

State of the Environment Report



2006/2007

city of villages

State of the Environment

Our city's future
is based on a vision of
environmental sustainability:
live green

The City's infrastructure, policies and procedures are designed to achieve the goal of sustainable communities and due consideration of natural systems. In partnership with the community, the City respects and cares for the environment and takes action to safeguard the beauty of the landscape.

The City's Environmental Management Plan (EMP) was approved by Council on 25 June 2007. The EMP established the environmental vision for our city and set targets and priority action for clean air, less waste, and efficient use of energy and water.

This State of the Environment document provides an annual reporting mechanism to monitor progress toward achieving the EMP goals.

The City of Sydney Environmental Management Plan can be viewed online

www.cityofsydney.nsw.gov.au/EMP

NOTE:

Councils in NSW are required to prepare an annual State of the Environment Report to document environmental trends and programs. This report contains information about environmental issues within the City of Sydney local government area (LGA) for 2006/07.

For latest information about environmental trends, issues and programs see

www.cityofsydney.nsw.gov.au/Environment

For information about environmental programs contained within this report, telephone the City of Sydney on 9265 9333.

City of Sydney is committed to reducing our impact on the environment. This year, we have printed a limited number of these reports, which are available at our Neighbourhood Service Centres or by calling 9265 9333.



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"The only pro-growth strategy for the long-term is action on climate change."

These words from Michael Bloomberg at the 2007 C40 Large Cities Climate Change Summit in New York resonate strongly with me as I review the City's environmental leadership over the past twelve months.

Sydney is a global city characterised by sustainable development, a thriving economy, and a vibrant social and cultural life. An increasing population has provided the city with more energy and excitement and we have embarked on a range of initiatives designed to protect the quality of life for those who live, work or visit Sydney.

In June 2007 Council approved an Environmental Management Plan for our city and established an environmental vision which set targets and priority actions. Through implementation of the plan, the City will deliver a range of services and facilities to meet the current and future needs of our community in transport, public space and infrastructure to protect our natural resources and support the use of renewable resources.

One of the City's key commitments is to become Australia's first carbon neutral council through energy-saving measures and using 100 per cent accredited GreenPower. Our Energy and Water Saving Plans are well underway and once complete will save around 5,500 tonnes of greenhouse gas emissions and 72 megalitres of water per year.

The Cycle Strategy and Action Plan and the Pedestrian study by Jan Gehl aim to encourage cycling as a viable transport option and make the city more pedestrian friendly. This in turn will make Sydney a more pleasant city to live in and help reduce our carbon footprint.

The City's ethos to live sustainably has been captured in the building of the new community facility at Surry Hills. The Crown Street project applies principles of the GreenStar environmental rating tool and includes the installation of rainwater collection tanks and solar cells to provide power to the building.

This year we also began to plan the City's first green event – Live Green. Designed to raise awareness for the need to change our habits and embrace sustainable living, the inaugural event was staged in August 2007 and attracted 10,000 people. Live Green will become a regular fixture on the City's events calendar and plans are already underway for next year's event.

In 2006/07 we also increased our green space and continued to increase our urban tree canopy. Harmony Park and a redeveloped Glebe Foreshore added to the city's open space and residents now have a total of 377 hectares of parks to enjoy. Many of our parks are also showcase projects of water treatment and re-use. Throughout the year 2,030 new trees were planted and Council took measures to protect our trees including expanding the Significant Tree Register.

This year, the state of our environment has improved and much has been achieved. However, over the coming years we will continue to work to secure a sustainable future for the city and its residents. That means a greater level of commitment to addressing climate change and providing a clean, green City of Sydney.

CLOVER MOORE MP

Lord Mayor



Take action: quick contacts

In growing numbers, Australians are voicing their concern about how our lifestyles impact the planet. Our quality of life, our financial security and the lives of our children and grandchildren are all dependent on the natural environment. Everyone has an important role to play. Your action will make a difference.



Learn more about environmental programs

The Watershed Sustainability Resource Centre is where you can get tips and advice on living green. A range of information is available and you can attend free workshops. Call the centre on 9519 6366, visit the centre at 218 King Street, Newtown or go to www.cityofsydney.nsw.gov.au/Watershed



Switch to GreenPower

GreenPower is electricity generated from clean and renewable resources such as sunlight, wind and water, rather than fossil fuels like coal and oil. Switching to GreenPower is an easy way to immediately reduce your greenhouse gas emissions. For further information, go to www.greenpower.nsw.gov.au and ask your energy retailer for 100 per cent accredited GreenPower.



Plant a tree

Join a local native planting project. Volunteer with the Rozelle Bay Community Native Nursery or Pyrmont Ultimo Landcare. The City's website has information on project details and locations. www.cityofsydney.nsw.gov.au/Environment/PlantsAndAnimals/WhatYouCanDo.asp



Save Water

Sydney Water offers a range of programs from offering rebates for rainwater tanks and water saving appliances to the WaterFix program where, for \$22, a certified plumber will come to your home and install water efficient devices to your taps, toilets and showers. For more information call Sydney Water on 132 092 or visit www.sydneywater.com.au



Report an environmental emergency

For urgent advice about the clean-up or disposal of a pollution incident, call the Department of Environment and Climate Change on 131 555.



Report stormwater pollution

To report pollution incidents, such as dirty water, oil or paint in a stormwater drain, call the City of Sydney on 9265 9333.



Report tree vandalism

Trees are protected by the City's Tree Preservation Order and severe penalties for tree vandalism apply. To report tree vandalism call City of Sydney on 9265 9333.



Wildlife rescue

If you find injured or sick native animals in Sydney, call Sydney Metropolitan Wildlife Service on 9413 4300.

For the latest information on environmental trends, issues and programs see www.cityofsydney.nsw.gov.au/Environment

For information on environmental programs contained within this report, call the City of Sydney on 9265 9333.





Our city at a glance

The City of Sydney Local Government Area (LGA) covers an area of 26.15 sq km. Within the LGA there are 375 hectares of open space.

Our city

The City is working to create a sustainable Sydney, a city that contributes positively to global sustainability and provides a high quality of life and amenity for residents, business and visitors.

Through our commitment to sustainability, equity and civic collaboration, Sydney is a flourishing and outward-looking city of which its communities are justly proud.

Table: Demographics

INDICATOR	2004 ¹	2005 ¹	2006 ¹	2007 ¹
Residents	146,540	155,559	160,090	161,800
Workers (per day)	350,000	367,544	369,043	375,000
Visitors (per day)	450,000	475,000	475,000	475,000
Visitors (total nights)	8,732,100	9,000,000	9,039,900	9,462,800
City of Sydney employees²	1,479	1,485	1,509	1,601

¹ As at 30 June.

² Figures include permanent and casual staff.

Table: Built form

Area of LGA (26.15 sq km)

INDICATOR	2003/04 ¹	2004/05 ¹	2005/06 ¹	2006/07 ¹
Households (dwellings)	84,123	87,506	90,597	93,965
Completed commercial development (sqm)	85,276	150,859	246,825	107,404
Completed residential development (dwellings)	4,812	3,706	2,558	3,368

¹ As at 30 June.

Environmental Management Plan

www.cityofsydney.nsw.gov.au/EMP

The City of Sydney Environmental Management Plan (EMP) was adopted by Council on 25 June 2007. The EMP was developed with assistance from the Institute for Sustainable Futures in consultation with environmental organisations, community groups, Councillors and staff.

The plan establishes the City's environmental vision, targets and actions for council and the community.

There are 53 actions categorised by themes included within this State of Environment Report.

A summary of targets include:

- **100 per cent reduction and offset of Council's greenhouse gas emissions**
Council operations and services are aiming to be carbon neutral. Council will offset 100 per cent of greenhouse gas emissions from its operations and services by 2008. This includes making energy savings to achieve a minimum 15 per cent reduction of Council emissions by 2012, based on 2006 levels.
- **Reducing greenhouse gas emissions across the total Local Government Area (LGA)**
Council aims for a 70 per cent reduction of greenhouse gas emissions from our LGA by the year 2050, based on 1990 levels. This includes 30 per cent reduction by 2020.
- **Using renewable energy**
Council aims for 25 per cent of electricity used in our LGA to come from renewable energy by 2020.
- **Environmentally-friendly transport**
Council aims to create a more cycle-friendly city with 20 per cent of short trips in the LGA (between 2 and 20 kilometres) made by bicycle by the year 2016.
- **Water conservation**
Council aims for a zero increase in mains water used by Council and across the LGA by the year 2015, based on 2006 levels. This includes 25 per cent of water used by Council and across the LGA to be recycled by 2015.

■ Resource recovery/recycling

Council continues to promote resource recovery to reduce the amount of waste sent to landfill, by 2014 it aims for:

- 66 per cent resource recovery (recycling) of residential waste from our LGA
- 66 per cent resource recovery of waste generated by Council and its contractors
- 63 per cent resource recovery of commercial and industrial waste from our LGA
- 76 per cent resource recovery of construction and demolition waste from our LGA and council projects.

■ Public Space

Open space is vital for our city's health. Currently our city has 23.2 square meters of public open space, per resident. Including areas not managed by the City of Sydney, the residents in the LGA currently enjoy 397 hectares of open space – the equivalent of 568 rugby football fields or 15 per cent of the LGA. Council aims to maintain the quality and usability of open space, even as the population of the city increases. It aims to provide 24 square metres of public open space per resident.

It is a requirement of the EMP that actions are reported annually with the State of Environment Report. A summary of actions and implementation status is included in the Appendix of this report.



Energy and emissions

Global warming and emission reductions

Global warming and green house gas emissions

In 2006/07 global warming and climate change received unprecedented attention in Sydney and the world. Global warming is increasingly viewed as one of the defining environmental issues of our time.

Global warming – an increase of earth's surface temperatures linked to the build up of greenhouse gas emissions – affects the location, frequency and intensity of rainfall and creates temperature extremes.

Atmospheric concentrations of greenhouse gases began to increase with the industrial revolution, and today, there are more greenhouse gases in the atmosphere

than at any one time in the last 400,000 years. Per capita, Australians are now the world's worst contributors to global warming.

In 2006/07, council greenhouse gas emissions account for around 1 per cent of emissions from the LGA and the council has set targets to become carbon neutral by 2008.

The City acknowledges the need for action by all levels of Government, community and the private sector to reduce global warming and arrest climate change. The City is working to reduce its carbon footprint, achieve energy savings in buildings and transportation, conserve natural resources, encourage renewable energy usage, and reduce air pollution.

TABLE: Greenhouse gas emissions

Indicator	2003	2004	2005	2006	Trend
Global (t)¹	41,965,517,000	42,448,276,000	42,931,034,000	43,413,793,000	×
National (t)²	571,102,000	571,724,000	575,839,000	579,862,000	×
LGA emissions (t)³	3,351,000	3,430,000	3,509,000	3,589,000	×
LGA savings (t)⁴	No data	3,769	5,870	12,587	✓
Council emissions (t)⁵	35,600	36,400	37,100	37,900	×
Council savings (t)⁶	No data	55 (0%)	112 (0%)	1,172 (3%)	✓
Council offsets (t)^{7, 8}	737 (2%)	4,938 (13%)	11,675 (31%)	TBC (100%)	✓
Cities for Climate Protection™ (CCP) program			Milestone 1	Milestone 3	✓

¹ Calendar year global greenhouse gas emissions (CO₂ equivalent) rounded to nearest 1,000 tonnes – from median 2030 modelling forecasts of the Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

² Calendar year forecast estimate (including abatement measures), rounded to nearest 1,000 tonnes, from Tracking To The Kyoto Target 2006, Australian Greenhouse Office (AGO). Figures shown vary to previous SoE reports due to revised AGO data.

³ Calculated Business as Usual (BAU) scenario using Cities for Climate Protection™ software. Results are rounded to nearest 1,000 tonnes. Figures shown vary to previous SoE reports as emissions estimates have been updated using 2001 ABS, ABARE and revised population forecasts.

⁴ Measures prepared for Milestone 4 of the Cities for Climate Protection™ program based on community greenhouse savings achieved through initiatives such as the 3CBDs Greenhouse Initiative.

⁵ Calculated Business as Usual (BAU) scenario using Cities for Climate Protection™ software. Results are rounded to nearest 100 tonnes.

⁶ Measures prepared for Milestone 4 of the Cities for Climate Protection program based on Council greenhouse emissions savings achieved through programs such as the energy savings plan and fleet programs. Figures do not include offsets or GreenPower.

⁷ Includes GreenPower used for New Year's Eve, properties and street lighting. 2006/07 emissions to be offset through the City's carbon neutral program.

⁸ Fleet offsets include accredited tree plantings and GreenPower. 2006/07 emissions to be offset through the City's carbon neutral program.

(t) Tonne.

~ No change.

✓ Improvement.

× Decline.

Table: Global Warming

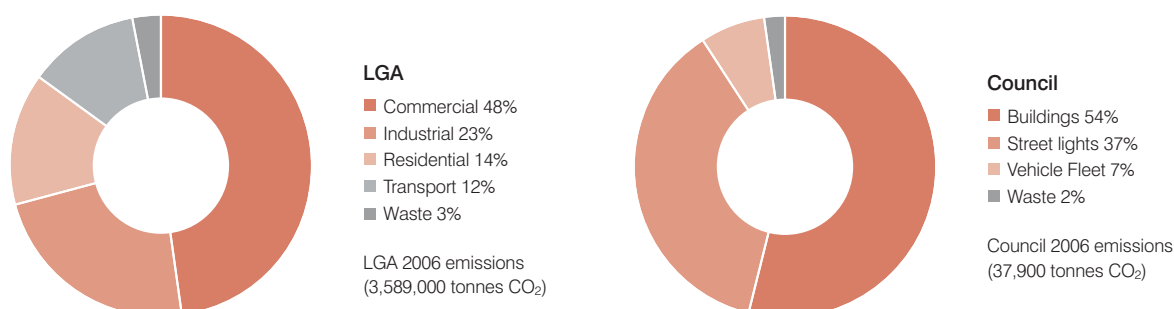
Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Atmospheric CO ₂ (ppm) ¹	374	376	378	379	×
Global-mean surface temperature increase (°C) ²	0.67	0.60	0.76	0.65	×

¹ Information provided by Cape Grim Baseline Air Pollution Station, funded and managed by the Australian Bureau of Meteorology and CSIRO Marine and Atmospheric Research.

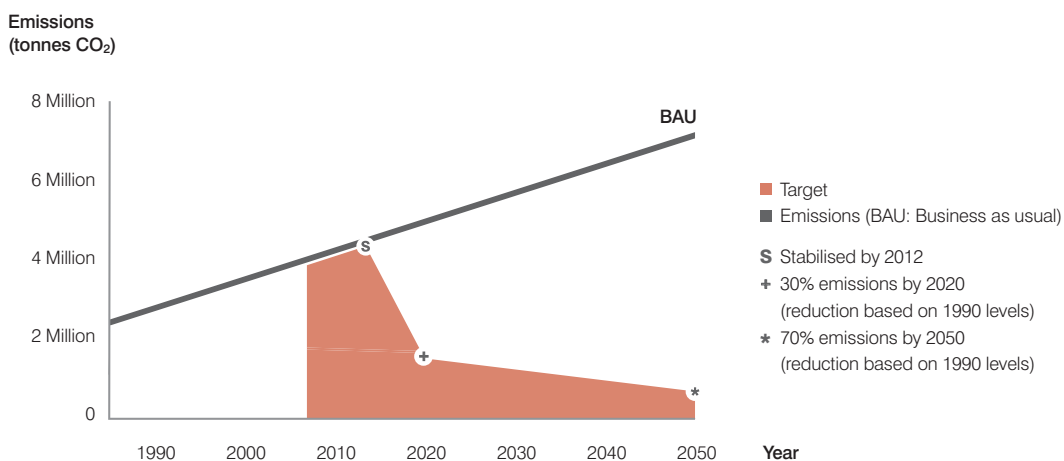
² Calendar year global observed temperature averages above the climatological mean (1951-1980). Trends show a general increase in global temperature. NASA Goddard Institute for Space Studies. <http://data.giss.nasa.gov/gistemp/2005>

ppm Parts per million.

°C Degrees Celcius.

Chart: Greenhouse gas emissions in the City of Sydney LGA¹

¹ 1 tonne CO₂ = 505 cubic meters (based on CO₂ density of 1.98kg per cubic meter at 25°C). CBD Area 2,200,000 sqm bounded by College Street – Macquarie Street – Western Distributor – Harris Street from Gehl Study: *Public Spaces – Public Life* 2007.

Chart: City of Sydney LGA greenhouse emissions targets¹

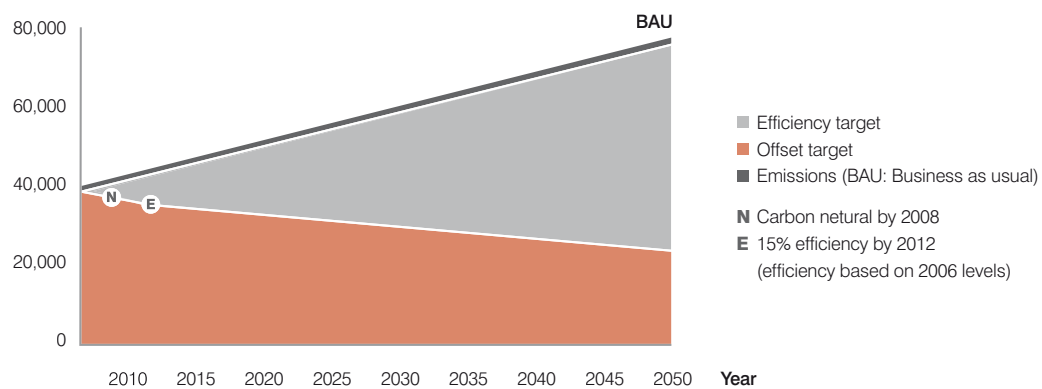
¹ Source: City of Sydney EMP 2007

Energy and emissions



Chart: Council greenhouse emissions targets¹

Emissions
(tonnes CO₂)



¹ Source: City of Sydney EMP 2007

A greener vehicle fleet

Energy and emissions

To reduce greenhouse gas emissions, the City has taken a number of measures to reduce emissions produced by its vehicles and to offset its fleet emissions.

- The City has reduced the number of vehicles in its fleet and has smaller and more fuel-efficient vehicles.
- By 2008, the City's entire light fleet of 29 vehicles will be hybrid (petrol/electric) vehicles.
- To encourage staff with vehicles as part of their salary package to drive fuel efficient vehicles, Council pays 15 per cent of the salary sacrifice for staff who choose a vehicle that emits less than 200 grams CO₂ per kilometre.

- The City's truck fleet has used Biodiesel (B20, B30 and B50) since 2005. By using Biodiesel, the City has saved more than 100 tonnes of greenhouse gas emissions – and the cost of Biodiesel is the same as diesel.
- In 2006/07, the City offset 100 per cent of its fleet emissions through tree planting projects accredited by the NSW Greenhouse Gas Reduction Scheme. The City will continue to reduce and offset its fleet emissions as part of its carbon neutral strategy.

Sustainable transport

The City is investigating transport networks that will serve the community and benefit the environment. The City's Road Safety Strategy and proposed Pedestrian Strategy are key components for improving safety and amenity for pedestrians and increasing access to public transport.

Cycle-friendly city

■ Cycle Strategy and Action Plan

Following extensive public consultation, the City of Sydney Cycle Strategy and Action Plan was endorsed by Council in 2006/07. The plan aims to increase the number of bicycle trips as a percentage of all trips in the LGA from less than 2 per cent in 2006, to 5 per cent by 2011, and 10 per cent by 2016. It also intends to increase the number of short trips (between 2 and 20 km) to 20 per cent by 2016. The City is now designing cycle routes and other infrastructure to support the plan. This includes key CBD north-south and east-west dedicated cycle-ways that are safely separated from traffic. For more information go to www.cityofsydney.nsw.gov.au/Cycling

Sponsoring cycle events

The City works with a range of organisations to promote cycling as a viable transport option, it sponsors a number of cycling events and has created programs to support cycling throughout the city.

■ Cycling in the City

In 2006/07 the City implemented the third phase of the successful Cycling in the City program. The City partners with businesses to provide cycling training, Bicycle NSW membership (insurance) and trip computers to encourage staff to cycle to work. To date, 250 people have completed the course, and cycled more than 65,000 kilometres. The program has won a Heart Foundation Local Government Award and Environs Australia Award. For more information go to www.cyclinginthecity.com.au

■ Spring Cycle

Since 2005, the City has encouraged and supported its staff to participate in Bicycle NSW's Spring Cycle from North Sydney to Olympic Park. In 2007, 2008 and 2009, the City is the naming rights sponsor of the City of Sydney Spring Cycle. For more information go to www.springcycle.com.au

■ Bike Breakfasts

For World Environment Day 2007, the City held two bike breakfasts in Hyde Park and Pyrmont to encourage people to ride to work. At the breakfasts, the City distributed information, safety vests and bike lights.

Energy and emissions

Pedestrian-friendly city

The City is working towards a Pedestrian Strategy. In 2006/07 the City of Sydney engaged Professor Jan Gehl to conduct a study of how people use the CBD and its public spaces. The Public Spaces and Public Life Study will assess how public spaces are organised, designed and used and evaluates the actual physical conditions provided for pedestrians. The recommendations from the study will help the City develop a more people-friendly environment which encourages walking and a better balance between people, cars and the built form.

In 2006/07, footpath upgrades at Redfern, Glebe and CBD locations have improved amenity and access for pedestrians. The upgrades also include parking for bicycles and street tree plantings.

Public transport

To promote sustainable forms of transport, the City of Sydney continues to advocate for mass transit public transport within and around the LGA. The City works with State agencies for improved public transport services including light rail, the CBD rail link and improved bus services.

Light Rail

In 2006/07 the City advocated extending the existing Lilyfield Light Rail service along Castlereagh Street between Central and Circular Quay. The City also investigated a light rail route along Hickson Road and advocated a network of light rail routes on major transport routes linking the CBD to inner city suburbs. For more information go to www.cityofsydney.nsw.gov.au/AboutSydney/ParkingAndTransport/LightRail.asp

Bus services

In 2006/07 the City of Sydney provided funding for a trial shuttle bus service from Redfern to Newtown. Operated by South Sydney Community Transport, the shuttle bus provides a service not covered by existing public transport.

Car Sharing

The City is looking to encourage the uptake of car sharing in the LGA by calling for Expressions of Interest to operate car share services over the next two years. Dedicated parking will be allocated in prominent locations based on community demand and consultation.

Table: Transport

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Vehicles per day in LGA ¹	808,398	816,754	809,428	794,461	✓
Staff with travel passes	194 (13%)	266 (18%)	321 (21%)	338 (21%)	✓

¹ Information provided by the NSW Roads and Traffic Authority (does not include Cross City Tunnel). Based on combined direction vehicle numbers for Sydney Harbour Bridge, Sydney Harbour Tunnel, Anzac Bridge, Kings Cross Tunnel, Oxford Street, Parramatta Road, King Street, Regent Street, O'Riordan Street, Anzac Parade, and City West Link Road.

Table: Fleet

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Fleet emissions (t)	2,575	2,746	2,504	2,744	~
Contractor emissions (t) ²	No data	No data	1,060	1,309	x
Fleet emissions offset (t) ³	684 (27%)	1,394 (51%)	3,564 (100%)	4,053 (100%)	✓

² Based on fuel data provided by contractors who provide Council services on behalf of the City.

³ Fleet offsets include accredited tree plantings and GreenPower. 2006/07 emissions to be offset through the City's carbon neutral program.

(t) Tonne.

~ No change.

✓ Improvement.

x Decline.

Figure: Cycle routes planned in the City of Sydney



Air pollution

Energy and emissions

Air pollution poses a risk to human health and ecosystem function. Sydney air quality has improved due to efficient engines and cleaner fuels; however these positive measures are being counteracted by a rise in the number of vehicles on our roads. The main sources of air pollution in the City of Sydney LGA include:

- Vehicle emissions
- Dust from construction sites
- Small and medium-scale industrial and commercial processes (production of metal and white goods, furniture manufacturers, dry cleaners, vehicle repairs and spray painting, print shops, petrol stations, food outlets)
- Domestic combustion sources (coal/wood fired heaters and stoves, barbecues)
- Bushfires (regional)

These sources contribute to a range of air pollution types including:

- Odour
- Particulates
- Deposited air pollutants
- Smoke
- Fumes
- Toxic substances
- Volatile organic compounds (hydrocarbons)
- Photochemical air pollution (ozone)
- Nitrogen oxides
- Carbon monoxide

The City helps minimise the impact of air pollution by requiring dust suppression at construction sites. It is also working to alleviate vehicle traffic on our roads by encouraging greater uptake of walking, cycling and public transport. The City also has a representative on the Cross City Tunnel Air Quality Community Consultative Committee (AQCCC). For more information go to www.crosscity.com.au

The NSW Department of Environment and Climate Change is responsible for air quality monitoring and improvement programs in Sydney. For more information go to www.environment.nsw.gov.au/air

Table: Air Pollution

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Low air pollution (days/year) ¹	291	300	287	283	✓
High air pollution (days/year) ¹	9	6	9	5	✓
Carbon monoxide (CO average ppm) ²	No data	1.9	1.3	1.7	~
Nitrogen dioxide (NO ₂ average pphm) ²	No data	5.2	4.7	4.4	~
Total nitrogen oxides (NO _x average pphm) ²	No data	25.3	19.6	20.6	~
Particulate matter (PM ₁₀ average µg/m ³) ²	No data	37.1	35.4	36.6	~
Particulate matter (PM _{2.5} (25 µg/m ³) ²	No data	15.1	14	15.3	~

¹ Information for Central East Sydney by the NSW Department of Environment and Climate Change.

² Ground level Ambient Air Quality Monitoring Results (Mary Ann Street Park, Ultimo). Cross City Tunnel Air Quality Monitoring Reports. 2005/06 figures based on Sep 05 to May 06 monthly averages. National Environment Protection Measure criteria are CO (9 ppm); NO₂ (12 pphm); NO_x (no standard); PM₁₀ (50 µg/m³); and PM_{2.5} (25 µg/m³) www.crosscity.com.au

~ No change.

✓ Improvement.

x Decline.

Energy efficiency

Energy and emissions

Cities for Climate Protection (CCP)

CCP is a milestone-based program which aims to reduce greenhouse gas emissions by local governments and their communities. The City of Sydney was one of the first councils to join CCP in Australia. Developed by *ICLEI – Local Governments for Sustainability*¹, the program endorses greenhouse gas emissions targets and actions within the Environmental Management Plan. The program milestones are:

- **Milestone 1:** Inventory of emissions resulting from council and community activities for a chosen base and forecast year.
- **Milestone 2:** Endorsement of reduction goals to reduce council and community emissions.
- **Milestone 3:** Development and endorsement of a strategic local action plan to achieve the Milestone 2 targets.
- **Milestone 4:** Quantification of greenhouse gas (GHG) emission reduction measures implemented by council since the base year (achieving at least 5 per cent of target reduction in one sector).
- **Milestone 5:** Re-inventory of council's corporate and community emissions taking into account measures implemented since Milestone 4. Information used to develop a Milestone 5 report provides direction for future greenhouse actions.
- **Milestone 5 Plus** – Advanced greenhouse reduction initiatives through a suite of CCP Plus actions: Advancing Action Projects, Organisational Reviews and Planning & Review.

In 2006/07 the City achieved Milestones 2 and 3 and is well on the way to achieving Milestone 4 of the CCP program. While the City was one of the first to join CCP, changes to the LGA area through council amalgamations and boundary changes delayed progress on these activities.

Energy Savings Action Plan

The City has reviewed its largest sites, street lighting and its vehicle fleet to develop an Energy Savings Action Plan (ESAP) which will save an estimated 5,500 tonnes of greenhouse gas emissions each year. The City's twelve largest sites in 2006 were Town Hall House, Lawson Square, Epsom Road Depot, Customs House, Domain Car Park, Ultimo Community Centre, Bay Street Depot, Railway Square Tunnel, KGV Community Centre, Paddington Town Hall, Haymarket Library and Redfern Town Hall. These sites, plus street lighting and fleet, account for about 80 per cent of the City's total energy usage. Street lighting alone accounts for about 40 per cent of Council's electricity usage.

Most of the measures identified in the Energy Savings Action Plan are being implemented. Implementation of the program will cost \$1,016,000 however when implemented across the City's largest sites the measures will provide an annual saving of \$198,000 and will have paid for themselves within five years.

Energy and emissions

Energy savings on a small scale

Every little bit helps. The City is implementing energy saving measures in its smaller sites and will be able to reduce its energy consumption at smaller sites by around 20 per cent. For example, T5 Efficient Street Lighting with motion sensors is being installed at the Redfern Occasional Child Care Centre and a solar hot water system has been installed at Hilda Booler Kindergarten in Glebe.

Energy savings in street lighting and public domain

The City adopted its Public Domain Lighting Design Code and Strategy in September 2006. Works resulting from the strategy will improve the quality and amount of lighting in public areas and reduce greenhouse emissions by approximately 14 per cent.

In a trial with Energy Australia and the Southern Sydney Regional Organisation of Councils, the City installed 100 T5 Efficient Street Lighting luminaires in the Glebe area. These will use about 40 per cent less energy. The trial received grant funding from the NSW Government Energy Fund.

Earth Hour

On the evening of 31 March 2007, Sydneysiders switched off lights and appliances for Earth Hour and achieved a 10 per cent reduction in power usage across the city. The project was initiated by World Wildlife Fund Australia and the Fairfax Media group, and supported by the City of Sydney and the 3CBDs Greenhouse Initiative (a program that assists commercial office tenants to become more energy efficient). The Lord Mayor of Sydney, Clover Moore MP, has called for Earth Hour to become a global initiative and gained support for the project at the C40 Large Cities Climate Change Summit held in New York in 2007. Earth Hour is gaining momentum around the world as we approach the next event, 29 March 2008.

Greener City Buildings

Sydney's commercial buildings are the largest single contributor to greenhouse gas emissions in the LGA. The City promotes the Australian Building Greenhouse Rating (ABGR) scheme in the commercial sector, encouraging businesses to formally commit to energy saving practices to achieve a 4-star or higher ABGR.

- The City partnered with North Sydney and Parramatta City councils and the Department of Environment and Climate Change to create the 3CBDs Greenhouse Initiative – a world-leading program that assists commercial office tenants to enhance their energy efficiency to significantly reduce their greenhouse gas emissions and help arrest climate change.
- 3CBDs represents the largest central business districts in Australia covering 30 per cent of the nation's office space. Businesses formally commit to achieve a 4-star or higher ABGR and to conduct an annual ABGR to monitor performance and measure energy savings. For more information go to www.3cbds.com.au

GreenPower

The City promotes energy efficiency and supports the use of GreenPower as a way to take immediate action on global warming. Unlike electricity generated by fossil fuels, GreenPower is generated from clean and renewable resources such as wind and sunlight.

To reduce its greenhouse emissions, the City uses GreenPower in its properties and street lighting and has increased its use of fully accredited GreenPower. In 2006/07, the City purchased 7,645 megawatts of GreenPower – equivalent to 20 per cent of the electricity used in 2005/06. In 2007/08, the City will retrospectively purchase 100 per cent GreenPower for its electricity usage in 2006/07 and will continue to source 100 per cent GreenPower for its energy needs – a key step to becoming carbon neutral.

Future focus

Acknowledging that climate change is occurring, and will continue despite efforts to reduce greenhouse gas emissions, the City is looking to participate in regional Climate Change Adaptation programs with *ICLEI – Local Governments for Sustainability*¹, and the Sydney Coastal Councils Group. The programs will determine localised climate change scenarios, impacts and opportunities for further action to arrest climate change.

On 2 April 2007, Council endorsed the City of Sydney joining the C40 Large City Climate Leadership Group (The C40). Recognising cities are responsible for three-quarters of the world's energy consumption, The C40 is a commitment by large cities to reduce carbon emissions and increase energy efficiency. A primary mechanism to deliver on C40 objectives is the Clinton Climate Initiative (CCI). The C40 aims to create procurement policies and alliances to accelerate the uptake of climate-friendly technologies. For more information go to www.c40cities.org

In May 2007, the Lord Mayor and CEO attended the C40 Large Cities Climate Summit in New York. The City is working with CCI and future focus areas include:

- improving the energy efficiency of our own assets through an energy performance contract
- establishing an Energy Efficiency Building Retrofit Program to bring together Sydney's energy service companies, financial institutions and large asset holders to implement energy efficient technologies
- recruiting a CCI Director position based in Sydney.

¹ International Council for Local Environmental Initiatives

Table: Electricity

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
City of Sydney area residential electricity usage (MWh) ¹	373,391	376,863	399,136	Unavailable at time of print	~
City of Sydney area business electricity usage (MWh) ¹	3,520,574	3,576,030	3,714,346	Unavailable at time of print	~
Council electricity usage (MWh) ²	31,485	33,117	37,379	39,173	x
Council electricity usage per employee (MWh) ²	21.3	22.3	24.8	24.5	✓
Council gas usage (GJ)	No data	No data	13,805,950	11,612,012	✓
Total GreenPower purchase in Australia (MWh) ³	No data	495,250	688,754	1,013,707	✓
GreenPower purchase by Council (MWh) ⁴	50	4,144	7,695	39,173 ⁵	✓
Households using GreenPower in Australia ³	No data	150,374	281,701	565,977	✓
Businesses using GreenPower in Australia ³	No data	7,229	14,676	24,313	✓
Solar parking meters	1,194	1,268	1,267	1,264	~

¹ Information provided by Energy Australia for suburbs in and around the City of Sydney. Data is not confined to the LGA and may be based on accruals and estimates. Figures shown vary to previous SoE reports as suburbs used have been changed to more accurately represent the local government boundary.

² Information provided by Energy Australia. Data for 2003/04 and 2004/05 is based on daily average totals (may not be accurate representation of actual consumption).

³ National GreenPower quarterly reports (residential and commercial sales) www.greenpower.com.au

⁴ Includes properties and public domain lighting, New Year's Eve, and fleet offsets. 100% GreenPower to be purchased for 2006/07 through the City's carbon neutral program.

⁵ Approximate amount of GreenPower to be purchased retrospectively for electricity use 2006/07 as per council resolution.

MWh Megawatt hour.

GJ Gigajoule.

~ No change.

✓ Improvement.

x Decline.

Water



Water conservation

www.cityofsydney.nsw.gov.au/Environment/Water

Water is a precious resource and essential for quality of life. Sydney's falling dam levels and drought across the state have raised awareness of how we must protect our water supplies. The City has introduced a range of measures to protect the supply and quality of our water.

In Sydney, the commercial and residential sectors are the biggest water users. Balancing the supply of fresh water and the demand for its use is one of the City's challenges and requires ongoing commitment to water conservation, efficient use, and localised supply options such as rainwater tanks and water recycling.

In 2006/07, Council's water consumption accounted for about 1.4 per cent of total water use in the LGA.

Water Savings Action Plan

The City has reviewed its largest sites to develop a Water Savings Action Plan (WSAP) which will save an estimated 72 megalitres of water each year at a cost of \$198,000. In 2006/07, most of the measures identified in the plan have been implemented.

The City's twelve largest sites in 2006 were Queen Victoria Building (QVB), Cook + Phillip Park and Pool, Sydney Park and Depot, Victoria Park and Pool, Hyde Park, Town Hall House, Prince Alfred Park/Pool, 82-106 Oxford Street, Customs House and the Capitol Theatre.

These sites account for about 60 per cent of the City's total water usage.

Water savings on a small scale

The City has also implemented water savings measures within its smaller sites and will be able to reduce current water consumption at these sites by around 20 per cent. Examples include the installation of water-saving taps and toilets at Hilda Booler Kindergarten, Glebe, and Redfern Occasional Care Centre.

Table: Water supply

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Potable water cost (\$/kilolitre) ¹	\$1.013	\$1.013	\$1.264	\$1.48	✓
City of Sydney area average rainfall (mm) ²	705	1,041	792	1,403	✓
Water storage level (per cent) ³	42.6	38.3	41.8	50.5	✓
City of Sydney LGA total water use (megalitres) ²	36,338	35,309	34,985	34,636	✓
City of Sydney average water use per property (kilolitres): ²					
– Commercial	2,548	2,459	2,394	2,426	x
– Units	166	165	167	168	x
– Houses	201	290	188	181	✓
Council water usage (megalitres) ²	534	484	493	496	x
Council water usage per employee (kilolitres) ²	361	326	322	310	✓
Fountains water usage (kilolitres/fountain/day)	No data	No data	1.9	2.0	~

¹ Sydney Water pricing for consumption more than 100 kilolitres per quarter.

² Sydney Water.

³ Sydney Catchment Authority June figures.

~ No change.

✓ Improvement.

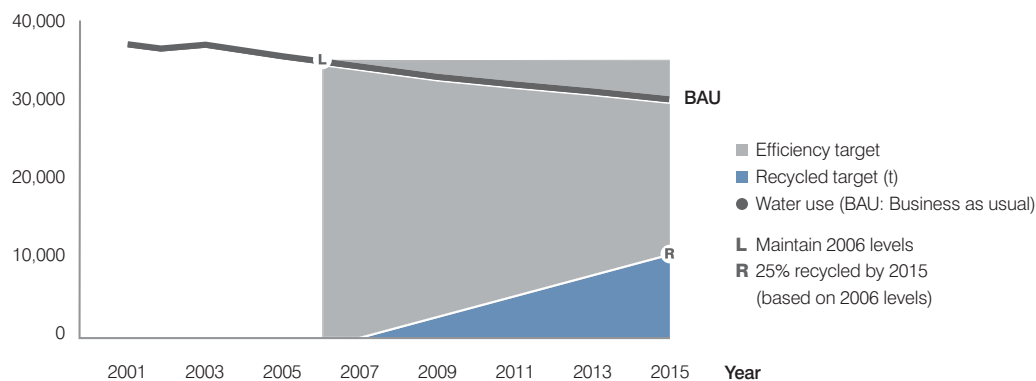
x Decline.

Table: Uptake of Sydney Water programs in the City of Sydney

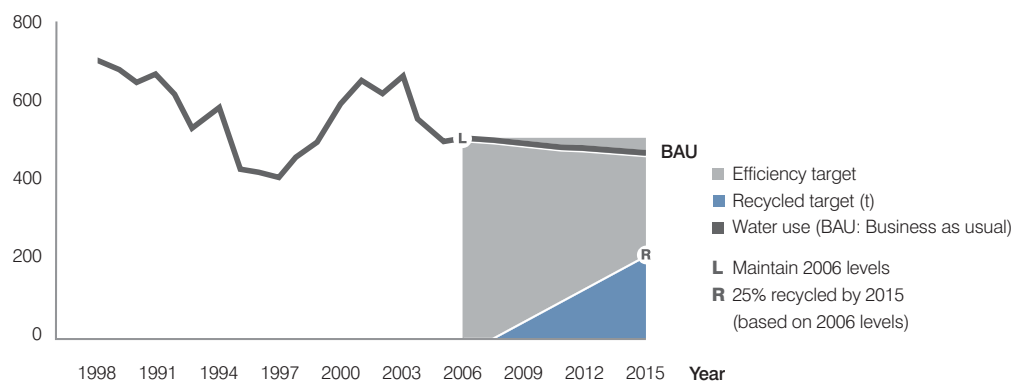
PROGRAM	2002/03	2003/04	2004/05	2005/06	2006/07
DIY Kits				576	3,019
Rainwater Tank Rebate	1	3	8	18	26
Washing Machine Rebate	26	291	0	387	2,929
Waterfix	945	718	3,092	2,112	5,037
Total	972	1,012	3,100	3,097	11,011

Chart: City of Sydney LGA water targets¹

Water use (megalitres)

¹ Source: City of Sydney EMP 2007**Chart: Council water targets¹**

Water use (megalitres)

¹ Source: City of Sydney EMP 2007

Water

Saving water in street cleaning

The City has implemented various initiatives to reduce the amount of mains water required for essential street cleansing programs.

This includes:

- using sweepers and efficient high-pressure equipment
- reducing the frequency of washing plant and equipment
- using bore water, rainwater and recycled truck wash water.

Aquatic facilities

Water savings initiatives being implemented in the City's aquatic facilities include:

- installing efficient filtration systems at Victoria Park Pool and using a pool blanket to reduce evaporation
- upgrading amenities at Cook + Phillip Park
- installing roof water collection at Ian Thorpe Aquatic Centre.

Water features

The City has installed meters to monitor water use in all of its water features. Using the data now available, the City has identified and repaired many leaks. In partnership with Sydney Water, the City is developing this program as a water management benchmark for use by other councils.

Water saving in the community

In 2006/07, the City in partnership with Sydney Water offered 400 free WaterFix home retrofits. The service which normally costs \$22 provides residents with a home visit by a certified plumber to install water saving devices to taps, toilets and showers.

The City is also looking at ways to encourage the uptake of rainwater tanks.

Sydney Water also offers a range of other water savings incentive programs including rebates for rainwater tanks and water efficient washing machines, and provision of free Do-It-Yourself water savings kits. In the last seven years, more than 21,500 Sydney Water customers in the City of Sydney LGA have saved water through these programs.

Water-sensitive urban design

Water re-use projects minimise reliance on mains water and reduce the volume of stormwater discharged to Sydney Harbour and Botany Bay.

The City owns and operates one of the first large scale stormwater collection, treatment and re-use systems built in Sydney. Located at Solander Park, Erskineville, the system provides about 90 per cent of the water used by the park. In 2006/07 the system provided an estimated nine megalitres of water.

Major water collection, storage and re-use opportunities are also being designed for Hyde Park, Prince Alfred Park, Sydney Park and the Water Police site.

Water re-use systems

In 2006/07, the City of Sydney had water re-use systems installed in 49 sites – 15 systems have been fully installed, and work is continuing on 34 sites across the LGA.

Rainwater tanks feature as part of the water savings programs at:

- Alexandria Child Care Centre
- Bay Street Depot
- Beaconsfield Community Centre
- Broughton Street Kindergarten
- Epsom Road Depot
- Hilda Booler Kindergarten
- Ian Thorpe Aquatic Centre
- James Cahill Kindergarten
- Jane Evans Day Care Centre
- John J Carroll Kindergarten
- Joseph Sargent Community Centre
- Lance Kindergarten
- Maybanke Recreation Centre
- Millers Point Activity Centre
- Millers Point Older Woman's Network
- Phillip Park Child Care Centre
- Pine Street Creative Arts Centre
- Plunkett St Depot
- Pyrmont Child Care Centre
- Redfern Occasional Child Care Centre
- Rosebery Child Care Centre
- Rosebery Community Centre
- Rushcutters Bay Kindergarten
- St Helens Community Centre
- Sunbeam Kindergarten
- Surry Hills Child Care Centre
- Surry Hills Library and Community Facility
- Sydney Park Nursery
- Ultimo Community Centre

Stormwater and/or groundwater collection, treatment and re-use systems are installed at the following sites:

- Barcom Avenue Park
- Beare Park
- Busby's Bore Water Reclamation Project
- Cook + Phillip Park
- Darlinghurst Road
- Erskineville Oval
- Foley Park
- Glebe Foreshore
- Harmony Park
- Hyde Park
- John Thompson Reserve
- Prince Alfred Park
- Prince Alfred Park Pool
- Redfern Park
- Rushcutters Bay Park
- Solander Park
- Southern Area Aquatic Centre Aquifer Recharge
- Sydney Park Groundwater and Stormwater Reuse
- Taylor Square Fountain
- Walter Read Reserve
- Water Police Site

Water

Parks and open spaces

The City is reducing the amount of mains water required in its parks and open space by using bore water, deferring major new plantings, mulching, planting drought-tolerant plants and using efficient irrigation systems (where irrigation is required).

Water re-use systems are being incorporated into new parks and are being installed as part of park upgrade programs.

Hyde Park and Cook + Phillip Park projects

In October 2006, the Lord Mayor Clover Moore MP announced a \$2.3m water reuse scheme to drought proof Hyde Park and Cook + Phillip Park

It is estimated the project will supply up to 100 megalitres or 66 Olympic sized swimming pools of water per year, which is well in excess of the City's current demand of 60 megalitres for irrigation, fountains, street plantings and street cleansing.

The project will also provide financial savings. The current cost of mains water is \$1.48 per kilolitre, with expectations that the cost of mains water will continue to rise. It is estimated that the Hyde Park and Cook + Phillip Park projects will provide water at a cost of \$1.20 per kilolitre for the next 50 years (a figure to be verified during detailed design of the project).

Barcom Park upgrade

The work in Barcom Park, Darlinghurst, included installation of a 90 kilolitre tank to harvest water from the adjacent St Vincent's stormwater retention system for use in park irrigation. The works also included installation of permeable pavement, soft landscaping and a bio-retention basin to increase water absorption into the ground and improve stormwater quality.

Harmony Park

The new Harmony Park (built in Surry Hills on a former car park site) incorporates an underground 220 kilolitre stormwater re-use system to collect and treat runoff water from the park and from the adjacent Energy Australia building. Water harvested by the system will be used for irrigation in the park.

Glebe Foreshore

Three bio-swales have been installed as part of the recent upgrade of Glebe Foreshore. Bio-swales treat polluted stormwater and reduce the need for irrigation. Bio-swale technology has also been used for watering street trees and treating stormwater along Darlinghurst Road.

Green Square

The University of NSW Research Laboratory is investigating a system that would allow stormwater at the Green Square urban development site to be stored and made available for irrigation. The proposed aquifer recharge project would see stormwater directed underground and stored in the botany sands aquifer and pumped to the surface when the water was needed for irrigation.

Optimised Irrigation

Irrigation in the City's 40 parks is being investigated to optimise water use. Optimised Irrigation will be determined by matching watering requirements with key site characteristics such as the soil type, climate and how each site is used. The work is being conducted by URS Australia through grant funding received from the NSW State Government.



Stormwater and water pollution

Water

Rain falling onto our city's buildings, footpaths and roads flows into gutters and through stormwater pipes flows directly into our harbours – approximately half flows north to Sydney Harbour while the other half flows south to Botany Bay.

It is essential that we keep roads and footpaths clear of litter and cigarette butts and maintain the quality of our stormwater to ensure our freshwater and marine ecosystems are protected from harmful pollutants.

The main sources of pollution to waterways are licensed premises, illegal dumping and spills. Numerous small sources of pollution (e.g. litter, sediments, oils, nutrients and heavy metals) are also washed into waterways through stormwater.

City programs

- The City's street cleansing operations remove significant volumes of dust, litter, heavy metals, and organic matter which could otherwise become a significant stormwater pollution issue.
- Council also promotes the link between littering and polluting our waterways – fish symbols on stormwater drain covers and street kerb signs reinforce that stormwater often flows into our harbours.
- The City owns and maintains 11 large stormwater pollution traps and about 4,000 smaller trapped gully pits which collect about 1,290 tonnes

of pollution each year. The waste from these traps is collected and transported to landfill to prevent it from entering our waterways.

- The Federal Park Salt-Marsh Wetland is designed to provide biodiversity and improve the quality of stormwater from an adjacent catchment. The wetland is a thriving ecosystem with aquatic and terrestrial species including a resident Blue-Tongue Lizard. The City periodically removes litter and pollution from the wetland and an adjacent gross pollution trap.
- The City's various stormwater education programs aim to reduce stormwater pollution. It publishes brochures on stormwater pollution, and produces erosion and sediment control guidelines for builders and developers. The City also distributes free personal ashtrays to help keep cigarette butts out of our waterways.
- The City is one of eight councils on the Cooks River Foreshore Working Group to implement the Cooks River Sustainability Initiative. Supported by funding from the NSW Environmental Trust, the initiative aims to conserve water resources and improve the health of the river. Various projects are directed at bringing together key stakeholders to establish new governance arrangements across the catchment area and create an integrated sustainable river management plan.

Table: Water pollution

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Darling Harbour bacteria levels exceed safe limit (months per year) ¹	7	10	6	9	x
Water pollution removed from Blackwattle Bay (cubic m) ²	96	99	116	126	~
Water pollution removed from Rozelle Bay (cubic m) ²	214	298	263	204	~
Rubbish from Council stormwater pollution traps (t)	1,011	1,366	1,249	1,290	~
Water pollution infringements	52	94	76	44	~

¹ For faecal coliform and enterococci bacteria levels tested by the NSW Department of Environment and Climate Change.

² Information provided by the NSW Maritime Authority.

(t) Tonne.

~ No change.

✓ Improvement.

x Decline.

Waste



Waste minimisation

www.cityofsydney.nsw.gov.au/Environment/Waste

A core service of local government is to provide a residential waste and recycling service. However in order to reduce the environmental impacts associated with waste disposal, the City has adopted a far more comprehensive approach to waste management.

The City's waste policy and various waste management programs attempt to reduce waste and re-direct waste from landfill by promoting resource recovery. The City also has programs to prevent littering and illegal dumping of waste.

Waste minimisation strategies

- The Waste Management and Resource Recovery Strategy (2007-2014) is being developed in consultation with the community. The strategy sets immediate and long term objectives for waste minimisation and seeks to identify ways to reduce domestic waste and increase recycling rates across the LGA.
- The City's policies for the Management of Waste in Public Places and Waste Minimisation in New Developments encourage best-practice waste minimisation and resource recovery (recycling) for various waste streams.

For more information on waste management go to www.cityofsydney.nsw.gov.au/Council/FormsPoliciesPublication/Policies.asp

Resource recovery

Council's various waste management programs include waste education and waste and recycling services which aim to avoid waste, improve recycling rates and divert waste from landfill ie resource recovery.

Currently, 71 per cent of residential waste from the City of Sydney ends up in landfill. The material which goes to landfill represents a waste of natural resources, energy, water and nutrients. Landfill also produces methane, a greenhouse gas that is a major contributor to global warming. Landfill also reduces the amount of land available for other uses.

The City is committed to minimising waste and encourages residents and the city's commercial sector to reduce, re-use and recycle. The City is also investigating developing new waste recovery facilities with technology that has the potential to significantly increase resource recovery rates.

Since April 2006, the City has provided financial support for a Reuse Referral Service coordinated by The Bower, a not-for-profit cooperative. In 2006/07 this service has been able to divert 615.73 cubic metres of material from landfill.

Waste services

Waste

To prevent health and safety risks to our community and to protect our environment, the City provides a range of waste services. In addition to providing residents with a weekly waste and recycling service, the City provides a range of specialist services including:

- regular kerbside clean up services
- clean up services to recover metals and wood from discarded household items
- a free kerbside recycling service for white goods such as fridges, stoves, microwaves, washers and clothes dryers
- a green waste collection service
- a Christmas tree collection service
- the City also sells compost bins and worm farms at cost price to residents, and conducts training courses (see Urban Sustainability Workshop Series in the Waste education section below).

In 2006/07 kerbside recycling collected by the City of Sydney resulted in 16,122 tonnes of materials diverted from landfill saving:

- 44,428 cubic metres of landfill space
- 8,095 tonnes of greenhouse gas emissions
- 267 megalitres of litres of water.

Waste education

The City has various programs for reducing waste and improving recycling rates.

- Council's website contains information on waste minimisation and information on what materials can be recycled.

- The City has also produced a range of brochures to encourage residents to generate less waste and recycle more.
- In multi-unit dwellings, Council works with the Department of Housing, building managers and body corporate groups to implement effective recycling systems.
- Council's Urban Sustainability Workshops engage residents in waste reduction and resource recovery initiatives such as composting and worm farming. Workshops are delivered by The Watershed, a sustainability resource centre located in King Street, Newtown.

School programs

- The City provides waste education and support to the 17 schools within the LGA.
- Council offers schools a free recycling service and supports schools to develop and implement environmental management plans.
- In 2006/07 the City funded a range of environmental programs including:
 - the Keep Australia Beautiful Waste Watchers education program (12 schools)
 - stormwater education through the Observatory Hill Environmental Education Centre (3 schools)
 - the Sydney Water Streamwatch program (3 schools).

Environmental protection

Council continues to work towards creating a clean city.

- In 2006/07 more than 25 sites within the LGA were registered in Clean Up Australia Day activities. The City provides free removal of waste collected on the day.
- The City's Street Cleansing program and street bins prevent substantial amounts of waste from becoming stormwater pollution.

- Council also promotes the link between littering and polluting our waterways – fish symbols on stormwater drain covers and street kerb signs reinforce that stormwater often flows into our harbours.
- The City regularly removes and recycles advertising materials and posters from its streets.
- In 2006/07, the City's Burrows Road Materials Recycling Facility recycled about 20,000 tonnes of construction and road materials. The facility recovers around 97 per cent of the material it receives.

Waste

Enforcement

City Rangers undergo regular training on environmental protection and enforce the City's various pollution controls.

A City of Sydney study in the CBD, Kings Cross and Glebe found there were more than 15,000 cigarette butts littered every day. In 2006/07, Council launched an extensive community education campaign to encourage the responsible disposal of litter to prevent pollution and to advise that Rangers would issue on-the-spot fines for street littering, including cigarette butts.

The City's Rangers also issue Clean-Up and Prevention Notices to prevent sediment pollution from construction sites and illegal dumping.

Council Waste Minimisation Practices

Council is working towards minimising waste in all its operations.

Food waste from some City venues is donated to Oz-Harvest, a charity that collects excess food and delivers it free of charge to organisations that feed the disadvantaged in our community.

Paper

In 2006/07 the City of Sydney used 21,844 reams of paper. While this is one per cent less than last year, it is enough paper to cover nearly a third of the central business district. It is estimated that about 540 trees¹ were used to produce this paper.

In an effort to close the recycling loop and minimise impact on the environment, the City has switched to using 100 per cent recycled paper. The paper is post consumer recycled meaning that it has been used, collected and recycled and is not just off-cuts from the factory floor. Previously the City used 60 per cent recycled paper.

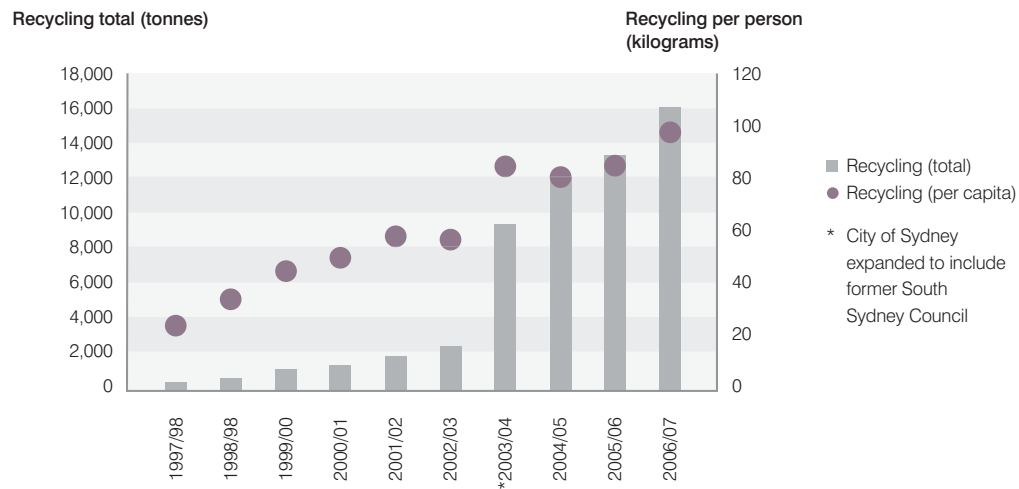
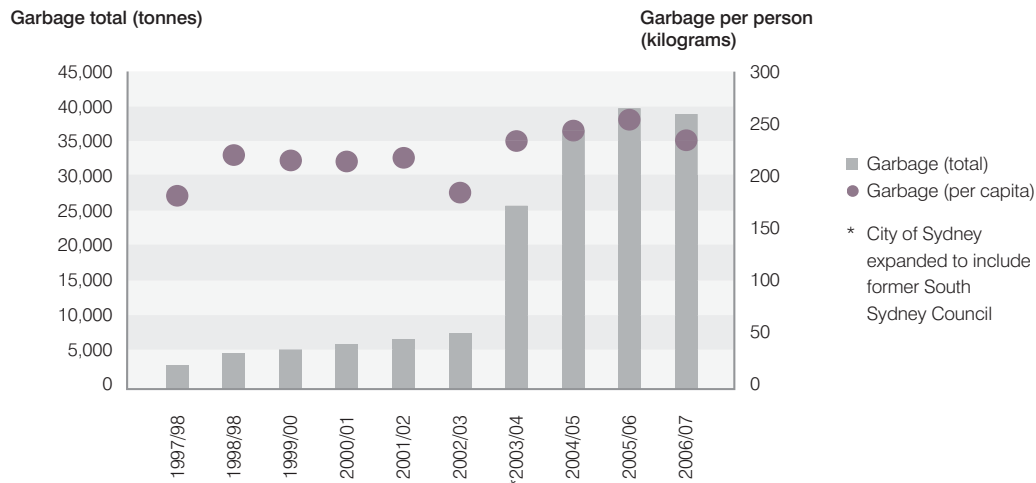
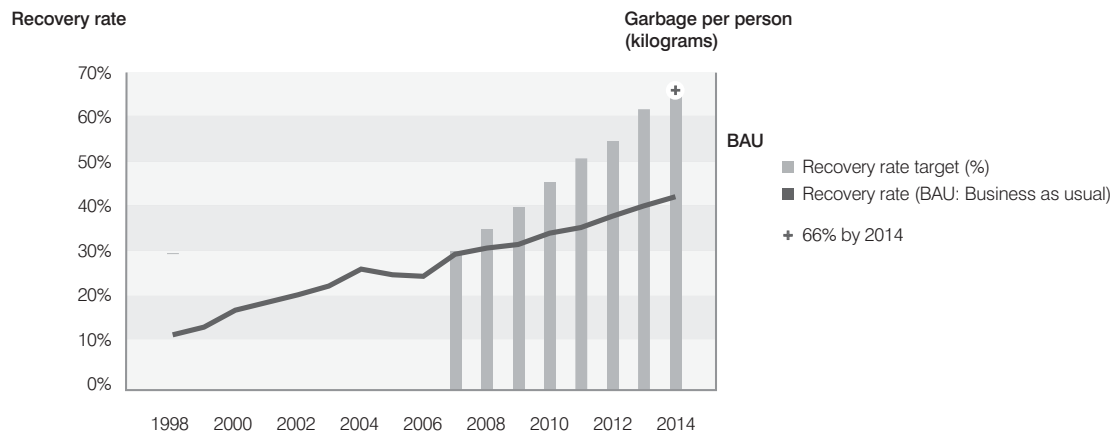
Council's City Rangers use electronic ticketing which is estimated to save around 800,000 paper notices each year.

The City's Information Management Unit has developed a number of initiatives to assist Council in reducing its waste including:

- using Multi Function Devices (MFDs) with double-sided printing, photocopying, faxing and scanning in the one device
- reducing the number of smaller, less efficient network laser printers by 30 per cent
- trialling automatic ordering of toner cartridges by MFDs to reduce over ordering
- participating in the Hewlett-Packard partnership with Planet Ark to ensure the environmentally-appropriate disposal of used toner cartridges and packaging
- using recycled toners – about a quarter of the toner cartridges used by Council are made from recycled cartridges and most used cartridges are returned for recycling
- initiating web-based online monitoring of print devices to determine usage patterns
- introducing electronic faxing and recordkeeping to reduce multiple copying of documents
- web publishing of documents and online forms to reduce printed copies.

¹ International Council for Local Environmental Initiatives

Waste

Figures: Domestic waste in the City of Sydney LGA^{1*}**Figure: City of Sydney domestic waste targets¹**¹ Source: City of Sydney EMP 2007

Waste

Table: Waste

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Total household waste (t) ¹	26,020	36,553	39,999	38,752	✓
Total household recycling (t) ¹	9,169	12,186	13,227	16,122	✓
Household waste (kg/person)	230	238	257	234	✓
Household recycling (kg/person)	84	79	85	97	✓
Household waste diverted from landfill (per cent)	26.1%	25%	25%	29%	✓
Household chemical collection (kg)	2,586	3,503	No data	No data	~
Public place waste collection (t) ²	7,565	6,901	7,410	7,750	~
Clean Up Notices ³	15	67	54	15	N/A
Litter infringements	80	122	671	1,412	N/A
Council A4 paper use (sheets/employee)	6,370	8,597	8,595	7,908	✓
Council recycled toner cartridges use (per cent)	46%	47%	25%	23%	✗
Building materials recycled at Council facility (t) ⁴	21,417	18,950	26,727	19,894	~

¹ Waste includes collected household waste and clean-ups disposed to landfill. Recycling includes containers, paper, green waste and white goods collection.

² Includes street cleansing waste, public bins, events and waste dumps.

³ Clean-Up Notices were first issued by the City in Q4 of 2003.

⁴ Burrows Road Materials Recycling Facility, St Peters.

(kg) Kilogram.

(t) Tonne.

~ No change.

✓ Improvement.

✗ Decline.

Plants and animals



Urban environment

[www.cityofsydney.nsw.gov.au/
Environment/PlantsAndAnimals](http://www.cityofsydney.nsw.gov.au/Environment/PlantsAndAnimals)

In the urban environment, parks and open spaces provide habitat and food for native animals, as well as improve the quality of air, soil and water.

A well managed urban environment accommodates animals, plants and people. The City is working to conserve and enhance our parks and trees and to improve the health and diversity of our plants and animals.

To help protect native animals and maintain our environment, the City is also encouraging the community to take greater responsibility for their pets or companion animals.

Biodiversity

European settlement and urbanisation of our LGA has had a significant impact on its natural biodiversity. The City is encouraging biodiversity by creating green corridors and planting native species.

Areas within the city where biodiversity is being encouraged include: Sydney Park, Glebe Foreshore mangrove plantings, Federal Park salt marsh wetland, Orphan School Creek Reserve, Pyrmont Light Rail corridor, Alexandria Canal network and in a variety of small pocket parks (areas less than 500 square metres) across the city and its villages.



Parks and open spaces

Plants and animals

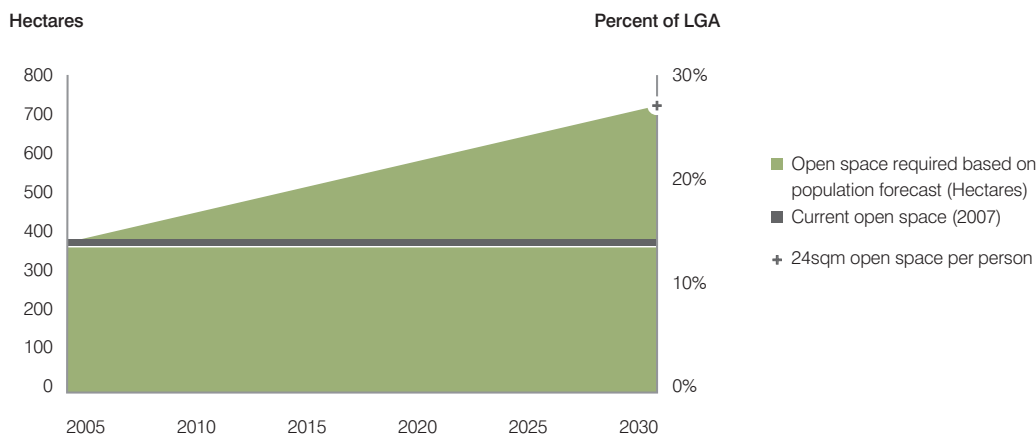
Open space is vital for our city's health, green environments contribute to air quality and cater for a wide range of active and passive recreational activities. Currently around 15 per cent of our city is open space – 377 hectares of parks and open space with 187 hectares managed by the City of Sydney.

The City aims to maintain the quality and usability of open space, even as Sydney's population increases. Currently the LGA offers 23.2 square meters of public open space, per resident, (roughly the equivalent of two parking spaces) and the City has set a target

of achieving 24 square metres of open space per person. The perpetual preservation of open space is seen as a vital aspect of maintaining a quality urban environment. For more information go to www.cityofsydney.nsw.gov.au/Parks

- In June 2007 the City endorsed its Open Space and Recreation Needs Study. The study establishes a framework for environmental sustainability within parks and open spaces by increasing the amount of green space, use of local plant species, water efficiency and wildlife corridors.

Chart: City of Sydney open space targets¹



¹ Source: City of Sydney EMP 2007



Trees

Plants and animals

The City has developed a number of Tree Management Policies (Urban Tree Management Policy, Tree Preservation Order, Street Tree Master Plan and Register of Significant Trees) to ensure the protection and enhancement of the City's urban forests. For more information go to www.cityofsydney.nsw.gov.au/Trees

- In December 2006, Council adopted the Hyde Park Tree Management Plan and Redfern Park Tree Management Plan. These plans identify the strategies required to manage the iconic 19th century trees that are significant to both parks.
- The City's Register of Significant Trees identifies 1,931 trees significant to the LGA. These trees are located in public spaces, parks, streetscapes and on privately owned properties.
- The City has continued to improve the number and quality of its street trees. Street trees improve urban amenity and air quality – in 2006/07, Council planted 2,030 new and replacement street trees.
- In 2006/07 volunteers planted approximately 1,600 plants for Planet Ark National Tree Day including native trees, shrubs and grasses. Each year the City provides free native plants for National Tree Day and for other special events.
- In order to combat tree vandalism, the City has installed CCTV to protect trees at Blackwattle Bay in Glebe.
- The City is working on programs to rid our open spaces of exotic plant species that have become weeds.

Community Planting Groups

The City continues to support the restoration work being undertaken by the Rozelle Bay Community Native Nursery (RBCNN) and Pyrmont Ultimo Landcare (PUL). These groups restore degraded natural environments through revegetation and maintenance projects.

In 2006/07, RBCNN and PUL volunteers planted around 3,700 native plants.

RBCNN worked at Federal Park Wetland, Johnston's Creek Canal, Lewis Hoad Reserve, The Crescent, Bicentennial Park, Glebe Foreshore and Pyrmont.

PUL worked at the Light Rail Station, Harris Street and Pirrama Road, Quarry Master Drive, Wentworth Park, Bartholomew Park and Waterfront Park West.

PUL also organised Clean Up Australia Day activities in March 2007 with 55 volunteers working on a number of clean up projects.

Community Gardens

There are ten Community Gardens in the LGA located in Glebe, Redfern, Newtown, Erskineville, Waterloo and Woolloomooloo. The City supports these gardens by providing services, land and materials.

As well as growing herbs, flowers, vegetables, fruits and rare plants, Community Gardens act as a social hub, bringing a wide range of people together to cultivate and care for their plants.

The gardens demonstrate sustainability principles including waste minimisation, water and energy conservation.

Animals in the city

Plants and animals

Wildlife is an important factor in urban areas and while native animals are being encouraged, the City is working towards reducing the problems caused by animals such as feral cats and rodents.

The City also acknowledges the health, social and emotional benefits companion animals provide. It encourages responsible pet ownership and has created facilities within the city's parks that are designed for residents and their companion animals to enjoy. The City provides 21 parks for the off-leash exercise of dogs and it is considering opening 30 new parks to off-leash activities.

Animal Protection

The City has two staff members who volunteer with the Sydney Metropolitan Wildlife Service and periodically collect and care for injured wildlife within the LGA. City Rangers have also assisted in wildlife rescues in the past twelve months.

Companion Animal Community Education Programs

The City promotes responsible care of companion animals and residents are strongly encouraged to de-sex their pets and to have their pets micro-chipped. Council offers a range of pet services including training programs to ensure dog owners can maintain effective control of their dogs.

■ Micro-chipping and registration

In 2006/07 the City offered residents free micro-chipping for their companion animals. Micro-chipping events were staged in easily-accessible locations across the LGA and Council promoted the importance of permanent identification and registration for companion animals.

■ Strategies to promote and assist the de-sexing of dogs and cats

The City works closely with The Sydney Dogs and Cats Home to promote de-sexing and the City of Sydney website has a dedicated Companion Animals section where information on responsible pet ownership, including de-sexing, is provided.

The City has made provisions to allow residents on pensions, or those with low incomes, to have their pets de-sexed. Through a referral system, the RSPCA auxiliary and The Cat Protection Society provides discounted de-sexing services.

■ Dog obedience training and dog owner education

In 2006/07 the City of Sydney funded 10-week basic and intermediate dog obedience training courses to assist residents gain effective control of their dogs and to educate residents on their responsibilities under the Companion Animals Act. On completion of the course, residents had a greater understanding of dog health and behaviour and were able to contribute to making parks and open spaces a safer and friendlier environment for dog owners and all visitors.

To educate residents about their dog-waste removal responsibilities, the City of Sydney provided course participants with small 'pooch pouches' designed to attach to their dog's lead. Reminding dog owners of their clean-up responsibilities and ensuring waste pick-up bags were always on hand, the pouches carry a City of Sydney logo and the slogan "don't forget to scoop my poop".

Pest Control – weeds and feral animals

The City manages weeds and feral animals within our parks and open spaces and has a comprehensive pest control program.

The City has investigated strategies to control foxes, pigeons, rabbits and Indian Mynas. To reduce the impact of cats on the environment, the City's Operation Cat provides residents with reduced fees for cat de-sexing.

Plants and animals

Table: Plants and animals

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Area of parks and open space (Ha)				377	~
Area managed by the City of Sydney (Ha)				187	~
Native animal rescues	115	151	129	172	~
Number of bird species ¹				68	~
New and replacement street trees ²	850 (2003)	1,127 (2004)	1,150 (2005)	2,030 (2006)	✓
Native plantings for National Tree Day	11,660	6,547	8,000	1,600	✗
Native plantings by Rozelle Bay Community Native Nursery	2,365	1,441	2,806	2,812	✓
Native plantings by Pyrmont Ultimo Landcare	No data	No data		900	✓
Free native plants distributed ³	No data	1,500	2,250	900	✗
New aerial bundle cabling on electricity cables (spans)	100	95	45	15	✗

¹ Sightings by the Bird Atlassers Association, and bird watchers in Pyrmont and Glebe.

² Calendar year plantings.

³ Includes World Environment Day, National Tree Day and other environmental events.

Ha Hectare.

~ No change.

✓ Improvement.

✗ Decline.



Integrated strategies

Integrated strategies

www.cityofsydney.nsw.gov.au/Environment

The way we live, purchase, consume, build and work has impacts across many sectors of the environment. Many of the City's environmental programs target more than one area, and seek to reduce a range of environmental impacts.

City projects

- The City has developed a Sustainable Asset Management Policy to embed sustainability principles into the procurement, operation, maintenance, upgrade and disposal of assets. In 2007/08 the City will develop an implementation plan and design guidelines based on the policy to promote sustainable design and management of new projects and existing assets.
- Energy and Water Savings Action Plans have been developed and actions are being implemented for our largest sites (see the Energy and Water sections for details).
- Construction has commenced on the new Surry Hills Community Centre. A showcase in sustainable design, the building will use recycled materials, cogenerate electricity and heating and has been designed to optimise solar access, indoor air quality and natural lighting. The centre will also have rainwater tanks and a rooftop garden. Sustainability principles incorporated into the building design are based upon the Green Star rating tool of the Green Building Council of Australia (GBCA) and key learnings from the project will be shared with GBCA to assist in the development of a community facilities sustainability rating tool.

Planning

- In 2006/07, the City developed an Environmental Management Plan (EMP) which establishes the environmental vision, targets and priority actions for Council and the community. The EMP was developed in consultation with environmental organisations, community groups, Councillors, staff, and the Institute for Sustainable Futures. The City of Sydney Environmental Management Plan can be viewed or downloaded online www.cityofsydney.nsw.gov.au/EMP
- In 2006/07, the City embarked upon the Sustainable Sydney 2030 project. The work brings together many voices from business, government and the community to ensure that Sydney contributes positively to global sustainability. The project seeks to create a vision for the city we want in the future – key focus areas include the environment, transport, the economy, design, culture, the community and governance. Sustainable Sydney 2030 sets out to create new partnerships and new ways of solving problems and will include time-lines, funding and implementation plans for specific projects. The environmental priorities for 2030 are clean air, less waste and efficient use of energy and water. For more information go to www.cityofsydney.nsw.gov.au/Development/2030
- Beginning in January 2006, an extensive community consultation process has seen Local Action Plans (LAPs) created for each of the city's eight villages identified across the LGA. The LAPs include a list of priority improvement projects, including environmental projects, as requested by the public. For more information go to www.cityofsydney.nsw.gov.au/LAPS

- In 2006/07, the City consulted on a proposed ESD Development Control Plan (DCP) which has a framework based on the Green Star rating tool. The DCP should deliver improved sustainability outcomes in all new development and major refurbishments in the LGA.
- The City of Sydney is one of eleven Australian councils to participate in the Triple Bottom Line (TBL) Capacity Building Program run by ICLEI – Local Governments for Sustainability – to incorporate TBL (economic prosperity, environmental quality and social justice) into its reporting and accountability systems.

Education

The City has embarked on an Environmental Leadership campaign. The multifaceted communications program seeks to provide residents with information on what they can do to reduce their environmental impact and promotes Council's various sustainability initiatives.

Elements of the campaign include:

- sponsoring the 2007 Green Cities Conference (11-13 Feb 2007)
- holding an Environmental Expo in Martin Place (14 Feb 2007)
- creating new banners, posters, newsletters and brochures to promote environmental awareness and sustainable living
- installing new environmental displays at each of the City's centres
- planning a large scale environmental event, Live Green for August 2007
- sponsoring four Sydney Forums to discuss sustainability in the built environment
- supporting World Environment Day – screening environmental films and undertaking other promotional activities
- In 2006/07, the City developed a guide called Green Your Life to help people identify easy ways to significantly reduce their impact on the environment. The guide may be downloaded from the City's website. www.cityofsydney.nsw.gov.au/Environment/documents/GreenYourLifeBrochure.pdf
- The City's website provides benchmarks on environmental issues, trends and programs. The number of visits to the environment website has increased from 88,989 in 2005/06 to 114,679 in 2006/07. For more information go to www.cityofsydney.nsw.gov.au/Environment
- To promote the City's environmental website, postcards printed on recycled paper and containing native bottle brush seeds were distributed. More than 10,000 plant-a-cards were distributed in 2006/07.
- The City is a member of the Council of Capital City Lord Mayors (CCCLM). The CCCLM is a lobby group which actively campaigns for the Australian Government to implement recommendations of the 2006 Sustainable Cities Senate Report. It also lobbies the government to invest in public transport infrastructure. In 2006/07 the City chaired the CCCLM Sustainability Committee and coordinated the development of the CCCLM Sustainability Policy with the Institute for Sustainable Futures.
- A new Green Lease Guide has been developed to help commercial office tenants reduce their environmental impacts. A joint initiative by Investa Property Group, the City of Sydney, NSW Department of Environment and Climate Change, the City of Melbourne and the Institute for Sustainable Futures, the Guide may be downloaded from the City's website. www.cityofsydney.nsw.gov.au/Environment/documents/GreenLeaseGuide_000.pdf

Integrated strategies

- City Talks, a popular community event program which features expert speakers, regularly provides information on issues of urban sustainability. In 2006/07 City Talk speakers shared their views on transport and the built form. For upcoming talks see the What's On section of the City of Sydney website www.cityofsydney.nsw.gov.au/WhatsOn
- The City's Community Centres continue to promote environmental awareness. School holiday programs conducted in the centres, subsidised excursions and various in-centre activities promote environmental responsibility. In 2006/07, excursions included a visit to Sydney Wildlife World, a Minibeasts excursion to Centennial Park with educational rangers and a marine discovery tour at Bondi Beach. In-centre activities included a wildlife demonstration and a range of games, books and building kits that encourage positive action in support of the environment.
- Many of the City's planners, project staff and strategic planning staff have undergone training to use the Green Star sustainability rating tool. Developed by the Green Building Council of Australia, Green Star is Australia's first comprehensive rating system for evaluating the environmental performance of Australian buildings. The rating system examines energy and water efficiency, quality of indoor environment and resource conservation. In 2006/07, 24 staff participated in Green Star training courses. For more information go to www.gbcaus.org
- In 2006/07, the City signed a memorandum of understanding with Marrickville Council to fund The Watershed Sustainability Resource Centre for a further three years. The Watershed promotes a wide range of environmental initiatives including energy and water efficiency. Staff and volunteers at the Watershed provide information on sustainable living including worm farming and composting, permaculture, grey water reuse, rainwater tanks, recycling and natural cleaning products. The Watershed also offers a referral service for products and services. The City's Waste Education Team is part of the Watershed steering committee. For more information go to www.cityofsydney.nsw.gov.au/Watershed
- The Watershed also delivers the City's highly successful workshops on Urban Sustainability. In 2006/07, 1,096 people participated in 80 workshops on topics including waste reduction, composting, worm farming, saving energy and water, environmentally friendly cleaning techniques, sustainable living and making eco choices.

Memberships and Associations

In 2006/07, the City maintained environmental memberships and associations with many organisations and Government departments, including:

- Clean Up Australia
- Cooks River Foreshore Working Group
- Environment Business Australia
- ENVIRONS Australia
- Green Building Council of Australia
- ICLEI – Local Governments for Sustainability
- Institute for Sustainable Futures
- Keep Australia Beautiful
- NSW Department of Environment and Climate Change
- NSW Department of Water and Energy
- Observatory Hill Environmental Education Centre
- Planet Ark
- Pyrmont Ultimo Landcare
- Rozelle Bay Community Native Nursery
- Southern Sydney Regional Organisation of Councils
- Streamwatch
- Sydney Metropolitan Wildlife Service
- Sydney Water Corporation
- The Sydney Coastal Councils Group
- The Watershed
- Total Environment Centre (Green Capital)

Awards

Integrated strategies

In 2006/07, the City received a number of environmental awards including:

- Keep Australia Beautiful Sustainable Cities Awards 2007 (runner-up)
– *City of Sydney Environmental Programs*
- Keep Australia Beautiful Sustainable Cities Awards 2006 (runner-up)
– *City of Sydney Environmental Programs*
- Banksia Environmental Award 2007 (finalist) – *3CBDs Greenhouse Initiative*
- Banksia Environmental Award 2006 (finalist) – *Blackwattle Bay Stormwater Pollution Prevention Program*
- ENVIRONS Australia Silver Award 2006 (winner) – *Cycling in the City*
- Local Government Heart Foundation Award 2006 (winner) – *Cycling in the City*

Grants

- In 2006/07, the City was offered \$243,781 in grant funding from the NSW Environmental Trust. Funding was provided to assist the City deliver a program to promote sustainability among small businesses. The Small Business Sustainability Program was delivered to 150 businesses in the LGA. The program complements work being done by The Watershed to encourage sustainable practices for small businesses.
- The City was offered \$7,500 in grant funding from the NSW Department of Water and Energy to promote the uptake of GreenPower.

Grants

Integrated strategies

City of Sydney environmental grant programs

In 2006/07, the City provided 11 environmental grants to community groups for environmental works and/or education. Based on the success of these projects, Council is looking to increase funding for new projects in 2007/08.

Projects that received environmental grant funding in 2006/07 include:

- **Water Awareness Education and Conservation** (Blackfriars Children's Centre). To support young children's awareness, experiences and care of the environment by developing and implementing educational programs, reducing use of potable water and improving outdoor water management by installing and using rain water tanks.
- **Community Garden: Asphalt to Green Belt** (Erskineville Public School P & C Association). The development of school community garden as a central outdoor learning space. The garden draws on themes of bush tucker, Erskineville's cultural heritage, food production, water use and sustainability.
- **Stormwater Harvest: Saving Stormwater at School** (Erskineville Public School P & C Association). Creating an underground 30,000L stormwater harvest system on the Erskineville Public School grounds to save 190,000L of mains water per year. The installation project was incorporated into the school's environmental education curriculum.
- **Ethnic Communities Bin Butts** (Ethnic Communities Council of NSW). Bilingual environmental educators with the training and culturally appropriate resources targeted cigarette butt littering among ethnic communities. The project focused on a number of strategic locations including: Chinatown and outside the Mandarin Club, King Street Newtown, outside the Greek Community Welfare Centre and at education sessions held in the City of Sydney.
- **Why Waste at World Square?** (Ethnic Communities Council of NSW). Bilingual environmental educators engaged Korean and Chinese residents living in the World Tower in a waste reduction and recycling program. The results of the project will provide a model for other large high-rise developments in the LGA.
- **Blue Wren Habitat Conservation in Glebe / Forest Lodge** (Glebe Society). This project seeks to preserve and enhance the habitat for Blue Wrens in Glebe. Research, on-ground works and community education activities aim to achieve biodiversity conservation outcomes for the long term benefit of the whole community.
- **HarbourKeepers for Kids** (National Parks Association of NSW). The program provides unique educational experiences for Sydney's school children allowing them to learn more about Sydney Harbour's marine environment as part of National Parks Association's existing HarbourKeepers program.
- **Water Wise Guys** (Observatory Hill Environmental Education Centre). An environmental education event to celebrate National Water Week. The project involves 750 students and 60 teachers with programs focusing on waste water management and water conservation.
- **Improving the Ecology of Pyrmont Peninsula** (Pyrmont Progress Incorporated). The ecology of Pyrmont Peninsula is much impoverished. This project aims to generate baseline information, strategies, and action plans for ecological improvement to be implemented.
- **Pyrmont Urban Wildlife Corridor – Stage 2** (Pyrmont Ultimo Landcare). Regeneration of weed-infested land and the creation of a wildlife corridor of native species, within the Light Rail Corridor, Pyrmont.
- **Plastic Bag and Mobile Phone Recycling Survey** (Total Environment Centre). Survey and report on voluntary plastic bag and mobile phone waste reduction initiatives by the retail sector. Comparing current figures to commitments.

Land and noise



Land

www.cityofsydney.nsw.gov.au/Environment/Land

Land contamination is addressed through the City's Contaminated Land Development Control Plan. Contaminated land is identified and remediated, capped or removed as part of the development approvals process.

The City maintains a register of all premises where Contaminated Land Site Audit Statements have been issued.

Urban Form is influenced by the City through its various policy and planning controls. The City's proposed Ecologically Sustainable Design Development Control Plan should deliver improved sustainability outcomes in all new development and major refurbishments in the LGA.

Noise

www.cityofsydney.nsw.gov.au/Residents/Noise

The City prevents and regulates noise through planning controls and reports of noise incidents. With the exception of construction activities, the City limits neighbourhood noise from most sources to a maximum of five decibels above background levels.



Cultural heritage

Cultural programs

Our cultural heritage, the physical or cultural link with our past, is a non-renewable resource that must be protected and conserved. Elements of daily life create our cultural heritage. The physical – buildings, parks, roads, objects, tools, waste sites or middens, cemeteries or burial sites – and the intangible cultural activities such as the ceremonies, stories, songs and beliefs that give expression to who we are.

Within the City of Sydney, our cultural heritage is defined by the lives of our people – Indigenous Australians, people born within Australian and those born overseas who now share in and contribute to our rich and diverse culture. During 2006/07, the City continued efforts to conserve the history of the LGA and embrace, promote, and celebrate our cultural heritage.

Aboriginal Heritage

Throughout 2006/07, the City continued to consult and work with Sydney's Aboriginal and Torres Strait Islander communities and achieved a significant improvement in the working relationships between the greater community, Indigenous community organisations and Council.

In the past twelve months community groups have become more focused on the creation of cultural programs designed to benefit the Indigenous community. The City has received an increased number of funding applications for community projects and has provided a number of grants to support various programs.

Indigenous residents are also making more use of the City's community facilities, services and programs.

During the year, the City:

- Celebrated National Aboriginal and Torres Strait Islander (NAIDOC) Week including flying banners throughout the LGA during the festivities
- Supported NSW Sorry Day Committee in the commemoration of the 'Stolen Generation' on 'Sorry Day'
- Supported the Yabun Festival in Victoria Park
- Continued to run Lights, Camera, Action and a diverse range of community development projects through our community centres
- Launched the Koori collection in Waterloo Library
- The City also maintains cultural protocols acknowledging and paying respect to Sydney's traditional owners.

History

The City's History Program is nationally and internationally recognised for its depth, rigorous research and commitment to ensuring all members of the community have the opportunity to access information on the LGA's history.

In 2006/07 the City's history programs included:

- Completion of 'Strip on the Strip' in Kings Cross – public art that tells the history of the area with an accompanying booklet
- Staging Heritage Week and History Week – the City's programs were a success with many sell-out events
- On-going development of the Dictionary of Sydney at www.dictionaryofsydney.org
- Public lectures, talks and presentations by the City Historian and the Research Historian. A number of presentations were made to conference groups, students, history groups and the general public.

Heritage

In 2006/07, the City continued to work towards improving Sydney's heritage. It also took measures to protect Heritage Items and Conservation Areas.

The City of Sydney Heritage Development Control Plan 2006 commenced operation on 2 January 2007. The City reviewed existing Heritage Conservation Areas, updated contributory maps including reviewing Conservation Area boundaries, and upgraded Conservation Area Heritage Listings.

Heritage Grants

Through its Heritage Grants program, the City provides grants of up to \$10,000 to encourage landowners of Heritage Items, both private and not for profit, to undertake conservation works.

In 2006/07 Heritage Grants totalling \$114,000 were approved.

Heritage Grants totalling \$100,240 have been approved for the 2007/08 financial year.

Heritage studies

As part of its review work to inform the City Plan and consolidate Local Environmental Plan and Development Control Plans from the former South Sydney LGA, the City conducted a number of heritage assessments in 2006/07 including:

■ **Heritage streetscapes**

The City reviewed 56 heritage streetscapes (as recognised under the Sydney Local Environmental Plan 2005 and the South Sydney Local Environmental Plan 1998) to prepare a Draft Heritage Streetscapes Study.

The City of Sydney Draft Heritage Streetscapes Study contained a comprehensive analysis of the city's heritage inventory including: development histories, assessment reports and maps identifying contributory, neutral and detracting development.

The Study made recommendations for minor boundary changes to some heritage streetscapes to exclude detracting development, or include contributory development.

■ **Rosebery Estate**

The City undertook an assessment of the Rosebery Estate which had been identified as a 'Special Precinct' under the South Sydney Development Control Plan 1997.

The City's Draft Rosebery Heritage Assessment Study concluded the Estate did not warrant classification as a Heritage Conservation Area. However, it recommended specific planning controls to ensure that the consistent subdivision pattern and urban form of detached single storey housing was protected. The Study also identified 16 potential Heritage Items within the Estate which required further assessment.

■ **Ultimo/Pymont Heritage Items**

The City conducted a review of existing Heritage Items and Conservation Areas within Pymont and Ultimo, prepared Heritage Inventory sheets using the State Heritage Inventory format and revised existing inventory data. One new listing was recommended in Ultimo.

Heritage Items and Heritage Item Listing amendments

As part of the preparation of the City Plan Local Environmental Plan, the City investigated the heritage potential of a number of properties within the LGA.

The Draft City Plan Local Environmental Plan proposes the addition of 36 Heritage Items to the Heritage Schedule and amendments to the Heritage Listings for 26 items on the existing Heritage Schedule.

Millers Point and Walsh Bay Heritage Review

In April 2006, the City began a detailed review of the heritage value of the Millers Point and Walsh Bay area. A Draft Millers Point and Walsh Bay Heritage Review was publicly exhibited in September/October 2006 and its findings will be incorporated into the City Plan program.

The Draft Review recommends protection of Millers Point and Walsh Bay as a Heritage Conservation Area.

The recommendations for conservation extend to significant landscape and public domain features (including a number of newly proposed Heritage Items), as well as key views and vistas to, from and within the area. Planning provisions to recognise and support the new Millers Point and Walsh Bay Heritage Conservation Area form part of the Review.

Heritage Floor Space Scheme

The City's Heritage Floor Space (HFS) Scheme is designed to encourage the conservation of Heritage Items. It is governed by the provisions of clauses 60-62 of Sydney Local Environment Plan 2005 and Section 7 of Central Sydney Development Control Plan 1996.

The scheme allows the transfer of floor space from heritage sites to non heritage sites and only applies to Heritage Items listed in Sydney Local Environmental Plan 2005 Schedule 8 Part 1 or Heritage Items located within the City Centre or City Edge Zones of the Sydney Local Environment Plan 2005.

Owners of Heritage Items submit a Development Application to undertake conservation works guided by a Conservation Management Plan. Once approved conservation works to the Heritage Item have been completed, the owner is awarded HFS. The awarded HFS may then be allocated (sold) to another site which requires the purchase of HFS as part of its development.

Since January 2007, the City has issued one HFS award – 4,940m² of the former Qantas House building at 68-96 Hunter Street, Sydney.

In the first nine months of 2007, there were 13 sales of HFS – with an average price of \$399 per square metre. The total amount of HFS transferred was 10,801m².

Heritage Databases

The City of Sydney Heritage Inventory is regularly updated by the City's heritage specialists with the revised data periodically uploaded to the NSW Heritage Office for inclusion within NSW State Heritage Inventory. Information on Heritage Inventory within the LGA is available via the NSW Heritage Office website.

The City's City Plan Development Unit also contributes to documenting Sydney's Heritage Inventory.

Heritage Conservation Area Maps indicating contributory, neutral and detracting buildings, are available on the City's website. For further information, see www.cityofsydney.nsw.gov.au/Development/HeritageInformation/HeritageConservationAreaMaps

Appendix



Environmental management plan

Status of actions

A list of the summary of actions and the status of actions from the City of Sydney Environmental Management Plan (EMP) is produced below.

In June 2007, a total of 40 out of 53 actions have been initiated. For a complete description of actions and targets, the EMP can be viewed and downloaded online www.cityofsydney.nsw.gov.au/EMP

Energy and Emissions – 9/12 actions initiated

ID	ACTION	PRIORITY	TIMEFRAME	STATUS
e01	Cities for Climate Protection (CCP)	High	2007	✓ Initiated
e02	Energy savings action plan	High	2008	✓ Initiated
e03	Cycle strategy	High	2016	✓ Initiated
e04	Vehicle fleet program	High	Ongoing	✓ Initiated
e05	GreenPower	High	2020	✓ Initiated
e06	Carbon neutral Council	High	2007	✓ Initiated
e07	Public lighting	High	2014	✓ Initiated
e08	Sustainable transport	High	2010	✓ Initiated
e11	Energy efficiency in commercial buildings	High	2007	✓ Initiated
e09	Air quality monitoring	High	Ongoing	Not initiated
e10	Climate change adaptation program	High	2008	Not initiated
e12	Residential energy programs	High	2007	Not initiated

Water – 3/6 actions initiated

ID	ACTION	PRIORITY	TIMEFRAME	STATUS
w02	Water reuse projects	High	Ongoing	✓ Initiated
w03	Water savings action plan	High	2008	✓ Initiated
w06	Erosion and sediment control	Medium	Ongoing	✓ Initiated
w01	Stormwater management plan	High	2007	Not initiated
w04	Residential water programs	High	Ongoing	Not initiated
w05	Water savings in commercial buildings	High	Ongoing	Not initiated

Waste – 5/6 actions initiated

ID	ACTION	PRIORITY	TIMEFRAME	STATUS
ws01	Waste management strategy	High	2007	✓ Initiated
ws02	Waste education and enforcement	High	Ongoing	✓ Initiated
ws03	Residential waste and recycling programs	High	Ongoing	✓ Initiated
ws04	Department of Housing program	High	Ongoing	✓ Initiated
ws06	Land contamination	Medium	Ongoing	✓ Initiated
ws05	Commercial and building waste	High	2014	Not initiated

Plants and Animals – 6/8 actions initiated

ID	ACTION	PRIORITY	TIMEFRAME	STATUS
p01	Community planting days	Medium	Ongoing	✓ Initiated
p02	Native plants	Medium	Ongoing	✓ Initiated
p03	Native wildlife	Medium	Ongoing	✓ Initiated
p04	Open space strategy	Medium	Ongoing	✓ Initiated
p06	Tree management	Medium	Ongoing	✓ Initiated
p08	Weed control	Medium	Ongoing	✓ Initiated
p05	Green roofs	Medium	2007	Not initiated
p07	Urban forest program	Medium	2008	Not initiated

Appendix

Integrated Strategies – 17/21 actions initiated

ID	ACTION	PRIORITY	TIMEFRAME	STATUS
i01	Energy and water data	High	2007	✓ Initiated
i02	Energy savings action plan	High	2007	✓ Initiated
i03	Benchmarks and key performance indicators	High	Ongoing	✓ Initiated
i04	Council purchasing	High	2007	✓ Initiated
i05	Showcase buildings	High	2009	✓ Initiated
i06	Sustainability planning controls	High	2007	✓ Initiated
i07	The Watershed	High	Ongoing	✓ Initiated
i08	Education for sustainability	High	2007	✓ Initiated
i09	Lobbying and advocacy	High	Ongoing	✓ Initiated
i12	Sydney sustainability forums	Medium	Ongoing	✓ Initiated
i13	Triple bottom line	Medium	2007	✓ Initiated
i14	Ethical investment	Medium	2007	✓ Initiated
i15	Events	Medium	Ongoing	✓ Initiated
i17	Grants	Medium	Ongoing	✓ Initiated
i18	Schools program	Medium	Ongoing	✓ Initiated
i20	Community gardens	Medium	Ongoing	✓ Initiated
i21	Noise and urban amenity	Medium	Ongoing	✓ Initiated
i10	Awards	Medium	2007	Not initiated
i11	Environmental project control group	Medium	2007	Not initiated
i16	Environmental art	Medium	Ongoing	Not initiated
i19	Small business program	Medium	2007	Not initiated

Summary of environmental indicators

Appendix

Table: Demographics

Indicator	2004 ¹	2005 ¹	2006 ¹	2007 ¹
Residents	146,540	155,559	160,090	161,800
Workers (per day)	350,000	367,544	369,043	375,000
Visitors (per day)	450,000	475,000	475,000	475,000
Visitors (total nights)	8,732,100	9,000,000	9,039,900	9,462,800
City of Sydney employees ²	1,479	1,485	1,509	1,601

¹ As at 30 June.

² Figures include permanent and casual staff.

Table: Built form

Area of LGA (26.15 sq km)

Indicator	2004 ¹	2005 ¹	2006 ¹	2007 ¹
Households (dwellings)	84,123	87,506	90,597	93,965
Completed commercial development (sqm)	85,276	150,859	246,825	107,404
Completed residential development (dwellings)	4,812	3,706	2,558	3,368

¹ As at 30 June.

TABLE: Greenhouse gas emissions

Indicator	2003	2004	2005	2006	Trend
Global (t)¹	41,965,517,000	42,448,276,000	42,931,034,000	43,413,793,000	✗
National (t)²	571,102,000	571,724,000	575,839,000	579,862,000	✗
LGA emissions (t)³	3,351,000	3,430,000	3,509,000	3,589,000	✗
LGA savings (t)⁴	No data	3,769	5,870	12,587	✓
Council emissions (t)⁵	35,600	36,400	37,100	37,900	✗
Council savings (t)⁶	No data	55 (0%)	112 (0%)	1,172 (3%)	✓
Council offsets (t)^{7, 8}	737 (2%)	4,938 (13%)	11,675 (31%)	TBC (100%)	✓
Cities for Climate Protection™ (CCP) program			Milestone 1	Milestone 3	✓

- ¹ Calendar year global greenhouse gas emissions (CO₂ equivalent) rounded to nearest 1,000 tonnes – from median 2030 modelling forecasts of the Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.
- ² Calendar year forecast estimate (including abatement measures), rounded to nearest 1,000 tonnes, from Tracking To The Kyoto Target 2006, Australian Greenhouse Office (AGO). Figures shown vary to previous SoE reports due to revised AGO data.
- ³ Calculated Business as Usual (BAU) scenario using Cities for Climate Protection™ software. Results are rounded to nearest 1,000 tonnes. Figures shown vary to previous SoE reports as emissions estimates have been updated using 2001 ABS, ABARE and revised population forecasts.
- ⁴ Measures prepared for Milestone 4 of the Cities for Climate Protection™ program based on community greenhouse savings achieved through initiatives such as the 3CBDs Greenhouse Initiative.
- ⁵ Calculated Business as Usual (BAU) scenario using Cities for Climate Protection™ software. Results are rounded to nearest 100 tonnes.
- ⁶ Measures prepared for Milestone 4 of the Cities for Climate Protection program based on Council greenhouse emissions savings achieved through programs such as the energy savings plan and fleet programs. Figures do not include offsets or GreenPower.
- ⁷ Includes GreenPower used for New Year's Eve, properties and street lighting. 2006/07 emissions to be offset through the City's carbon neutral program.
- ⁸ Fleet offsets include accredited tree plantings and GreenPower. 2006/07 emissions to be offset through the City's carbon neutral program.

(t) Tonne.

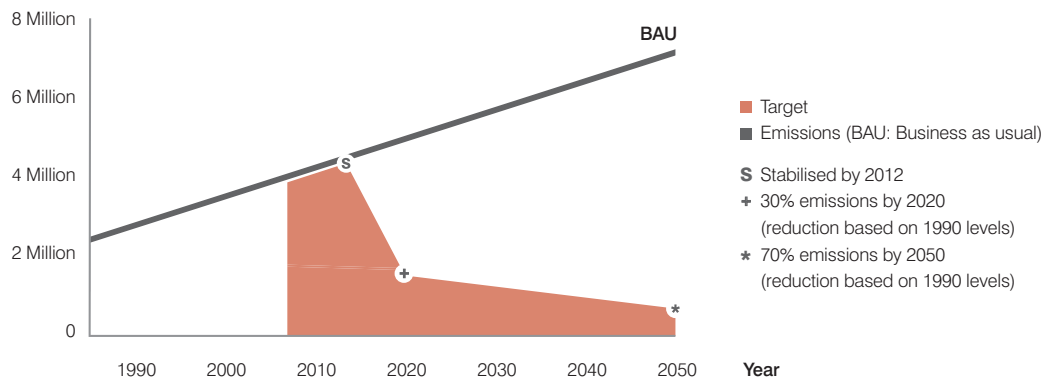
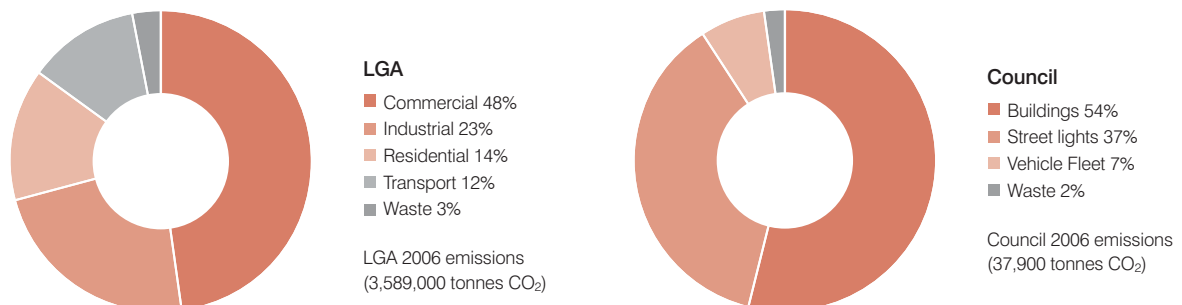
Table: Global Warming

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Atmospheric CO₂ (ppm)¹	374	376	378	379	✗
Global-mean surface temperature increase (°C)²	0.67	0.60	0.76	0.65	✗

- ¹ Information provided by Cape Grim Baseline Air Pollution Station, funded and managed by the Australian Bureau of Meteorology and CSIRO Marine and Atmospheric Research.
- ² Calendar year global observed temperature averages above the climatological mean (1951-1980). Trends show a general increase in global temperature. NASA Goddard Institute for Space Studies. <http://data.giss.nasa.gov/gistemp/2005>

ppm Parts per million.

°C Degrees Celcius.

Chart: City of Sydney LGA greenhouse emissions targetsEmissions
(tonnes CO₂)¹ Source: City of Sydney EMP 2007**Chart: Greenhouse gas emissions in the City of Sydney LGA¹**

¹ 1 tonne CO₂ = 505 cubic meters (based on CO₂ density of 1.98kg per cubic meter at 25°C).
 CBD Area 2,200,000 sqm bounded by College Street – Macquarie Street – Western Distributor – Harris Street
 from Gehl Study: *Public Spaces – Public Life 2007*.

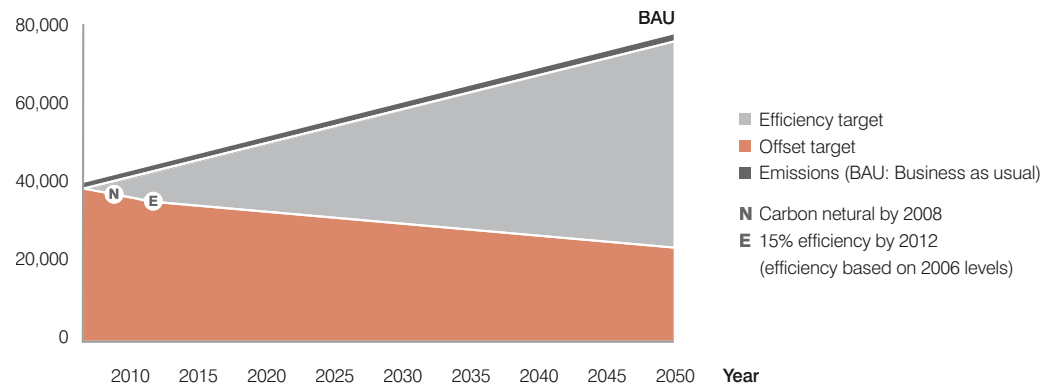
Chart: Council greenhouse emissions targets¹Emissions
(tonnes CO₂)¹ Source: City of Sydney EMP 2007

Table: Transport

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Vehicles per day in LGA ¹	808,398	816,754	809,428	794,461	✓
Staff with travel passes	194 (13%)	266 (18%)	321 (21%)	338 (21%)	✓

- ¹ Information provided by the NSW Roads and Traffic Authority (does not include Cross City Tunnel).
Based on combined direction vehicle numbers for Sydney Harbour Bridge, Sydney Harbour Tunnel, Anzac Bridge, Kings Cross Tunnel, Oxford Street, Parramatta Road, King Street, Regent Street, O'Riordan Street, Anzac Parade, and City West Link Road.

Table: Fleet

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Fleet emissions (t)	2,575	2,746	2,504	2,744	~
Contractor emissions (t) ²	No data	No data	1,060	1,309	x
Fleet emissions offset (t) ³	684 (27%)	1,394 (51%)	3,564 (100%)	4,053 (100%)	✓

- ² Based on fuel data provided by contractors who provide Council services on behalf of the City.

- ³ Fleet offsets include accredited tree plantings and GreenPower. 2006/07 emissions to be offset through the City's carbon neutral program.

(t) Tonne.

Table: Air Pollution

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Low air pollution (days/year) ¹	291	300	287	283	✓
High air pollution (days/year) ¹	9	6	9	5	✓
Carbon monoxide (CO average ppm) ²	No data	1.9	1.3	1.7	~
Nitrogen dioxide (NO ₂ average pphm) ²	No data	5.2	4.7	4.4	~
Total nitrogen oxides (NO _x average pphm) ²	No data	25.3	19.6	20.6	~
Particulate matter (PM ₁₀ average µg/m ³) ²	No data	37.1	35.4	36.6	~
Particulate matter (PM _{2.5} (25 µg/m ³) ²	No data	15.1	14	15.3	~

- ¹ Information for Central East Sydney by the NSW Department of Environment and Climate Change.

- ² Ground level Ambient Air Quality Monitoring Results (Mary Ann Street Park, Ultimo). Cross City Tunnel Air Quality Monitoring Reports. 2005/06 figures based on Sep 05 to May 06 monthly averages. National Environment Protection Measure criteria are CO (9 ppm); NO₂ (12 pphm); NO_x (no standard); PM₁₀ (50 µg/m³); and PM_{2.5} (25 µg/m³) www.crosscity.com.au

~ No change.

✓ Improvement.

x Decline.

Table: Electricity

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
City of Sydney area residential electricity usage (MWh) ¹	373,391	376,863	399,136	Unavailable at time of print	~
City of Sydney area business electricity usage (MWh) ¹	3,520,574	3,576,030	3,714,346	Unavailable at time of print	~
Council electricity usage (MWh) ²	31,485	33,117	37,379	39,173	x
Council electricity usage per employee (MWh) ²	21.3	22.3	24.8	24.5	✓
Council gas usage (GJ)	No data	No data	13,805,950	11,612,012	✓
Total GreenPower purchase in Australia (MWh) ³	No data	495,250	688,754	1,013,707	✓
GreenPower purchase by Council (MWh) ⁴	50	4,144	7,695	39,173 ⁵	✓
Households using GreenPower in Australia ³	No data	150,374	281,701	565,977	✓
Businesses using GreenPower in Australia ³	No data	7,229	14,676	24,313	✓
Solar parking meters	1,194	1,268	1,267	1,264	~

¹ Information provided by Energy Australia for suburbs in and around the City of Sydney. Data is not confined to the LGA and may be based on accruals and estimates. Figures shown vary to previous SoE reports as suburbs used have been changed to more accurately represent the local government boundary.

² Information provided by Energy Australia. Data for 2003/04 and 2004/05 is based on daily average totals (may not be accurate representation of actual consumption).

³ National GreenPower quarterly reports (residential and commercial sales) www.greenpower.com.au

⁴ Includes properties and public domain lighting, New Year's Eve, and fleet offsets. 100% GreenPower to be purchased for 2006/07 through the City's carbon neutral program.

⁵ Approximate amount of GreenPower to be purchased retrospectively for electricity use 2006/07 as per council resolution.

MWh Megawatt hour.

GJ Gigajoule.

~ No change.

✓ Improvement.

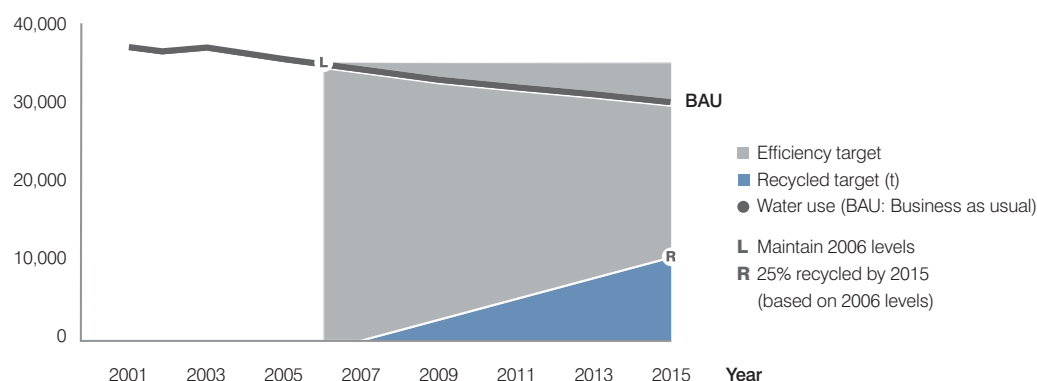
x Decline.

Table: Uptake of Sydney Water programs in the City of Sydney

PROGRAM	2002/03	2003/04	2004/05	2005/06	2006/07
DIY Kits				576	3,019
Rainwater Tank Rebate	1	3	8	18	26
Washing Machine Rebate	26	291	0	387	2,929
Waterfix	945	718	3,092	2,112	5,037
Total	972	1,012	3,100	3,097	11,011

Chart: City of Sydney LGA water targets

Water use (megalitres)

¹ Source: City of Sydney EMP 2007**Chart: Council water targets**

Water use (megalitres)

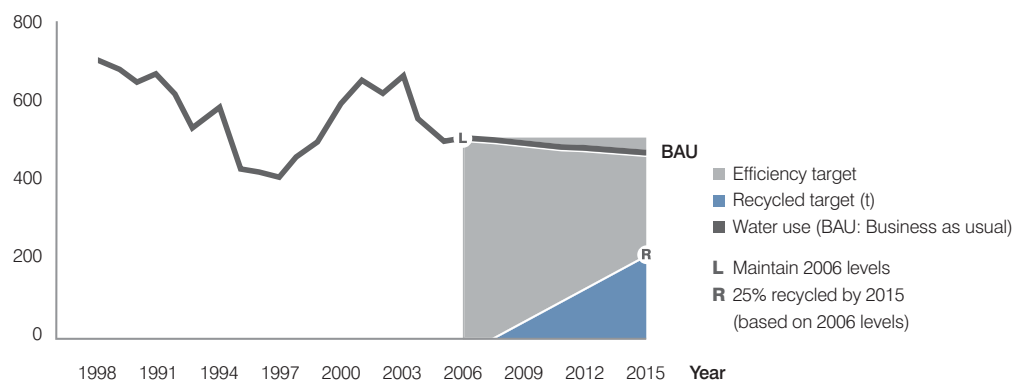
¹ Source: City of Sydney EMP 2007

Table: Water pollution

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Darling Harbour bacteria levels exceed safe limit (months per year) ¹	7	10	6	9	x
Water pollution removed from Blackwattle Bay (cubic m) ²	96	99	116	126	~
Water pollution removed from Rozelle Bay (cubic m) ²	214	298	263	204	~
Rubbish from Council stormwater pollution traps (t)	1,011	1,366	1,249	1,290	~
Water pollution infringements	52	94	76	44	~

¹ For faecal coliform and enterococci bacteria levels tested by the NSW Department of Environment and Climate Change.

² Information provided by the NSW Maritime Authority.

(t) Tonne.

Table: Water supply

INDICATOR	2003/04	2004/05	2005/06	2006/07	TREND
Potable water cost (\$/kilolitre) ¹	\$1.013	\$1.013	\$1.264	\$1.48	✓
City of Sydney area average rainfall (mm) ²	705	1,041	792	1,403	✓
Water storage level (per cent) ³	42.6	38.3	41.8	50.5	✓
City of Sydney LGA total water use (megalitres) ²	36,338	35,309	34,985	34,636	✓
City of Sydney average water use per property (kilolitres): ²					
– Commercial	2,548	2,459	2,394	2,426	x
– Units	166	165	167	168	x
– Houses	201	290	188	181	✓
Council water usage (megalitres) ²	534	484	493	496	x
Council water usage per employee (kilolitres) ²	361	326	322	310	✓
Fountains water usage (kilolitres/fountain/day)	No data	No data	1.9	2.0	~

¹ Sydney Water pricing for consumption more than 100 kilolitres per quarter.

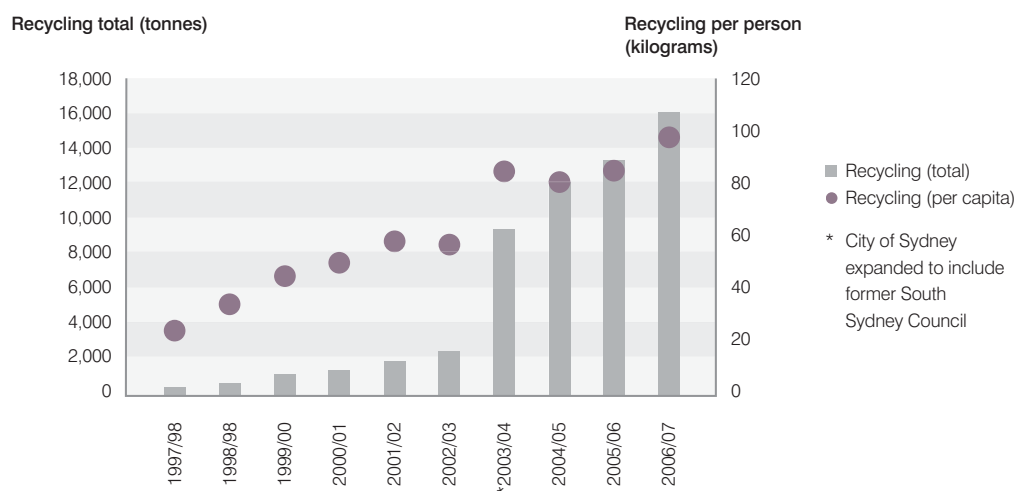
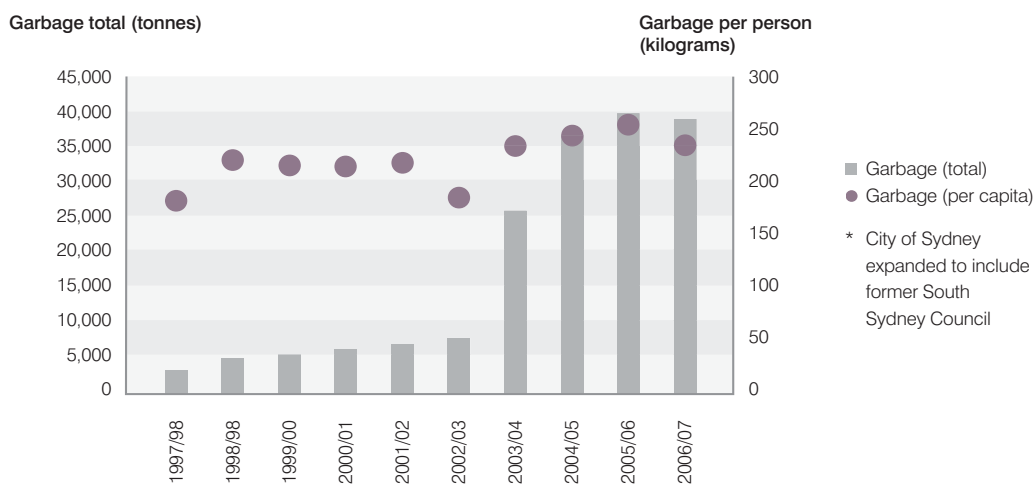
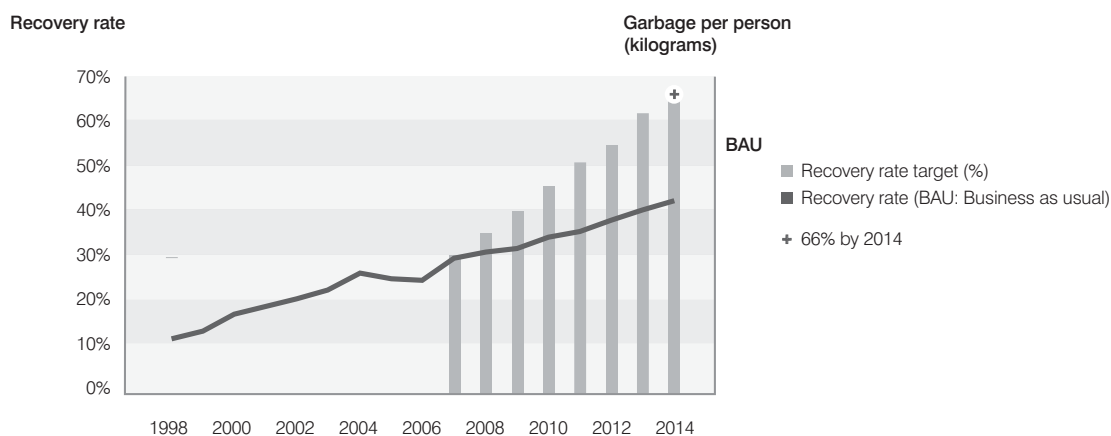
² Sydney Water.

³ Sydney Catchment Authority June figures.

~ No change.

✓ Improvement.

x Decline.

Figures: Domestic waste in the City of Sydney LGA¹***Figure: City of Sydney domestic waste targets¹**¹ Source: City of Sydney EMP 2007

Appendix

Table: Waste

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Total household waste (t) ¹	26,020	36,553	39,999	38,752	✓
Total household recycling (t) ¹	9,169	12,186	13,227	16,122	✓
Household waste (kg/person)	230	238	257	234	✓
Household recycling (kg/person)	84	79	85	97	✓
Household waste diverted from landfill (per cent)	26.1%	25%	25%	29%	✓
Household chemical collection (kg)	2,586	3,503	No data	No data	~
Public place waste collection (t) ²	7,565	6,901	7,410	7,750	~
Clean Up Notices ³	15	67	54	15	N/A
Litter infringements	80	122	671	1,412	N/A
Council A4 paper use (sheets/employee)	6,370	8,597	8,595	7,908	✓
Council recycled toner cartridges use (per cent)	46%	47%	25%	23%	✗
Building materials recycled at Council facility (t) ⁴	21,417	18,950	26,727	19,894	~

¹ Waste includes collected household waste and clean-ups disposed to landfill. Recycling includes containers, paper, green waste and white goods collection.

² Includes street cleansing waste, public bins, events and waste dumps.

³ Clean-Up Notices were first issued by the City in Q4 of 2003.

⁴ Burrows Road Materials Recycling Facility, St Peters.

(kg) Kilogram.

(t) Tonne.

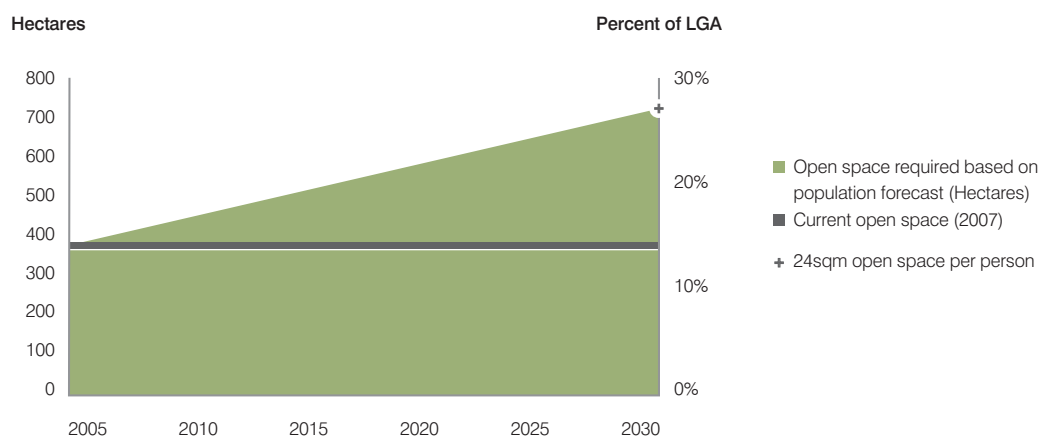
~ No change.

✓ Improvement.

✗ Decline.

Appendix

Chart: City of Sydney open space targets



¹ Source: City of Sydney EMP 2007

Table: Plants and animals

Indicator	2003/04	2004/05	2005/06	2006/07	Trend
Area of parks and open space (Ha)				377	~
Area managed by the City of Sydney (Ha)				187	~
Native animal rescues	115	151	129	172	~
Number of bird species ¹				68	~
New and replacement street trees ²	850 (2003)	1,127 (2004)	1,150 (2005)	2,030 (2006)	✓
Native plantings for National Tree Day	11,660	6,547	8,000	1,600	✗
Native plantings by Rozelle Bay Community Native Nursery	2,365	1,441	2,806	2,812	✓
Native plantings by Pyrmont Ultimo Landcare	No data	No data		900	✓
Free native plants distributed ³	No data	1,500	2,250	900	✗
New aerial bundle cabling on electricity cables (spans)	100	95	45	15	✗

¹ Sightings by the Bird Atlasers Association, and bird watchers in Pyrmont and Glebe.

² Calendar year plantings.

³ Includes World Environment Day, National Tree Day and other environmental events.

Ha Hectare.

~ No change.

✓ Improvement.

✗ Decline.

City of Sydney

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The State of the Environment Report
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