

STATE OF THE ENVIRONMENT REPORT 2009/10



Bushcare volunteers harvest seed from the native Kangaroo Grass for reintroduction where appropriate into Parramatta's natural reserves (David Wallace Photography)



One of the most relaxing ways to appreciate the Parramatta River and neighbouring remnant natural bushland is to travel up or down the river on the RiverCat ferry (Karen Steains Photography)



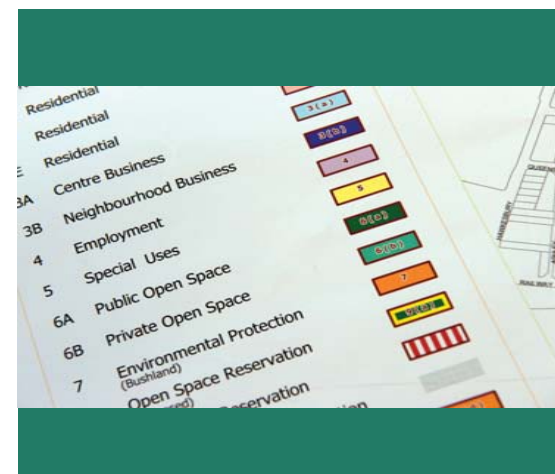
Named after the annual upstream migration of eels (burra) to the tidal reaches of the Parramatta River, the City continues to celebrate its Indigenous cultural heritage



Majestic 19th century government buildings continue to be one of the hidden treasures of Parramatta (David Wallace Photography)

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COUNCIL'S ORGANISATION



Council's Vision

"Parramatta First: The Leading City at the Heart of Sydney"

Our vision is for Parramatta LGA to become a sustainable city:

- with a healthy, natural environment
- with vibrant neighbourhood centres and attractive buildings
- with a CBD at the heart of Sydney with something for everyone
- that is accessible to people who walk, ride or use public transport
- that is inclusive of all people, cultures and lifestyles
- with economic and learning opportunities for growth and enrichment of our community rich in leadership and good management of its organisations

Council's Guiding Principles

Those behaviours that we live by in order for us to be a successful organisation:

- Cooperative teamwork
- Customer service
- Sustainability and Community focus
- Leadership
- Accountability
- Integrity
- Communication
- Excellence
- Innovation
- Respect

Council's Purpose

To deliver the best possible services to our community

PARRAMATTA PROFILE

Parramatta City is located in Sydney's western suburbs, about 24 kilometres from the Sydney GPO. Parramatta City is bounded by Baulkham Hills Shire and Hornsby Shire in the north, the City of Ryde in the east, Auburn, Bankstown and Fairfield councils in the south and Holroyd and Blacktown councils in the west.

Parramatta City has an estimated population of 161,912 people (2008) and includes the suburbs of Camellia, Carlingford, Chester Hill, Clyde, Constitution Hill, Dundas, Dundas Valley, Eastwood, Epping, Ermington, Granville, Guildford, Harris Park, Melrose Park, Merrylands, North Parramatta, Northmead, Oatlands, Old Toongabbie, Toongabbie, Parramatta, Pendle Hill, Rosehill, Rydalmere, South Granville, Telopea, Wentworthville, Westmead and Winston Hills.

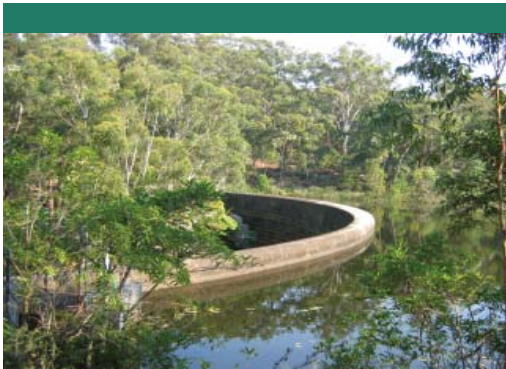
Parramatta is derived from the Aboriginal word "Burrumatta" meaning "the place where eels lie down to breed". It was originally known as Rose Hill.

Parramatta City is a predominantly residential area with substantial institutional, industrial and commercial land use. Major features of the City include Westfield Shoppingtown, the Parramatta City Centre, Westmead Hospital, The Children's Hospital at Westmead, TAFE NSW South Western Sydney Institute (Granville College), University of Western Sydney (Parramatta Campus and Westmead Precinct), Old Government House, Elizabeth Farmhouse, Parramatta Heritage Centre, Rosehill Gardens Racecourse, Parramatta City Raceway, Parramatta Stadium, Parramatta Regional Park, Lake Parramatta and the Parramatta River. The City is served by the Western (M4) Motorway, the Great Western Highway and the main western, main northern and Carlingford railway lines.

The City encompasses a total land area of about 61 square kilometres.



ENVIRONMENTAL PROFILE



Centrally located in the Sydney basin, the Parramatta Local Government Area straddles the junction between the Hawkesbury Sandstone of the Hornsby Plateau and the Wianamatta Shales of the Cumberland Lowland, as well as four catchments that drain into Sydney Harbour.

Since the area was explored and mapped in 1788, the towering Cumberland Plain Forests with their open understoreys have been whittled away to pockets of remnant bushland. Gone too are the dense flocks of waterfowl and fruit bats that once darkened the sky above Duck River, and the immense hoards of shellfish that accumulated over at least 20,000 years on the tidal mudflats during their occupation by Darug speaking peoples.

The traditional meeting place for Indigenous people from Western Sydney and beyond, Parramatta was the site of Australia's earliest attempts at Indigenous reconciliation within the early years of settlement after disease, dispossession and hostilities decimated the Darug clans around the port of Sydney. Parramatta's surviving sites of significance include axe grinding grooves, rock shelters and art sites.

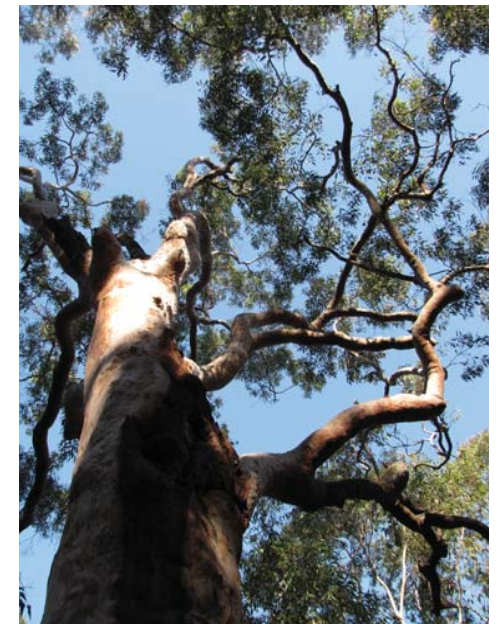
A legacy of its early establishment as a seat of government, Parramatta houses a rich legacy of Colonial heritage assets including buildings, bridges and cemeteries. The district was singled out in the first months of the Colony because of its fertile alluvial soils along its waterways and the richer loamy soils overlaying shales. Two centuries after it was earmarked as the site for Government farms, the settlement has become the heart and hub of Western Sydney. As Sydney's second CBD, the City has been experiencing increasing pressure on its open space under competing demands for land while striving to accommodate urban consolidation and population pressures.

Parramatta's light and heavy industry sectors generate point source pollution, compounded by diffuse and mobile pollutants in the form of private vehicles. As a major transport, retail, commercial and health profession hub, the local government

area is experiencing the impacts of increased commuter, residential and visitor transport movements, with inadequate infrastructure from feeder areas leading to high private car use.

Complicating matters, Parramatta's air quality is at the mercy of regional climatic conditions and pollution generated throughout the Sydney Basin. At the upper reaches of the Parramatta River's tidal flow, the City is beyond the cooling influences of coastal sea breezes and misses out on any natural flushing of its air quality. This means that Parramatta is consistently hotter in spring and summer than the coastal parts of Sydney.

Maintaining community awareness on environmental matters is complicated by the relatively high percentage of residents who were born in another country and speak English as a second language.



COUNCIL'S STRATEGIC DIRECTION

Parramatta Twenty25

In 2004 a group of residents, businesses, government representatives and other interested people came together to discuss ways to improve the sustainability of our city. The first step in creating a more sustainable Parramatta was to redefine the future. As a result, ParramattaTwenty25 was adopted by Council in December 2006.

ParramattaTwenty25 is Council's 20 year strategic plan for the Parramatta LGA to improve our economic, social and environmental wellbeing and to meet the aspirations of our residents. This plan tells us what we need to do to make the city of Parramatta more sustainable in the future. Expressed in seven destinations, Parramatta Twenty25 outlines the vision for Parramatta and the strategies required to get there.

In developing Parramatta Twenty25, council undertook extensive consultation with residents, and other key stakeholders throughout the city. Ongoing participation and involvement of the community and stakeholders has been critical to ensure ParramattaTwenty25 is responsive and relevant.

Parramatta City Council will measure the deliverables of Parramatta Twenty25 using two reports - the State of the City Report and the Annual Report. While the Annual Report will determine how well Council met the goals, objectives, performance measures and targets of our Management Plan, the State of the City Report will ascertain Council's advancement towards the 7 destinations in Parramatta Twenty25. It will determine the city's progress in meeting sustainability benchmarks and report on key sustainability indicators that are part of the implementation plan of ParramattaTwenty25.

It should be noted that "Land and Water that is protected, respected and sustained" was identified by residents, workers and students as the number 1 priority through the consultation process, showing the importance that the community places on our natural environment.



STATE OF THE ENVIRONMENT REPORT 2009/10



The Local Government Act 1993 requires councils, councillors and council employees "to have regard to the principles of ecologically sustainable development in carrying out their responsibilities".

It also requires council to "properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible in a manner which is consistent with and promotes the principles of ecologically sustainable development and have regard to the long-term and cumulative effect of its decisions".

Australia's National Strategy for Ecologically Sustainable Development 1992 (NSED) defines ecologically sustainable development (ESD) as:

"using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased"

Each financial year Parramatta City Council prepares a State of the Environment (SoE) report in accordance with the Act.

The SoE reports on the major environmental pressures that face the Parramatta Local Government Area (LGA) and provides an explanation of the state of the eight environmental sectors including Land, Water, Biodiversity, Noise, Waste, Air Quality & Global Warming and Indigenous & Non-Indigenous Heritage. Within the SoE, Council explains in detail how the organisation responded to identified pressures facing the City by preparing environmental plans, targeted strategies and monitoring of performance trends.

NSW legislation states that SoE reports are to comply with the Pressure-State-Response model of environmental reporting. Each component of this model is described below:

- Pressure:** Identifies and describes the pressure that human activities put on their immediate environment and their natural surroundings.
- State:** Identifies and describes the current and projected state of the environment.
- Response:** Identifies and describes the response of councils, government agencies, industry and communities to the pressures on, and state of, the environment.



STATE OF THE ENVIRONMENT REPORT 2009/10

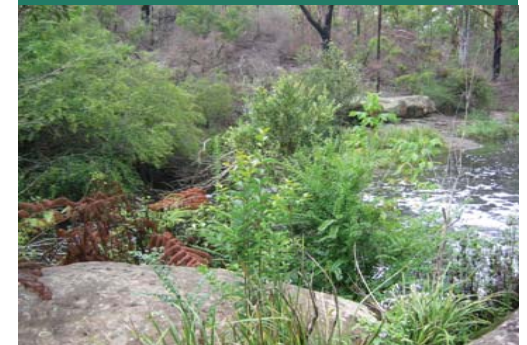
It should be noted that the first SoE for the year ending after each election of the councillors for its area must be a comprehensive state of the environment report. As a result of Council Elections held on 13 September 2008, last years SoE (2008/09) was a comprehensive report, providing a more detailed account on the condition of and Council's actions in managing and protecting the environment over the previous four years.

This years state of the environment report (2009/10) is a supplementary report which notes the achievements over the past twelve month period.

This SoE report also includes a number of indicators which have been provided for each of the Environmental Sectors. The purpose of including these is to monitor trends over time and determine whether we are making progress towards achieving our environmental goals whilst considering social and economic factors also. Trends are shown as in the report as follows:

- ▲ or ▼ indicates we are making improvements or tracking in the right direction
- ▲ or ▼ indicates we have room for improvement or need to manage increased pressures on our environment
- ◀▶ indicates no clear trend

A full list of the key achievements for each environmental sector has been included in the next section of this report. The future will hold changes for SoE reporting, with recent amendments to the Local Government Act 1993 setting out a new planning and reporting framework to be phased in over a 3 year period. Council is fortunate to already have a planning framework in place which will satisfy many of the requirements of the amended Act. Additionally, the new reporting framework will provide greater flexibility to how Council's develop their reports by potentially incorporating social and economic indicators across the City as well.



LAND

PRESSURE

Urban development and consolidation places great pressure on our land. Land degradation through the removal of trees and excavation for building sites can result in soil erosion and exposure of acid-sulphate soils. Additionally, former activities within the Parramatta Area have resulted in parcels of land becoming contaminated.

Parramatta Local Government Area (LGA) has very few green field (previously undeveloped) lots and therefore development is largely focused on redeveloping existing sites. This indicator has been selected to demonstrate the changes in building type from low density (single buildings/dwellings) to medium or high density. Whilst Development Application (DA) numbers may fluctuate annually based on various economic forces, the total number of new subdivisions as a proportion of the total number of DA's determined has steadily increased indicating greater urban consolidation. Such development places increased pressure on our natural environment with the potential for soil erosion to occur during the building process as a result of poor soil and sediment controls being implemented. However, the redevelopment of many of these sites does provide an opportunity for contaminated lots to be remediated as part of the DA process.



INDICATOR

Urban Consolidation Indicator							
No. Subdivisions approved as percentage of total DA's determined							
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	Trend
No. DA's determined	1812	1463	1390	1141	1126	1149	
No. Subdivision Certificates Issued (incl. by Private Certifier)	142	107	122	103	113	122	
No. Subdivisions approved as % of total DA's determined	7.84	7.31	8.78	9.03	10.04	10.6	▲

STATE

Urban development and revitalisation continued to place pressure on Parramatta's finite land resources and open space. The demand for housing has intensified urban consolidation, resulting in smaller building blocks and an increase in high rise buildings.

Projections show that the city's population is set to grow by 40,000 people by 2031. The challenge is to plan for sustainable development in addressing population distribution, accessibility, environmental quality, travel patterns, transport choices, residential quality and the character of residential areas throughout the Council area.

Other pressures on our land include contamination from chemical manufacture, service stations, landfill sites and railway yards. Such impacts continue to constrain development, requiring costly site remediation before re-use. Soil erosion from building sites remains an ongoing problem and places pressure on our waterways. Similarly, acid sulphate soils located generally around Parramatta and Duck Rivers have the potential to impact on the natural environment and new construction materials when exposed to air during excavation.

RESPONSES

- Publicly exhibited a draft revised Local Environment Plan (LEP) and Development Control Plan (DCP). The draft LEP is based on strategies outlined in the *Residential Development Strategy (RDS)* and represents a sustainable and staged approach to managing population growth and meeting NSW State Government's objectives and dwelling yield targets. These draft revised planning instruments have strengthened provisions for protection of biodiversity and incorporation of water sensitive urban design requirements for different development types
- continued to manage land contamination through the planning and development consent process under the *Environmental Planning and Assessment Act 1979* and various planning instruments including the *Parramatta Local Environmental Plan, State Environmental Planning Policy No. 55 – Remediation of Land and the Managing Land Contamination – Planning Guidelines*
- planted more than 700 trees under Council's City of Trees Program in our streetscapes and parks
- continued to deal with matters of poor soil and sediment control on building sites, with regular inspections by Council's Environmental Health Officers, Development Control Officers and Rangers, and issue of notices for breaches.

NOISE

PRESSURE

Pressures responsible for intensifying noise levels in the LGA include urban development and construction, domestic and neighbourhood noise, commercial and industrial noise, increased volume of road, rail and air traffic, and noise from recreation and public venues.

There was an increase in the numbers of noise complaints received by Council compared to previous years. In the past it was noted that staff had some difficulty in reporting on this indicator as several different teams deal with a large variety of noise issues including noise generated by construction sites operating outside their hours of consent and noise created by barking dogs, roosters and other animals. Over the last 12 months Council has made significant improvements to its reporting database, making the retrieval of such data more accurate and meaningful.

STATE

The intensification of land use has and will continue to generate increased levels of noise across the LGA. As individual householders, business and industrial enterprises seek maximum use of their land, isolation or distance to nearby sensitive receptors can no longer be utilised



INDICATOR

Number of noise complaints received by Council						
	2005	2006	2007	2008	2009	Trend
Number of complaints	103	133	132	116	190	▲

to improve noise levels, turning the focus to new noise amelioration strategies.

In NSW, the key documents for controlling noise are the Protection of the Environment Operations Act 1997, the Protection of the Environment Operations (Noise Control) Regulation 2008 and the Industrial Noise Policy 2000. Noise complaints received by Council mostly involved barking dogs, construction works, domestic noise sources (stereos and electronic equipment, air conditioners, swimming pool pumps, intruder alarms), noise from roosters and other birds, noise from industrial sources and noise from backyard business operations. Council Officers regulate these matters by issuing appropriate letters and Notices requiring rectification of the offending noise.

Community awareness of environmental noise has increased and there is a higher expectation for Commonwealth, State and Local Government to reduce noise levels. Given the large number of services that Council provides, combined with the number of locations of its buildings, depots and active worksites, Council receives very few complaints about its own activities in relation to noise.

RESPONSES

- Continued to actively respond to noise complaints throughout the year mainly in relation to barking dogs and construction works associated with development

consent. The move from single to multi unit dwellings means that neighbours are living closer together than ever before and that distance is no longer an option to attenuate noise. In particular, Council receives many complaints about noise from sound equipment (stereos and televisions) and air conditioners. Residents are encouraged to attempt resolving these issues directly with their neighbour prior to Council intervention

- Continued assessing acoustic reports submitted with development applications for development proposed for major transport corridors (road and rail) and any other noise generating industries or activities
- Appropriate conditions are placed on development consents issued by Council to ensure that the development incorporates the required design elements to protect residents and the environment from noise. In addition, the development consent specifies permitted hours of work to ensure that neighbouring properties are not excessively impacted by noise from the development while it is under construction
- Council's Rangers and Development Control Officers investigate alleged breaches of these conditions and undertake enforcement action as necessary, including the issue of Penalty Infringement Notices

WASTE

PRESSURE

Pressures include limited local landfill, over consumption and packaging, intensified urban development, increasing population and lack of community awareness about recycling.

Council is working to increase the amount of waste diverted from landfill through a combination of community education, better provision of services and the implementation of state of the art technologies such as composting by 2014.

STATE

Parramatta's expanding residential population, workforce and business activity compounded by Australia's consumerist society continues to generate increased volumes of waste, presenting a considerable challenge for Council.

As demand for goods and services and the volume of waste generated by consumers rises, the availability of local and regional landfill disposal options decreases. This has a direct impact on waste disposal methods and available landfill lifespan. Increasing the amount of waste diverted to recycling and/or reuse continues to be difficult due to the composition of consumer product packaging and poor separation of materials by consumers.

The trend away from single swellings towards medium and high density housing in the Parramatta area has boosted housing affordability and brought an increased population. As a result, increased volumes of waste are generated every year in our Local Government Area (LGA) and puts significant strain on Council's ability to provide adequate waste services to these properties.

Amount of Waste Diverted from Landfill							
Service	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	Trend
Garbage	36,858	35,175	31,543	32,883	33,040	32,991	
Recycling	13,571	13,250	13,965	15,458	13,968	14,042	
Garden Waste	6,179	7,353	11,856	13,171	13,058	12,177	
Kerb Clean Up	1,370	1,504	4,447	4,780	4,692	4,523	
Diversion from Landfill*	34.9%	36.9%	45.1%	46.6%	45.0%	44.3%	▲

* Diversion percentage excludes Kerbside Clean Up tonnages

Increased development throughout the LGA has been implicated in increased incidence of illegal dumping of building materials, including asbestos wastes. This is believed to be due to the special requirements relating to disposal of these materials and the associated high costs. As the availability of landfill options decreases, the costs of disposal increases and Council is striving to achieve environmental sustainability, alternatives must be sought to the waste issue.

RESPONSES

- Awarded a tender to WSN Environmental Solution to build an AWT (Alternate Waste Treatment) facility and have it operational by 2012/13, diverting an estimated 80 per cent of Parramatta's putrescible waste from landfill
- Held a Clean Up Australia Day on Sunday 7 March, with the 30 sites registered in the Parramatta local government area collecting approximately 6 tonnes of rubbish
- Managed 23 sharps bins across the LGA collecting approximately 500kgs of used injecting needles, a significant increase of the previous year
- Implemented a cigarette butt littering awareness program for the Parramatta CBD

- Conducted 21 waste and recycling workshops across the Parramatta LGA, with a further 90 workshops held at local schools involving over 3000 students.
- Implemented a new in-house waste system for our major buildings, including the Darcy Street Administration Building, Council Chambers, Central Library, Morton Street Depot and Parramatta Heritage and Visitor Information Centre
- Implemented the recommendations of our Cleansing Team Review to reduce double handling of waste and review work scheduling and commencement times to decrease greenhouse gas emissions from Council vehicles
- Initiated an illegal dumping education campaign and hotline 1800 DUMPED targeting illegal dumping of household goods in high density residential areas
- Continued the residential Street Sweeping Recovery program involving the collection, screening, testing and reuse of swept material, estimated to save Council over \$40,000 in landfill tipping fees annually
- Distributed 5,000 calico bags at special events to encourage the community's use of non plastic bags and reduce plastic bag use at retail outlets
- Trialled a new program to recycle 600 mattresses dumped between January and June 2010

AIR QUALITY AND GLOBAL WARMING

PRESSURE

There are many substances in the air which may impair human health as well as the health of plants and animals, or reduce visibility. Urban air pollution arises from emissions from motor vehicles, major industry, commercial operations and domestic activities. Air pollutants include dust, odours, vapours and greenhouse gases. The amount of greenhouse gases in our atmosphere is the key driver behind climate change.

Air quality data for the Sydney North-West Region (which incorporates Parramatta) can fluctuate significantly based on weather conditions. Additionally, severe bushfires can have considerable impact on our air quality during Summer months.



Council has reduced its CO2 emissions by approximately 45% since 2004/2005. This has been accomplished via a range of strategies which are detailed in the Responses for this section, the most significant of which was to increase our purchase of accredited GreenPower in 2008/2009 to 100% for all of our electricity needs (with the exception of 10% purchase of GreenPower for street lighting).

INDICATORS

No. of days Regional Air Quality Index (Sydney North-West) was in the Poor to Hazardous Range						
	2005/2006	2006/2007	2007/2008	2008/2009	2009/10	Trend
No. Days Regional Air Quality Index was in Poor to Hazardous Range	16	19	7	12	32	▼

CO2 Emissions (tonnes) from Council facilities, public lighting and fleet						
	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	Trend
CO2 emissions (tonnes)	21,021	19,064	18,040	11,799	11,535	▼

STATE

Air quality is a regional issue and cannot be clearly defined by the boundaries of the Parramatta LGA. The NSW Department of Environment, Climate Change and Water (DECCW) monitors air quality on a regional basis and reports the results as a Regional Air Quality Index (RAQI). The nearest air quality monitoring site to Parramatta is Prospect which places Parramatta within the Sydney North West Monitoring Region.

The RAQI is an indication of how polluted the air is, the associated health effects and the impacts on sensitive groups. An air pollution health alert is issued by DECCW and the Bureau of Meteorology when pollution levels are expected to be in the poor to hazardous range the following day. It provides 24-hour summaries, reporting monthly RAQI values and annual exceedances and by providing a search function for public access to the air quality database.

Figure 2: Air Quality Index and Health Alerts

AQI	What action should people take?
VERY GOOD 0-33	Enjoy activities
GOOD 34-66	Enjoy activities
FAIR 67-99	People unusually sensitive to air pollution: Plan strenuous outdoor activities when air quality is better
POOR 100-149	AIR POLLUTION HEALTH ALERT Sensitive Groups: Cut back or reschedule strenuous outdoor activities
VERY POOR 150-200	AIR POLLUTION HEALTH ALERT Sensitive groups: Avoid strenuous outdoor activities Everyone: Cut back or reschedule strenuous outdoor activities
HAZARDOUS 200+	AIR POLLUTION HEALTH ALERT Sensitive groups: Avoid all outdoor physical activities Everyone: Significantly cut back on outdoor physical activities

Parramatta's air quality continues to be affected by pollutants generated throughout the Greater Sydney metropolitan area. Vehicle exhausts, poor soil management on construction sites, spray drift, chemical use and domestic and industrial odours contribute to air pollution. These activities result in a wide range of pollutants such as greenhouse gases, photochemical smog, fine particulate pollution, carbon monoxide, sulphur, lead, dust and odours being discharged into our atmosphere. While industry and motor vehicles are generally the greatest contributors to local air pollution, most air quality complaints received by Council continue to be related to odours, dust and smoke in Winter due to wood-fired heaters.

The atmosphere and global warming are issues of regional and international significance; however Council is developing local initiatives to assist in improving the quality of our atmosphere and reduce global warming in Western Sydney. This involves both Council looking at its own operations to reduce greenhouse gas emissions and also working with the community to tackle climate change issues. Council is working hard to promote more sustainable modes of transport, reduce the number of vehicles travelling to the CBD each day to improve air quality and mitigate the impacts of climate change.



RESPONSES

- Worked with a number of small to medium businesses to reduce energy consumption and greenhouse gas emissions
- Continued to purchase 100 per cent accredited GreenPower for all Council assets and 10% GreenPower for street lighting
- Completed the retrofit of T5 energy saver lights in our main administration building to reduce energy consumption by about one third
- Installed solar powered lighting along the pedestrian path between Gasworks Bridge and Charles Street ferry wharf Parramatta
- Completed an energy audit of Council's four multi-story parking stations in the CBD
- Replaced energy intensive lights at Riverside Theatre, Libraries and Heritage Centre with low consumption LED alternatives and motion sensors in less frequented areas
- Commenced a Community Climate Challenge in partnership with the Nature Conservation Council in which over 400 residents participated to assess where energy and water savings could be made in the home
- Organised Walk to Work and Ride to Work Day events as part of Council's Commuter Challenge month held each November
- Participated in Earth Hour for the fourth year running and continued our commitment to the national CitySwitch program for office tenants

- Continued our free city bus service 'The Loop' to connect tourists, residents and commuters with the City Centre, powered by low fuel consumption, less polluting diesel engines
- Extended the bicycle path network by 5.7 kilometres (on and off road)
- Progressed installation of two secure bicycle parking and end of trip toilet/shower facilities at Council's Erby and Horwood Place car parks
- Adopted the Parramatta City Centre Integrated Transport Plan



BIODIVERSITY

PRESSURE

There are many pressures placed on Parramatta's biodiversity as a result of human activities such as increasing urban development, including competing demands for open space, stormwater and water pollution, invasion by introduced plants and animals, vandalism and impact from over use of our natural environment.

Council is working hard to restore native bushland across the LGA with the assistance of our bushcare volunteers and contractors. We are continuing to increase the amount of works undertaken annually as demonstrated by the indicator above.



INDICATOR

Land Under Bush Regeneration							
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/10	Trend
No. Hectares	133.44	144.84	151.47	162.97	174.12	181.07	▲

No. of Plants Produced by Council's Nursery							
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/10	Trend
No. Trees	40056	41732	60996	73639	77087	89345	▲

There has been a significant increase in the number of plants produced each year by Council's nursery. The nursery supplies plants for National Tree Day, World Environment Day, our Free Tree Giveaways for residents, Street Tree program, bushland regeneration and parks as well as various other special events throughout the year. These plants make an important contribution to restoring the biodiversity of Parramatta.

STATE

Parramatta's biodiversity has markedly declined since the arrival of non-Indigenous people over 200 years ago and the magnificent forests that once enshrouded the Sydney Basin have largely disappeared. Indiscriminately cleared for farming during the colonial period and later in response to demand for housing and industry, the total area of native vegetation under Council's management is now just 326.3 hectares. This is just 5.42 percent of the city's total area of 61sq km. Within this remnant are wetlands, remnant canopy trees and 11 different vegetation or ecological communities of which eight are of State or national significance.

Protection and enhancement of native vegetation corridors on public and private land remain critical for the protection of the City and suburb's remaining biodiversity. Terrestrial and aquatic biodiversity have both been severely impacted by stormwater volume and quality (including sewage, fertilisers and industrial pollution). Human impacts in the Local Government Area are on the increase, ranging from illegal dumping and clearing to encroachments and spread of garden escapees.

Our core areas of bushland vary from good condition (Duck River Bushland) to fair (Galaringi). The bushland corridors along our creeks vary in quality from fair to poor. The majority of Parramatta's smaller isolated bushland remnants and minor corridors are in poor condition because Council's management resources focus by necessity on larger reserves.

At 90 hectares Lake Parramatta is one of the largest Council-managed reserves. Other significant pockets of natural bushland we manage include Moxham and Cox parks, Campbell Hill, Third Settlement, Edna Hunt and Galaringi reserves as well as Vineyard Creek and Duck River Bushland. The centrally-located Parramatta Park is separately managed by the Parramatta Park Trust.

RESPONSES

- Managed over \$2 million of bushland regeneration, waterways rehabilitation, and creek maintenance projects across 67 reserves containing natural areas
- Continued to deliver actions within the Natural Areas Plan of Management, Open Space Plan, Waterways Maintenance and Rehabilitation Master Plans, Biodiversity Plan and local area plans of management (POMs)
- Produced and installed signage along Settlers' Walk Track along Toongabbie Creek, from Oakes Road to Old Windsor Road, Toongabbie
- Undertook planting days and environmental activities with four schools in Granville, through a grant received from local business Merck Sharp and Dohme
- Constructed and realigned two stormwater outlets in Moxhams Park Winston Hills, funded by a Landcare Grant, to control overland surface water flow and the removal of woody weeds
- Removed noxious weeds and continued bushland regeneration along the Parramatta and Duck rivers; and Ponds/Subiaco, Vineyard, Toongabbie, Terrys, Finlaysons, Milsons, Coopers, Quarry Branch creeks and Lake Parramatta to protect the long term sustainability of Endangered Ecological Communities
- Undertook feral animal control in several bushland reserves across the LGA, targeting rabbits, foxes, introduced honeybees and European wasps
- Undertook large scale remediation of asbestos contamination on A'Becketts Creek Rosehill, Lake

Parramatta Reserve and Molly's Track within Vineyard Creek by way of crushed sandstone capping

- upgraded and/or constructed new walking tracks in Dundas Valley as well as Duck River, Lower Ponds Creek and Vineyard Creek
- enlisted over 50 staff members to take part in World Environment Day activities as part of 2010 being the Year of Biodiversity
- co-ordinated 125 participants who planted more than 4,500 native tube stock at Fred Spurway Reserve Eastwood as part of National Tree Day 2009
- continued supervising and resourcing Parramatta's 200 Bushcare volunteers who work year 'round to provide new habitat for local wildlife
- handed out over 1300 seedlings under the annual free tree give away program to encourage local residents to help green our City
- continued restoring grasslands and bushland remnants at Waddangalli Woodland, Guildford.
- Upgraded and/or constructed new walking tracks in Dundas Valley as well as Duck River, Lower Ponds Creek and Vineyard Creek
- Enlisted over 50 staff members to take part in World Environment Day activities as part of 2010 being the Year of Biodiversity
- Co-ordinated 125 participants who planted more than 4,500 native tube stock at Fred Spurway Reserve Eastwood as part of National Tree Day 2009
- Continued supervising and resourcing Parramatta's 200

Bushcare volunteers who work year 'round to provide new habitat for local wildlife

- Handed out over 1300 seedlings under the annual free tree give away program to encourage local residents to help green our City
- Continued restoring grasslands and bushland remnants at Waddangalli Woodland, Guildford
- Commenced baseline weed mapping (density and identification) for Council's eight core bushland reserves and an update of conservation significance assessment across the entire local government area completed aquatic biological surveys at 20 creek sites across Parramatta



WATER

PRESSURE

The key pressures on water quality in the Parramatta Local Government Area include stormwater runoff and soil erosion; legal and illegal chemical pollution and discharges; littering and illegal dumping; contaminated soil, sediments and groundwater and urban development impacting on our waterways.

Creek maintenance includes litter removal, aquatic weed control and vegetation maintenance as well as other unspecified works that may be required. Council has significantly increased annual works since 2004/2005 in order to counteract human pressures on our waterways.

STATE

Parramatta's 65 km of waterways continues to be affected by pollutants that include litter, nutrients, sediment, toxicants and bacteria transported as a result of stormwater discharges, sewerage leakages and overflows.



INDICATOR

Lineal Metres of Creek Corridor Maintained							
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/10	Trend
No. square metres	16,605	17,595	22,300	27,780	32,900	42,000	▲

The ongoing expansion of hard surfaces through construction activity accelerates run off and soil loss. High levels of suspended solids are present within our waterways following wet weather events, impacting on light levels penetrating the water and often smothering bottom life. Due to Parramatta's geographical location, the majority of waterways and catchments arise from the adjoining Council areas of Bankstown, Auburn, Holroyd, Blacktown, The Hills and Ryde which complicates water management.

Introduced plant and animal species compound the pressures on our waterways, impacting on recreation activities such as swimming and fishing. Significant flood mitigation works continue to be implemented in the upper catchments but will not flood-proof the City, given the large portion of urban development within the floodplain.

Council also maintains 438 km of stormwater discharge drainage pipes and puts in place stormwater drainage and flood mitigation measures to minimise impacts of flooding, maintain safe access and protect life and property during heavy rain.

In Spring 2009 and Autumn 2010, biological surveys were undertaken at 20 representative sites distributed across four major catchments in the Parramatta Local Government Area (LGA). The primary objective of these surveys was to determine the biological health of each waterway as indicated by water quality, the condition of aquatic habitats

and their associated fauna and flora (diatoms, macro algae, macrophytes, fish and macroinvertebrates). The secondary objective was to determine whether the biological health of each waterway was related to the level of effective imperviousness (the proportion of the catchment that consists of impervious surfaces connected directly to streams by stormwater pipes).

The aquatic habitats at the study sites ranged from disturbed to slightly disturbed. On average across the two sampling periods, 5% of sites were categorised as "highly disturbed", 85% as "moderately disturbed" and 10% as "slightly disturbed". Nine native and three exotic species of fish were caught in spring while ten native and four exotic species were caught in autumn. Mosquito fish accounted for >87% of the total fish caught, indicating that this non-native species is very common in creeks in the LGA.

Council through its various sustainability and education programs works with residents and businesses in the LGA to reduce potable water use. Sydney Water also offers a variety of water conservation programs to assist residents and businesses to reduce water consumption. The consumption of water for 2009/10 is shown in Figure 3.

Figure 3: Water consumption in Parramatta LGA

Average Water Consumption (kL) per property							
Property Type	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	Trend
Houses	225	226	217	207	215	221	▲
Units/Flats	165	166	169	165	168	177	
Industrial	4,794	4,664	4,857	4346	4028	4707	
Commercial	1,637	1,408	1,766	1543	1675	1980	
Other	1,405	865	845	976	681	819	

The dramatic increase in the "industrial", "commercial" and "other" sectors is likely due to the relaxing of the water restrictions by Sydney Water in 2009.

RESPONSES

- Continued to implement the various Waterway Rehabilitation and Maintenance Masterplans, the Parramatta River Foreshore Plan 2009-16 and the Environmental (Waterways) Improvement Program 2009-13
- Completed the draft Parramatta River Estuary Processes Study, a precursor to the Estuary Management Plan
- Completed an aquatic biological survey of 20 sites across Parramatta's waterways
- Installed stormwater pollutant traps at Pendle Hill (off Wentworth Avenue), Harris Park (Wigram Street) and South Granville (Dixmude Street)
- Supervised contractors cleaning and maintaining over 140 stormwater pollution assets, removing over 460 tonnes of litter, sediment and organic matter that would otherwise choke our waterways
- Targeted aquatic weed infestations in Lake Parramatta Reserve, Parramatta and Duck rivers, Darling Mills, Toongabbie, Vineyard, Pendle, Coopers and Ponds/ Subiaco creeks
- Stabilised drainage lines on using sandstone armouring and planting on Quarry Branch Creek at Model Farms Reserve, Winston Hills; on Parramatta River foreshore Hilder Road Reserve, Ermington and Baludarra wetland, Parramatta; at Third Settlement Reserve Winston Hills; and Ray Marshall Reserve (Duck River), South Granville
- Implemented actions identified within the Toongabbie Creek Platypus Recovery Plan including targeted fox den fumigation at Bellbird Bend and Milson Park, tree planting at Tartoola Reserve and Robin Hood Park, and weed removal in specific creek bank locations
- Continued work on three major urban sustainability grant projects funded by the NSW Environmental Trust, namely: Sustaining the Parramatta River (\$1.943 million), Camellia – Silverwater, a model for Industrial

Sustainability in the Duck River Catchment (\$1.32 million) and Sustainable Water Management in the Duck River Catchment (\$1.829 million)

- Updated Council's draft Development Control Plan (DCP) to include revised water quality targets, stormwater drainage and water sensitive urban design requirements for new development. The update also included incorporation of standard drawings for water sensitive urban design applications in public streetscapes into Council's Urban Design Guidelines
- Completed mapping of drainage infrastructure locations and condition for inclusion in Council's Strategic Asset Plan
- Maintained Council's extensive drainage system which covers over 438 kilometres of pipe network and over



HERITAGE

PRESSURE

Pressures that threaten the integrity and longevity of Parramatta's extensive Indigenous and Non-Indigenous heritage include urban consolidation resulting in demolition of and damage to heritage sites; encroachments by unsympathetic development and transport infrastructure; natural deterioration and damage resulting from human activities including recreation and vandalism, and lack of community awareness, appreciation and respect for cultural heritage.

The trend indicates increased visitor numbers to the Centre attending temporary exhibitions and events, public programs and the Local Studies Family History Library.

INDIGENOUS HERITAGE



INDICATOR

Number of Visitors to Parramatta Heritage and Visitor Information Centre							
	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/10	Trend
No. of visitors	61,006	69,682	53,737	48,433	46,492	55,596	▲

STATE

Parramatta acknowledges the Traditional owners and custodians of this land, the Darug people. The name Parramatta is derived from the Aboriginal word "Burramatta", meaning "the place where eels lie down to breed".

Parramatta Council Area has a lower percentage of indigenous persons when compared to the greater western Sydney region. However, as Parramatta and Toongabbie were the locations of the 2nd and 3rd settlements following the arrival of Europeans, great pressure has been placed on the indigenous population and their culture since this early time. For this reason, Council is committed to preserving the history and heritage of indigenous Australians.

Parramatta's Indigenous heritage includes physical artefacts, archaeological sites and rock engravings as well as contemporary places and communities that maintain and sustain strong spiritual and cultural links. While 44 Indigenous sites have been registered by the NSW National Parks & Wildlife Service throughout Parramatta, these continue to be impacted by urban development, natural weathering and erosion and recreational pressures. A lack of community appreciation and respect for Indigenous culture exerts additional pressure, with vandalism compounded by staffing constraints.

To reduce damage to Indigenous sites and increase community awareness, we aim to raise community appreciation of the heritage of our original and contemporary Indigenous community by organising interpretive activities, exhibitions and events throughout the year.

Council continues to build relationships with Indigenous communities, relying on the advice of its Aboriginal and Torres Strait Islander (ATSI) Advisory Committee.

RESPONSES

- Adopted Aboriginal names for two previously unnamed reserves at Broughton Street, Parramatta (Baludarri Wetland), and Barbers Road, Guildford (Wandangalli Woodland)
- Completed restoration works at the Lake Parramatta Bush Foods Garden and fencing a remnant Aboriginal campsite at Rydalmere
- Continued to build relationships with Indigenous communities, relying on the advice of its Aboriginal and Torres Strait Islander (ATSI) Advisory Committee
- Participated in NAIDOC (National Aborigines and Islanders Day Observance Committee) week celebrations

NON - INDIGENOUS HERITAGE

STATE

Parramatta's non-Indigenous heritage sites, including an extensive collection of 19th and early 20th century buildings, continue to face pressure from office, retail and residential developments and transport corridor upgrades. Council continued to promote heritage in the Parramatta LGA, greatly enhanced by its partnership with the Heritage Advisory Committee and heritage agencies such as NSW Heritage Office and NSW branch of the National Trust. Council's activities have a major beneficial impact on the environment by protecting and enhancing Parramatta's heritage through heritage grants, heritage awards, policies and planning controls and importantly, the Parramatta Heritage & Visitor Information Centre (PHVIC).

Although some 1000 properties and items are listed as of national, state or local significance, and 11 conservation areas registered, many properties suffer from neglect and Council's Cultural Assets Collection remains at risk through the lack of resources for storage, conservation



and documentation of non-Indigenous items. The major challenge for Council is to adequately protect and recognise Parramatta's rich heritage, given budget and staffing constraints, development pressures and neglect of many properties.

Parramatta City Council's management of its heritage sites and items is guided by the Heritage Strategy 1993, the Local Environmental Plan 1996 (Heritage and Conservation), the Parramatta Heritage Development Control Plan 2001 and the Regional Environmental Plan No 28 - Parramatta.

With support from local historical societies and its Heritage Advisory Committee, Council promoted and maintained its heritage assets, including the historic Parramatta and Granville town halls, Hambleton Cottage and the Parramatta Heritage and Visitor Information Centre.

RESPONSES

- Continued to plan and develop projects under the Parramatta Stories program to bring the City's heritage to life
- Installed new way-finding signs that will help pedestrians navigate and explore the City on foot
- Administered applications under the Local Heritage Fund
- Digitised early Council rate and valuation books at the PHVIC, and launched a new public engagement program within the Local Studies Library: Conversations in the Library
- Launched a commemorative event to Governor Macquarie - ParraMac - in May 2010 with six individual events in partnership with Riverside Theatre including Luminary Art, DigiMacq (digital walking tour of

heritage sites) and a series of forums entitled The Grand Macquarie Feast, Meet the Macquarie's at Parramatta exhibition and tours and an award winning play by Alex Buzo, Macquarie.

- Continued restoration of headstones and monuments at the historic St Patrick's and All Saint's Cemeteries
- The listing of eleven Australian Convict Sites (of which Parramatta Park and Old Government House are included under the joint name of 'Old Government House and Domain') on the UNESCO World Heritage List





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