National Carbon Offset Standard
Carbon Neutral Program
Public Disclosure Summary

CITY OF MELBOURNE

An Australian Government Initiative

1. Organisation and Product Information

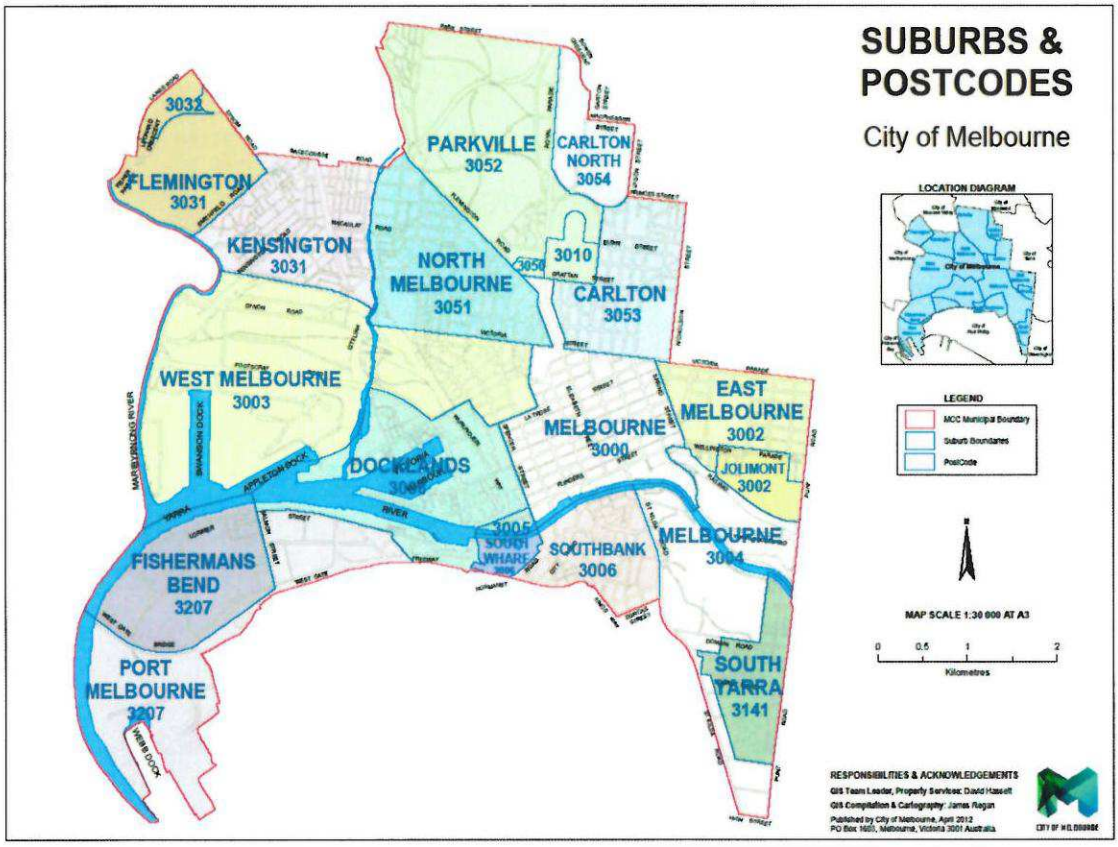
Table 1: Organisation and Product Information

Organisation Name	City of Melbourne	
Name of the subject(s) of certification	City of Melbourne	
Type of certification (tick all applicable)	✓ Organisation ☐ Part of organisation	
Reporting year period	From 1/07/2013	30/06/2014
Emissions in this reporting year	51,030 t CO2-e	
Base year period[1]	From 1/07/2011	30/06/2012
Emissions in the base year	52,059 t CO_2-e	

[1] First year for which the GHG Inventory has been completed – this will be considered to be the base year against which emission reduction activities will be measured.

2. Description of Organisation Activities

Figure 1: City of Melbourne geographical boundary



Melbourne is the state capital of Victoria and is Australia's second largest city.

The City of Melbourne ('the City') is the local government authority responsible for the Melbourne city centre and fourteen surrounding inner-city suburbs. The municipality covers 37.7 square kilometres and has a residential population of 116,431 (CoM Annual Report 2013-14). On an average weekday, more than 800,000 people work in or visit the city, and Melbourne hosts over a million international visitors each year.

The City of Melbourne is formally known as the Melbourne City Council and is one of 79 city and shire councils in Victoria operating as a public statutory body incorporated under the Victorian *Local Government Act 1989*.

As a local government authority, the City of Melbourne strives to achieve its community's vision of a bold, inspirational and sustainable city – a great place for people to live, work and visit.

Services and Facilities

The City of Melbourne is responsible for maintaining an extensive range of facilities and delivering a large and diverse number of services. The community infrastructure maintained by the City includes roads, bridges, drains, town halls, libraries, recreation facilities, childcare centres, community hubs, event venues, parks and gardens.

The majority of the City's operations are run out of three main administrative buildings in the central business district including the Melbourne Town Hall, Council House 1 and Council House 2.

Additional operations are run out of a number of external sites and facilities located throughout the municipality. The City owns and/or operates more than 350 buildings, parks, gardens and other facilities.

The services provided by the City include property, economic, human, recreational and cultural services. The City also enforces state and local laws relating to matters such as land use, planning, environment protection, public health, traffic and parking and animal management.

Below is an overview of the services and operations undertaken by the City of Melbourne during 2013-14:

- Animal management
- Community and cultural services
- Event management and sponsorship
- Health services
- Local laws
- Parks, gardens and open space
- Planning and building
- Recreation services
- Roads and parking
- Strategic planning
- Sustainability
- Waste management

Strategies

In April 2012, Melbourne City Council endorsed the *Carbon Neutral Strategy for Council Operations*. In 2013 the City first achieved carbon neutral certification for the 2011-12 financial year.

In addition to the above strategy, the *Zero Net Emissions by 2020 Strategy (ZNE Strategy)* originally launched in 2002 set an aspirational target for the municipality to become carbon neutral by the year 2020. An update of this strategy was endorsed by Melbourne City Council in February 2014, which commits the City of Melbourne to maintain its status as a carbon neutral organisation.

In the twelve years since the launch of the ZNE strategy, the City has built strong foundations to reduce the carbon footprint of Council operations as well as implementing programs to encourage carbon emission reductions for the municipality as a whole.

This work has included collaborating with residents and businesses through leading outreach programs like *1200 Buildings, City Switch* and *Smart Blocks* to support and incentivise the active retrofitting of Melbourne's built environment.

The City has also designed and built its own low emissions buildings such as Council House 2, East Melbourne Library, and Docklands Library. These actions allow the City to reduce emissions from its operations, while also showcasing and promoting innovative green building designs.

To continuously improve the performance of existing buildings, the City entered into a significant Energy Performance Contract (EPC) to increase the efficiency of a number of its buildings. More details of these actions can be reviewed in Section 9 *Emission Reduction Measures*. Although the works part of the EPC is complete, the contract guarantees 1,560 tCO_2-e savings per year until 2020.

3. Organisational & Geographic Boundary/ Scope & system Boundary

The City of Melbourne Emissions Boundary

To determine its emissions boundary, the City has applied the GHG Protocol's *Corporate Accounting and Reporting Standard*:

- *Organisational boundary:* The City uses the operational control approach for measuring and reporting on the organisation's emissions. The City includes emissions from all activities over which we have full operational control (as shown in Figure 2).
- *Operational boundary:* The emissions inventory includes direct emissions sources (scope 1), emissions from purchased energy (scope 2) and other measurable indirect sources (scope 3) that are material to the City's operations (see Figure 3).

Summary of emissions sources

A summary of the City's emissions sources by scopes are listed in Table 2.

Table 2: Emissions sources by scope

EMISSIONS SOURCE	SCOPE
Natural gas	1, 3
Transport fuels	1, 3
Stationary fuels	1, 3
Refrigerants	1
Grid electricity	2, 3
Transport	3
Waste disposal	3
Reticulated water	3
Subsidiaries	3
Supply chain	3
Staff and volunteer travel	3

Emissions methodology
Quantitative data from our utility retailers and/or contractors was used wherever possible. Where no source data was accessible, CoM's financial data was used to estimate emissions. Emissions based on financial data accounted for 0.1% of total emissions (traffic engineering, promotion paper, Myki staff & volunteers, hire cars, courier, postage and taxis).

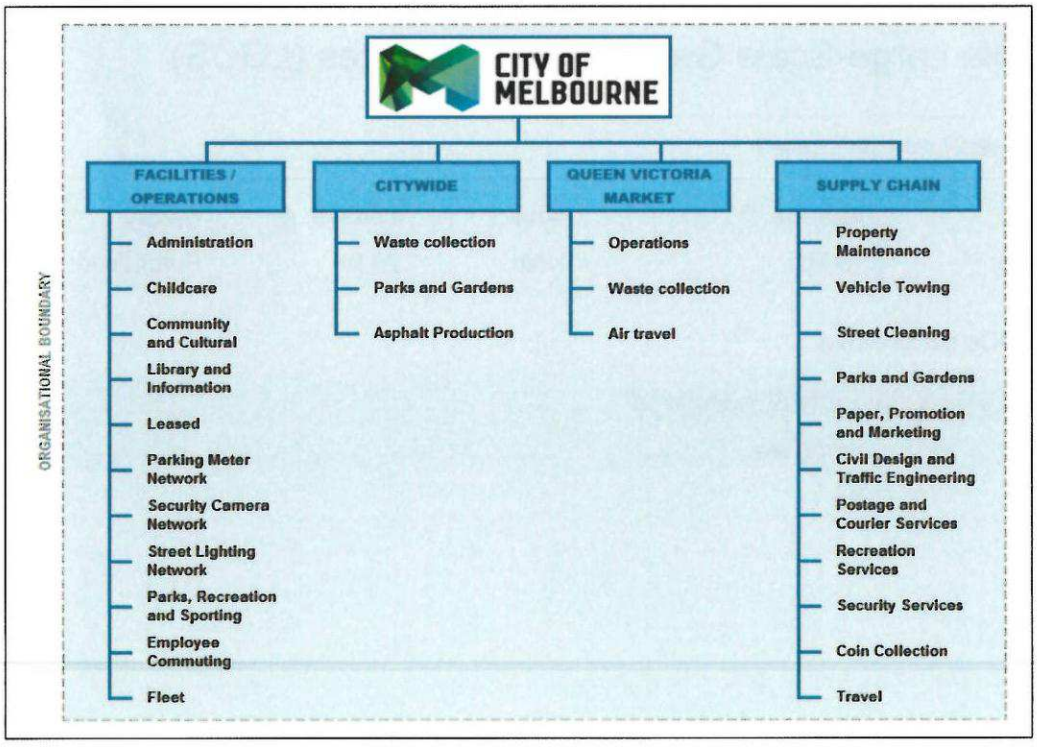
Melbourne's emission sources
Aligned with the emissions boundary, the City of Melbourne has included all measurable scope 1 and scope 2 emissions within its organisational boundary, and a number of scope 3 emissions that are material to the City.

A facilities review was undertaken that resulted in eight additional facilities being included in the inventory this year – the new Docklands Library, and seven other facilities in which CoM is considered responsible for the operation of the building or provision of services. The additional facilities included are:
- North Melbourne Town Hall (ground floor leased area);
- Four Childcare facilities (Docklands, Fawkner Park, Kensington, Harbour Family and Children's Centre);
- Carlton community centre; and
- North and West Melbourne Neighbourhood Centre.

4. Diagram of the Boundary of the Subject of Certification

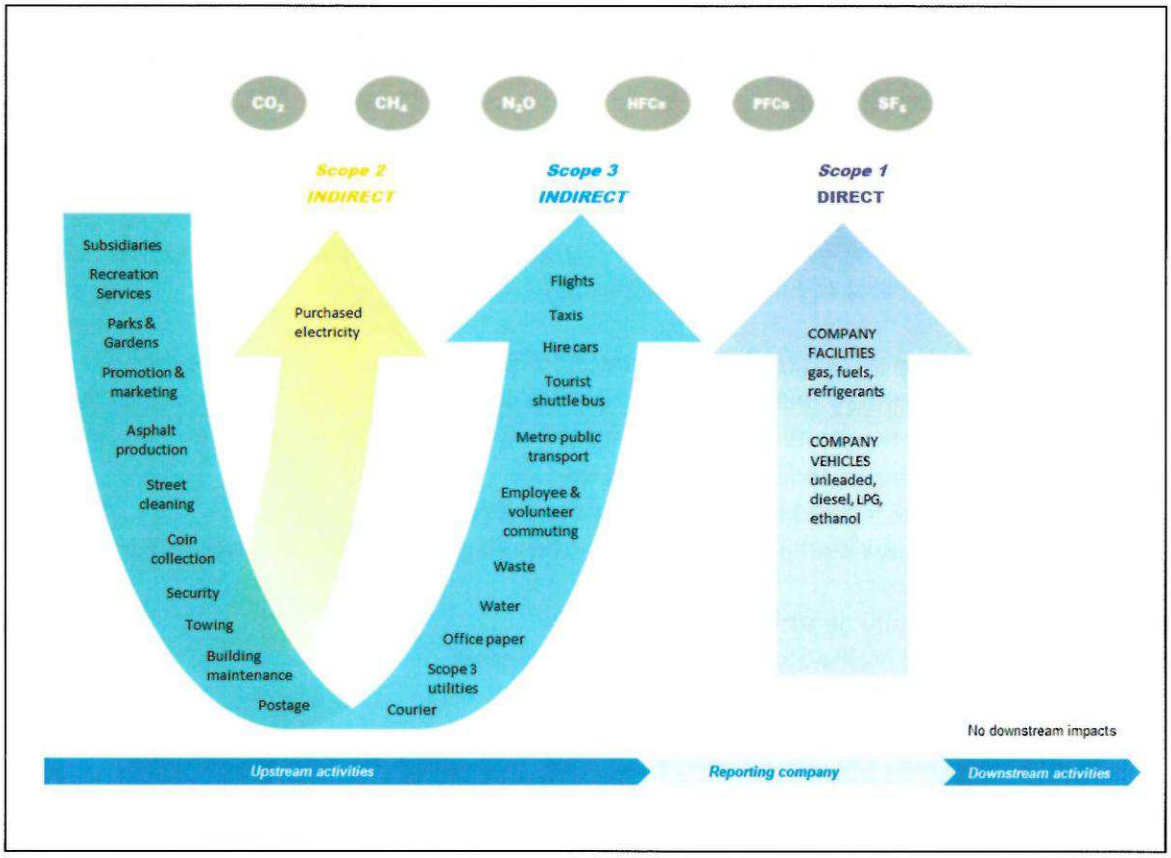
The City of Melbourne reporting structure can be seen below in Figure 2. CoM reports emissions from its facilities and operations, its 2 subsidiaries (Citywide and Queen Victoria Market) and its supply chain.

Figure 2: City of Melbourne organisational reporting structure



CoM reports the scope 1, 2 & 3 emissions sources outlined below in Figure 3.

Figure 3: City of Melbourne emissions included



5. Purchase of GreenPower and Retirement of GreenPower Eligible Large-Scale Generation Certificates (LGCS)

Table 3: GreenPower purchased

Type	Volume	Unit	t CO_2-e	Status
GreenPower™	15,981	kWh	21.09	Purchased

Table 4: LGCs surrendered

Details of LGCs Voluntarily Surrendered	
Quantity	**Serial No.**
0	NA

6. Purchase of NCOS Carbon Neutral Products

Table 5: Carbon Neutral products

Product/service	Company	Quantity	Units	t CO_2-e (if known)
Green Wrap Pure 100% Recycled Carbon Neutral	Fuji Xerox	5,195	A4 reams	Unknown
Green Wrap Pure 100% Recycled Carbon Neutral	Fuji Xerox	787	A3 reams	Unknown
Monza Satin Art CN (455mm x 650mm)	Complete Colour	15	reams	Unknown
Monza Satin Recycled FSC CN	Complete Colour	5	A3 reams	Unknown
GreenPower	AGL	15,980.368	kWh	21.09
			Total (known)	**21.09**

7. Total Carbon Footprint

Table 6: Emission sources, scopes and quantities

Scope	Emission source	t CO_2-e
3	Asphalt Production	448.45
3	Chemicals	24.66
2 & 3	Electricity	36,677.78
3	Expenditure	271.89
3	Flights	284.31
1 & 3	LP. Gas	0.7
1 & 3	Natural Gas	2,588.20
3	Office Paper	188.18
3	Office Services	43.01
1	Other Gaseous Fuels	0.01
1 & 3	Public Transport	57.88
1	Refrigerants	90.5
1 & 3	Stationary Fuel	214.17
1 & 3	Transport Fuel	7,305.56
3	Vehicle Hire	0.57
3	Waste	1,092.35
3	Water	1,790.09
Total carbon footprint in t CO_2-e		**51,030**

8. Carbon Offset Purchases and Retirement for this Reporting Period

Offset Purchasing and Cancellation Strategy

The City of Melbourne has continued to use a panel of offset providers who are engaged to purchase all offsets required on an annual basis.

The City of Melbourne will work with its offset providers to procure offsets that meet the established Principles as outlined in its Carbon Neutral Strategy.

60,000 tCO_2-e of offsets have been bought for 2013-14 financial year. The City of Melbourne, in general, will seek to purchase and retire a 5% surplus of offsets. This buffer covers any potential margin of error in inventory or carbon offset calculations. These offsets will not be banked for future years. Any offsets purchased above and beyond the 5% surplus may be applied to subsequent years.

Table 7: Offsets purchased

Offset type	**Registry**	**Serial number**	**Quantity (t CO_2-e)**
VER	Markit	GS1-1-ML-GS414-18-2012-1274-40671 to 100670	60,000
		Total	**60,000**

Surplus Cancelled Offsets

Offsets were forward purchased for the 2012-13 Financial Year. The surplus from the forward purchased offsets for 2012-13 FY beyond 5% of the GHG inventory for that year comes to 9,120 tCO_2-e. This has been applied to the 2013-14 FY inventory. From 2013-14 onwards, forward purchasing of offsets will not be undertaken.

44,372 t CO_2-e of offsets were required to be retired in 2013-14 (Document 1).

Table 8: Offsets required

	t CO2-e	***Calculation notes***
Total offsets required	53,582	51,030 + 5%
Total offsets carried over from previous year	9,210*	
Total offsets retired this year	44,372**	53,582 – 9,210

* Excess offsets retired in 2012-13 and carried over

** Retired 44,512 rather than 44,372 required. Slight changes in calculations were made after retirement.

Table 9: Offsets retired

Offset type	Quantity (tCO2e)	Registry	Serial number
Offsets bought in 2013-14			
Gold Standard Voluntary Emissions Reductions (VER) credits. *Improved Household Charcoal Stoves in Mali*	60,000	Markit Registry	GS1-1-ML-GS414-18-2012-1274-40671 to 100670
Offsets retired for 2013-14			
Verified Carbon Standard (VCS)* *Wayang Windu Phase 2 Geothermal Power Project*	9,120	Markit Registry	2536-108321879-108376878-VCU-009-MER-ID-1-688-04032009-01122010-0
Gold Standard Voluntary Emissions Reductions (VER) credits. *Improved Household Charcoal Stoves in Mali*	44,512**	Markit Registry	GS1-1-ML-GS414-18-2012-1274-40671 to 85182
Totals			
Total Retired	53,582		
Total Remaining	15,488		

** Retired 44,512 rather than 44,372 required. Slight changes in calculations were made after retirement.

9. Emission Reduction Measures

Emissions Reduction Strategy

City of Melbourne first achieved carbon neutrality for council operations for the 2011-12 Financial Year and will continue to implement best practice approaches to further reduce emissions. We will continue to demonstrate leadership in sustainable practices by reducing electricity and fuel demand, improving energy efficiency and switching to less carbon intensive fuel sources. We will prioritise reducing emissions through improvements to our operations over purchasing offsets.

In April 2012, Melbourne City Council endorsed its *Carbon Neutral Strategy (Council Operations)* (Document 2). This strategy sets out the City's key priorities regarding becoming carbon neutral for its operations.

In addition to the *Carbon Neutral Strategy (Council Operations)*, the *Zero Net Emissions by 2020 Strategy (Update 2014)* for the municipality was endorsed by the Melbourne City Council in February 2014 (Document 3).

The updated *Zero Net Emissions by 2020 Strategy* commits the City of Melbourne to maintain its status as a carbon neutral organisation. Although Council operations make up less than one per cent of the greenhouse gas emissions of the municipality, the City plays a major role in bringing stakeholders together to work towards this goal, and setting an example of best practice.

The *ZNE Strategy* encompasses the actions the City will take to reduce emissions from our operations, as well as actions we will take to work towards the municipality achieving a zero net emissions outcome.

The four-year targets for Council Operations are to:

1) maintain our carbon neutral accreditation; and
2) reduce greenhouse gas emissions by 10% by 2018 (based on 2010-11 baseline).

ELECTRICITY (72% of total emissions, scope 2 and 3)

The City of Melbourne owns or operates more than 350 buildings, parks, gardens and other facilities. In 2010 the City engaged Honeywell Engineering to implement an Energy Performance Contract (EPC) to retrofit 13 of CoM's largest buildings. The works part of this EPC has now ended however the contract guarantees annual emissions savings of 1,560 tonnes every year until 2020.

The City is committed to further reducing electricity usage from the 2011-12 baseline. The main uses of electricity are street lighting and Council facilities.

Under the *ZNE Strategy (Update 2014)*, by 2018 the City will:

- Continue to trial sustainable (energy efficient) street lighting technologies that contribute to low emission to help develop a city-wide rollout of sustainable street lighting.
- Trial low emissions technologies on council buildings.
- Upgrade existing buildings, as appropriate, to meet current environmental standards. This will include a range of passive energy control methods from insulation and ventilation through to solar hot water and photovoltaic panels.
- Investigate opportunities for precinct energy solutions for council facilities.
- Undertake NABERS ratings for council's largest buildings and make these ratings public.

The City will also:

- Release an energy reduction plan for our existing buildings that outlines our approach for achieving significant emissions reductions from building energy consumption including investigating options for office accommodation and fit-outs that optimise energy and space efficiency.
- Develop minimum environmental design standards for new council buildings.
- Release a green information technology plan that explores opportunities to reduce energy used by information technology infrastructure.
- Enhance sustainable buildings knowledge and capacity in City of Melbourne to provide internal and external advice.

Street Lighting

The *City of Melbourne Public Lighting Strategy 2013* (Document 4) was endorsed by Melbourne City Council in August 2013. One of the principal recommendations of strategy is the replacement of mercury vapour street lights with more energy efficient lighting. A second recommendation in the action plan is to replace all metal halide and high pressure sodium lights. Converted fittings will use less power and need less maintenance. Overall power used for street lighting is expected to drop by approximately 40 per cent.

The Public Lighting Strategy has outlined the following actions:

- Promote and apply energy conservation practices.
- Implement the actions from the energy efficiency audit for metered lighting assets (including car parks, sports facilities, parks and gardens).
- Reduce the amount of power consumed by public lighting.
- Reduce the amount of power consumed by metal halide and high pressure sodium public lighting at a cost of $13.1 million, and annual savings of $1.5 million and 6,300 t CO2-e.
- Introduce a waste management plan for Melbourne's public lighting system.
- Collect environmental data.

Facilities

In addition to the Honeywell contract mentioned above, CoM's Property Services branch completed the following works:

- Undertook NABERS ratings on City Village and Council House 1.
- Upgraded the air-conditioning unit at North Melbourne Library.
- Upgraded the main plant and equipment at Council House 1.
- Completed voltage power optimisation works, heating ventilation and air-conditioning upgrade, lighting control upgrade at City Village.
- Undertook remedial works on the solar panels at Queen Victoria Market.

SUPPLY CHAIN

Council is committed to continually measuring and reducing its impact on the environment, through its own activities, through the activities undertaken by its subsidiaries, and the activities undertaken on its behalf by service providers.

To reduce impacts associated with our supply chain, the City's Zero Net Emissions Strategy commits to undertaking the following initiatives:

- undertake a review of opportunities to reduce the impacts associated with our supply chain and develop a plan to implement initiatives;
- require environmental reporting by providers of major impact services and products;
- increase the number of major contracts for carbon neutral services; and
- ensure all building projects achieve a rating of at least five star Green Star (or equivalent) where 50 per cent or more of the building is being renovated.

CITYWIDE

Citywide is a wholly-owned subsidiary of the City of Melbourne, and provides open space, environmental and civil infrastructure services. As the City does not have operational control of this entity, we have included emissions associated with work undertaken for the City as a scope 3 emissions source.

The City runs competitive tender processes for all open space, environmental and civil infrastructure services, making Citywide subject to the conditions of these tenders. As mentioned above, the City is engaging with contractors to reduce their environmental impact through the *Sustainable Procurement Project*.

In 2013-14, Citywide used 5,378 tonnes of Greenpave for the CoM contract, which is an alternative to traditional hot mix asphalt. Greenpave produces 30% less greenhouse gases and provides energy savings of up to 30% over traditional asphalt production.

The reported emissions from Citywide increased in 2013-14 due to improvements in the data management and reporting procedures utilised by Citywide. These process improvements have resulted in Citywide now reporting a more complete set of data than was previously available. The overall impact of this increase has resulted in Council's overall emissions increasing by 4% from last year. A review of Citywide's historical data will be undertaken to allow CoM to update previous inventories as needed.

WATER

The City of Melbourne passed an update to its Total Watermark: City as a Catchment strategy in February 2014. This strategy sets out our plan for integrated water cycle management for the next four years. This strategy has set new targets and objectives:

Table 10: targets set in the Total Watermark: City as a Catchment strategy

	2018 targets	**2030 targets**
Water use	30% of all water use sourced from alternative water sources.	50% of all water use sourced from alternative water sources.
Water for the environment	20% reduction in Total Nitrogen contributed to the waterways from the municipality of Melbourne's catchment (baseline year 2000).	30% reduction in Total Nitrogen contributed to the waterways from the municipality of Melbourne's catchment (baseline year 2000).

The City of Melbourne was a winner in the Research and Innovation category of the Stormwater Victoria Excellence Awards and received a highly commended award for the stormwater harvesting projects. This award was received for undertaking an impressive analysis of the water needs of its trees, developing a life expectancy for each tree and mapping this across a GIS platform to enable better management of its urban forests.

Using dendrochronology, or a study of the trees growth rings, it has identified the best watering aspects to maximise tree lifetime and has used this information to identify best watering practices. This information was utilised to develop a business case to expand the cities stormwater harvesting practices so that 50% of the cities irrigation water needs could be met utilising stormwater.

In 2013-14 3 major stormwater harvesting projects were completed, which has increased our storage capacity by 43%.

QUEEN VICTORIA MARKET

Queen Victoria Market Pty Ltd (QVM) is a wholly-owned subsidiary of the City of Melbourne and has operated since July 1997 to manage and develop the Queen Victoria Market site. QVM occupies seven hectares within the Melbourne Central Business District and has been operated by the Council or QVM for 130 years. As the City does not have operational control of this entity, their emissions have been included as a scope 3 emissions source.

QVM is included in the City of Melbourne's Energy Performance Contract with Honeywell. Any viable energy and water efficiency opportunities at QVM will be implemented by Honeywell to contribute to the overall energy reduction required by this contract. QVM also has solar panels installed onsite and generated approximately 73,904 kWh for this reporting period.

OTHER SOURCES

Other sources emissions reduction projects

Corporate fleet

The City of Melbourne won the 2014 Australasian Fleet Management Association Fleet Environment Award for its Triple Bottom Line vehicle procurement model (Document 5).

This award recognised the achievements of the City's Fleet Management strategy. The original Fleet Management strategy was developed in 2002 and aimed to reduce Council greenhouse gas emissions by 30% by the year 2010 (baseline 1996). This target was increased to 50% reduction in 2007 and was achieved during 2008. The target was further increased in 2010 to 70% and this was achieved in 2012.

The strategy also aimed to change the culture of travel behaviour and promoting 'Active Melbourne' by educating staff on the benefits of staying healthy and active, including encouraging the take up of sustainable transport modes such as ride to work, using electric bikes and easier access to public transport. This ongoing initiative has enabled the City to steadily reduce overall fleet numbers.

The current fleet consists of 15% hybrid electric vehicles and 10% fully electric vehicles. This has improved fuel consumption by 50-100% compared to previous petrol or diesel models.

There are currently 30 electric bicycles available for use by all staff. These were first introduced in 2006.

As of June 2014, the City of Melbourne has achieved 72% reduction in greenhouse gas emission from its baseline in 1996. There has also been a 33% fuel reduction since 2009.

Staff behaviour and development

To reduce emissions associated with staff, the City has:

- made a commitment to reduce Council's printing and paper costs within in the Melbourne City Council Enterprise Agreement (EA) 2013; and
- developed two new staff training modules titled 'Sustainability Basics' and 'Beyond Sustainability Basics' to offer specialist training and promote opportunities for staff across all work areas to contribute to CoM's sustainability agenda.

Waste

In 2014 the City received a WasteWise accreditation for 2012-13.

Emissions Reduction

Table 11: Emissions reduction projects

Emission source	Reduction Measure	Scope	Status	Reduction t CO_2-e
Council facilities	Electricity and water – Honeywell Energy Performance Contracting (see actions above)	2	Implemented this reporting period	1560
	Total emission reductions implemented in this reporting period			1560
	Total expected emission reductions in future reporting periods			1560 / year

11. Declaration

To the best of my knowledge and having implemented the quality controls and standards required under the NCOS Carbon Neutral Program and made all appropriate inquiries, the information provided in this Public Disclosure Summary is true and correct.

Dr Kathy Alexander

Name of Signatory

Signature

Chief Executive Officer

Position / Title of Signatory

12/11/2014

Date

Supporting Documentation

Document 1	Offset retirement certificate	Markit Registry
Document 2	Carbon Neutral Strategy (Council Operations)	CoM website
Document 3	Zero Net Emissions by 2020 Strategy	CoM website
Document 4	City of Melbourne Public Lighting Strategy 2013	CoM website
Document 5	Fleet award	Australasian Fleet Management Association website