather events such as extended droughts and extreme storms. In addition the increase in number of high heat days has resulted in a marked increase in the installation of backyard swimming pools.

2.3.1.2 Opportunities

- Complete and implement an Integrated Water Action Plan
- Continue making water efficiency improvements to Council facilities and parks
- Conduct a Water Infrastructure and Water Conservation Study of Council’s Sports Ovals
- Embed an ESD Building Policy for new Council facilities which sets minimum performance standards for water efficiency
- Undertake water sensitive urban design (WSUD) capacity building programs for builders and developers
- Continue to monitor and report annually on Council’s and Community’s water consumption
- Advocate to the State Government to strengthen Building Regulations to achieve higher water performance outcomes
- Increase the use of alternative water supplies and fit for purpose water, such as recycled water, rainwater, stormwater and wastewater reuse
- Educate and support the community in greater water efficiency

"Frankston City has done a great job in encouraging residents to save water. With the introduction of Stage 2 water restrictions it will be important to continue reminding residents, and supplying incentives for water saving to combat complacency which will be inevitable. Water will always be a scarce commodity in Victoria."

LOCAL RESIDENT

2.3.2 Energy and Greenhouse Gas Emissions

2.3.2.1 Current condition

Council has been working to reduce its energy use and greenhouse gas emissions since 2000 when it developed a Greenhouse Strategy and in 2012 adopted a goal of being “net carbon neutral” by 2025 in its *Carbon Neutral Action Plan*. In 2010, Council was one of the first municipalities in Melbourne to invest in a bulk changeover of about 7,000 street lights to more efficient, brighter T5 globes which has reduced emissions by one third and is saving over \$300,000 per annum. As energy costs continue to rise, Council continues to focus on energy reduction in its facilities and operations as a primary means to reach its 2025 target.



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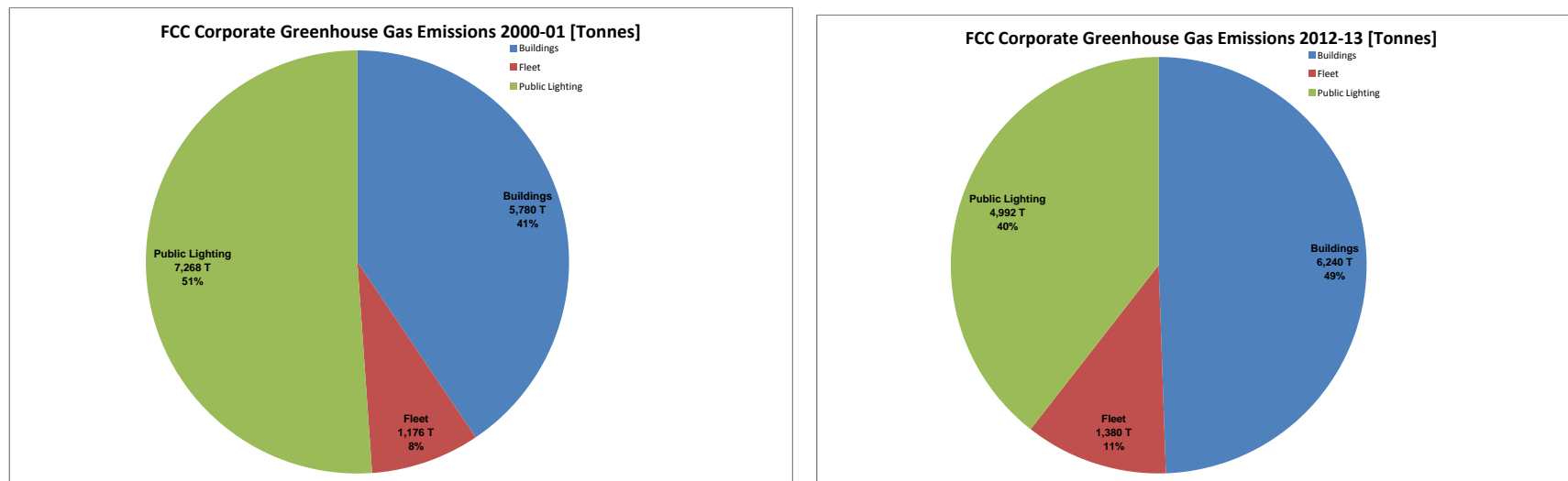


Figure 27: Council’s emissions 2000-01 (above left), Council’s emissions 2012-13 (above right)

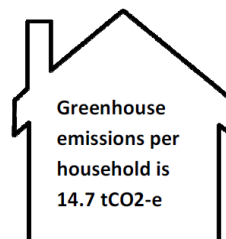
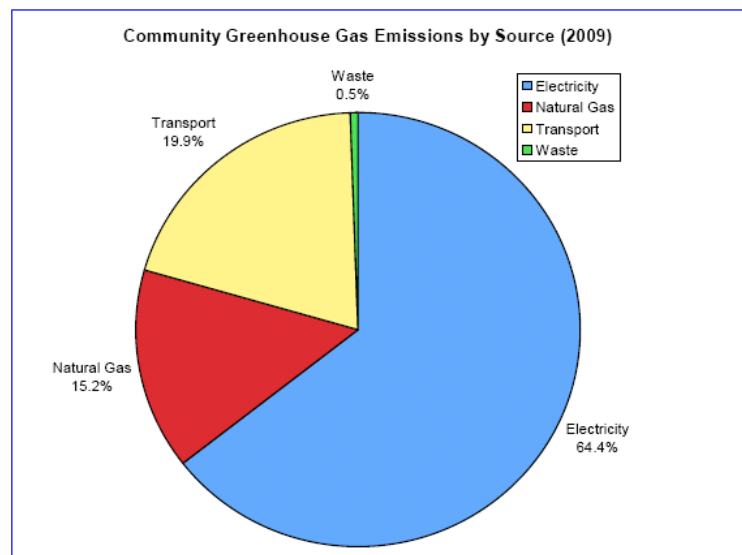
As most grid electricity is supplied by burning fossil fuels which are high in greenhouse gas emissions, Council is moving towards a goal of installing 15% of its energy supply from alternative and renewable energy. This is detailed in the Carbon Neutral Action Plan.

A study of community energy use in 2009 found that total community emissions (inclusive of residential, commercial, industrial, transport and waste) in 2009 for Frankston City were an estimated 1.2 million tonnes of carbon dioxide equivalent. This is an increase of 11% since 2005. Electricity consumption contributed the most emissions, followed by transport, natural gas and waste [see graph below]. Suburbs with the highest total emissions in 2009 are Frankston, Carrum Downs, Seaford and Langwarrin. Suburbs with the lowest total emissions are Langwarrin South, Sandhurst and Skye.



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Total community greenhouse gas emissions by source



Active steps to reduce carbon emissions - e.g. convert council vehicle fleet to operate on bio diesel that is not sourced from food stock... priorities pedestrians, commuting cyclists and public transport over cars in the CAD and in and around the station and shopping areas, and more actively want Frankston city to take the lead with solar/ wind power. I want leadership with sustainable gardens using indigenous plants/mulching/solar lighting.

GREENING OUR FUTURE SURVEY, 2011

The community is also adopting renewable energy. As of March 2013, 5,984 solar hot water units have been installed (1,431 excluded from postcode 3977 which includes Sandhurst as well as parts of the greater Cranbourne area). In addition 6,772 solar electricity systems have been installed in the municipality providing 14,387kW capacity by March 2013.¹¹ The average system size is 2.12kW.

¹¹ [RET-data-0313.xls](http://ret-data-0313.xls) <http://ret.cleanenergyregulator.gov.au/Forms-and-Publications/publications?dfaction=search&dfname=xls&dfdtitle=> NB Postcode 3977 includes Cranbourne



Figure 28: Changing Frankston's streetlights halved energy consumption; community solar programs

2.3.2.2 Opportunities

- Continue to implement the Carbon Neutral Action Plan
- Continue to monitor and report on Council’s and Community’s energy usage and greenhouse gas emissions
- Increase Council’s energy security through investment in alternative and renewable energy
- Embed an ESD Building Policy for new Council facilities which sets minimum performance standards for energy efficiency
- Continue retrofitting energy efficiency measures into existing Council facilities
- Educate and support the community in energy efficiency and renewable energy initiatives



Greening Our Future – Frankston City’s Environment Strategy

2.3.3 Waste

2.3.3.1 Current condition

Australia continues to generate increasing amounts of waste and current global and Australian production and consumption patterns are unsustainable.¹² We produce commodities at a significantly faster rate than the environment or society can absorb at the end of their product life. There is growing awareness that the problem is not just one of waste and limited landfill capacity, but that it extends up the production chain to the impact of extracting and processing virgin materials (such as plants, animals, minerals, fossil fuels, etc.). In addition a significant amount of energy, water and transport is required to produce, store and transport these goods, which end their life as landfill, further adding to the environmental cost of producing consumer goods. Therefore, reducing the amount of waste we generate, as well as diverting valuable resources from landfill, is a key concern for Frankston City Council.

In Frankston City, the trends seen in Figure 29 (overleaf) shows that overall the amount of materials diverted from landfill including garden waste has increased, although waste to landfill has also been steadily increasing over the past four years.

The tonnage of kerbside recyclables has slowly been decreasing and it is uncertain the exact cause of this reverse trend. It may be due to the switch by beverage companies from the use of glass to lighter weight plastics, and/or it could also be the result of households not recycling as carefully. In 2004-05 the average annual waste per household was 413.42 kilograms, whereas in 2010-11 it has increased to 441kg per household. Organic waste comprises over 50% of the waste stream.

There has been a steady increase in the number of households using Council’s user-pays garden waste service (over 62%¹³ of all households in 20013-14). This not only reduces waste to landfill, but also reduces greenhouse gas emissions.

As a family of 5 using the halve garbage program, we have had to think more about the rubbish we send to landfill, so our children now automatically separate their rubbish into recyclable goods, food for the worms, compost and landfill. Our garden benefits from the worm waste and the compost, and we know we are significantly reducing our contribution to landfill and overall carbon emissions.

HALVE GARBAGE WASTE PARTICIPANT, 2010

¹² [Solid Waste In Australia](#), Australian Bureau of Statistics, 7 December 2007

¹³ As of 1/02/2014.



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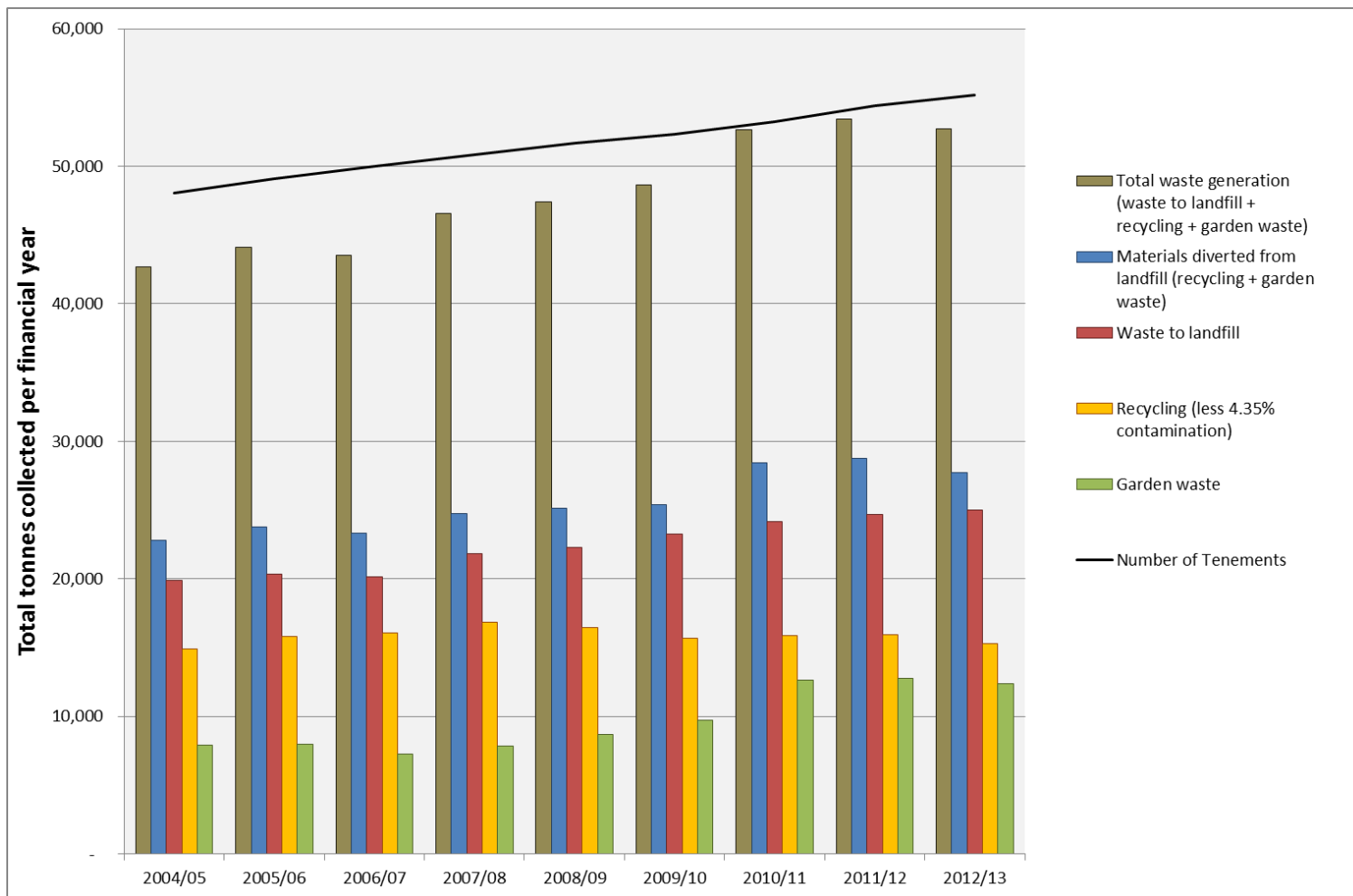


Figure 29: Household Waste generated and diverted over past ten years (tonnes), Frankston city



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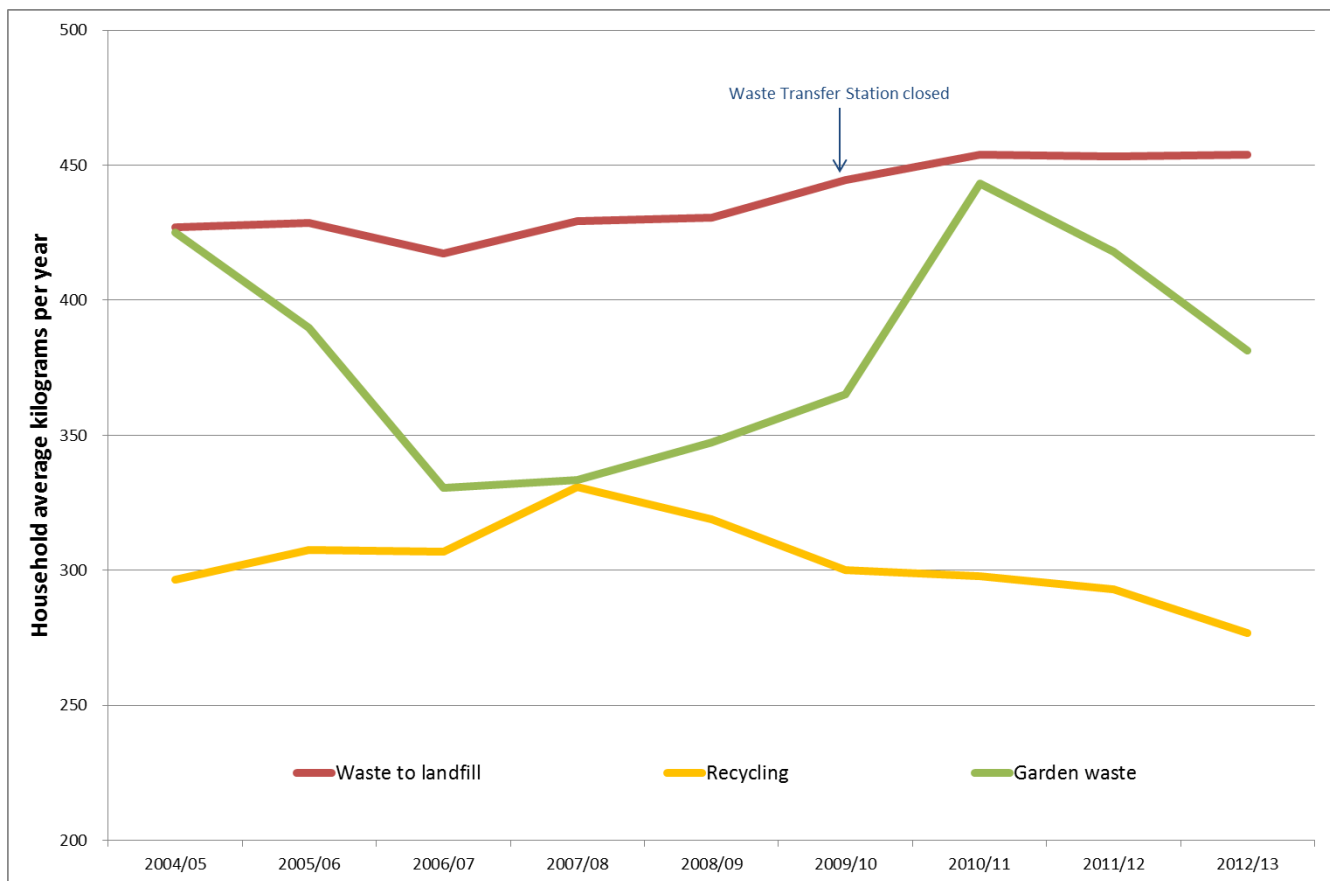


Figure 30: Average Household Waste per year (kg)

2.3.3.2 Opportunities

- Review the Waste Minimisation & Management Strategy to align with State Government policy and to inform new Waste contracts



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- Expand the Halve Our Waste program to 10% of the households in the municipality to reach a “tipping point” of behaviour change
- Investigate the establishment of a transfer station in the municipality
- Provide support to local community groups interested in developing and implementing waste reduction initiatives e.g. community gardens, sporting clubs
- Support home grown food and local produce swaps



Figure 31: Encouraging home composting and vegetable growing is valuable in reducing food waste

2.4 Minimising environmental impacts

2.4.1 Litter and Illegal Dumping

2.4.1.1 Current condition

Litter is the inappropriate depositing of waste into the environment, where it can move by wind and water to other natural areas, harming wildlife, reducing amenity and posing a health threat to the community. Litter currently costs council \$234,000 per year, and including managing litter bins and street sweeping, the cost is \$586,000 per year.

According to the 2011 Victorian Litter Report (VLR) study, cigarette butts are the most littered item at 53% followed by beverage containers (29%), chip and confectionary packets and plastic film (5%), paper 6% and organics 6%.



Greening Our Future – Frankston City’s Environment Strategy



Figure 32: Litter continues to pose challenges in a disposable society

2.4.1.2 Opportunities

- Update and implement a Litter Prevention Action Plan
- Continue to raise awareness through support to schools and community events such as Clean Up Australia Day and 'I Sea I Care' program
- Work with the State Government, its agencies and other stakeholders on reducing littering behaviour
- Advocate for incentives and programs to reduce littering behaviour, such as container deposit schemes, plastic bag free shopping, etc.
- Trial increasing smoke free and glass container free places such as the foreshore
- Advocate for increased funding for gross pollutant traps (GPTs) and maintenance to prevent litter entering streams and the bay.
- Increasing education programs and implementing enforcement for illegal dumping such as issuing 45ZI Forms from the Litter Act.



Figure 33: Example of litter education signs at Frankston Waterfront

2.4.2 Climate Change

2.4.2.1 Current condition

Frankston City is particularly vulnerable to climate change impacts due to its coastal aspect, low lying areas, low socio-economic communities, a high number of aged and young residents, poorly designed housing, and current drainage infrastructure which is constructed for one-in-five year events. This infrastructure may prove inadequate as extreme weather events and storm surges become more common.

Climate has already changed as detailed in CSIRO’s *State of the Climate 2012* report¹⁴. Since 2012, Frankston City and indeed all of Australia has experienced its hottest summer on record (Summer 2013)¹⁵. In recent years, Frankston has seen extreme weather events including fire, heat waves, floods, storm surges and drought. All these weather events have impacted property, the community, vegetation, wildlife, agriculture and the economy. The storm-tide associated with the flooding and damage to the Frankston pier in April 2009 and the Pier Promenade. Climate change is seeing changes to rainfall patterns and extreme storms. To protect against this, Melbourne Water has upsized its major stormwater pipes that flow into Kananook Creek and Council has been conducting drainage studies of low lying areas and increasing drain cleaning across the catchment. The last few years have seen cost impacts to Council and the community from storms on trees,

¹⁴ <http://www.csiro.au/Outcomes/Climate/Understanding/State-of-the-Climate-2012.aspx>

¹⁵ <http://www.bom.gov.au/climate/current/season/aus/summary.shtml>



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drains, beaches and erosion, and insurance claims for residents. To date there have been no recorded deaths directly relating to climate change, however deaths through heatwaves and drowning may be linked.

Frankston City Council has adopted a *Climate Change Impacts and Adaptation Plan* which is taking an integrated approach to preparing for and adapting to the changing needs of the community, infrastructure and the environment as a result of global warming.



Figure 34: Storm damage and erosion of foreshore infrastructure and beaches at Frankston foreshore

2.4.2.2 Opportunities

- Continue to implement the Climate Change Impacts and Adaptation Plan
- Continue to monitor climate change science and re-evaluate changing risks
- Advocate and work with other levels of government for a coordinated approach to addressing the impacts of climate change
- Conduct community education on local resilience such as storm preparation and home maintenance for resilience against weather extremes
- Investigate changes to local planning requirements to ‘future proof’ developments based on longer-term forecasts i.e. 100 years

2.4.3 Built Environment

2.4.3.1 Current condition

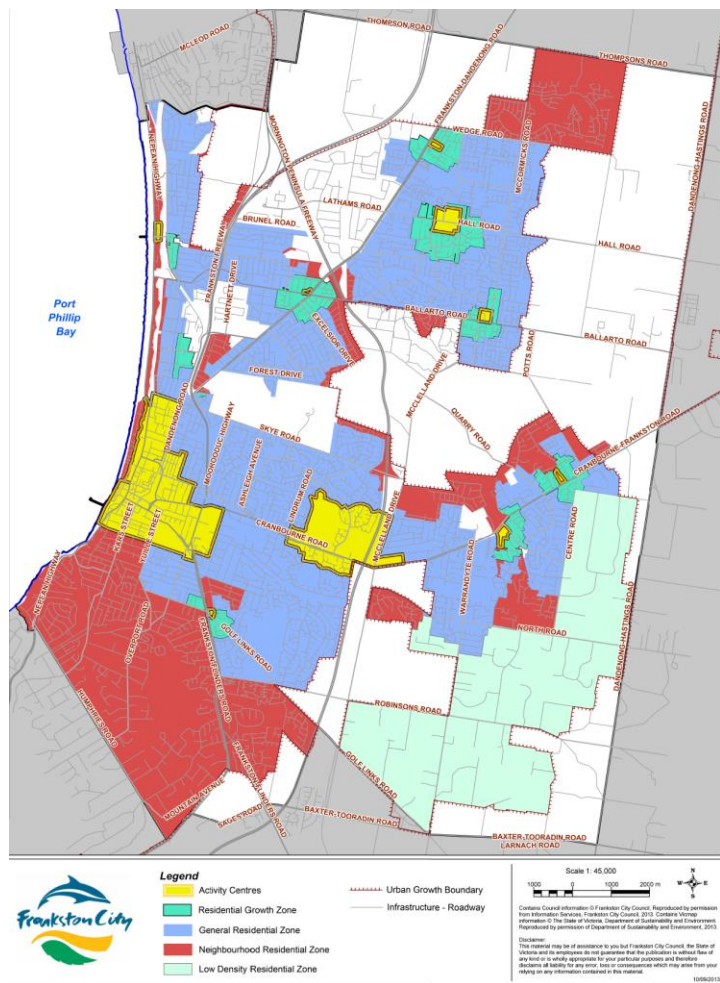


Figure 35: Map showing land use and zoning

About 70 per cent of the municipality’s 131 square kilometres (km²) is built environment comprising residential, road/transport, commercial/industrial and other land uses.¹⁶ An Urban Growth Boundary divides the municipality into developed areas and Green Wedge/Rural Living zones.

Development in the city is guided by Frankston City’s Local Planning Policy Framework (LPPF) which is updated every three years and is approved by the State Planning Minister. The LPPF has to conform to the requirements of the State Planning and Policy Framework and contains local planning policies. In support of State Planning policy of planning for increasing population growth, Council adopted a Frankston Housing Strategy in 2013 which details areas for minimal, incremental and substantial change. The Strategy provides the vision below and guidance for residential housing to become more socially and environmentally sustainable.

The City encourages socially and environmentally sustainable housing that is well designed and located, affordable, accessible and adaptable. Housing will respond to and respect the natural environment, coastal processes and local character of residential areas.

The new Housing Strategy supports increasing density along public transport routes and in the Central Activities Area. This has the potential to support environmental objectives while accommodating a growing population. It aims to enhance the environmental performance and better design of new developments.

The history of urban development in the municipality has proceeded along traditional lines with quarter acre blocks, single story 9m² houses centred on the block surrounded by feature trees, garden beds and lawns. New development trends has seen some of these residential blocks subdivided with bigger houses (20m²) on smaller blocks and buildings and driveway taking up most of the land area, leaving little room for feature trees and garden areas. Fashion in building design and materials has the widespread use of black roof tiles, no eaves and brick finishes. The increase in hard dark surfaces with little or no shading has negative environmental effects resulting in increased stormwater run-off, increase in urban heat island effect and loss of biodiversity and amenity. There is a marked difference in temperature now between urban and rural areas with higher night time temperatures in urban areas [reference: *State of Australian Cities Report 2013*, Commonwealth Government].

¹⁶ Integrated Urban Water Cycle Management Workshop 1 October 2013 by CH2MHill



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Council is a key provider of infrastructure in the municipality. As part of its own operations it has the opportunity to showcase iconic ESD design in its new buildings and to retrofit existing buildings to improve thermal comfort, efficient use of water, reduce utility costs and prevent loss of trees and biodiversity. In addition, local government is an important consumer of construction materials. Many of these can be sourced from recycled materials which are very serviceable and often less expensive including concrete, asphalt, recycled plastic outdoor equipment and mulch from processed green waste. Materials with low embodied energy and low pollution should also be considered in the construction design.

2.4.3.2 Opportunities

- Implement the Frankston Housing Strategy including provision of ESD information and assessment during the planning process
- Establish an ESD Design Award to acknowledge outstanding buildings that perform to exceptionally high environmental standards
- Reduce urban heat island effect through promotion of “green roofs and walls”, “cool roof programs”, greened urban spaces and water sensitive urban design
- Promote the installation of alternative and renewable energy technologies to provide power, heating and cooling at individual development and community scale
- Investigate the feasibility of establishing an ESD Display Centre and training programs in the municipality
- Integrate urban renewal with improvements to an integrated transport network, the preservation of tree canopy cover and the establishment of habitat corridors
- Develop master plans for the Green Wedge - the “green lungs” of the municipality and better planning protection of natural reserves and waterways
- Implement an ESD Policy for Council Buildings and support the use of recycled materials for its infrastructure





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Figure 36: Left to right - Green Curtain in Japan, green wall in Melbourne; Singapore’s municipal offices; illustration of a green city vision

We need to ensure that new buildings are built with 6 star energy rating, and built with smaller footprints on the block to ensure room for trees and green.

GREENING OUR FUTURE SURVEY RESPONSE, 2011

2.4.4 Transport

2.4.4.1 Current condition

Frankston City has a comprehensive road network, a train line that provides both electric and diesel passenger and freight services and 21 metropolitan bus routes which link into the central Transit Interchange at Frankston train station. All bus routes lead to the CAA and community consultation has raised the need for better connecting of suburbs without the need to travel to the CAA to interchange.

There is more than 55 kilometres of dedicated bicycle pathways including the new Peninsula Link shared user pathway.¹⁷ However many bike paths are not well connected or lead to roads with no bike lanes. In urban areas there are good footpaths provided along most roads while in rural areas few or no footpaths are provided.

Studies into travel behaviour indicate that most households drive cars with only eight percent not owning a car¹⁸. A high proportion of workers commute by car and travel further each day than the average person living in metropolitan Melbourne. The level of use of public transport is also lower in Frankston City than in many other metro Melbourne areas. Due to these factors and also a lower average income level, Frankston City is rated as equal fourth out of 31 metro municipalities in vulnerability to Peak Oil¹⁹.

Council has undertaken a detailed investigation into improving transport in the municipality and has adopted an *Integrated Transport Strategy*. This strategy has a strong focus on improving the sustainability of transport including better integration of train and bus schedules, use of alternative modes of transport include car-share schemes and more bicycle lanes and better cycling facilities.

¹⁷ Frankston Bicycle Strategy 2010 pg. 2

¹⁸ Frankston Integrated Transport Strategy, aurecon, 2012

¹⁹ Oil Vulnerability Index in Melbourne, 2009, Institute of Sensible Transport www.sensibletransport.org.au



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Ensure that more is done to encourage an environmental active community through getting people out of their cars and converting car parks to people orientated spaces that are used throughout the day.

GREENING OUR FUTURE SURVEY RESPONSE, 2011

2.4.4.2 Opportunities

- Implement the Integrated Transport Strategy 2013 including advocating for
 - improved bus services
 - more express trains and
 - better connectivity between suburbs
 - solar or accredited Green Power charging stations for electric vehicles
- Investigate the establishment of a community car share system such as “Go Get” or “Flexicar”
- Implement the Frankston Bicycle Strategy 2010 including
 - introducing a Council bike fleet
 - investigating the feasibility of establishing of a community bike hire system
 - positioning Frankston as a cycling city, pedestrian friendly and well connected without the need for cars

I think Frankston is already an enviro friendly city to live in. Improvements would include more bike paths, green areas, cleaner creeks, less litter, more birds, native animals, and an improved CBD area.

GREENING OUR FUTURE SURVEY RESPONSE, 2011



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Figure 37: Case study of Copenhagen cyclability (images 1-3 from left); Frankston community participates in Ride to Work Day (far right)



Figure 38: Honda Electric Vehicle Charging Station using solar panels in Europe



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2.5 Educating and engaging the community

2.5.1 Households

2.5.1.1 Current condition

Frankston City has 49,331 households with approximately 130,055 residents. The population forecasts indicate that the population in Frankston City is likely to peak at approximately 137,000 by 2021 and slowly decline to approximately 136,000 by 2031²⁰.

The Environmental Survey found that 98 per cent of nearly 1000 responses expressed concern about the environment. Many households are aware to some degree of the environmental impact of their household use of energy and water and are taking steps to use these resources more wisely. Major barriers for households in undertaking environmental actions includes the cost, lack of time and lack of independent advice on environmental products and services.

Households play a primary role in determining the environmental sustainability of any city. According to the CSIRO, “Decisions households make about where to live, whether to buy or rent a house, how many children to raise and what major items to purchase, as well as the behaviours affected by these decisions, strongly influence the impact society has on the environment.”

While many Frankston households have implemented measures to reduce their use of energy and water, they may not be as aware of the significant environmental impact of what they purchase. With regards to greenhouse gas emissions, the graph below shows that emissions generated from producing the foods and goods households buy are together more than four times the emissions from home use of electricity. This suggests that for households to make a serious reduction in emissions, they must go well beyond merely reducing household energy and petrol use.²¹

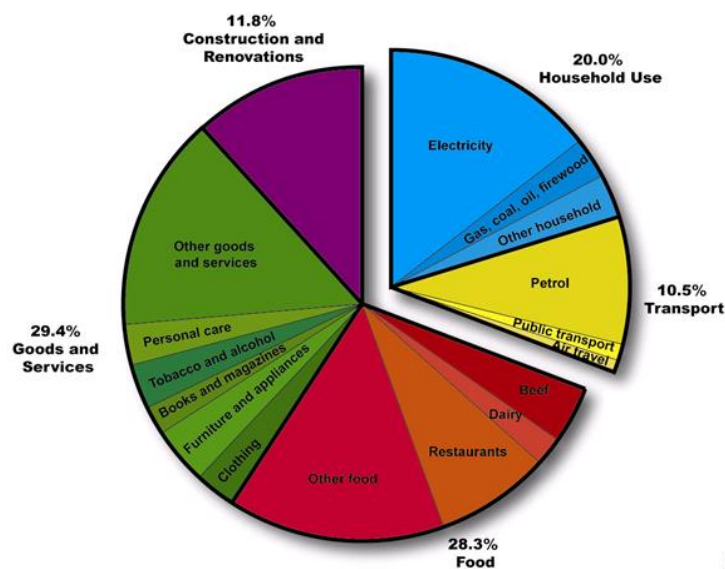


Figure 39: Sources of Household Greenhouse Gas Emissions [Consuming Australia]

²⁰ 2011 Census data <http://profile.id.com.au/frankston/households>

²¹ Consuming Australia: Main Findings, 2007 by Australian Conservation Foundation



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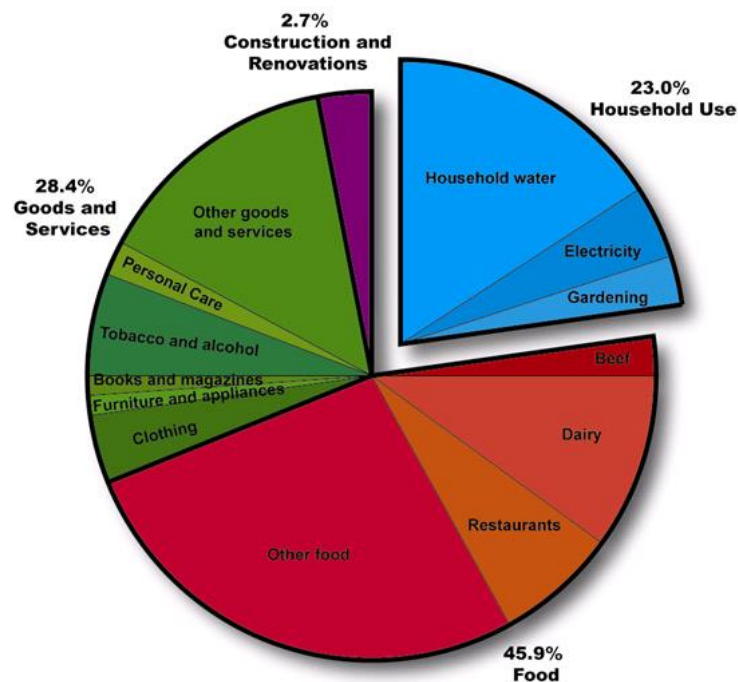


Figure 40: Sources of Household Water Consumption [Consuming Australia]

The total water used by the average Australian amounts to 720 kilolitres (kL) per person, per year, including water embodied in all food, goods and services (see Figure 41). This amount of water is comparable to the volume of an olympic-sized swimming pool. Direct water use in the household only accounts for just over 16 per cent of total water use. The water used to produce all goods and services consumed is more than six times greater than direct household water use.



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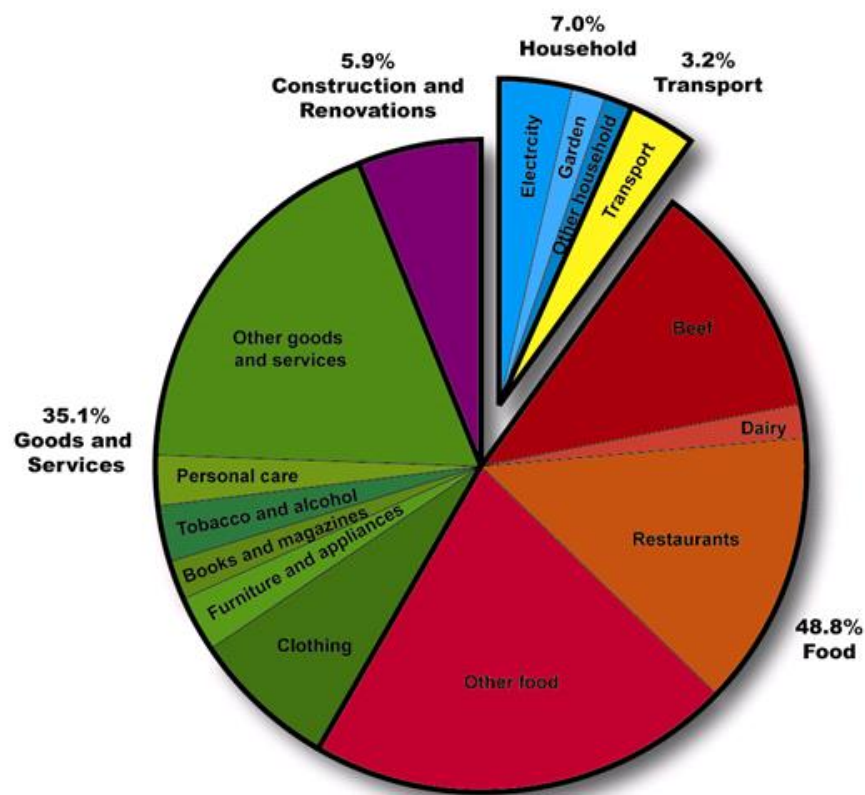


Figure 41: Eco Footprint of Average Australian [Consuming Australia]

As Figure 42 above shows nearly half of the average person’s ecological footprint is attributable to land disturbed by food production because direct household and transport contributions to land disturbance are relatively small, the best way for households to reduce their impact in terms on land is to alter their patterns of consumption of food, clothing, and other goods.

As demonstrated above at least two thirds of a household’s environmental impact comes from what they buy. Educating the community to understand the impacts of their lifestyle purchasing decisions is as crucial as helping them to understand how to more efficiently use energy and water in their homes.



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An emerging issue with regards to commercially available food products is growing trend towards more widespread use and production of genetically modified food (GMO) products. Under current Australian and New Zealand food legislation, GMO foods need to be labelled if there is a significant proportion of GMO product in the manufactured food. However there are many exemptions for not labelling. The other challenge is the contamination of organically grown crops by GMO pollen and seeds with the consequent of GMO companies demanding plant royalties from farmers



Figure 42: Frankston cloth nappy workshops teach parents how to reduce waste; Environmental forums, Environment at community events

2.5.1.2 Opportunities

- Continue to develop and deliver strategically targeted workshops and seminars on environmental sustainability topics
- Continue to provide independent environmental information and advice to households
- Capacity build within the community to improve backyard biodiversity, food growing and connection with nature
- Continue to run behaviour change programs including Sustainable Homes, Halve Garbage Waste and Halve Our Waste programs
- Encourage community-led initiatives such as community gardens, Transition Towns and wildlife rescue
- Establish an Environmental Awards for Excellence program to acknowledge outstanding efforts of individuals and household for environmental protection
- Investigate feasibility of community programs to support the purchase of “green” goods/services such as solar panels, grey water systems, insulation, etc.
- Investigate the issues of genetically modified foods and support Council in forming a position on the subject



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Figure 43: Joy of the Earth Community Garden Volunteers, Community engagement at events and festivals

Lots of people walking and cycling to work, school, for play etc. Lots of diverse natural areas with wildlife and plants, clean rivers and streams, happy people!

GREENING OUR FUTURE SURVEY RESPONSE, 2011



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2.5.2 Schools



2.5.2.1 Current condition

Frankston schools have embraced environmental protection with 21 participating in the Frankston Teachers Environmental Network and 34 out of the 44 schools in the city having taken part in environmental programs such as the AuSSI (Australian Sustainable Schools Initiative) “ResourceSmart Schools” over the past seven years. Involving their students, many schools have audited their consumption of energy, water and waste and put in place actions to reduce these. In addition schools have established gardens for biodiversity protection and food production. Many students have taken on environmental leadership roles within their school community and have been acknowledged with environmental awards for their efforts. Council’s partnership with schools has been very successful in instilling environmental appreciation and behaviours in the upcoming generations. This is critical to achieving the objective of the City becoming more environmentally sustainable. Children take what they learn at school back into the home and inspire their families to greater levels of environmental responsibility.

Children are particularly sensitive to the impacts of elevated levels of air pollutants. A number of schools in the municipality are adjacent to transport routes that carry high to medium loads of traffic. With schools’ growing interest and involvement in the environment, it has been proposed to establish air quality monitoring programs at relevant schools. The closest air quality monitor is in the City of Greater Dandenong and does not pick up localised air quality conditions. The EPA has expressed interest in partnering with Council in such a program to identify possible opportunities for improving localised air quality.

2.5.2.2 Opportunities

- Continue to promote and support the AuSSI ResourceSmart Schools program to schools in the municipality
- Continue to facilitate the Teachers Environmental Network and encourage more schools to this support network
- Continue to support environmental student leadership training programs



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- Advocate to the EPA for better air quality monitoring and reporting for the City.

2.5.3 Businesses

2.5.3.1 Current condition

Currently Frankston has 9,529 registered businesses²². Of all businesses in Frankston City, 95% are small businesses with 37% of those classed as micro businesses. Large companies make up only 1.6%²³. The most common categories are contractors, sub-contractors and Small Office/Home Office (SOHO) types of businesses. Total employment in the municipality is estimated at 33,554 (2010), with the Retail Sector being the largest employer (22.2%), followed by Health and Community Services (17.1%) and Manufacturing (12.5%). The largest individual employers within the municipality are Peninsula Health, Monash University, Chisholm Institute of TAFE, Frankston City Council and Australian Arrow.²⁴ The total output of the local economy is estimated to be \$9.22B per annum (2010) with the Manufacturing sector being the largest contributor to this (30.6%), followed by Construction (12.6%) and Property and Business Services (11.9%).²⁵

While there is a reasonable amount of economic data available on the business community, there is much less data available on business’ environmental impact. A study conducted in 2011 on historical energy use and greenhouse gas emissions for 2005 and 2009 found that commercial and industrial emissions account for an estimated 34.2% of the total Frankston City community greenhouse emissions (an underestimation as only electricity and gas data was available).²⁶ There was a noticeable increase in electricity use between 2005 and 2009 (16.7%) while natural gas use decreased by 20%. The number of metered commercial and industrial properties increased by 7.8% between 2005 and 2009, while emissions increased by 15%. This equates to an increase of emissions of 6.8% per business.²⁷

Non-residential water consumption data for 2010 provided by South East Water showed that 964,378 litres was used that year by 2,815 business customers - 13% of the total water consumed in the City. As can be seen in the graph below, the bulk of the non-residential water use occurred in the commercial/industrial hubs of Frankston and Carrum Downs. This location use trend is consistent with what the study on energy and greenhouse emissions found. Unfortunately there is no relevant waste generation data for the commercial/industrial sector in Frankston City. What is challenging to understand is whether the commercial/industrial resource consumption in Frankston City is higher or lower compared to other commercial/industrial precincts as there is no comparable data. However water consumption data over the years shows that Frankston City businesses have been becoming more water efficient with average business consumption falling from 1,326 litres per day in 2004 to 925 litres per day in 2010.

²² 2001 data <http://businesstimes.net.au/snapshot.html>

²³ Data: <http://businesstimes.net.au/snapshot.html>

²⁴ Frankston City Council Economic Development Strategy pg. 11

²⁵ Ibid.

²⁶ Frankston City Council, *Measure It, Manage It*, 2011

²⁷ Frankston City Council, Carbon Neutral Action Plan pg 26, 2012



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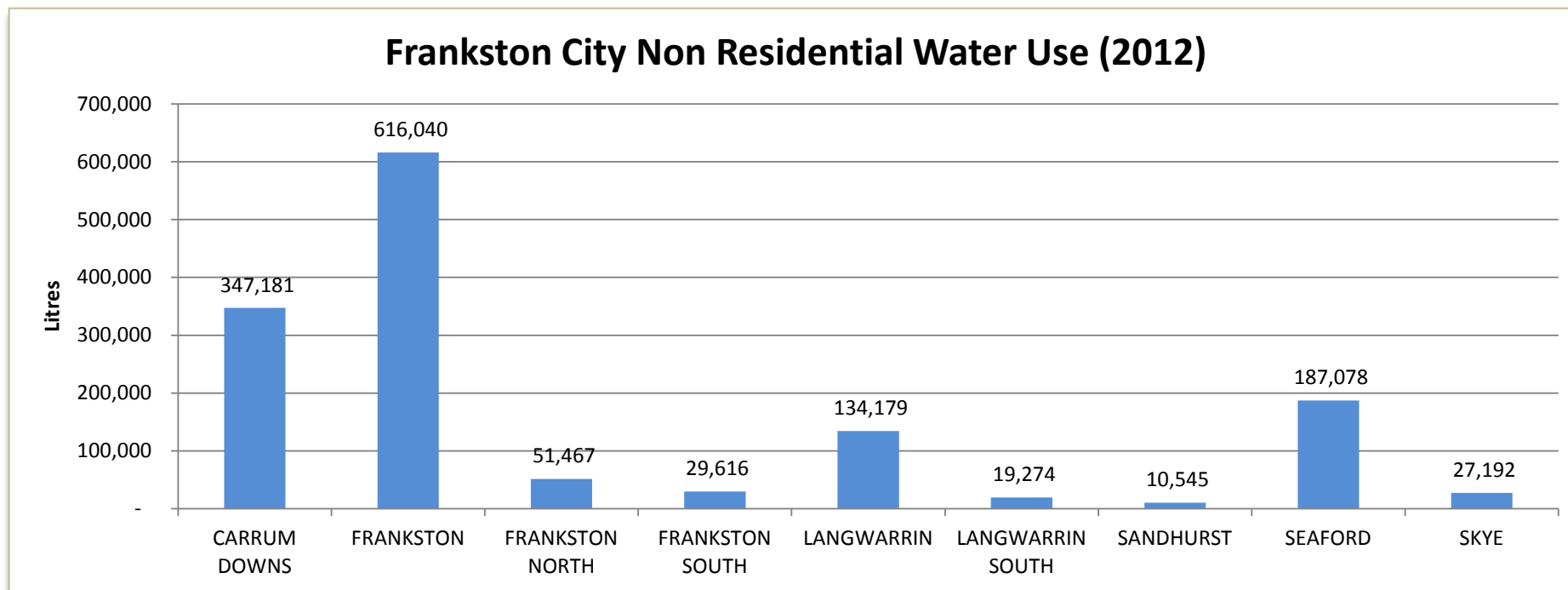


Figure 44: Frankston City non-residential water use 2012

Council adopted an Economic Development Strategy (EDS) in 2011 to support the development of local jobs, professional education and training and vibrant commercial and industrial precincts. An objective in the EDS is “To position Frankston City as a national leader in sustainable industries, such as in recycling and sustainable energy and resource use technology and resource sharing.” A number of initiatives to achieve this are outlined in the Action Plan of the EDS.



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Figure 45: Frankston Traders

Frankston City has a Green Business Network which developed in partnership with Frankston Business Chamber and Frankston City Council. The Green Business Network is a group of over 20 local businesses who have joined forces to promote the benefits of being green for the economy and the planet.

2.5.3.2 Opportunities

- Implement the Economic Development Strategy and input environmental sustainability opportunities into its review
- Investigate existing green industries/businesses in the municipality and target complementary green industries/businesses for attraction to the city
- Work with the Frankston Business Chamber to support green business initiatives, events and training
- Link green service businesses such as energy auditors to small medium enterprises
- Identify, and where possible, support large resource consuming businesses/industries with resource efficiency information and links to environmental programs
- Work with Chisholm TAFE and Monash University to provide green skills training programs in the municipality such as ESD design for construction businesses
- Advocate to extend State Government environmental rebates to businesses



Greening Our Future – Frankston City’s Environment Strategy

2.5.4 Volunteers

2.5.4.1 Current condition

Volunteering is strongly supported by the community in Frankston City. Forty percent of those surveyed for the 2010 State of City Report indicated that they had participated in a volunteer activity in the past year. This compares well to national volunteering rates in the 2010 Census of 36 percent.

Volunteering for the environment is widely practiced in the municipality. A number of environmental groups including 16 active Friends groups have formed over the years and collaborate together in a Frankston Environmental Friends Network. The Network is well organised and very active in undertaking works in natural reserves and Council’s Native Nursery, securing grants for local projects and advocating to Council for environmental initiatives. An estimate in 2010 of the level of volunteering by Friends groups found that there was an average each month of 117 volunteers and approximately 700 hours.

One of the challenges facing volunteer groups generally is aging membership and the need to undertake succession planning. A priority is developing strategies to attract and retain younger members. Studies have found that the ethos of volunteering is engendered young and through the family. Census statistics support the idea that people are more likely to volunteer if as a child their parents were volunteers. Many families find it challenging to fit in on-going volunteer activities such as running a committee. Successful volunteer activities tend to be short term and infrequent such as Clean Up Australia Day and National Tree Day.



Figure 46: Left to right - Volunteers around Frankston municipality



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2.5.4.2 Opportunities

- Support Friends groups to develop succession plans and consider more social/education activities
- Support the growing interest in community gardens
- Work with schools and associated families on environmental projects and provide them with volunteering opportunities
- Skill up young people to run environmental programs/events in their schools and community
- Council and volunteer groups collaborating on community education and nature protection
- Establish Environmental Awards for Excellence to acknowledge outstanding efforts by individuals and community groups
- Structure short-term or one-off activities



Greening Our Future – Frankston City’s Environment Strategy

Chapter 3 Implementation

3.1 Roles and responsibilities

As everyone has an impact on the environment, each of us has a role to play in minimising our eco-footprint and preserving the functioning of the Earth’s natural processes and eco-systems. All levels of government, business and the community must manage environmental risks and explore opportunities to improve. It is therefore important to allocate risk and define roles and responsibilities. Roles and responsibilities have evolved over time as there is increased scientific understanding and to adapt to changing circumstances and local needs. Council is mainly responsible for its own activities and tries to influence the policies/ strategies/ activities of major stakeholders which may have effect on the environmental sustainability of the City through an advocacy and lobbying role.

Group	Roles and Responsibilities	Examples applicable to Frankston City
Federal Government	<ul style="list-style-type: none"> • Development of National and international legislation • National policy leadership and direction, working with state and territory governments • In cooperation with other governments, administers legislation, policies, programs and associated activities to manage environmental risk at the national level. • Data collection and monitoring of environmental conditions including demographics, biodiversity, climate, energy, resource usage, water, etc. • Protection of resources, communities and environment, such as water resources, biodiversity, coasts, infrastructure, natural ecosystems, agriculture, emergency management, renewable energy, vulnerable communities. • Providing funding for local and regional programs 	<ul style="list-style-type: none"> • Environmental Protection and Biodiversity Conservation Act • Protection of RAMSAR Wetlands such as Seaford Wetlands • Bureau of Metrology climate data, Clean Energy Regulator solar data • E-Waste recycling through the Product Stewardship Act • Community Energy Efficiency Program • Caring for Our Country grants
Victorian Government	<ul style="list-style-type: none"> • Responsible for state policies including State Planning Policies, as well as appropriate standards and regulations. • Data collection and monitoring of environmental conditions including EPA Victoria, Department of Environment and Primary Industries, Sustainability Victoria, etc. • Sets state-wide strategies and targets for waste, litter, water, climate change adaptation 	<ul style="list-style-type: none"> • Flora and Fauna Guarantee Act 1988, Building Code’s minimum energy performance • NaturePrint database on remnant native vegetation in the State • Improving Our Waterways – Victorian Waterway



Greening Our Future – Frankston City’s Environment Strategy

	<ul style="list-style-type: none"> Responsible for managing state public lands, water, mineral and natural resources Addressing the risks under Federal Government jurisdiction on a regional level A state-wide approach to emergency management including fire and flood, sea level rise Building and managing major infrastructure such as roads, trains, water Provides funding for local/regional programs such as energy efficiency, biodiversity, etc. 	<p>Management Strategy</p> <ul style="list-style-type: none"> Port Phillip Bay, Pines and Langwarrin Flora & Fauna Reserves, all creeks and waterways, etc. Fire Management New freeways such as Peninsula Link, Public Transport i.e. trains, etc. Landcare, water efficiency incentives, etc.
Council	<ul style="list-style-type: none"> Address the environmental matters in Federal and State government policies and strategies as required at a local level Develop and implement environmental policies, strategies, and plans Responsible for appropriate land use through the Local Planning Scheme Advocate to state and federal governments on environmental matters Establish and administer of local laws Manage Council land and assets including facilities, street trees and roadside vegetation on council managed roads and council reserves Monitor and report on council’s environmental performance Community education, engagement and support to achieve environmental outcomes 	<ul style="list-style-type: none"> Protecting local biodiversity and remnant vegetation and establishing bio-links Climate change, water conservation, waste etc. Preserving Green Wedge and Rural Zones Biodiversity protection, Greenhouse targets Litter, Noise and Tree Protection Local Laws ESD in council facilities, Street Tree Master Plan and Policies, etc. State of Environment Report Newsletters, events, seminars, programs, etc.
Community [residents, businesses, students, visitors]	<ul style="list-style-type: none"> Advisory Committees and Committees of Management provide input into policies and strategies Volunteers support Council’s programs and other environmental initiatives Advocacy to Council, State and Federal governments Develop and deliver community-led projects and programs 	<ul style="list-style-type: none"> FEAC, Foreshore Advisory Committee Frankston Environmental Friends Network, Friends Groups working in natural reserves Green Business Council Recycling, energy and water efficiency, etc.



Greening Our Future – Frankston City’s Environment Strategy

	<ul style="list-style-type: none"> Businesses, households and Individuals reducing their own environmental footprints 	<ul style="list-style-type: none"> Sustainable Home participants, Community Solar
Other Stakeholders	<ul style="list-style-type: none"> A range of non-profit organisations support action on environmental issues and can work across municipal boundaries on regional programs. 	<ul style="list-style-type: none"> South East Councils Climate Change Alliance, Western Port Biosphere, Birdlife Australia, Victorian Naturalists, Wildlife Victoria, etc.

3.2 Targets and Indicators

3.2.1 Targets

It is important to establish measurable goals or targets within a timeframe in order to monitor progress towards achieving desired outcomes. Regular reporting against targets helps to determine if actions undertaken are effective or if changes need to be made due to changing conditions. It is proposed that these targets are reported upon yearly in Council’s Annual Report.

Council has previously adopted a number of targets for its operations based on commitments to environmental strategies and plans, and aspirational targets for the community. In addition, the State Government develops environmental strategies with targets which can serve as benchmarks for local government. Below are targets previously adopted by Council, with the exception of the Litter target which is a State Government target. It is proposed that these targets be reviewed as each existing sub-plan or strategy is renewed.

Topic	Target	Target Year	Existing Plan/ Strategy	Current Progress (latest data)
Water	Council Mains Water Consumption 45% reduction on 2000 level	2017	<i>Sustainable Water Use Plan 2006</i>	In 2012-13, Council consumed 149ML of mains water, a 55% reduction on 2000 level.
	Community Mains Water Consumption To assist the State Government reach their 25% reduction per capita from 2000-01 by 2015	2015	<i>Sustainable Water Use Plan 2006</i>	In 2012-13 household potable water use 7,793ML per household per year, a 24.9% reduction on 2000 level
Greenhouse Gas (carbon dioxide equivalent)	Council Zero Nett CO ² -e emissions (tonnes)	2025	<i>Carbon Neutral Action Plan 2012</i>	In 2011-12, CO²-e was 7,326 tonnes
	15% Energy use from alternative and renewable	2015	<i>Carbon Neutral</i>	In 2011-12, 15% energy use was from renewable



Greening Our Future – Frankston City’s Environment Strategy

CO ² -e)	sources		Action Plan 2012	sources
Waste	Reduce waste to landfill per household per year by 25% on 2008/09 figures by 30 June 2014 (under 410kg of waste per household per year) To achieve a 65% diversion of waste from landfill by 2014 and 100% by 2025, in line with former State targets	2020 2043	<i>Waste Minimisation and Management Strategy 2010-2014</i> <i>Getting Full Value – Victoria’s waste and resource recovery policy</i>	In 2012-13, an increase to 454.9 kg of waste per household per year 54% diversion (recycling and garden waste) in 2012/13
Litter	25% reduction in litter on 2003 benchmarks [This would require Council to establish a litter benchmark and conduct an annual litter audit.]	2014	<i>Victorian Litter Strategy 2012-2014</i>	77% of Victorians dispose of waste in bins in public places, whereas 23% of people litter. There was a 23.4% improvement in littering behaviours on 2003 levels in 2011 (State wide data).

3.2.2 Indicators

A set of good environmental indicators provides information about the health of the environment and the way people demonstrate environmental responsibility. Indicators need to be regularly measured and easy to understand by the community. For example, some native animals such as Koalas, birds and frogs are highly dependent upon good quality habitat. If these animals are regularly monitored they tell us about the quantity and quality of native vegetation and waterway health. For some indicators, the community can easily assist in the monitoring process.

Below is a set of Environmental Indicators which in addition to Council’s targets is proposed to be reported on in a bi-annual State of Environment Report (SoE). Data for these indicators comes from a variety of sources. Therefore the frequency of their inclusion in the SoE will be dependent on the availability of data.



Greening Our Future – Frankston City’s Environment Strategy

Type	Rational / Details	Proposed Data Source
Biodiversity	Koalas, Woodland birds and frogs as indicator species of habitat health	Annual Koala Count BirdLife Australia counts (Langwarrin Flora & Fauna Reserve, Seaford Wetlands{ XE "Seaford Wetlands" }, Eastern Treatment Plan) and annual Birds In Backyards count Melbourne Water’s Annual Community Frog Survey
Tree Cover	Canopy cover of municipality	Council’s GIS layer Canopy coverage monitoring software
ESD Design	Highly efficient ESD designed buildings including those with verified applicable ratings [Green Star, NABERS, etc.] Uptake of green roofs and walls	Architectural Awards, Council’s bi-annual Environment Awards, builders and homeowners, Council buildings Green Building Council Australia (GBCA), NABERS (Office of Environment and Heritage) Green Roofs Australasia Association, builders and homeowners
Electricity Use	Average kWh per household per day per suburb	Electricity Distributor or Electricity Retailers websites
Renewable Energy	Uptake of grid connect solar electric (PV) and solar hot water systems - 4,203 Solar PV systems (Total 9,058kWh) - end of May 2013 - 1,546 Solar Hot Water - end of May 2013 Note EXCLUDES 3977 Sandhurst as it includes Cranbourne and surrounds	Clean Energy Regulator – Data by postcode
Waterways	Creek water quality	Department of Environment and Primary Industries - <i>Index of Stream Condition</i> Melbourne Water
Climate Change	Average Day Time, Night Time, Extreme Heat Days, Tide levels, Max Wind Gusts	Bureau of Metrology for Frankston Council may consider setting up our own weather station as the BoM one at the Coast



Greening Our Future – Frankston City’s Environment Strategy

Guard Building data is not a true indication for the City given its proximity to the water.

3.3 Monitoring and Evaluation, Reporting and Review

A Monitoring, Evaluation, Reporting and Review process provides timely information that can be used to learn from successes and failures. This information can also be used to continuously respond to and adapt to progress and changes. It is an essential part of reviewing policies, strategies, programs and actions. Done effectively, it allows goals to remain realistic and the achievement of outcomes to be continuously improved.

What we measure affects what we do; and if our measurements are flawed, decisions may be distorted. Choices between promoting GDP [Gross Domestic Product] and protecting the environment may be false choices once environmental degradation is appropriately included in our measurement of economic performance. So too, we often draw inferences about what are good policies by looking at what policies have promoted economic growth; but if our metrics of performance are flawed, so too may be the inferences that we draw.

"Beyond GDP" the Stiglitz Commission

Monitoring and Evaluation

Monitoring of the progress of this strategy will be undertaken through an annual review of progress on the actions, achievement of targets

Biannual surveying of the environmental indicators will be undertaken to form a basis of comparison and to advise whether environmental health and conditions are improving or declining.

Evaluation will be undertaken to assess the efficiency, effectiveness and appropriateness of the actions, targets and indicators of this strategy. As changes occur overtime such as to government policies, community visions, concerns and priorities and new science, some actions, targets and indicators may need to be changed to meet new conditions. In addition, if some actions, targets or indicators are successful and no longer needed or prove to be ineffective, they may need to be changed. This process of evaluation and change is called “adaptive management” and is commonly used as a tool in environmental management.

Reporting

Reporting will be undertaken through Council’s reporting mechanisms (Council Reports, Annual Reports). Some of the targets in this strategy may be included in the Council Plan such as reducing greenhouse gas emissions.

Additional reporting will be undertaken on a two yearly basis with a *State of the Environment* report. This report will include the Targets and Indicators of this strategy and will be of value to council and the community.



Greening Our Future – Frankston City’s Environment Strategy

Review

This 10 year strategy will be reviewed every four years in line with the Council term.

3.4 Action Plan

The Action Plan below is structured to reflect the opportunities identified in sections of Chapter 2. Highest priority is given the development of detailed sub-plans, such as the Biodiversity Action Plan, as the sub-plans will deal with the subject matter in much greater detail. The sub-plans will be developed with relevant stakeholder and community input and will be presented to Council for adoption.

	Action	Priority	Timing			Financial Implication	Lead Department	Responsibility (Supporting)	Existing Action	New Action
			2014-15	2015-16	2016-24					
2.2.1	Biodiversity		\$	\$	\$					
A.	Develop and implement a Biodiversity Action Plan	HIGH		50,000		\$50k once off budget	Planning & Environment			X
B.	Establish and implement local recovery plans for endangered flora and fauna	HIGH	10,000	10,000	10,000	\$10k/year budget	Planning & Environment	Operations		X
C.	Enhance the protection of remnant native vegetation in the Frankston Local Planning Scheme undertaking a targeted investigation and preparing a specific amendment.	HIGH	10,000	SBP ²⁸	SBP	\$10k once off budget	Planning & Environment			X

²⁸ Denotes Subject to Budgetary Process



Greening Our Future – Frankston City’s Environment Strategy

D.	Investigate a 24 hour cat curfew and cat exclusion zones around key conservation reserves	HIGH	SBP	SBP	SBP		Community Safety	Operations		X
E.	Increase fox control on Council land and educate private property owners on foxes	HIGH	10,000	10,000	10,000	Operational budget	Operations	Sustainable Assets		X
F.	Work with the community to increase appreciation of biodiversity and what they can do to support it, i.e. actions in their own backyards and fauna counts	Medium	SBP	SBP	SBP		Planning & Environment	Sustainable Assets, Community Relations		X
G.	Support volunteer initiatives such as the Friends Groups and local wildlife rescue groups	HIGH	SBP	SBP	SBP		Sustainable Assets	Operations	X	
H.	Create and protect habitat corridors (installing fauna movement structures, improving habitat, enlisting private property owners and establishing Landcare groups)	Medium	SBP	SBP	SBP	Capital Works	Planning & Environment	Infrastructure, Operations, Sustainable Assets	X	X
I.	Investigate methods to secure vital linkages i.e. covenants, grants, etc.	Low	SBP	SBP	SBP		Planning & Environment	Operations		X
2.2.2	Trees									
A.	Review the Street Tree Master Plan, Tree Policy, Tree Guidelines and develop an Urban Forest Action Plan	HIGH	SBP	SBP	60,000	Spread over 3 years with operational budget	Public Space & Leisure	Planning & Environment, Operations		X



Greening Our Future – Frankston City’s Environment Strategy

B.	Continue enhanced street tree planting and replace inappropriate street tree species as per the Street Tree Master Plan	HIGH	SBP	SBP	SBP		Operations	Public Space & Leisure	X	
C.	Advocate to the State government for the removal of the 10/30/50 rule for urban areas of the Frankston municipality	HIGH	SBP	SBP	SBP		Planning & Environment	Councillors, EMT		X
D.	Use street tree plantings to link conservation zones where appropriate and to establish beautiful, iconic entrances to the city	Medium	SBP	SBP	SBP	Capital Works	Public Space & Leisure	Public Space & Leisure, Operations, Planning & Environment		X
E.	Investigate methodology for assessing levels of urban heat island effect and hotspots	Medium		35,000		Operational budget	Planning & Environment	Information Technology		X
F.	Develop a method of measuring tree canopy cover across the municipality and undertake bi-annual reporting	Medium	SBP	SBP	SBP	Capital Works	Planning & Environment	Information Technology, Community Safety		X
G.	Educate the community on the value of trees	HIGH	5,000	5,000	5,000	Operational budget	Planning & Environment	Sustainable Assets		X
H.	Run training programs for local tree removal companies and developers on Council’s tree regulations and Australian Standards for Trees	HIGH	SBP	SBP	SBP		Planning & Environment	Operations, Sustainable Assets, Community Safety		X



Greening Our Future – Frankston City’s Environment Strategy

I.	Support the owners of declared Significant Trees with tree health advice and information on their tree	Medium	SBP	SBP	SBP		Planning & Environment	Operations		X
2.2.3	Open Space and Bushland									
A.	Complete and implement the Open Space Strategy	HIGH	SBP	SBP	SBP		Public Space & Leisure	Facilities, Operations, Planning & Environment, Sustainable Assets		X
B.	Improve connections between open spaces by establishing corridors of green (trees) and blue (waterways) to link open space	HIGH	SBP	SBP	SBP	Capital Works	Public Space & Leisure	Facilities, Infrastructure, Operations, Planning & Environment	X	
C.	Improve amenity of existing open space with more trees and plantings of native vegetation where appropriate	HIGH	SBP	SBP	SBP	Capital Works	Public Space & Leisure	Operations	X	



Greening Our Future – Frankston City’s Environment Strategy

D.	Work in partnership with volunteers in Council's natural reserves; provide guidance and supervision of appropriate tasks through agreed work plans	HIGH	SBP	SBP	SBP		Operations	Public Space & Leisure, Planning & Environment, Sustainable Assets	X	
2.2.4	Waterways and Beaches									
A.	Complete and implement an Integrated Water Action Plan to support a holistic approach to water management incorporating water efficiency, water quality improvement and use of alternative water supplies	HIGH	TBD ²⁹	TBD	TBD	TBD	Sustainable Assets	Infrastructure, Public Space & Leisure, Operations, Facilities, Community Safety, Planning & Environment		X
B.	Implement the Kananook Creek Corridor Management Plan to meet Council's obligations	HIGH	SBP	SBP	SBP	Capital Works	Public Space & Leisure	Operations, Sustainable Assets, Planning & Environment, Community Relations	X	

²⁹ Denotes To Be Determined



Greening Our Future – Frankston City’s Environment Strategy

C.	Support the review of Melbourne Waters' Sweetwater and Boggy Creeks Waterway Management Activity Plans	HIGH	SBP	SBP	SBP	Capital Works	Public Space & Leisure	Operations, Sustainable Assets, Planning & Environment		X
D.	Develop a Coastal Management Plan	HIGH	57,000	SBP	SBP	\$57,000 Operational budget	Public Space & Leisure	Facilities, Operations, Planning & Environment, Sustainable Assets, Community Relations		X
E.	Advocate for a comprehensive water pollution testing regime to discover the causes and sources of pollution in waterways and beaches	MEDIUM	SBP	SBP	SBP		Community Safety	Councillors, EMT, Planning & Environment, Operations, Sustainable Assets		X
F.	Utilise more Water Sensitive Urban Design (WSUD) in Council infrastructure	MEDIUM	SBP	SBP	SBP	Capital Works	Infrastructure	Public Space & Leisure, Operations, Facilities	X	
G.	Undertake water sensitive urban design (WSUD) capacity building programs for builders and developers	MEDIUM	SBP	SBP	SBP		Planning & Environment	Sustainable Assets, Infrastructure		X



Greening Our Future – Frankston City’s Environment Strategy

H.	Implement the Flood Management Plan and an enhanced Drainage Cleaning Program	HIGH	SBP	SBP	SBP	Already Budgeted Capital Works	Infrastructure	Operations, Sustainable Assets		X
2.3.1	Water use									
A.	Complete and implement an Integrated Water Action Plan	HIGH		TBD	TBD	TBD	Sustainable Assets	Infrastructure, Public Space & Leisure, Operations, Planning & Environment		X
B.	Continue making water efficiency improvements to Council's facilities	MEDIUM	SBP	SBP	SBP	Capital Works budgets	Facilities	Sustainable Assets	X	
C.	Continue making water efficiency improvements to Council's parks and assets	MEDIUM	SBP	SBP	SBP	Capital Works budgets	Public Space & Leisure	Operations, Infrastructure, Sustainable Assets	X	
D.	Embed an ESD Building Policy for new Council facilities which sets minimum performance standards for water efficiency	HIGH	SBP	SBP	SBP		Facilities	Sustainable Assets		X
E.	Continue to monitor and report annually on Council's and Community's water consumption	MEDIUM	SBP	SBP	SBP	\$41,000/year Operational budget	Sustainable Assets		X	



Greening Our Future – Frankston City’s Environment Strategy

F.	Advocate to the State Government to strengthen Building Regulations to achieve higher water performance outcomes	HIGH	SBP	SBP	SBP		Community Safety	Planning & Environment, Sustainable Assets, EMT, Councillors		X
G.	Increase the use of alternative water supplies and fit for purpose water, such as recycled water, rainwater, stormwater and wastewater reuse	HIGH	SBP	SBP	SBP	Capital Works	Operations	Infrastructure, Public Space & Leisure, Sustainable Assets, Facilities		X
H.	Conduct a Water Infrastructure and Water Conservation Study of Council’s Sports Ovals	HIGH		80,000		\$80,000 Capital Works	Operations	Public Space & Leisure, Sustainable Assets		X
I	Educate and support the community in greater water efficiency	MEDIUM	SBP	SBP	SBP		Sustainable Assets		X	
2.3.2	Energy									
A.	Continue to implement and review the Carbon Neutral Action Plan 2012-2017	HIGH	SBP	SBP	SBP		Sustainable Assets	Facilities, Planning & Environment	X	
B.	Continue to monitor and report on Council’s energy usage and greenhouse gas emissions	HIGH	SBP	SBP	SBP		Sustainable Assets	Operations, Facilities	X	



Greening Our Future – Frankston City’s Environment Strategy

C.	Lobby State Government for monitoring & reporting of Community’s energy usage and greenhouse gas emissions	MEDIUM	SBP	SBP	SBP		Sustainable Assets			X
D.	Increase Council’s energy security through investment in more efficient (CHP/ CCHP), alternative and renewable energy technologies	MEDIUM	SBP	SBP	SBP	Capital Works	Sustainable Assets	Facilities, Planning & Environment	X	X
E.	Embed an ESD Building Policy for new Council facilities which sets minimum performance standards for energy efficiency	HIGH	SBP	SBP	SBP		Facilities	Sustainable Assets, Community Safety		X
F.	Continue retrofitting energy efficiency measures into Council existing and new facilities	HIGH	SBP	SBP	SBP		Facilities	Sustainable Assets	X	
G.	Continue to incorporate energy efficiency measures into Council’s assets (e.g., street lighting, decorative lighting)	HIGH	SBP	SBP	SBP		Operations	Infrastructure, Public Space & Leisure, Sustainable Assets, Community Relations	X	



Greening Our Future – Frankston City’s Environment Strategy

H.	Educate and support the community in energy efficiency and renewable energy initiatives	MEDIUM	SBP	SBP	SBP		Sustainable Assets	Public Space & Leisure, Community Strengthening, Facilities	X	
2.3.3	Waste									
A.	Review and implement the Waste Minimisation & Management Strategy to align with State Government policy	HIGH	80,000	TBD	TBD	\$80,000 once off Operational budget for Strategy Development.	Sustainable Assets	Operations		X
B.	Investigate the feasibility of expanding the Halve Our Waste program to more households	MEDIUM		TBD	TBD		Sustainable Assets	Operations		X
C.	Establish a transfer station in the municipality	HIGH	SBP			Capital Works	Operations			X
D.	Provide support to local community groups interested in developing and implementing waste reduction initiatives	LOW	SBP	SBP	SBP		Operations	Sustainable Assets		X
E.	Promote waste reduction initiatives amongst local community groups	LOW	SBP	SBP	SBP		Sustainable Assets			X
2.4.1	Litter & Air Quality									
A.	Update and implement the Litter Prevention Action Plan	HIGH			60,000	Once off Operational budget	Sustainable Assets	Operations, Community Safety		X



Greening Our Future – Frankston City’s Environment Strategy

B.	Continue to raise environmental awareness through support to schools and community events such as Clean Up Australia Day program	HIGH	SBP	SBP	SBP		Sustainable Assets	Operations, Community Relations	X	X
C.	Advocate and work with the State Government, its agencies and other stakeholders on litter minimisation	Medium	SBP	SBP	SBP		Sustainable Assets	Councillors, EMT, Operations		X
D.	Trial increasing smoke free and glass container free public events and places such as at the foreshore	Low		SBP			Arts & Culture	Arts & Culture, Community Safety, Community Relations		X
E.	Advocate for increased funding for gross pollutant traps (GPTs) and maintenance to prevent litter entering streams and the bay	Low	SBP				Infrastructure	Councillors, EMT, Operations		X
F.	Advocate to the EPA for better air quality monitoring and reporting programs for the City	LOW	SBP	SBP	SBP		Sustainable Assets	Councillors, EMT		X
2.4.2	Climate									
A.	Implement and review the Climate Change Impacts and Adaptation Plan 2011	HIGH	SBP	SBP	SBP		Sustainable Assets	Community Relations, Planning & Environment, Infrastructure	X	



Greening Our Future – Frankston City’s Environment Strategy

B.	Continue to monitor climate change science and re-evaluate changing risks	MEDIUM	SBP	SBP	SBP		Sustainable Assets	Planning & Environment	X	
C.	Advocate to other levels of government for a coordinated approach to addressing the impacts of climate change	HIGH	SBP	SBP	SBP		Planning & Environment	Councillors, EMT, Sustainable Assets	X	
D.	Conduct community education on local resilience, such as transition towns, home food growing, storm preparation and home maintenance for resilience against weather extremes and storms	HIGH	SBP	SBP	SBP		Community Safety	Active Aging & Disability, Community Strengthening, Sustainable Assets, Community Relations	X	
E.	Investigate changes to local planning requirements to ‘future proof’ developments based on longer-term forecasts i.e. 100 years	MEDIUM		50,000		\$50,000 once off Operational budget	Planning & Environment	Infrastructure, Sustainable Assets		X
2.4.3	Built Environment									
A.	Implement the Frankston Housing Strategy utilising appropriate ESD tools/ guidelines (eg., STEPS etc)	HIGH	TBD	TBD	TBD		Planning & Environment	Sustainable Assets	X	
B.	Establish/promote an ESD Design Award with relevant industry bodies to acknowledge outstanding buildings that perform to exceptionally high environmental standards	LOW		10,000		\$10,000 bi-annual Operational budget	Planning & Environment	Sustainable Assets, Facilities		X



Greening Our Future – Frankston City’s Environment Strategy

C.	Reduce urban heat island effect through promotion of “green roofs and walls”, “cool roof programs”, greened urban spaces and water sensitive urban design	MEDIUM	SBP	SBP	SBP		Planning & Environment	Sustainable Assets, Facilities		X
D.	Promote the installation of more efficient (CHP/CCHP), alternative and renewable energy technologies (for power, heating and cooling) in new developments.	MEDIUM	SBP	SBP	SBP		Planning & Environment	Sustainable Assets, Facilities		X
E	Promote the installation of alternative and renewable energy technologies (for power, heating and cooling) at Council buildings/ facilities	MEDIUM	SBP	SBP	SBP		Sustainable Assets	Facilities		X
F.	Integrate urban renewal with improvements to an integrated transport network, the preservation of tree canopy cover and the establishment of habitat corridors	HIGH	SBP	SBP	SBP		Planning & Environment	Infrastructure, Public Space & Leisure		X
G.	Complete Green Wedge Strategy - the “green lungs” of the municipality by better planning protection of natural reserves and waterways	HIGH		150,000		\$150,000 once off Operational budget	Planning & Environment	Sustainable Assets, Community Relations, Public Space & Leisure		X



Greening Our Future – Frankston City’s Environment Strategy

H.	Implement an ESD Policy for Council Buildings and support the use of recycled materials for its infrastructure	MEDIUM	SBP	SBP	SBP	Capital Works	Facilities	Infrastructure, Commercial Services, Sustainable Assets		X
I.	Review ESD Guidelines and investigate other more effective models	HIGH	SBP	SBP	SBP		Planning & Environment	Sustainable Assets		X
2.4.4 Transport										
A.	Implement the Integrated Transport Strategy	HIGH	SBP	SBP	SBP		Infrastructure		X	
B	Lobby State Government for improved public transport including more express trains and better connectivity between suburbs	HIGH	SBP	SBP	SBP		Infrastructure	Councillors, EMT	X	
C	Investigate the establishment of a community car share system such as “Go Get” or “Flexicar”	MEDIUM	SBP	SBP	SBP		Infrastructure	Planning & Environment, Sustainable Assets		X
D	Better connect the suburbs to each other with appropriate public transport	LOW	SBP	SBP	SBP		Infrastructure			X
E	Advocate for electric vehicles charging stations	LOW	SBP	SBP	SBP		Infrastructure	Councillors, EMT		X
F	Review and implement the Bicycle Strategy	MEDIUM	SBP			Capital Works	Infrastructure			X
G	Investigate the feasibility of introducing a Council bike fleet	MEDIUM		SBP	SBP	Capital Works	Infrastructure	Sustainable Assets		X



Greening Our Future – Frankston City’s Environment Strategy

H	Investigate the feasibility of establishing a community bike hire system	LOW	SBP	SBP	SBP		Infrastructure	Community Relations		X
I	Position Frankston City as a cycling city, pedestrian friendly and well-connected	MEDIUM	SBP	SBP	SBP		Infrastructure	Community Relations		X
2.5.1	Community - Households									
A.	Continue to develop and deliver strategically targeted environmental workshops and seminars on environmental sustainability topics	HIGH	SBP	SBP	SBP		Sustainable Assets	Planning & Environment, Community Relations	X	
B.	Continue to provide independent environmental information and advice to households	HIGH	SBP	SBP	SBP		Sustainable Assets	Planning & Environment	X	
C.	Promote food growing and connection with nature to improve backyard biodiversity	HIGH	SBP	SBP	SBP		Community Strengthening	Sustainable Assets, Planning & Environment		X
D.	Continue to run behaviour change programs with households including Sustainable Homes and Halve Garbage Waste	HIGH	SBP	SBP	SBP		Sustainable Assets	Operations	X	
E.	Encourage community-led initiatives such as community gardens, local community planning and wildlife rescue	MEDIUM	SBP	SBP	SBP		Community Strengthening	Planning & Environment	X	



Greening Our Future – Frankston City’s Environment Strategy

F.	Promote environmental excellence amongst individuals and households through Awards/ Grants	LOW			10,000	\$10,000 bi-annually Operational budget	Sustainable Assets	Planning & Environment, Community Relations		X
G.	Investigate feasibility of Community programs to support the purchase of “green” goods/services such as solar panels, grey water systems, insulation, etc.	LOW	SBP	SBP	SBP		Sustainable Assets			X
2.5.2	Community - Schools									
A.	Continue to promote and support environmental education programs into school curriculum in the municipality	MEDIUM	SBP	SBP	SBP		Sustainable Assets		X	
B.	Continue to facilitate the Teachers Environmental Network and encourage more schools to send teachers to this support network	HIGH	SBP	SBP	SBP		Sustainable Assets		X	
C.	Continue to support environmental student leadership training programs	MEDIUM	SBP	SBP	SBP		Sustainable Assets		X	
D.	Continue to support tree planting and tree protection in schools i.e. National Schools Tree Day	MEDIUM	SBP	SBP	SBP		Planning & Environment	Sustainable Assets, Operations	X	
2.5.3	Community - Businesses									



Greening Our Future – Frankston City’s Environment Strategy

A.	Attract and support sustainable industries/businesses in the municipality and target complementary industries/businesses for attraction to the city	HIGH	SBP	SBP	SBP		Community Relations	Planning & Environment		X
B.	Link green service businesses such as energy auditors to small medium enterprises	MEDIUM	SBP	SBP	SBP		Community Relations			X
C.	Advocate for and promote resource efficiency programs/ grants amongst the major industrial/ commercial consumers by networking with key stakeholders	MEDIUM	SBP	SBP	SBP		Community Relations	Councillors, EMT, Sustainable Assets, Planning & Environment		X
D.	Work with Chisholm TAFE and Monash University for green skills training programs in the municipality offering Council facilities for demonstrations/ case studies	LOW	SBP	SBP	SBP		Community Relations	Planning & Environment, Facilities		X
E.	Advocate to extend State Government environmental rebates to businesses	LOW	SBP	SBP	SBP		Community Relations	Councillors, EMT, Sustainable Assets		X
2.5.4	Community - Volunteers									
A.	Support Friends groups with training, recruitment, promotions and community education events	HIGH	SBP	SBP	SBP		Sustainable Assets	Planning & Environment, Operations	X	



Greening Our Future – Frankston City’s Environment Strategy

B.	Work with schools and associated families on environmental projects and provide them with volunteering opportunities	LOW	SBP	SBP	SBP		Sustainable Assets	Planning & Environment, Operations, Facilities	X	
C.	Skill up young people to run environmental programs/events in their schools and community	HIGH	SBP	SBP	SBP		Sustainable Assets	Facilities	X	
TOTAL			172,000	400,000	155,000				37	66



Greening Our Future – Frankston City’s Environment Strategy

References

Commonwealth

Natural Resource Management Ministerial Council 2010, Australia’s Biodiversity Conservation Strategy 2010-2030, Australian Government, Department of Sustainability, Environment, Water, Population and Communities, Canberra. ISBN 978-0-9807427-2-5

State

Census, 2011 data: <http://profile.id.com.au/frankston/households>

Climate Change Act 2010

Coastal Management Act 1995

Environment Effects Act 1978

Environment Protection Act 1970

Flora and Fauna Guarantee Act 1988

Institute of Sensible Transport, Oil Vulnerability Index in Melbourne, 2009, www.sensibletransport.org.au

Living Melbourne, Living Victoria Implementation Plan 2012, www.water.vic.gov.au

Melbourne Water ~ Regional River Health Strategy and the Better Bays and Waterways 2009-2014 plan

Planning and Environment Act 1987

State Government of Victoria, Planning Amendment C65, Clause 21.02

State Government of Victoria (1987), State Planning Policy Framework, www.land.vic.gov.au

Victoria’s Native Vegetation Management —a Framework for Action (2002)

State Government of Victoria, Victorian Climate Change Adaptation Plan (2013), www.climatechange.vic.gov.au/adapting-to-climate-change/Victorian-Climate-Change-Adaptation-Plan

Victorian Litter Report, 2011

Victorian Litter Strategy 2012-2014

Water Act 1989

Wildlife Act 1975



Greening Our Future – Frankston City’s Environment Strategy

Internal

Census, 2011 data: <http://profile.id.com.au/frankston/households>

ERP 2011: <http://profile.id.com.au/frankston>

Frankston Community Survey, 2013

Frankston Economic Development Strategy

Frankston Environmental Sustainability Policy, 2010

Frankston ~ State of the City report, 2009 (?)

Frankston City Council ~ Municipal Strategic Strategy

Frankston 2025 ~ A vision for our community’s future

Frankston Integrated Transport Strategy, aurecon, 2012 (2013?)

Local Conservation Strategy: “Think Globally Act Locally”, 1991

Frankston Sustainability Policy, 2012

Remplan, ABS (Dec 2012): www.remplan.com.au/

Frankston Sustainability Policy, 2012

Environment Survey Results, 2011

Electronic

City of Kingston: <http://localhistory.kingston.vic.gov.au/htm/article/191.htm>

Department Primary Industries, Myrtle Rust: http://www.dpi.vic.gov.au/_data/assets/image/0006/142647/myrtle-rust-large.jpg

The Dirt: “Green Streets Cut Pollution More Than Previously Thought”: <http://dirt.asla.org/2012/08/15/green-streets-cuts-pollution-more-than-previously-thought/>

CRC for Water Sensitive Cities: <http://watersensitivecities.org.au/>

Monash Water for Liveability: http://www.waterforliveability.org.au/?page_id=77



Greening Our Future – Frankston City’s Environment Strategy

Australian Government: National standards for criteria air pollutants in Australia:

<http://www.environment.gov.au/atmosphere/airquality/publications/standards.html>

Southern Flora and Fauna Association, Legg M.,: <http://www.spiffa.org>

CSIRO, State of the Climate Report, 2012: <http://www.csiro.au/Outcomes/Climate/Understanding/State-of-the-Climate-2012.aspx>

Bureau of Meteorology: <http://www.bom.gov.au/climate/current/season/aus/summary.html>

Business Times: <http://businesstimes.net.au/snapshot.html>

Frankston City Council: <http://profile.id.com.au/frankston/volunteering>

Other

Tony Wong blueprint 2011: Stormwater Management in a Water Sensitive City, Wong, T.H.F, Allen, etc., Centre for Water Sensitive Cities, Monash University



Greening Our Future – Frankston City's Environment Strategy

Appendix 1: International agreements, Federal and State legislation, policies and strategies

A number of Federal and State policies, legislation and targets affect Council's environmental practices in areas such as waste management, water conservation, greenhouse emissions, ESD design and urban development. In some cases this legislation sets targets for Council and in other cases it limits what Council can do.

International

Convention on Biological Diversity 1992: establishes principles for protecting biological diversity [directly relates to protecting remnant flora and fauna]

Convention on Wetlands of International Importance, especially as Waterfowl Habitat 1971 (Ramsar Convention): to stem the progressive encroachment on and loss of wetlands now and in the future [directly pertains to Seaford Wetlands]

Japan-Australia Migratory Birds Agreement (JAMBA): bi-lateral treaty to conserve migratory birds of the East Asian - Australasian Flyway [directly pertains to Seaford Wetlands]

China-Australia Migratory Birds Agreement (CAMBA): bi-lateral treaty to conserve migratory birds of the East Asian - Australasian Flyway [directly pertains to Seaford Wetlands]

Ramsar Convention 1971: an intergovernmental treaty that embodies the commitments of its member countries to maintain the ecological character of their Wetlands of International Importance and to plan for the "wise use", or sustainable use, of all of the wetlands in their territories.

Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA): bi-lateral treaty to conserve migratory birds of the East Asian - Australasian Flyway [directly pertains to Seaford Wetlands]

Kyoto Protocol: set Australia's greenhouse gas emissions target to reduce emissions by 5 per cent below 2000 levels between 2013 to 2020

Montreal Protocol on Substances that Deplete the Ozone Layer 1987: to protect the ozone layer by taking precautionary measures to control substances, CFCs and halons that deplete it [relates to refrigerants and air conditioner gases especially in old equipment]

UNESCO Man and the Biosphere Programme: to promote sustainable development based on local community efforts and sound science and to reconcile conservation of biological and cultural diversity and economic and social development through partnerships between people and nature [Portions of Frankston City are included in the Westernport Biosphere Reserve]

Federal

Biodiversity Conservation Strategy 2010-2030: Conservation of Biological Diversity [relates protecting remnant flora and fauna]

Environment Protection and Biodiversity Conservation Act 1999: requires protection of nationally endangered species on EBPC list found in Frankston City

Natural Heritage Trust of Australia Act 1997: to redress the current decline, and to prevent further decline, in the quality of Australia's natural environment



Greening Our Future – Frankston City’s Environment Strategy

State

- Catchment and Land Protection Act 1994 - requirements for landowners to control noxious weeds and pest animals
- Climate Change Act 2010 - requirement for a State Climate Change Adaptation Plan which sets out roles and responsibilities for State and local governments
- Coastal Management Act 1995
- Conservation, Forests and Lands Act 1987
- Crown Land (Reserves) Act 1978
- Electricity Safety Act 1998 - requirements for electric line clearance and bushfire mitigation works for power lines
- Environment Protection Act 1970
- Flora and Fauna Guarantee 1988
- Planning and Environment Act 1987
- State Environment Protection Policy
- State Soil Health Strategy 2012
- Victoria's Biodiversity Strategy 1997
- Victorian Bushfire Strategy 2008
- Victorian Building Regulations – sets building standards for new homes and now refurbishments to 5 Star
- Victorian Coastal Strategy 2013 (draft)
- Victorian Future Farming Strategy 2008
- Victorian Government Committee of Management: Responsibilities and Good Practice Guidelines 2011
- Victorian Waterway Management Strategy: Improving Our Waterways 2013
- Victoria’s Invasive Plants and Animals Policy Framework
- Victoria’s Native Vegetation Management Framework
- Victoria’s Salinity Management Framework
- Water Act 1989



Greening Our Future – Frankston City’s Environment Strategy

Appendix 2: Achievements

Theme	Achievements to date
Biodiversity	<ul style="list-style-type: none"> • Natural Reserve crew established with specialist bushland skills, becoming Rangers in 2005 and provided with delegation to enforce local laws in 2010. • Management plans developed for most large reserves and Triple R vegetation quality monitoring instituted in all Council-managed natural reserves since 2006. • Flora and fauna studies in 10 natural reserves since 2006 (19 in total). • Overall study completed on Council’s natural reserves. • Integrated Pest Animal Management program established including an on-going fox control program. • A number of Net Gain sites have been secured within Council reserves providing 10 year funding to improve vegetation quality. • Two properties covenanted with Trust for Nature. • Recruitment of 44 private properties to enhance and protect their native woodlands in Langwarrin for 5 years. • Fauna Linkages Study completed 2013. • Participation in the Mornington Peninsula and Western Port Biosphere’s ‘Growing Connections’ Project.
Trees	<ul style="list-style-type: none"> • Council is implementing a Street Tree Master Plan – planting about 4000 street trees per year with the aim of having a tree in front of every house by 2015. Currently there are about 65,000 street trees which are inspected and pruned, if necessary, every two years. The database of street trees and their condition is electronically recorded and fully updated every two years. • Significant Tree Register incorporated in the Frankston Planning Scheme in 2012 providing protection to the trees on the Register. • Introduction of a Tree Protection Local Law in 2008 and enhanced it in 2010.
Waterways and Beaches	<ul style="list-style-type: none"> • Council has implemented its Stormwater Management Plan over the past 10 years. This has resulted in the installation of 17 gross pollutant traps to remove litter and contaminants out of waterways. In addition, guidelines and an enforcement regime has been established to prevent sediment from construction sites flowing into stormwater drains • Council adopted WSUD Design Guidelines to help embed this approach into its infrastructure construction and maintenance regimes and



Greening Our Future – Frankston City’s Environment Strategy

	<p>external developments. With assistance from Melbourne Water, Council has been incorporating Water Sensitive Urban Design (WSUD) concepts into upgrades of car parks and streetscapes to capture and slow stormwater flow before it reaches a waterway</p> <ul style="list-style-type: none"> • A Flood Management Plan was adopted by Council to support works to manage water flow through the municipality • In partnership with Melbourne Water and Kananook Creek Association, Council updated the Kananook Creek Corridor Management Plan 2009 • Council instituted a “place management” approach to the foreshore and Kananook Creek area in 2010 to coordinate the use and maintenance of these important features 																												
<p>Open Space and Bushland</p>	<ul style="list-style-type: none"> • Frankston City currently has 1,619 hectares of public open space on Crown, public authority and Council-owned land. This gives 13.3 hectares of public open space per one thousand residents. Council manages a large number of parks (400+), gardens (2), sporting ovals (33), golf course (1) and natural bushland reserves (55) and approximately 9.4 kilometres of foreshore. • Council is currently developing an Open Space Strategy which provides a strategic look at requirements for open space across the municipality and details actions and priorities for management of open space. 																												
<p>Water</p>	<ul style="list-style-type: none"> • Council has reduced its mains water (potable) consumption by 63% between 2000 and 2011 (see Figure 49 below). In 2010-11, Council consumed 121.4 ML of potable water. <div data-bbox="376 855 1256 1430" style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;">Potable water use by Frankston City Council 2000-01 to 2012-13</p> <table border="1"> <caption>Data for Potable water use by Frankston City Council (2000-01 to 2012-13)</caption> <thead> <tr> <th>Financial Year</th> <th>Water use (ML/year)</th> </tr> </thead> <tbody> <tr><td>2000</td><td>310</td></tr> <tr><td>2001</td><td>300</td></tr> <tr><td>2002</td><td>340</td></tr> <tr><td>2003</td><td>230</td></tr> <tr><td>2004</td><td>250</td></tr> <tr><td>2005</td><td>260</td></tr> <tr><td>2006</td><td>180</td></tr> <tr><td>2007</td><td>160</td></tr> <tr><td>2008</td><td>190</td></tr> <tr><td>2009</td><td>140</td></tr> <tr><td>2010</td><td>120</td></tr> <tr><td>2011</td><td>120</td></tr> <tr><td>2012</td><td>140</td></tr> </tbody> </table> </div>	Financial Year	Water use (ML/year)	2000	310	2001	300	2002	340	2003	230	2004	250	2005	260	2006	180	2007	160	2008	190	2009	140	2010	120	2011	120	2012	140
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Greening Our Future – Frankston City’s Environment Strategy

- Figure 47: Frankston City Council’s potable water consumption over 12 years
- Council’s water savings have been achieved through:
 - Use of recycled water from the Eastern Treatment Plant to irrigate Council’s garden beds, street trees, parks and reserves. In 2010-11, Council used approximately 65 ML of recycled water (equivalent to 26 Olympic size swimming pools)
 - Installing water saving measures in Council facilities, such as dual flush toilets, water efficient taps and showerheads, push-button timers
 - Collection and use of rainwater for irrigation and toilet flushing in 27 Council facilities and sites, saving an estimated 7.9 ML per year (equivalent to 3 Olympic size swimming pools)
 - Progressively changing sports grounds from cool to warm season grasses, upgrading irrigation systems and applying wetting agents and aeration techniques
 - Reducing the irrigation of open space in response to water restrictions and changing use, as well as conducting regular irrigation audits and maintenance
 - Using indigenous and drought tolerant plants and mulch for landscaping and revegetation
 - Installation of a 257,000 L rainwater collection system at the Operations Centre for high pressure cleaning of Council vehicles, toilet flushing, street sweeping and dust suppression, as well as for irrigating trees and plants
 - Developing an internal water reporting system to help identify leaks and to regularly monitor Council’s water use
 - Installation of flow meters at Jubilee Park Aquatic Centre and the George Pentland Botanical Garden to accurately monitor the amount of water being used
 - Reuse of dam water for irrigation at Baxter Park
- Community
 - Likewise, residents in Frankston City have significantly reduced their water consumption since 2000. On average, households have reduced their potable water consumption by 44% since 2000-01 from 676 L to 378 L per property per day (see Figure 50 below).
 - Since the introduction of a free Low Flow Showerhead Exchange Program in 2007, a partnership between South East Water and FCC, residents have exchanged over 5,000 showerheads.
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Greening Our Future – Frankston City’s Environment Strategy

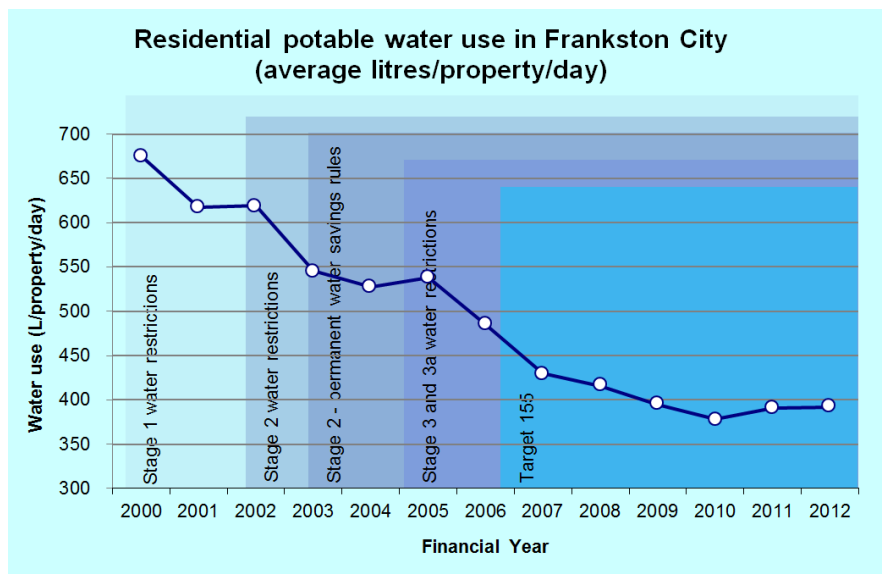


Figure 48: Residential potable water consumption over the past 12 years

- It is clear that the community has embraced water saving measures. However, there is also considerable variation in residential potable water consumption by suburb (Figure 51 above).
- Council has supported community water saving programs and initiatives through:
 - Ongoing funding for the ResourceSmart Schools program – where local schools are sponsored by Council to learn how to become more environmentally sustainable, including water quality and water conservation themes
 - Greening Frankston’s Children Centres project – recently completed project aimed at improving the energy and water efficiency of 48 Council-owned child care centres with education for parents, teachers and the broader community
 - Council’s environmental seminar series and workshops – such as the Sustainable Homes Program and Resourceful Gardening workshops

Energy

- Bulk change-over of 6,858 inefficient Mercury Vapour street lights to energy efficient T5s
- Energy audits and implementation of efficiency works, for example in Frankston Arts Centre, Cube 37, Frankston Library, Civic Centre, Operations Centre, Pines Forest Aquatic Centre, Seaford Community Centre, Meals on Wheels and many more



Greening Our Future – Frankston City’s Environment Strategy

	<ul style="list-style-type: none"> • Greening Frankston’s Children Centres Project – implementation of energy and water saving measures in 48 of Council’s Children Centres, including Pre Schools, Maternal Child Health and Community Centres • Prior to 2012-2013, Council purchased 5% GreenPower™ for its major selected facilities and 20% GreenPower for street lighting • Improvements to Council’s monitoring and reporting on energy usage • Installations of renewable energy such as solar panels and/or solar hot water in approximately 29 Council facilities • Established a Resource Efficiency Reserve Fund from overcharging and unclaimed rebates from Council’s utility bills to appoint a Utility Auditor and implementation of energy efficiency and renewable energy works • Development of ESD Design Guides to encourage green building design • An ESD consultant and \$3M budget allocated to the development of the Frankston Regional Aquatic Health and Wellbeing Centre.
Waste	<ul style="list-style-type: none"> • Waste Minimisation & Management Strategy adopted in 2010. Implemented a wide range of initiatives to support the community to reduce resource use and maximise resource recovery. Initiatives include e-waste collections, Follow Your Waste Tours, Waste Wise Events, recycling rewards programs, public place recycling, and educational and promotional material. • Council won the Towards Zero Waste award category in the Keep Australia Beautiful Sustainable Cities 2010 awards, for its Halve Garbage Waste program aimed at reducing household food waste to landfill in 1000 households by composting and worm farming. • With a State government grant, recruiting another 1000 residents to reduce food waste through the Halve Our Waste program
Climate Change	<ul style="list-style-type: none"> • Worked with SECCCA to undertake the CSIRO climate change impacts study for Western Port and Port Phillip with a Risk Assessment and incorporated climate change into Council Plan and Health and Well-Being Plan • Established an internal Climate Change Taskforce and developed the Climate Change Impacts & Adaptation Strategy. The Strategy has supported enhancements of major stormwater pipes, flooding studies and strategy, drought-proofing major sporting ovals, work with frail elderly and FCC’s children centres, work on fire protection, and enhanced emergency planning
Litter	<ul style="list-style-type: none"> • Promotion of the annual Clean Up Australia Day events and a local Too Lovely To Litter Campaign in conjunction with State campaign. • Internal working group developing a Litter Prevention Action Plan
Built Environment	<ul style="list-style-type: none"> • Over the past 10 years Council has incorporated more environmental sustainability concepts and amendments into its Municipal Strategic Statement and Local Planning Policy Framework (LPPF) • Amendment C63 provides for the protection of designated Significant Trees on private property.



Greening Our Future – Frankston City’s Environment Strategy

	<ul style="list-style-type: none"> • A recent review of the LPPF has flagged climate change and greater consideration of environmental sustainability in development. • Council adopted the Frankston Housing Strategy that supports the introduction of voluntary ESD Design assessments into the planning assessment
Transport	<ul style="list-style-type: none"> • Developed an Integrated Transport Strategy • Increased the number of bus routes including Smart Bus • Improved safety including the installation of a Safe Taxi Rank • Development of a Bicycle Strategy and bicycle trail map • Council has reduced petrol consumption in Council fleet, increased the fuel efficiency of its fleet including Hybrid vehicles and trialled two Electric Vehicles • Successfully advocated for the upgrade of the central Transit Interchange
Community – Households	<ul style="list-style-type: none"> • A range of well attended community environmental education sessions help to residents with practical actions to help reduce their environmental impacts, e.g. indigenous and vegetable gardening, composting and worm farming, use of cloth nappies rather than disposables, how to reduce energy bills, solar electricity systems, grey water systems, etc. • Sustainable Homes Program has been developed and run in local community houses and libraries • Green Renters workshops, supported by Council, have been held in Seaford and Frankston • Over 1000 local residents have halved their rubbish output by participating in the Halve Garbage Waste Program since 2006 • Community groups such as the Veggie Growers Network have developed to support people wanting to increase food security
Community – Schools	<ul style="list-style-type: none"> • Sponsored by Council to enter the awards, Frankston High School won a KABV Award • Nearly half of the 44 schools in Frankston City have participated in AuSSI ResourceSmart Schools program • Council established an Environmental Teachers Network in 2008 to support school teachers in delivering environmental education. There are now 18 schools regularly attending.
Community – Business	<ul style="list-style-type: none"> • In 2014 Council's Small Business Grants Program provided its first Green Business grant – a first for local government in Australia • Council helped establish a Green Business Network with the Frankston Business Chamber • Ran an EPA grant-funded Local Industry Efficiency Program between 2006 to 2008 which supported 100 businesses with energy/water/waste



Greening Our Future – Frankston City’s Environment Strategy

	<p>audits and advice</p> <ul style="list-style-type: none"> • In 2004/05 supported 20 companies with energy audits and advice through a grant funded Business Energy Efficiency Program • From 2004-2008 Council supported local strip shopping centres of Foot Street, Norman Avenue, Seaford Shops and The Pines to go Plastic Bag Free • Skilling up local businesses with training programs e.g. Eco-electricians, Green Plumbers, Carbon Price • Economic Development Strategy adopted with a focus on greening the economy and attracting more green businesses • Green Business Newsletter and Sustainability section on Business Register website
Community – Volunteers	<ul style="list-style-type: none"> • 16 Friends Groups contributing over 5000 volunteer hours per annum • Growing numbers of volunteers and sites for Clean Up Australia Day • Council provides staff assistance and funding to the Frankston Environmental Friends Network for training and promotions • Council sponsors National Tree Planting Day and provides free native plants to schools and community for this day • Environmental Pioneers honoured • Council’s nomination of various Friends Groups and individual members have been successful winners of environmental awards with Keep Australia Beautiful and Victorian Coastal Council Awards • Frankston Environmental Friends Network offering native fauna education to children • Establishment of the Frankston Volunteer Resource Centre to link volunteers and skill up volunteer groups • Annual Community Group Grants support environmental groups i.e. Green Renters, Friends Groups, Fauna Rescue services, etc.