



# TOWARD ZERO

Annual  
Progress  
Report

2011/12 & 2012/13





Prepared by the Sustainability Department July 2013



<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>1 INTRODUCTION .....</b>	<b>5</b>
1.1 Context.....	5
1.2 Scope & Methodology .....	6
<b>2 DELIVERING TOWARD ZERO .....</b>	<b>7</b>
2.1 Council’s Greenhouse Management Program .....	7
2.2 Council’s Integrated Water Management Program .....	11
2.3 Council’s Waste Management Program.....	16
2.4 Council’s Climate Adaptation Program .....	17
2.5 Council’s Sustainable Design Program .....	19
2.6 Council’s Sustainable Transport Program.....	20
2.7 Community engagement in sustainability action .....	24
<b>3 CONCLUSIONS .....</b>	<b>33</b>







# EXECUTIVE SUMMARY

The Toward Zero Annual Progress Report covers two years of program implementation, from 2011/12 to 2012/13, and assesses Council's progress in delivering the Toward Zero Sustainable Environment Strategy objectives and targets.

The report documents Council's progress in implementing seven key programs of action:

- Greenhouse Management Program
- Integrated Water Management Program
- Waste Management Program
- Climate Adaptation Program
- Sustainable Transport Program
- Sustainable Design Program
- Community Engagement in Sustainability Action

Each section documents key actions and progress toward targets laid out in Toward Zero or Council policy that supports each program of action. A summary of Council and community progress toward key Toward Zero targets is outlined in Tables 1 and 2 on the following pages.



**Table 1 – Council progress toward key Toward Zero targets in 2011/12 and 2012/13**

TARGET	Baseline	2011/12	2012/13	% total increase/ reduction from previous year	% total increase/ reduction since baseline
<b>Net greenhouse gas emissions in tonnes CO<sub>2</sub>-e</b> <b>Zero by 2020</b>	16,333 (1996/97) (excludes waste)	10,327	10,293	-0.3%	-37%
<b>Potable water use in megalitres</b> <b>70% reduction by 2020</b>	518 (2000/01)	138	211	+53%	-59%
<b>Waste in tonnes</b> <b>80% reduction by 2020</b>	53.2 (2011/12 baseline)	53.2	42.9	-19%	-19%
<b>Sustainable purchasing as % of total spend</b> <b>70% purchase of sustainable alternatives by 2020</b>	0.04% of total spend (2006/07)	6% of total spend	Data not available	+1%	6%

**Table 2 – Community progress toward key Toward Zero targets in 2011/12 and 2012/13**

ASPIRATIONAL REDUCTION TARGETS	Baseline	2011/12	2012/13	% total reduction or increase since baseline
<b>Net greenhouse gas emissions (tonnes CO<sub>2</sub>-e)</b> <b>(estimated)</b> <b>50% reduction by 2020</b>	1,412,639 (2007/08)	Data not available	Data not available	Not estimated
<b>Potable water use (megalitres)</b> <b>50% reduction by 2020</b>	10,307 (2000/01)	8,449	Data not available	-18.2%
<b>Municipal waste to landfill (tonnes)</b> <b>75% diversion of waste to landfill by 2020</b> <b>(State target – Towards Zero Waste Strategy)</b>	19,531 (2005/06)	21,173	20,834	+6.3%

**Table 3 – outlines progress in achieving increased community participation in Council-initiated sustainability action.**

COMMUNITY ACTION	Baseline 2006/07	2011/12	2012/13
<b>Increase in Community Environment Program participation</b> <b>(including Showerhead Exchange)</b>	106 (440 including Showerhead Exchange)	1,898 (2,124 including Showerhead Exchange)	2,144 (2235 including Showerhead Exchange)
<b>Increase in planning applications applying sustainability</b>	115 (26% of eligible planning applications)	220 (58% of eligible planning applications)	211 (78% of eligible planning applications)



## Key successes and challenges for Council

Council has achieved a number of successes in 2011/12 and 2012/13:

- Ongoing leadership in the implementation of the Water Plan (2010) with the delivery of several water infrastructure projects, most notably the City of Port Phillip/City of Bayside partnership project: Elwood/Elsternwick Stormwater Harvesting Scheme (2012/13).
- Implementation of actions arising from Council's Sustainable Design Strategy and Policy. Now, 78% of eligible planning applications currently comply with Council's Sustainable Design Assessment in the Planning Process (SDAPP) framework, and Council has taken steps to develop the complementary local planning policy C97 Environmentally Efficient Design amendment. Council has made further efforts to help to grow the capacity of other local governments to implement ESD in the planning system.
- Council has made significant progress on climate adaptation work, with many actions underway including work to aid a Bay-wide approach for a Coastal Hazard Vulnerability Assessment (CHVA) for Port Phillip Bay. In 2012, Council won the Judges' Appreciation Award for its Community Climate Resilience Project, awarded by Disaster Resilient Australia, the Office of The Emergency Services Commissioner and the federal Attorney-General's Department.

An ongoing challenge for Council is to reduce its greenhouse gas emissions while bringing new services on line to service a growing population (for example, childcare centres and sports facilities), a challenge faced by many local governments. The next year should see the further rollout of building and lighting energy efficiency retrofits, with the last of the Citipower street lights being retrofitted. This will deliver a significant reduction in Council's greenhouse gas emissions.

An additional challenge is to address Council's increasing consumption of potable water. The significant increase observed over 2012/13 can be mainly attributed to the increased irrigation of open space and sporting facilities, and to a lesser degree a small but steady increase in indoor water use across Council buildings. Projects earmarked to address this in 2013/14 include a parks and open space audit, and rectification works to address site-specific issues.

## Key successes and challenges for the community

Council relies on data provided by third parties to track the community's progress on key Toward Zero targets. Unlike the government-owned water businesses, the privatised electricity and gas distribution businesses are not required to make public aggregated data for household, business and industrial energy consumption. Consequently, community emissions cannot be tracked. A key challenge is to continue to argue that State Government should make accurate data available.

While we have been unable to report fully on community environmental data, Council has been able to significantly grow community participation in Council programs, with numbers increasing to 2,144 in 2012 from 106 in 2006 (baseline year). Through delivery of programs that grow and support community and individual leadership, capacity and action, Council encourages the community to take sustainability action. The breadth of targeted programs delivered for and with the community is detailed further in this report.







# INTRODUCTION



# 1.1 Context

In 2007, the City of Port Phillip introduced a revised environmental agenda and approach for the municipality and Council operations through its umbrella environment strategy, *Toward Zero Sustainable Environment Strategy*. *Toward Zero* outlines nine key sustainability challenges for the City of Port Phillip, with targets and a 2020 timeline for some key challenges. The nine challenges are:

- **Toward Zero Greenhouse Emissions**
- **Toward Zero Potable Water Use**
- **Toward Zero Contamination and Pollution**
- **Sustainable Transport**
- **Sustainable Urban Design and Development**
- **Toward Zero Climate Change**
- **Toward Zero Net Loss of Heritage**
- **Toward Zero Waste**
- **Sustainable Purchasing and Procurement**

This *Toward Zero Annual Progress Report* covers two years of program implementation, from 2011/12 to 2012/13, and aims to provide:

## **For Council operations:**

- Progress on four key sustainability targets – Council's greenhouse gas emissions, potable water use, waste, and sustainable purchasing
- What has influenced reductions and increases against key targets
- Progress on key sustainability initiatives for Council operations.

## **For community:**

- Community participation rates in Council sustainability programs
- A summary of actions that have contributed to reductions in community emissions, water use and waste from Council-run programs
- Community water use and waste-to-landfill.

The *Toward Zero Annual Progress Report* documents Council's progress towards these targets as part of a broader discussion around the implementation of seven key programs of action:

- Greenhouse Management Program
- Integrated Water Management Program
- Waste Management Program
- Climate Adaptation Program
- Sustainable Transport Program
- Sustainable Design Program
- Community Engagement in Sustainability Action.





# 1.2 Scope & Methodology

## Council operations

Greenhouse gas emissions – The zero emissions target by 2020 covers Council's electricity, gas, vehicle fuel use and waste-to-landfill emissions only. Council estimates that remaining emissions through contracts and materials purchase could be as much as a further 50% of Council's total greenhouse gas footprint. Council aims to target these indirect emissions for reduction after 2020. In the meantime, Council is establishing baseline data and is increasing sustainability requirements for contracts and materials to reduce these indirect emissions. This is consistent with the approach currently adopted by the sector.

Council's total annual emissions are audited and verified by independent auditors (Genesis Now) to Australian Greenhouse Protocol and National Carbon Offset Standard (NCOS).

## Water use

Council's water use target covers all Council potable water use. Council's annual water use is audited and verified by independent auditors (Genesis Now). Project-specific water quality benefits are estimated using MUSIC, specialist software used to model urban stormwater management schemes.

## Waste

In 2011/12 and 2012/13, Council undertook an independent audit and verification of its annual waste including the percentages to each waste stream (landfill, recycling, composting). The 2011/12 audit has also been used for establishing waste emissions to landfill.

## Sustainable purchasing

Council currently quantifies the level of annual expenditure on sustainable alternatives as a percentage of total expenditure. It completes an annual ECO-Buy report, which demonstrates the percentage increase in annual green product spending as a proportion of Council budget. Data for 2012/13 is not yet available.

## Sustainable transport

Council quantifies expenditure on initiatives to improve walkability and bike-friendliness. Furthermore, Council is developing a comprehensive data set on commuter bike counts within the municipality.

*Note: This report includes a change in the period around which Council undertakes its annual reporting of emissions and water use. As this report is being prepared at the end of the financial year as part of Council's annual report, it has been necessary to change the reporting period from April to March to provide enough time to collect the necessary data.*



## Community

Greenhouse gas emissions – In the past, community greenhouse gas emissions have been estimated based on 2006 data (a combination of community electricity and gas consumption data from energy retailers, Census 2006 transport data and waste collection services data from Council contractors). This methodology uses a ‘top-down’ approach in that it takes into account national and regional patterns of travel and energy use, with emissions extrapolated from this dataset on the basis of population growth. Council will not be estimating community emissions for 2011/12 and 2012/13 as it has not been possible to gain access to reliable, up-to-date sector emissions data from electricity retailers and distributors, and any estimations would not be reflective of current community emissions patterns.

## Water use

Community water consumption data is provided regularly by the relevant local water corporations and generally represents actual current usage. Data is available for 2011/12 but is not yet available for 2012/13.

## Waste

Council's annual waste collection services allow Council to provide good data for waste collected in the municipality by Council. This data is broken down into waste-to-landfill, recycling and greenwaste. This data does not include private waste collection services that are additionally used by many businesses and highrise apartment blocks. Additionally, the municipal waste data does not include information about other activities such as waste from renovations or construction, or from beach cleaning. As such, the community waste data provided does not cover 100% of all waste collected in the city.











## 2. **DELIVERING TOWARD ZERO**

Council currently delivers to the nine key sustainability challenges outlined in Toward Zero through a number of distinct and complementary programs. These are discussed and detailed further in reference to established Toward Zero targets and new targets and objectives that have been adopted since the setting of these targets in 2007.

# 2.1 Council's Greenhouse Management Program

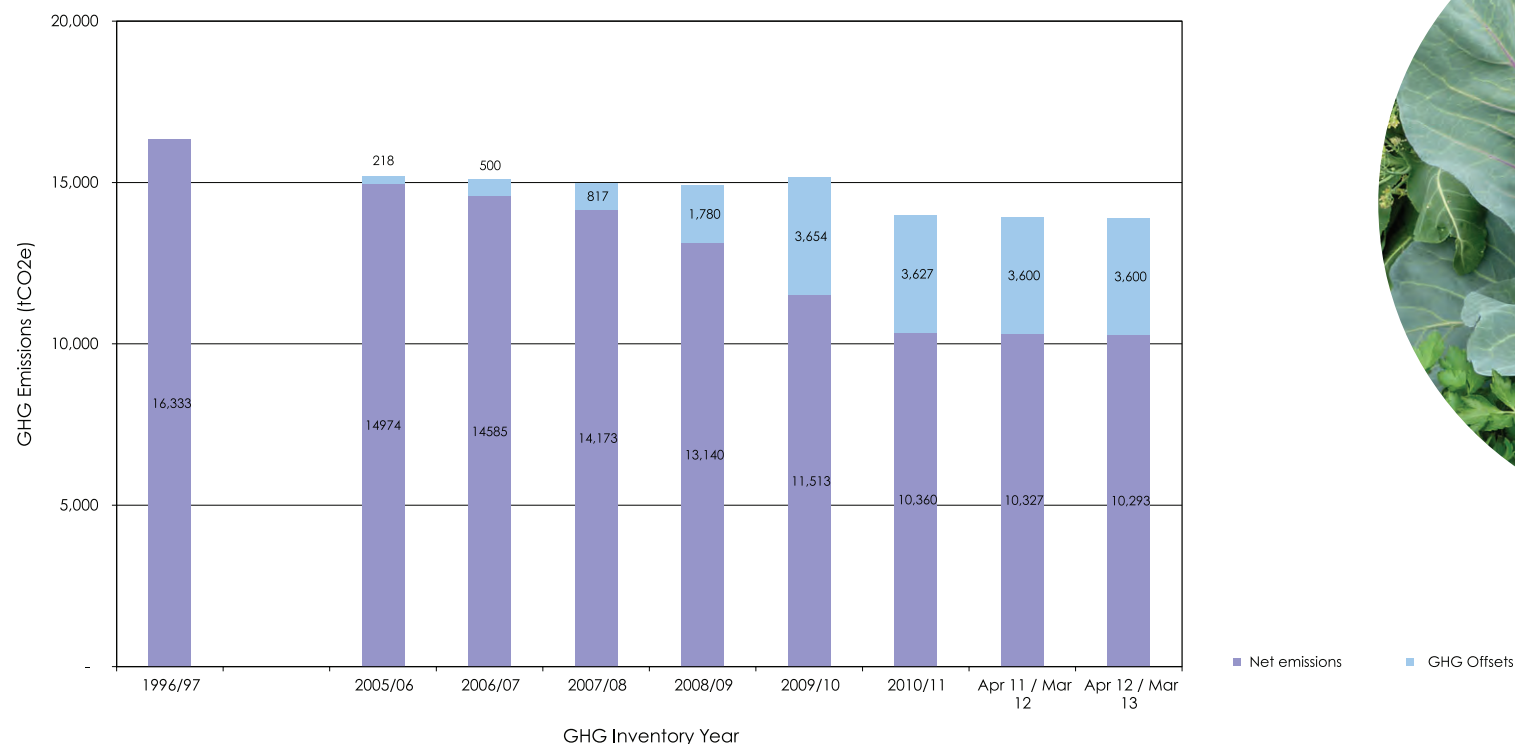
The Greenhouse Plan was adopted in 2011, and forms the basis for action to reduce Council and community emissions and meet Toward Zero targets for 2020. The document details action paths, strategies and activities for emissions reductions in Council buildings, public lighting, IT infrastructure, and Council's vehicle fleet.

Council's greenhouse policy platform has progressed further since the adoption of the Plan. In May 2013, Council adopted an interim greenhouse target for 2015/16. An interim target is useful for tracking Council progress toward its 2020 target and demonstrates Council's commitment to reducing its greenhouse gas emissions. The interim target is a 60% reduction on Council's greenhouse gas emission levels for 1996/97, or net emissions<sup>1</sup> of 6,464 tonnes CO<sub>2</sub>-e (tonnes of carbon dioxide-equivalent).

Council has experienced a sharp increase in the cost of electricity since 2010/11, with Council spending on energy rising 22%, from \$2,764,323 in 2010/11 to \$3,373,451 in 2012/13.

## Council's greenhouse gas emissions

Figure 1 – Corporate greenhouse gas emissions history 1996–2013



<sup>1</sup> 'Net emissions' is defined as total (gross) emissions minus offsets (for example, GreenPower or carbon offsets from forestry)



**Table 4 –Council progress toward greenhouse targets in 2011/12 and 2012/13**

Target	Baseline	2011/12	2012/13	% total increase/ reduction from previous year	% total increase/ reduction since baseline
Net greenhouse gas emissions in tonnes CO <sub>2</sub> -e Zero by 2020	16,333 (1996/97) (excludes waste)	10,327	10,293	-0.3%	-37%

## Overview

Council's total net emissions (including GreenPower) has remained reasonably constant since 2010/11, at 10,293 tonnes CO<sub>2</sub>-e for 2012/13. Council's net emissions for 2012/13 comprise a 0.3% reduction on the previous year and a 37% reduction since 1996/97. From 2011/12, Council included emissions arising from waste in its total net emissions, based on waste audits undertaken at Council facilities over 2011/12 and 2012/13. Figure 1 provides an overview of Council's greenhouse emissions from 1996/97, with the 2015/16 interim target included. Table 4 provides specific greenhouse gas emissions data for 2011/12 and 2012/13.

Emission reductions are largely attributable to building and public lighting energy efficiency retrofits, and the purchase of GreenPower, which offsets 25% of Council's current emissions. A range of factors have limited savings made to date, with increased usage by buildings compensating for small savings made in public lighting and emissions from vehicle fuel.

Examples are provided as part of Council's emissions profile:

- Buildings (electricity and gas) – Buildings currently account for 48.2% of total emissions, with Council's top nine buildings responsible for 78% of total building emissions and 37% of Council's net greenhouse gas emissions. In 2012/13, total building emissions increased by 2.1% on the previous year (a 5.3% decrease since 1996/97). Various factors have contributed to the increase in emissions, with the new childcare centre Bubup Nairn opening in March 2013 and higher energy use from community centres and town halls (energy use increased by 40% at the South Melbourne Town Hall and 27% at the Port Melbourne Town Hall between 2010/11 and 2012/13 due to changes in tenancy and occupancy).
- Public lighting – Public lighting currently accounts for 46% of total Council emissions. In 2012/13, Council reduced its total public lighting emissions by 1.8% from the previous year (23.5% since 1996/97). A delay in implementing sustainable public lighting retrofits planned for 2012/13 limited further savings in this area.
- Council fleet – Council's vehicle fleet currently accounts for 4.8% of total net greenhouse gas emissions. In 2012/13, Council reduced emissions from vehicle fuel use by 4.5% from the previous year (a reduction of 25.8% since 1996/97).
- Waste – Council emissions from waste currently account for 1% of Council's total emissions profile. This is the second year that waste has been included in Council's greenhouse inventory. The total general waste attributed to the Council operations for April 2012 to March 2013 is 92.4 tonnes (129 tonnes CO<sub>2</sub>-e). From 2011/12 to 2012/13, the amount of waste sent to landfill reduced by 16.5%. This came about through an overall reduction in total materials being discarded rather than common diversion measures such as increased recycling.

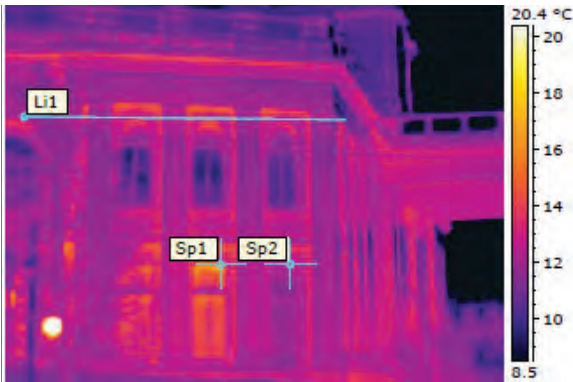
## Council action

Over 2011/12 and 2012/13, Council implemented a range of initiatives to reduce energy use and greenhouse gas emissions across its operations. These actions are highlighted in Table 5.



**Table 5 - Greenhouse management actions delivered over 2011/12 and 2012/13**

Strategy	Action implemented
<b>Policy</b>	<ul style="list-style-type: none"> <li>• Adoption of the Greenhouse Plan (November 2011).</li> <li>• Adoption of an interim greenhouse target to attain a 60% reduction in GHG emissions by 2015/16 (May 2013).</li> <li>• Development of the 'Nine Buildings Strategy' – a targeted approach to attain a 40% reduction in energy use across Council's top nine energy-using buildings (2012/13). The strategy relies on the development of nine building-specific implementation plans, and will be supported by detailed project specifications for implementation through capital works or maintenance programs.</li> </ul>
<b>Building improvements</b>	<ul style="list-style-type: none"> <li>• Ongoing implementation of the Sustainable Building Improvement Plan (SBIP) to support retrofits and technological improvements across Council buildings. Commissioned projects include: thermographic mapping, heating and air-conditioning assessments and energy audits at key Council facilities (St Kilda Town Hall, St Kilda Library, South Melbourne Town Hall, Port Melbourne Town Hall).</li> <li>• Ongoing implementation of Council's Environmental Building Retrofits program, investing approximately \$500,000 per annum towards energy efficiency retrofits across Council facilities. In 2011/12 and 2012/13, retrofits were undertaken on 14 small to medium-sized facilities. In 2012/13, the program focused primarily on lighting control, submetering/building management system and lighting upgrades at St Kilda Town Hall and completing the designs for the chiller retrofit at St Kilda Library and the water tank connection to the public toilets next to Donovan's restaurant.</li> <li>• Commenced development of building-specific implementation plans for the St Kilda Town Hall and Port Melbourne Town Hall, as part of the Nine Buildings Strategy (2012/13). These implementation plans will guide the Environmental Building Retrofit capital works program in 2013/14 and beyond.</li> </ul>
<b>Capacity building</b>	<ul style="list-style-type: none"> <li>• Development of technical specifications for a suite of technologies and products (for example, insulation, air conditioners, heaters) to benchmark environmental performance and help standardise the upgrade and maintenance of Council buildings (2011/12).</li> <li>• Delivery of Sustainable Public Lighting Guidelines and workshops to assist Council staff to select energy efficient lighting when commissioning new lighting, managing lighting retrofits or maintaining existing lighting (2012/13).</li> </ul>
<b>Fuel switch</b>	Installation of a 34 kW solar photovoltaic (PV) array at South Melbourne Market, which is anticipated to generate around 6% of the market's annual electricity use.
<b>Advocacy</b>	<ul style="list-style-type: none"> <li>• Continued involvement in the Council Alliance for Sustainable Built Environments (CASBE) to develop improved standards for building design and efficiency.</li> </ul>
<b>Offset</b>	<ul style="list-style-type: none"> <li>• Continued purchase of accredited GreenPower to offset emissions from Council buildings and streetlights. In 2013, GreenPower was purchased from Leonards Hill Wind Operations, commonly known as 'Hepburn Wind' – Australia's first community-owned wind farm.</li> <li>• Council has retained the 630 Renewable Energy Certificates (RECs) generated from installing the 34 kW solar photovoltaic (PV) array at South Melbourne Market.</li> </ul>
<b>Public lighting improvements</b>	<ul style="list-style-type: none"> <li>• Implementation of the Sustainable Public Lighting Strategy to upgrade streetlights and replace lights in parks and open spaces with energy efficient technologies. In 2012/13 the Strategy directed the installation of light emitting diodes (LEDs) in parks, such as Turville Place Reserve.</li> <li>• Replacement of 25 80W MV lights in Station Pier car park with 42W CFL lamps, with a resultant reduction in energy use of 47.5% (2012/13).</li> </ul>
<b>Measuring and monitoring</b>	<ul style="list-style-type: none"> <li>• Submetering opportunity assessments undertaken for key Council buildings, including St Kilda Town Hall and South Melbourne Market (2012/13).</li> <li>• Third party review of annual water and GHG emissions inventories to validate internal data management and track progress towards water and GHG emissions goals.</li> <li>• Temperature monitoring of IT server racks (2012/13).</li> </ul>
<b>Fleet</b>	<ul style="list-style-type: none"> <li>• Change from leasing to ownership-based fleet operating model, providing Council with greater flexibility in the type of vehicles selected for fleet and greater incentive to reduce fleet size to minimise upfront costs (2012/13).</li> <li>• Electric bike event for staff, providing staff with the opportunity to showcase the potential of an electric bike for work trips (2012/13).</li> <li>• Driver training for staff who regularly use a fleet vehicle (2012/13).</li> </ul>



St Kilda Town Hall façade  
(Source: Thermoview Infrared Consulting Services (2012)  
City of Port Phillip: St Kilda Town Hall Façade).



The 34kW solar PV array at South Melbourne Market (Source: City of Port Phillip).

## Case study – Thermographic mapping

The Sustainable Building Improvement Plan (SBIP) guides actions to improve the environmental performance of Council buildings and reduce utility costs. As part of program delivery in 2012/13, Council completed thermographic mapping of the St Kilda Town Hall, St Kilda Library and Liardet Street Community Centre to identify ways to improve the thermal efficiency of these sites.

The thermographic images help to identify specific locations of thermal bridging and develop tailored solutions, such as improved insulation and weather sealing, to improve the thermal capacity of St Kilda Town Hall and reduce the amount of energy needed to heat and cool the building. The results of this mapping are visualised in the images on the left, with the thermographic image (top) showing the temperature differences across various elements of the façade that are not usually visible (bottom).

## Case study - Solar at South Melbourne Market

In 2012, the South Melbourne Market spent \$4.5 million on the placement of a 'roof over the roof'. This enabled the installation of a 34 kW solar photovoltaic (PV) array consisting of 136 individual solar panels. The electricity generated by the solar PV array is equivalent to 6% of the market's annual electricity use or the annual electricity used in nine local households. With Council's solar PV array only occupying 5% of the roof space, the LIVE Community Power group is keen to join Council to use some of the remaining roof space to generate local, clean energy.

## Next steps

In 2013/14 Council will:

- complete implementation plans for an additional three high energy using buildings, as part of Council's Sustainable Building Improvement Plan
- continue to deliver the Environmental Building Retrofits program to increase the energy efficiency and submetering of key Council buildings, with a focus on improving the energy efficiency of St Kilda Town Hall and Port Melbourne Town Hall via the measures identified in the implementation plans for these buildings
- replace the St Kilda Library chiller, giving a significant reduction in that building's energy consumption
- replacement of the remaining streetlights in the Citipower distribution region, to take place over the next two years. This includes replacement of over 1000 lights in 2013/14, providing greenhouse reduction of ~65% in each retrofitted area. Other sites earmarked for future upgrades are Lagoon Reserve, Morris Reserve, Murphy Reserve and Alma Park bike path.



## 2.2 Council's Integrated Water Management Program

The Water Plan was adopted in 2010, extending the water targets set in Toward Zero to long-term targets for water quality, alternative water sources and indoor water use. The Water Plan sets Council's vision for integrated water management and outlines five strategies to deliver to this vision:

- Implementing water efficiency for parks gardens and facilities
- Implementing water-sensitive urban design in roads drainage and streetscape works
- Implementing stormwater harvesting for open space irrigation
- Facilitating the application of water-sensitive urban design by the community
- Institutionalising water-sensitive urban design

The Water Plan received the award for excellence in research, innovation, policy and education from Stormwater Victoria in 2011, with a commendation at the national Stormwater Excellence Awards in 2012.

### Council's water targets

Council has completed its second year of implementation of the Water Plan and is tracking its progress against the newly adopted integrated water management targets. Table 6 details Council's progress in delivering to these integrated water management targets.

**Table 6 - Corporate Water Plan targets**

Target	Targets and progress
<b>Potable water use</b> 70% reduction by 2020 (against 2000/01 baseline)	2011/12 – 68% reduction 2012/13 – 59% reduction
<b>Water quality improvement</b> Annual reduction targets for: <ul style="list-style-type: none"><li>• Total Suspended Solids: 10,973 kg/year</li><li>• Total Phosphorus: 18 kg/year</li><li>• Total Nitrogen: 88 kg/yr</li></ul>	Council is not achieving its annual water quality targets but has achieved the following reductions over 2011/13: <ul style="list-style-type: none"><li>• Total Suspended Solids: a reduction of 9,271 kg, or 40% of the target for the two-year period</li><li>• Total Phosphorus: a reduction of 15 kg or 44% of the target for the two-year period</li><li>• Total Nitrogen: a reduction of 103 kg or 57% of the target for the two-year period</li></ul>
<b>Alternative Water Sources</b> 50% of irrigation demand by 2020.	30% of the alternative water sourcing target for 2020 will be met in 2013/14 from water gained from the Elwood and Elsternwick Stormwater Harvesting Project

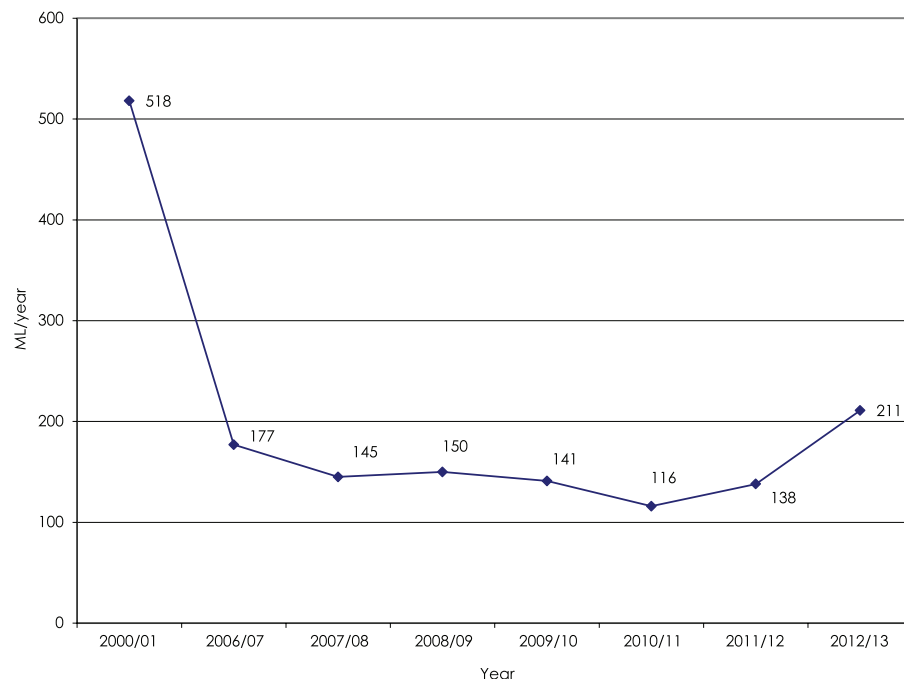
Note 1: Water quality improvement is estimated based on the modelled pollutant reduction of all Council projects implemented over 2011/13.

### Potable water use

Overview – Council's total potable water use in 2012/13 was just over 211 megalitres (ML). This represents a 53% increase from the previous year and a 59% reduction since the 2000/01 base year. Council achieved its 70% reduction target for 2020 early on due to water restrictions, and managed to maintain this target for the period 2007/08 to 2010/11. In 2011/12, Council did not meet its 70% target for the first time in five years, falling short by 2% with an overall reduction of 68%. Since the Towards Zero report in 2010/11, Council's spend on water use has risen 88% (from \$379,384 in 2010/11 to \$711,158 in 2012/13).

The significant increase in water use in 2012/13 has meant that Council is again not on target to retain its 70% reduction in water use. Figure 2 provides an overview of Council's water use trajectory since 2000/01, and Table 7 provides specific data for 2011/12 and 2012/13.

**Figure 2 – Total corporate water use 2000/2013**



**Table 7 – Council progress toward key Toward Zero targets in 2011/12 and 2012/13**

Target	Baseline	2011/12	2012/13	% total increase/ reduction from previous year	% total increase/ reduction since baseline
Potable water use in megalitres 70% reduction by 2020	518 (2000/01)	138	211	+53%	+59%

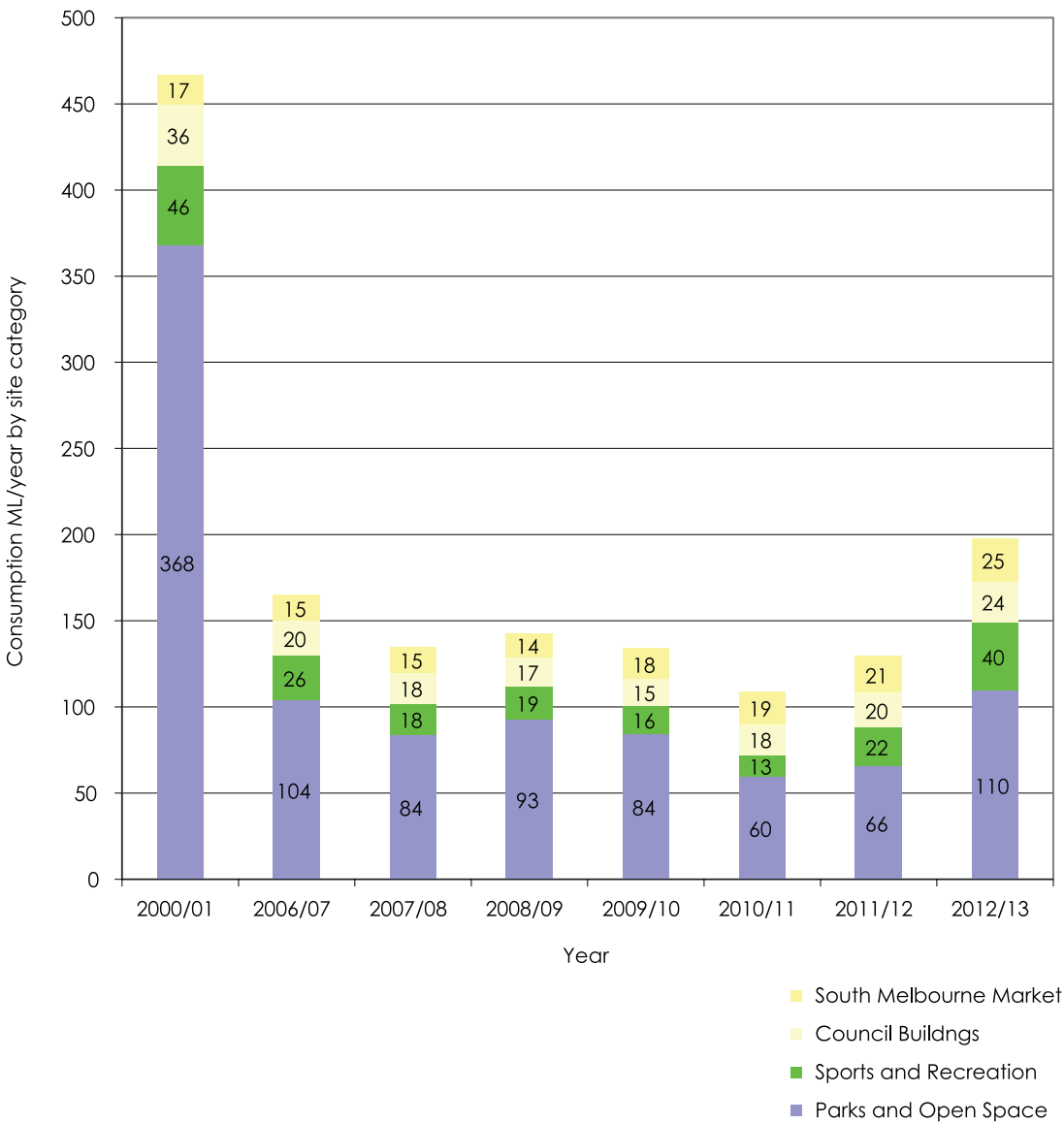
The significant increase observed over the last year can be mainly attributed to the increased irrigation of open space and sporting facilities and, to a lesser degree, a small but steady increase in indoor water use across Council buildings including the South Melbourne Market.

Figure 3 profiles Council's four major water using sectors. These sectors contribute the following percentage water use to Council's total, and have experienced the following percentage change in usage from 2011/12 to 2012/13:

- Parks and open space: Comprises 52% of Council's total water use; in 2012/13 this user experienced a 66% increase in water use on 2011/12.
- Sports and recreation: recreational and sporting facilities and their grounds account for 19% of Council's total water use; in 2012/13 this user experienced a 77% increase in water use on 2011/12.
- Council buildings: Council buildings account for 11% of Council's total water use; in 2012/13 buildings experienced a 19% increase in water use on 2011/12.
- South Melbourne Market: the Market accounts for 12% of Council's total water use; in 2012/13 the market experienced a 16% increase in water use on 2011/12. The 'roof over the roof' project implemented in 2012/13 should have a significant impact on future water use, with an estimated reduction of 4.3 megalitres per year through rainwater harvesting.



Figure 3. Corporate water consumption history 2000/2013



Council action

Significant actions have been carried out in 2011/12 and 2012/13 to deliver to the Water Plan's five key strategies as detailed in Table 8.





**Table 8 – Progress in the delivery of the Water Plan’s five key strategies**

Strategy	Actions and benefits
<b>Implementing water efficiency for parks gardens and facilities</b>	<p>Delivery of South Melbourne Market Rainwater Harvesting project. It is estimated that this project will provide water savings of approximately 4.3 million litres of water a year, through a 500,000 litre tank in the York Street car park.</p> <p>Delivery of irrigation upgrades to St Vincent Gardens, Elwood Park, Alma Park, Peanut Farm and the St Kilda Botanical Gardens.</p>
<b>Implementing water-sensitive urban design in roads drainage and streetscape works</b>	<p>Delivery of raingardens at eight locations:</p> <ul style="list-style-type: none"> <li>• Inkerman Road</li> <li>• Dank Street, Middle Park</li> <li>• Langridge and Richardson Streets</li> <li>• Banks and Montague Streets intersection, South Melbourne</li> <li>• Young Street, Albert Park</li> <li>• Marina Reserve car park, St Kilda</li> <li>• Elwood Foreshore, Elwood</li> <li>• Tennyson and Dickens Streets intersection</li> </ul> <p>These projects have contributed to Council’s pollutant reduction targets and will directly impact water quality entering the Bay.</p>
<b>Implementing stormwater harvesting for open space irrigation</b>	<p>The following projects have been undertaken:</p> <ul style="list-style-type: none"> <li>• City of Port Phillip/City of Bayside partnership project: Elwood/Elsternwick Stormwater Harvesting scheme (2012/13)</li> <li>• St Kilda Botanic Gardens stormwater harvesting design, to deliver over 24 million litres of water for irrigation once constructed (2011/12).</li> <li>• Feasibility and concept development for stormwater harvesting and wetland at JL Murphy Reserve (2011/12)</li> <li>• Preliminary investigations for harvesting from Albert Park Lake (2012/13)</li> <li>• Other investigations, including O’Donnell Gardens and Alma Park, for which feasibility has not been determined.</li> </ul> <p>These projects have significant potential to assist Council to achieve its alternative water source targets.</p>
<b>Facilitating the application of water-sensitive urban design by the community</b>	<p>Actions have been undertaken in the areas of planning and community education as follows:</p> <ul style="list-style-type: none"> <li>• C-78 Stormwater Management (Water Sensitive Urban Design) Local Planning Scheme Amendment: this policy was submitted to the Minister for Planning for approval in September 2010. This policy will make consideration of water-sensitive urban design a mandatory part of the planning process.</li> <li>• Programs and events to educate the community on WSUD and water efficiency, including a showerhead exchange program and workshops around raingarden design and downpipe diversions. These have been undertaken in partnership with Melbourne Water and South East Water.</li> </ul>
<b>Institutionalising water-sensitive urban design</b>	<p>Actions have been undertaken in the areas of:</p> <ul style="list-style-type: none"> <li>• development of tools and strategic resources to assist capital works projects to incorporate WSUD. These include guidelines, standard drawings and GIS-based information systems.</li> <li>• catchment-based precinct and master planning.</li> </ul>



## Case study – Implementing water-sensitive urban design in streetscapes

Cleaner stormwater has flowed from a number of streets and public spaces across the City of Port Phillip in 2012/13 as a result of Council's Water-Sensitive Urban Design Program. Raingardens were installed in locations such as the Banks and Montague Street intersection, Inkerman Street, Young Street, Elwood Park and Marina Reserve. These projects result not only in reductions in pollutants reaching the Bay, but also provide a number of other contributions such as greening and cooling our city.

## Melbourne Water's Living Rivers Stormwater Program

A number of capital and strategic projects have been supported by Melbourne Water between 2011 and 2013 through the Living Rivers Stormwater Program. Projects include the implementation of raingardens at Banks and Montague Streets, Young Street, and the Elwood Foreshore. Strategic projects include the Water-sensitive Urban Design Opportunities Mapping Project and raingardens maintenance audits. These partnership projects are critical to the delivery of Council's water-sensitive urban design program and have greatly assisted Council in gaining momentum in achieving its water quality targets.

## Case study – Stormwater harvesting

The Elsternwick and Elwood Stormwater Harvesting Project was completed in April 2013 with the completion of a treatment wetland in Elsternwick Golf Course and piping and storage tanks to transfer treated stormwater for the irrigation of Elwood Park. This partnership project with Bayside City Council will deliver 100 million litres of stormwater for irrigation, and the City of Port Phillip will utilise 30 million litres within Elwood Park and surrounds each year. This is a significant project for Council and it will contribute to reducing our potable water demand and achieving our alternative water sourcing targets, meeting approximately 30% of our target for 2020. The project is ready to supply water and will come online when conditions become drier and water is required for irrigation.

## Next steps

In 2013/14 the following actions will be taken to address increased water use:

- Parks & Open Space Water audit to include site-based analysis of water use, irrigation rates, irrigation systems and vegetation. A review of current and future options for the use of alternative non-potable water sources will also be undertaken.
- Rectification works to address site-specific issues such as leakage in the St Kilda Botanical Gardens pond.
- Sub-metering at South Melbourne Market to determine its usage profile.
- Ongoing retrofits through Council's Building Environmental Retrofits Program.

A key learning from these first years of implementation concerns the increasing role that alternative water sources such as stormwater must play in assisting Council to regain ground towards its potable water targets. Stormwater harvesting projects have multiple benefits, as they enable Council to reduce potable water use while increasing the quality of its parks and playing surfaces. It will be important to continue to progress investigations into such schemes in order to achieve both potable water and alternative water source targets. This will also contribute to the delivery of Council's stormwater quality targets.



**Richardson Street raingardens shortly after being installed in 2012**



**Installation of below-ground tank in Elwood Park 2012**

## 2.3 Council's Waste Management Program

The Victorian Government's new waste and resource recovery policy, Getting full value, was released in April 2013 and sets out a new vision for Victoria to become a 'national leader in resource recovery'. With the release of this document, and the impending release of the Metropolitan Waste Management Group's strategic plan, Council's Waste and Resource Recovery Strategy (2009–2014) is due for renewal.

Waste Management Operations will conduct this review in the 2013/14 financial year. Until this point, Toward Zero's target to achieve and maintain an 80% reduction in waste to landfill by 2020 continues to be the main driver.

### Council's waste and resource recovery targets

In 2011/12, Council estimated a baseline of waste (in tonnes) being sent to landfill from 12 key Council buildings. The audits also provided waste and recycling data for Council to maintain Waste Wise Certification. The 2012/13 financial year saw the second round of comprehensive waste auditing completed for Council's internal operations, and it returned positive results. Overall, Council operations reduced total waste to landfill by just under 20% from 2011/12 levels. Contamination rates in both waste streams remained very low, at under 3%, and overall diversion of waste from landfill remained steady at 38%. This shows a 2% fall from previous years but is mainly due to the fact that Council's new printing system has dramatically decreased paper consumption, resulting in lower diversion rates but better environmental outcomes overall. Overall resource consumption and organic waste recycling still remains an area for improvement, but in general terms Council's internal waste management is working well.

Please refer to Table 9 for Council's progress towards corporate waste reduction and resource recovery targets.

**Table 9 – Council waste reduction progress 2012/13**

Target	Baseline (2011/12)	2012/13	% total increase/ reduction from previous year	% total increase/ reduction since baseline
Waste in tonnes 80% reduction by 2020 against baseline	53.2	42.9	-19%	-19%

### Next steps

In 2013/14 the following actions will be taken to progress the objectives of the waste management program:

- Review Metropolitan Waste Management Group's strategic and infrastructure plan to ensure Council can lead with new waste infrastructure and services at a regional level.
- Update and align Council's Waste and Resource Recovery Strategy with all state and federal legislation.
- Procure new waste management fleet with a view to further reducing environmental impact.
- Work with Council green teams to further improve internal waste management.





# 2.4 Council's Climate Adaptation Plan

**Council's Climate Adaptation Plan was adopted in 2010. The Plan focuses on five key action areas – climate-resilient buildings, flood management, beach protection, city climate, and access and safety.**

At the Resilient Australia Awards in November 2012, Council received the Judges' Appreciation Award in the Local Government category for innovative practices and achievements in making communities stronger, better prepared and more resilient to emergency events and situations, specifically through Council's work in developing a community weather preparedness program.

## Council action

Over the last two years, 18 of the 24 key actions in the Plan have either commenced or been successfully completed. These actions fall into the following categories:

- modelling and mapping to gain comprehensive understanding of the risks and impacts of catchment and coastal flooding and local urban heat island effects
- mapping and managing urban island effects
- building community climate resilience to extreme weather events.

Table 10 outlines the key actions of note.



Bike riding  
along  
Elwood  
canal

**Table 10 – Progress in the delivery of the Climate Adaptation Plan**

Strategy	Actions and benefits
<b>Hydrological catchment modelling and Baywide coastal processes and hazards modelling</b>	<p>The following actions will help Port Phillip gain a clearer understanding of the future extent, behaviour and impacts of both coastal and stormwater flooding, and will assist Council to make decisions on planning, drainage and coastal management solutions:</p> <ul style="list-style-type: none"> <li>• Hydrological mapping of the CoPP catchment in 2011, providing information on drainage capacity under a range of rainfall and climate scenarios to 2100.</li> <li>• Completion of the Port Phillip Bay Coastal Adaptation Pathways study in 2012, providing a high level net cost-benefits framework to help determine when to undertake adaptation actions.</li> <li>• Commencing a partnership project with the Association of Bayside Municipalities to progress a Coastal Hazard Vulnerability Assessment of Port Phillip Bay. The first phase of coastal mapping involving Bayside Councils, Port of Melbourne and state stakeholders is underway, with the vulnerability assessment to be initiated in December 2013.</li> </ul>
<b>Mapping and managing urban heat island effects</b>	<p>The following actions will help Council to understand the options available to reduce the impact of the urban heat island effect:</p> <ul style="list-style-type: none"> <li>• Completion of an urban heat island map for the City of Port Phillip in 2012/13. The map will identify areas of the municipality that are warmer as a result of a built up areas. It will be available to Council and the community.</li> <li>• Completion of a canopy map for the City of Port Phillip commenced in 2011/12, developed to identify the dimensions, coverage and shade provided by tree canopies across the municipality.</li> <li>• Working with other local governments on planning recommendations, implementation guidelines and demonstration sites for green roofs and walls.</li> </ul>
<b>Building community climate resilience</b>	<p>These actions seek to improve community weather preparedness and resilience to a changing climate:</p> <ul style="list-style-type: none"> <li>• Development of the Community Climate Resilience Program.</li> <li>• Completion of Council's Flood Management Plan with Melbourne Water commenced in 2011/12.</li> <li>• Development of information around 'Being Safe' in floods.</li> <li>• Development of a community weather preparedness program to be rolled out in 2013/14.</li> </ul>

### Case study – Community Weather Preparedness Program

In what may be an inner urban first in Australia, the City of Port Phillip has developed a Community Weather Preparedness Program based on local street- or apartment-based networks to create safe, informed and resilient communities.

The Program creates opportunities to bring neighbours together to get to know one another while learning how to help their households and each other be better prepared for floods, storms or heatwaves. This may be as simple as ensuring they have an emergency management plan, are prepared to check that elderly neighbours are OK, or looking after a neighbour's property for them during extreme weather if they are on holidays. The program is being rolled out locally in 2013/14.

### Case study – Modelling future heatwave risks

In 2012/13, the City of Port Phillip became one of the first municipalities in Australia to capture aerial maps of urban heat island effects to show how they impact our city. The maps will assist the city's Parks and Open Spaces team to determine future succession planting for streets and parks, and develop appropriate principles and actions when preparing Council's Urban Forest Strategy and Alternative Greening Strategy. The maps are also useful in determining how the city could encourage appropriate building design, to make use of thermal efficiencies and increasing greening in new developments and redevelopments.

To assist community education and action, Council is developing a community query tool for these maps which will enable local community members to view, understand and build resilience to urban heat island effects. The UHI maps and community query tool will be launched to the community in 2013/14.



# 2.5 Council’s Sustainable Design Program

In 2012/13 Council updated its Sustainable Design Policy and Strategy 2006, which expired in 2010. The Sustainable Design Strategy 2013 aims to voluntarily encourage the community and Council to build environmentally sustainable buildings that are above the minimum regulatory building standards, and that achieve a zero net environmental impact.

The Strategy sets out how Council will achieve sustainable design outcomes through the planning scheme, and incorporates best practice sustainability design standards for Council buildings.

The Sustainable Design Strategy is implemented through the Sustainable Design in the Planning Process (SDAPP) framework, a voluntary program that seeks sustainable design statements from planning permit applicants as part of the planning process. This program has been in place since 2003 and relies on the use of sustainable design assessment tools (namely the Sustainable Design Scorecard and STEPS) to measure the environmental performance of a development proposal. Council has been tracking improvements in the implementation of SDAPP since 2006/07.

### Increase in municipal-wide planning applications considering sustainability

There has continued to be an increase in eligible planning applications voluntarily applying sustainability. Participation in SDAPP has risen gradually from 7.95% in 2003 (30 of 440 eligible applications) to 78% in 2012/13 (211 of 271 eligible applications). This would suggest that more and more developments and major renovations are applying sustainable design, passive solar orientation, water harvesting, energy efficiency and onsite renewable energy generation.

Table 11– Increase in planning applications applying sustainability in 2011/12 and 2012/13

Community action	Baseline 2006/07	2011/12	2012/13
Increase in planning applications applying sustainability	115 (26% of eligible planning applications)	220 (58% of eligible planning applications)	211 (78% of eligible planning applications)

Council is currently progressing efforts to:

- further streamline the operational process for assessing sustainability in planning permits so that Council can efficiently manage the increasing number of applications
- seek approval for a number of complementary planning scheme amendments, namely the proposed C78 Water Sensitive Urban Design and C97 Environmentally Efficient Design local planning policies. If approved, these policies would provide a framework for requiring sustainable design in the city’s planning application process (rather than the current approach of encouraging voluntary submissions).



Rainwater garden



A Port Phillip  
resident  
at the  
Ride2Work  
Day!

## 2.6 Council's Sustainable Transport Program

Council's Sustainable Transport Strategy, Walk Plan and Bike Plan were adopted in 2010, and drive Council's sustainable transport program. Council's vision is to improve the convenience, safety, accessibility and range of sustainable travel choices to create a connected and liveable city where residents, visitors and workers can live and travel car-free.

In order to realise Council's vision, the following mode shift targets have been developed that drive both capital and non-capital expenditure by Council to achieve a 50% reduction in the community's greenhouse gas emissions between 2006 and 2020. Expressed as mode shift targets based on distance travelled, this translates to:

- **private vehicles: reducing from 78% to 53%**
- **walking and bike riding: rising from 9% to 20%**
- **public transport: rising from 13% to 28%.**

To achieve these targets, opportunities for walking and bike riding should be taken for the majority of short local trips, with public transport services relied upon for longer trips.

The data used to track progress on the above targets is held by the Department of Transport Planning and Local Infrastructure and is not currently available. Council intends to report on its achievement against these targets in 2015/2016.

### Council action

The Sustainable Transport Program is implemented through a broad range of formats including ongoing policy development and the delivery of both strategic and capital projects. Financial year 2011/12 was the first year of implementation for the Walk Plan and Bike Plan, and focused on improving capital works project delivery mechanisms and project design. Even in these first stages, a number of capital projects on improving walkability and bike ride-ability have been delivered over 2011/12 and 2012/13. These projects have centred on improving pedestrian priority around schools, making it more convenient and comfortable for school children to walk to school, as well as responding to the community's need for more local bike routes away from busy streets and improved continuity between existing bike routes. Table 12 summarises the key actions of note from 2011/12 to 2012/13.



**Table 12 – Progress in the delivery of the Sustainable Transport Program**

Strategy	Actions and benefits
<b>Transport policy development</b>	<p>The following actions will assist Council to make decisions regarding walking, bike-riding, public transport, car use and parking:</p> <ul style="list-style-type: none"> <li>• Development of a Principal Pedestrian Network (PPN) for the municipality (2011/12 –2012/13).</li> <li>• Adoption of an On-Street Car Share Policy in September 2012. The first phase of this policy was implemented in 2012/13.</li> <li>• Adoption of Parking Management Guiding Principles in September 2012.</li> </ul>
<b>Communications</b>	<ul style="list-style-type: none"> <li>• Updated TravelSmart maps distributed to community centres and town halls (2012/13).</li> <li>• 'Just Look' Coexistence Campaign – Use of shared paths by bike riders and pedestrians, conducted on St Kilda foreshore in March 2013.</li> </ul>
<b>Measuring and monitoring</b>	<ul style="list-style-type: none"> <li>• Conducted Super Tuesday 2012 and 2013 Commuter Bike Counts and Local Bike Counts (Two seasonal bike counts per year in March and October).</li> <li>• Conducted Making Walking Count, an international walking benchmark survey.</li> <li>• Took part in the National Cycling Participation Survey and piloted survey questions on the comfort of Port Phillip's bike routes.</li> </ul>
<b>Staff travel</b>	<ul style="list-style-type: none"> <li>• Delivery of a range of initiatives including Commuter Club program for staff, the Staff Bicycle Users Group – Port Phillip Pedallers, Ride2Work Day and Walk to Work Day events for staff, and staff travel surveys.</li> <li>• Commenced development of a staff travel plan (2012/13).</li> <li>• Supported the implementation of end-of-trip facilities at St Kilda Town Hall.</li> </ul>
<b>Transport advocacy</b>	<p>Ongoing advocacy to the Victorian Government on the:</p> <ul style="list-style-type: none"> <li>• implementation of the Park Street Tram Link</li> <li>• upgrade of Carlisle Street Tram Stop No. 38 to create a fully accessible tram-train interchange at Balaclava Station.</li> </ul>
<b>Partnerships</b>	<ul style="list-style-type: none"> <li>• Active participation in a range of partnerships and working groups including the Inner Melbourne Action Plan, Metropolitan Transport Forum, Victorian Pedestrian Advisory Council, Cycling Reference Group, Inner Melbourne Road Safety Action Group, and Safe Speed Interest Group.</li> </ul>
<b>Travel programs and events (schools and community)</b>  <b>Please refer to Section 2.7 of this report</b>	<ul style="list-style-type: none"> <li>• Delivery of a range of initiatives to schools including ongoing support for the development of school travel plans and events encouraging the uptake of sustainable travel modes such as Ride2School, Walk2School and the Great Transport Race.</li> <li>• In conjunction with the Port Melbourne Business Association, contributed funding and in-kind support to the Bay Street Bike Fest community event (2012/13).</li> <li>• Hosted a community Ride 2 Work Day breakfast and piloted the Op Shop and Heritage bike tours.</li> <li>• Provided bike confidence-building courses such as Defensive Riding and 'Fix a Flat' bike maintenance.</li> <li>• Piloted a car-shaped bike rack in Bay Street, Port Melbourne in conjunction with the Port Melbourne Business Association.</li> <li>• Provided bike parking at community festivals and events.</li> </ul>
<b>Walking route improvements (capital projects)</b>	<ul style="list-style-type: none"> <li>• Installation of pedestrian-priority treatment projects at Loch and Fitzroy Streets, Chapel and Dickens Streets school crossing, Richardson and Armstrong Streets roundabout, and Clark and Graham Streets school crossing (2011/12). These projects involved the installation of kerb extensions to reduce crossing distances and raised pavement zebra crossings to enhance pedestrian priority.</li> <li>• Installation of pedestrian-priority treatment projects at Chapel Street (St Michaels Grammar School), Clark and Poolman Streets (Port Melbourne Primary), Inkerman Street (St Kilda Road to Chapel Street), Dickens and Tennyson Streets intersection, and the Byron Street and Broadway roundabout (2012/13). These projects involved similar retrofits to those undertaken in 2011/12, as well as the retrofitting of a roundabout with two raised zebra crossings.</li> </ul>
<b>Bike network development (capital projects)</b>	<ul style="list-style-type: none"> <li>• Installation of an innovative contra-flow bike lane at Acland Street (2011/12).</li> <li>• Installation of various minor bike treatments in Middle Park area (2011/12).</li> <li>• Implemented a connecting bike route along Carlisle Street between Acland Street and Brighton Road (2012/13).</li> <li>• Implemented a connecting bike route between Westbury and Chapel Streets (2012/13).</li> </ul>

## Council indicators

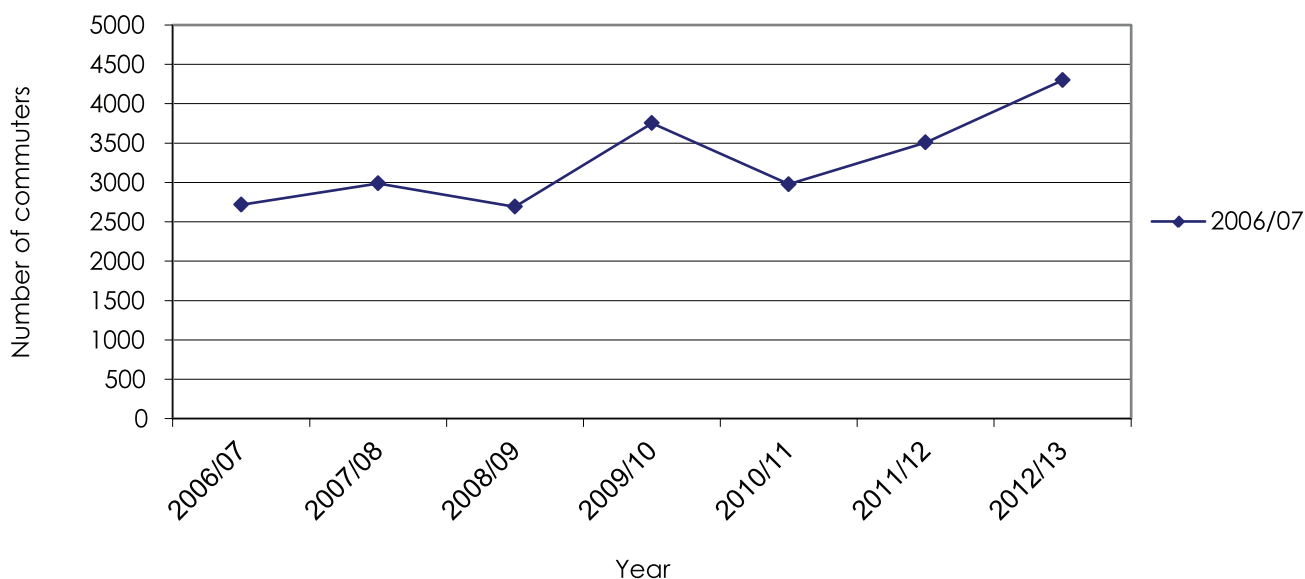
The Sustainable Transport Program uses bike counts as a key indicator in measuring the increased uptake of bike-riding in the municipality and of the effectiveness of actions within the Bike Plan. Table 13 provides data for both local bike counts and Super Tuesday counts.

**Table 13– Sustainable Transport bike indicators**

Action	Baseline year	Base year data	2011/12	2012/13
Local bike counts	2011/12	10,837	10,837	24,310
Super Tuesday counts	2006/07	2,717	3,507	4,299

Super Tuesday commuter bike counts are Council's longest-running dataset on bike-riding, with data extending back to 2006/07. Super Tuesday involves bike counting on a single day in March from 7 am – 9 am. The numbers are derived from nine count sites that have been consistently assessed across all years of the annual count. Both local bike counts and Super Tuesday bike counts for the last two years demonstrate the increase in bike commuting, with steady growth each year. Further investment by Council in projects supporting the continuity and comfort of bike routes throughout the municipality will help support further growth. Figure 4 gives a detailed overview of Super Tuesday bike counts in Port Phillip since 2006/07.

**Figure 4 – Super Tuesday bike counts 2006/07 – 2012/13**







**Cecil Street  
Bike Lane**

### Case study – Implementing innovative design in capital works

Council continues to implement projects that represent leading practice in encouraging walking and bike riding, while also improving the safety of people choosing to travel on foot. An example of this is Council's pioneering retrofitting of roundabouts, which are difficult to cross for both pedestrians and cyclists. Roundabouts with raised zebra crossings on each leg have been recently installed at the intersection of Dickens and Tennyson Streets at the entry to the Botanical Gardens (2012/13). This measure helps people take the most direct route over the street and has helped to reinforce the slow speed environment of each street, thereby encouraging more local bike riding and walking. This project follows successful piloting and evaluation of the roundabout design outside the South Melbourne Market in 2005.

### Case study – Acland Street bike lane

In 2011/12, Council installed a contra-flow bike lane alongside angle parking within the section of Acland Street running between Carlisle and Fitzroy Streets. This lane is the first of its kind in Australia, and is designed to allow cyclists to travel in both directions on a one-way section of the street. The lanes improve safety by giving bikes their own space on the road and create a more direct route for bike riding, making it more convenient to ride a bike to and from the Acland Street shopping strip.

### Case study – Domain Interchange project

Council played a significant role in influencing the design of the Domain Interchange redevelopment, which was completed in 2012/2013. This resulted in the installation of a continuous bike lane on St Kilda Road, Port Phillip's busiest bike commuting route, between Albert Road and Park Street, as well as a new pedestrian crossing and traffic signals improvements. The project demonstrates the benefits of working in collaboration and partnership with other stakeholders, in this instance VicRoads, Yarra Trams and Public Transport Victoria.



**Domain  
Interchange  
Project**



**Acland Street  
Bike Lane**





## Next steps

In 2013/14 the following actions will be taken to progress the objectives of the Sustainable Transport program:

- Continuing to grow participation in the school and community travel program (further discussed in section 2.7 of this report).
- Undertaking the Greenlight for Pedestrians: Traffic Signal Priority study.
- Continuing the City of Port Phillip Cycling Participation survey 2014 (biennial).
- Running a community awareness coexistence campaign to encourage better interactions between high and low speed bike riders on the city's busiest bike commuting route, St Kilda Road.
- Ongoing targeted advocacy to the Victorian Government on the Melbourne Metro Rail Project, Park Street Tram Link, St Kilda Road separated bike facilities and upgrading Carlisle St tram stop 38.
- A number of walking route improvement projects covering kerb extensions, raised pavement crossings and pedestrian safety improvements at Alma Road, Bridport Street, Victoria Avenue, Bay Street, Wellington Street and around the South Melbourne Activity Centre (Port Melbourne, St Kilda and St Kilda West, South Melbourne, Albert Park).
- A number of bike network development projects covering new bike routes on Wright St, Cowderoy Street, Longmore Street and York Street (St Kilda West and Middle Park). Bike priority will be improved around Park and Cecil Street tram stop.



# 2.7 Community Engagement in Sustainability Action

Council tracks the community's progress toward key Toward Zero targets and seeks to increase community engagement in sustainability action through a range of formats, including the delivery of Council-run sustainability programs and the tracking of community-led sustainability action and advocacy.

## 2.7.1 Toward Zero community targets

Table 14 outlines the community's progress toward key Toward Zero targets in 2011/12 and 2012/13 against the baseline. Progress against each target is discussed further below.

**Table 14. Community progress toward key Toward Zero targets in 2011/12 and 2012/13**

Aspirational reduction targets	Baseline	2011/12	2012/13	% total reduction or increase since baseline
<b>Net greenhouse gas emissions (tonnes CO<sub>2</sub>-e) (estimated)</b> 50% by 2020	1,412,639 (2007/08)	Data not available	Data not available	NA
<b>Potable water use (megalitres)</b> 50% reduction by 2020	10,307 (2000/01)	8,450	Data not available	-18.2%
<b>Municipal waste to landfill (tonnes)</b> 75% diversion of waste to landfill by 2020 (State target – <i>Towards Zero Waste Strategy</i> )	19,531 (2005/06)	21,173	Data not available	+8.41%

NOTE 1: Community greenhouse emissions are extrapolated from 2006/07 data and estimated on population.

NOTE 2: Community waste does not include private waste collection services.

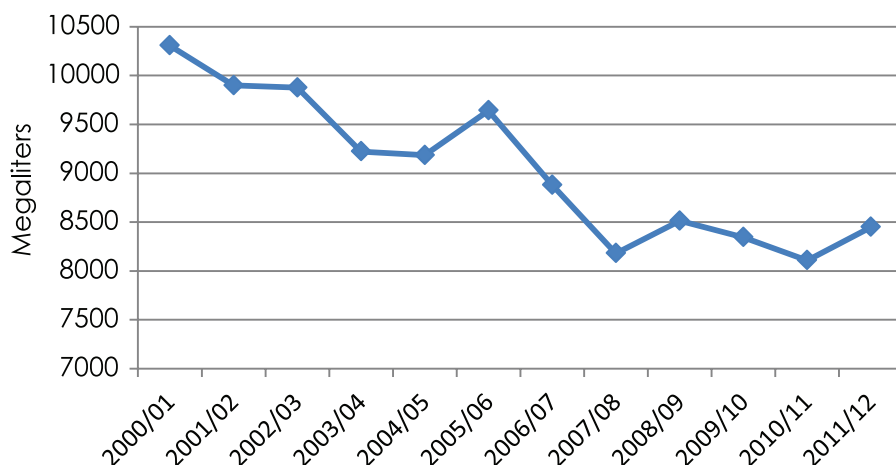
**Community greenhouse gas emissions** – Total community emissions were estimated at about 1,412,639 tonnes CO<sub>2</sub>-e in 2007/08. At that time the residential sector was estimated to be responsible for 35.5% of total community emissions, the commercial sector for 52.3%, and the industrial sector for the remaining 12.2%. This estimate is extrapolated from 2006/07 energy consumption data from energy retailers, ABS-based transport data and municipal waste to landfill emissions (excluding private waste collection services).

While Council has not estimated total net greenhouse gas emissions for the Port Phillip community (residents and businesses) for 2011/12 and 2012/13, it is estimated that community emissions are increasing. No further analysis is being undertaken at this time on community emissions due to the ageing and outdated dataset on which estimations are based, which makes any estimation highly unreliable.

**Community water use** – Total municipal-wide community mains water consumption totalled 8,449 ML in 2011/12. This represents a 4.2% increase over the previous year and a reversal of the downward trend experienced during the previous three years. Total community consumption increased by 341 ML during the year, with both the residential and non-residential sectors proportionally responsible for the increase. The result represents a total percentage reduction over the base year (2000/01) of 18% compared with a 21% reduction achieved in the previous year. Figure 5 outlines the community water consumption trajectory from 2000/01.

Household water consumption increased by 3.6% on the previous year, with an 11% reduction since 2000/01. Business water consumption increased by 5.6% on 2010/11, with a total business sector reduction of 32% since 2000/01. The commercial sector has therefore demonstrated larger increases in contrast to household water use, however household water use remains the larger user, comprising 71% of total community water use.

**Figure 5 Community water consumption history 2000/2012**



The key factors influencing increased water consumption are likely to include:

- removal of the State Government Target155 program in 2011
- general easing of concerns about supply security as a result of high dam levels and the construction of the desalination plant
- return to normal summer conditions from the previous wet summer.

Data for 2012/13 was not available at the time of writing, but will be included in the next Toward Zero Annual Progress Report.



**Community waste** – In 2012/13, total community waste (excluding private waste collection services) disposed to landfill was 20,834 tonnes. This represents a 6.3% increase since the 2005/06 baseline year, and a small decrease of 1.6% from the previous year. A total of 13,819 tonnes was recycled via kerbside recycling and the Resource Recovery Centre. Community waste diversion levels have remained constant at 39–40% since the 2005/06 baseline year.

With the introduction of hard and green waste and dumped rubbish recycling within Council's new waste collection contract (initiated in January 2013), Council is diverting an extra 100 tonnes of material from landfill per month. Should this trend continue through 2013/14, Port Phillip will record its highest ever levels of recycling.

Table 15 outlines key actions addressing municipal waste management delivered in 2011/12 and 2012/13:

**Table 15 - Progress in the delivery of the Waste Management Program**

Strategy	Actions and benefits
<b>Waste and recycling initiatives</b>	<ul style="list-style-type: none"> <li>• New hard and green waste and dumped rubbish recycling initiative diverting over 100 tonnes of material per month from landfill (2012/13).</li> <li>• New waste and recycling collection contracts to recycle all possible material from the hard and dumped rubbish streams.</li> <li>• Increased recycling services at the Port Phillip Resource Recovery Centre.</li> <li>• Improvements in gas capture technology at landfill sites (via contracted services).</li> <li>• Decrease in litter levels by 19% in 2012/13, resulting in a 60% decrease in predominantly beach-related litter since the baseline year of 2010/11.</li> </ul>
<b>Education</b>	Annual delivery of resource recovery and anti-litter education campaigns such as the No Cut No Butts Campaign in 2012/13.
<b>Measuring and monitoring</b>	<p>Full audit of residential waste and recycling streams (2012/13). The audit identified relatively low levels of contamination within the recycling stream (well under 10%) and noted the following opportunities:</p> <ul style="list-style-type: none"> <li>• Potential for a further 10% diversion of recyclable material from the waste stream</li> <li>• Potential for greater diversion of food waste from landfill – making up over 28% of the standard residential waste bin contents (by weight).</li> </ul>

### Case study – Recycling hard and green waste and dealing with dumped rubbish

Council's hard and green waste booking and dumped rubbish collection are two of Council's best used and most vital services. As part of the new contract for these service initiated in January 2013, all material collected will be processed and, where possible, recycled before the remainder proceeds to landfill. This means all mattresses, electronic waste, metals, timber and green waste are separated out and recycled. These services are extremely well used and are resulting in the following outputs each month:

- over 1,000 hard and green waste bookings, collecting over 110 tonnes of material
- an average of 750 dumped rubbish pickups, collecting over 55 tonnes of material
- over 65% of all material collected is recycled and diverted from the waste stream.

**Collection  
of dumped  
waste**



## 2.7.2 Community Sustainability actions and progress

Council's Community Sustainability programs are designed to engage the community to take action on climate change. The programs provide a mix of both direct reduction in environmental impacts and building community resilience.

Table 16 demonstrates that community participation in Council-run programs was significant over 2011/12 and 2012/13, with a steady total of 1,898 and 2,144 respectively across Council-led programs<sup>2</sup>. Participation figures for 2012/13 represent an increase in community participation of 1920% since the 2006/07 base year.

Council achieved this result through a range of sustainability engagement formats, including programs targeting households and businesses, education programs delivered with the Port Phillip EcoCentre and EnviroEvents, covering a range of sustainability topics of interest to the community. New initiatives for 2012/13 include the Sustainable Community Action Network, Indigenous Concepts of Sustainability, Schools Reducing Environmental Impact, Greenhouse Events, Green Building Week, and the 'Positive Charge' program. These are described later in this section of the report.

The 2011/12 and 2012/13 rates are lower than in 2010/11, the highest year for participation in Council-run programs. This is due to significantly fewer participants in the 'SOCs and Blocks' program (short for Sustainable Owners Corporations and Apartment Blocks) in 2012/13 (448 from 15 apartment blocks, compared with 1,943 from 25 apartment blocks in 2010/11).

**Table 16 – Community participation in Council-initiated sustainability programs, 2010/11**

Community Sustainability programs	Participation rates 2006/07	Participation rates 2011/12	Participation rates 2012/13
Total participation rates in Council program	106	1,898	2,144
Climate Challenge 1000	----	417	33
Challenge to Change	----	129	38
SOCs & Blocks	----	518	448
CitySwitch Green Office	----	17	10
EnviroEvents	----	443	543
Community leadership training	----	24	27
Tomorrow's Leaders (for schools)	----	100	260
Seedlings (formerly Low Carbon Early Childhood Services)	----	----	17
Sustainable Community Action Network	----	----	220
Positive Charge	----	----	53
Sustainable Energy Workshops	----	----	109
GreenBuilding Week	----	----	31
Garage Sale Trail	----	75	Not yet undertaken
Indigenous Sustainability Events	----	----	112
Sustainable Living @ Home	106	Program concluded	Program concluded
<b>Participation in other sustainability actions (not included in program participation figures above)</b>			
Showerhead Exchange (with South East Water)	334	226	91
Schools and Community Travel program	----	2831	4130

<sup>2</sup> These figures exclude the Showerhead Exchange, facilitated by Council for South East Water, and Council's School and Community Program; however, figures are provided for these initiatives in Table 12. These figures also exclude volunteer waste, planting and Community Pulse initiatives.



Council has estimated the measurable reductions from key Council programs detailed above. Table 17 outlines these reductions for 2011/12 and 2012/13 and demonstrates that participants in two key community programs saved a total of 893.6 tonnes CO<sup>2</sup>-e and 7,325 litres of water in 2011/12, and 61.4 tonnes CO<sup>2</sup>-e and 1,701 litres of water 2012/13 through their actions.

**Table 17 –Total community emissions and water use savings from key Council-initiated programs**

	Greenhouse savings (tonnes CO <sub>2</sub> -e)		Water savings (litres)	
	2011/12	2012/13	2011/12	2012/13
<b>Climate Challenge 1000</b>	849.8	43.8	3623	210
<b>Showerhead Exchange</b>	43.8	17.6	3702	1491
<b>Total Savings</b>	893.6	61.4	7325	1701

**Community and Schools Travel programs** – The Community and Schools Travel programs are part of the Council’s Walk and Bike plans and are designed to change travel behaviours and build capacity and skills for a walking and bike riding culture within the community. The program offers a range of initiatives from Defensive Riding courses, school travel planning, and events such as Ride2Work Day, walk to school days and bicycle op shop tours.

Table 18 outlines some of the indicators associated with this program. Travel programs were re-invigorated in 2011/12 and relationships have been rebuilt, from eight engaged schools in 2011/12 to 13 engaged schools in 2012/13. There are varied motivations for schools participating in the program. Some take part to address traffic concerns, others incorporate the program into their sustainability initiatives, and others feel it is a great way to improve student health and wellbeing.

**Table 18– Community and School Travel programs**

Action	Baseline year	Base year data	2011/12	2012/13
<b>Number of participants in COPP-run community initiatives</b>	2011/12	532	532	1375
<b>Number of schools participating in School Travel program</b>	2011/12	8	8	13
<b>Ride2School Day – number of participants</b>	2006/07	537	2299	2755



### Case study – Branding SustainAbility

In 2012, Council initiated a project to create a City of Port Phillip sustainability ‘brand’ as part of its Communication Strategy for Sustainability. The intention was to motivate our community to actively get involved in Council’s sustainability programs and to positively adopt more sustainable practices and behaviours. Research was undertaken to identify the key messages that resonated, and the communication channels that are most effective. Our new sustainability brand has been developed as a strong, visible, iconic and effective ‘call to action’. It has been applied to promotional materials, websites and communications for all our sustainability initiatives.





## 2.7.3 Community Sustainability Program highlights

### Challenge 2 Change

Participants in the 2011/12 program achieved an average weekly energy reduction of 20% through simple behaviour such as turning off unused lights, using heating efficiently, and reducing standby power use. Participants included 129 people from households, environmental teams from the St Kilda North Childcare Centre and St Kilda Primary School, and Council staff at the St Kilda Town Hall. Collectively, participants avoided 173 kilograms of greenhouse gas emissions in one week of action.

### SOCs and Blocks

The 'SOCs and Blocks' program (short for Sustainable Owners Corporations and Apartment Blocks) aims to assist owners corporations with the uptake of sustainability initiatives for the common areas of apartment blocks in order to reduce their environmental impact. Site audits are conducted for each block, with the owners corporations receiving a comprehensive assessment report identifying sustainability initiatives including potential savings and payback periods. The third and fourth year of this program resulted in a good response from owners corporations, with 35% indicating they were likely to act on the opportunities identified, and 70% indicating the program had improved their capacity to respond to climate change. The program engaged 966 apartments over both years, and at least as many individual participants. This program will conclude in 2012/13, as it has become increasingly harder to recruit apartment blocks.

### Tomorrow's Leaders for Schools

This program supports Port Phillip schools to progress their sustainability journey and is delivered by the EcoCentre Education Team. It is an integrated program of educational, practical project, and leadership activities targeting primary and secondary schools as well as the Port Phillip and Bayside Teacher's Environment Network for teachers in our region. Schools that have participated in this program over the last two years include Elwood College, Albert Park College, St Mary's Primary School, Christian Brothers College and Montague Continuing Education Centre. In the last two years the program has successfully expanded the number of schools and participants taking action for sustainability, and has inspired more teachers to join the Port Phillip and Bayside Teacher Environment Network.

### Low Carbon Early Childhood Services

This project has engaged a range of early childhood centres and services to measure current energy use. Council has developed tools to track environmental impacts and communicate how to use the buildings more efficiently, saving resources for both the centres and the community. This project has led to a Victorian Government Sustainability Accord partnership project with four other councils in 2011/12 to develop a framework for sustainability in the early childhood service sector.



## Indigenous Concepts of Sustainability

Sustainability events incorporating Indigenous perspectives were introduced in 2012/13 as part of the Indigenous Concepts of Sustainability program. Bush Tucker Gardening at St Kilda Sea Baths introduced native flavours from cooking by Auntie Carolyn Briggs, and the uses of indigenous plants with the EcoCentre's Neil Blake. Two further Cultural Heritage Walks from the Ngargee Tree were held to explore this significant gathering place. Finally, the World Environment Day arts/sustainability event in June featured Indigenous craft workshops and dance performances, teaching stories of the Boon Wurrung. These events were delivered with the support of the Port Phillip EcoCentre and the Boon Wurrung Foundation, and are an action under the City of Port Phillip Reconciliation Action Plan.

## 'Creative SustainAbility' World Environment Day event and exhibition

World Environment Day is celebrated every year to raise global awareness of the need to take positive environmental action. On 6 June 2013, over 180 participants celebrated the connections between sustainability and the arts at the Creative SustainAbility event at the St Kilda Town Hall. To coincide with the event, an exhibition of local artworks inspiring care for our environment was held in The Gallery. The event inspired visitors to think creatively about what we can do to respond to the challenges and changes in our environment. Participants reignited their creative abilities through the arts activities infused with sustainability. These included:

- indigenous plant illustration
- sustainable ikebana: Japanese flower arrangement using native plants
- natural indigo dyeing
- Indigenous craft
- puppet-making from recycled materials
- creating an 'interactive mandala' with found plastics
- bike decoration
- SustainAbility poster making.

The feature activity involved learning Boon wurrung stories performed through dance and storytelling.

## Green Business Environmental Leadership Pilot Program

Businesses in St Kilda Village participated in the Green Business Environmental Leadership Pilot Program during May and June 2013. This program was developed and undertaken with the assistance of the Port Phillip EcoCentre and with support from the St Kilda Village Traders Association. Sustainability initiatives included:

- organising Council recycling services for businesses
- setting up an organic waste disposal program with the EcoCentre
- organising energy efficient lighting upgrade quotations for local businesses
- installing fridge timers on non-perishable refrigeration systems
- organising electricity quotations to supply businesses with 100% GreenPower.



**Bush Tucker  
Gardening  
Event at St  
Kilda Sea  
Baths**



**Creative  
SustainAbility  
Event  
Mandala**

The savings made by businesses so far, both financially and environmentally, have been substantial. Total savings for the 31 participating businesses was in excess of \$27,000 per annum, with a reduction of over 1,180 tonnes of greenhouse gas emissions per year. This equates to an average saving of \$875 and 38 tonnes of greenhouse gas emissions per business.

### Port Melbourne Bikefest

The inaugural Port Melbourne Bikefest was held on Sunday 3 March where streets were 'car free' and closed to traffic from Beach Road to Bridge Street. The day featured something for bike riders young and old, new and experienced, curious and committed. The event was presented by the Port Melbourne Traders Association (PMTA) and supported by Council.

The festival attracted around 10,000 attendees and reached over 2 million people through radio, print, websites, blogs and social media coverage. Bikefest is the first of its kind for City of Port Phillip and helped to realise one of Council's goals: to create a bike riding culture within our city in order to decrease car-dependent behaviour. At Bikefest Council staff provided roving advice on journey planning by bike, walking or public transport, promoting upcoming bike events and courses and the 'look out for riders' car dooring message. There was a good representation of bicycle 'tribes' and a positive link to pressing road safety issues.

### Case study – No Cuts No Butts Campaign 2012/13

Results from the third year of the No Cuts No Butts campaign delivered in 2012/13 have again demonstrated the positive impact of this anti-litter education program. Port Phillip's beach rangers carried out 391 litter audits and 167 one-on-one surveys, with results indicating an overwhelming success. The data gathered shows that the average amount of litter (including cigarette butts and broken glass) has fallen by over 60% since the start of the campaign in 2010.

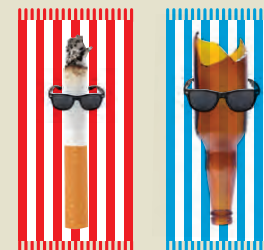
One-on-one survey data results show that 95% of interviewed beach users thought the banning of cigarettes and glass on the beach was a 'great idea', while 98% rated the beach cleaning as satisfactory or better. Furthermore awareness was raised around the vital connection between litter dropped on our streets to that washed up on our beaches.



No cuts  
No Butts  
campaign

It's not cool to bring  
ciggies or stubbies  
onto the sand.

Cigarettes and glass litter our beaches and can harm people, marine wildlife and our environment. As of November 2010 the City of Port Phillip has banned smoking and glass on the sand at all of our beaches.





## Ride2School Day

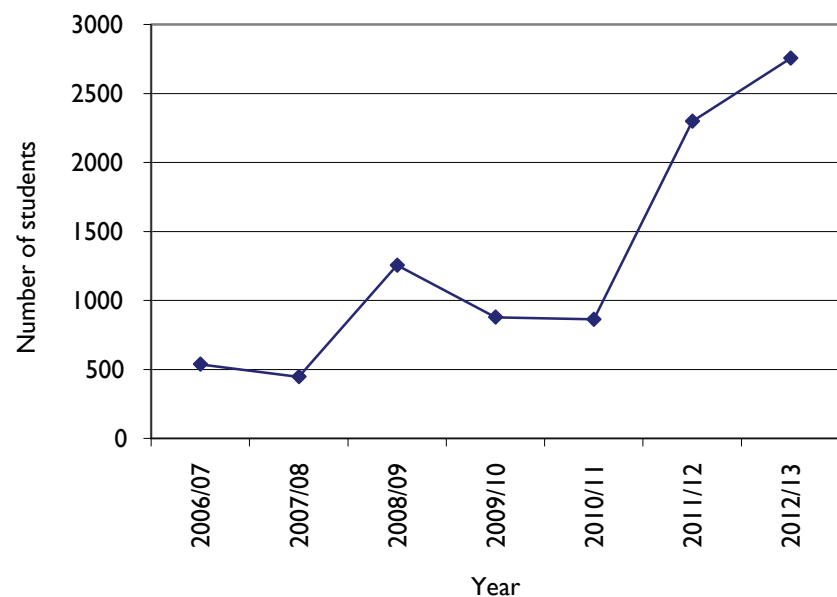
Ride2School Day is a yearly behaviour change event to encourage students to ride, walk, scooter or catch public transport to school. As 17% of morning peak hour in metropolitan Melbourne consists of car traffic due to school travel, this event is highly promoted by Council to schools.

In 2012, Ride2School Day saw a 48% jump in active travel, with 52% of children using active travel to reach school before the day and 77% on Ride2School Day itself. St Michael's Grammar experienced a 35% drop in car travel on its Ride2School Day. This result had some parents commenting about the noticeable decrease in traffic congestion in Marlton Crescent.

In 2013, ten schools across the municipality celebrated Ride2School Day with healthy breakfasts, bike decorating competitions and bike trick demonstrations. Data showed 81% of students travelled by foot, bike, scooter or public transport, with 50% of students riding.

Figure 6 illustrates the steady increase in participants in Ride2School Day since 2006/07, with a dramatic increase experienced over the last two years.

**Figure 6: Ride 2 School Day Uptake**



Ride2School  
Day at Port  
Melbourne  
Primary  
School.



## 2.7.4 Engaging community in sustainability action beyond Council programs

### Sustainability Community Action Network (SCAN)

In August 2012 Council established SCAN to directly support the community in growing its capacity to take action on climate change. SCAN aims to involve the community in working towards achieving Council's ambitious targets for water savings, greenhouse gas emissions reduction and waste reduction. SCAN is designed as a network of community collaboration to assist individuals and organisations to stay connected with each other and to facilitate collaborative relationships. Anyone working in the community on sustainability projects or with the capacity to get involved in local action is welcome. Individuals, members of community groups, leaders and enablers come together each quarter to generate new ideas and deliver outcomes.

To date, SCAN has worked to generate ideas around improving community sustainability, and has seen local groups deliver presentations on environmental projects across the City of Port Phillip showcasing community action. The most recent function in May 2013 focused on creating change through advocacy.

### LIVE Community Power

In August 2012, Council allocated funding to community group Locals Into Victoria's Environment (LIVE) to carry out a feasibility study on options for generating renewable energy on the new South Melbourne Market car park roof. In company with a group of consultants and City of Port Phillip officers, LIVE developed an economic model.

Over 50 people attended the first 'LIVE Community Power' community meeting in May 2013, at which the project team answered many questions. The team appointed volunteer leaders for each of the key project areas: finance, marketing, project management and legal. A specification for quotation for solar power installers for the South Melbourne Market rooftop has been finalised, and the project will continue to address financial and technical barriers in 2013/14.





# 3 CONCLUSIONS

The Annual Toward Zero Progress Report demonstrates that Council is in taking action around the following key sustainability challenges:

- Toward Zero Greenhouse Emissions
- Toward Zero Potable Water Use
- Toward Zero Contamination and Pollution
- Sustainable Transport
- Sustainable Urban Design and Development
- Toward Zero Climate Change

Increased efforts are required around commencing and sustaining action on:

- Toward Zero Net Loss of Heritage
- Toward Zero Waste
- Sustainable Purchasing and Procurement

Council intends to incrementally improve the parameters around which it reports, and this report represents a significant expansion on 2010/11, with the inclusion of detailed Sustainable Transport and Climate Adaptation sections.

In 2013 Council adopted its new Council Plan 2013–2017. Key actions in 2013/14 that will help Council delivers on its Toward Zero 2020 targets include:

## For Council operations:

- Minimising waste through recycling and reduced consumption
- Advocating to State Government for a statewide waste management strategy
- Demonstrating leadership in sustainability in our organisational practices
- Seeking opportunities for Council and the community to produce renewable energy
- Reducing Council's non-renewable energy use and source alternative renewable energy options
- Developing a policy that protects heritage and accommodates sustainability
- Partnering with others to improve the quality of water in the Bay and deliver stormwater harvesting projects
- Partnering with others to take local and Baywide action to address the impacts of climate change (including sea level rise, flooding and heatwaves)
- Further progressing and implementing water-sensitive urban design

## For our community:

- Encouraging, growing and supporting community and individual leadership, capacity and action
- Helping people to understand climate issues, the impacts and how we can adapt
- Supporting the community and schools in travel planning for safe bike riding, walking and public transport in local areas
- Building a connected network of community groups and leaders and increasing the number of people involved in sustainability programs

Progress on these actions will be included in Council's quarterly reporting on the Council Plan, and in the next [Toward Zero Annual Progress Report \(Year 7\)](#).



Ride2School  
Day at Port  
Melbourne  
Primary  
School.





E [enviro@portphillip.vic.gov.au](mailto:enviro@portphillip.vic.gov.au)

T 03 9209 6548

