



Comprehensive State of the Environment 2008-09 Report



a city of choice and opportunity in a natural environment

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1. Introduction

1.1 Introduction

The State of the Environment Report (SoE) is compiled each financial year by Council in accordance with the requirement of the Local Government Act 1993. The SoE reporting process advocates inclusion of Ecologically Sustainable Development principles into Council's regulatory and service functions. It also serves as a community engagement and education tool, providing 'snap-shot' information to local residents.

This year's report, the 2008/09 Comprehensive SoE Report, is an anthology of preceding interim reports since 2004. It endeavours to discern and appraise the environmental management of a range of predetermined issues for the Campbelltown Local Government Area (LGA), and provides a measurement of performance via selected indicators/measures or comparisons. The environmental performance of an issue of concern is reported in a format based on the NSW Department of Environment, Climate Change and Water (DECCW) Guidelines, and follows a 'State', 'Pressure' and 'Response' reporting model:

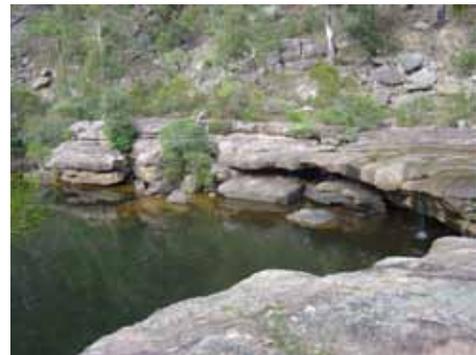
The "State" is an assessment of the current and projected condition of the environment.

The "Pressure" is the impact associated with human activities on the environment.

The "Response" is what has been done, or will be done, by Council to address the pressures, or change the current state.

The SoE Report covers the Local Government Act 1993 reporting requirements in the following sections:

- Our Land,
- Our Water,
- Our Community,
- Our Heritage, and
- Our Air.



For each section, a statement outlining the condition of the environment at the time of the report and subsequent comparison between previous SoE Reports, is provided. Comparisons have only been provided where clear conclusions or trends can be made, or where sufficient data has been collected over the reporting period.

The comprehensive report identifies major environmental issues and impacts which affect the condition of the Campbelltown local environment. It also appraises the condition of the environment using performance indicators and other accepted national or regional standards such as the Regional Air Quality Index and the Australian and New Zealand Environment Conservation Council Water Quality Guidelines. Council's response to these identified issues and impacts are described and where practical, measured.

The 2008/09 Comprehensive State of the Environment Report is the last comprehensive report to be compiled in its current format. Under the proposed integrated planning and reporting reforms, Councils will be encouraged to strengthen their annual reporting arrangements through the ability to prepare their SoE Reports in an integrated way and in line with the environmental objectives of the Community Strategic Plan (eg focusing on the environmental issues of concern to their local community and issues within Council's influence).

1.2 Ecologically Sustainable Development

Council is obligated to have regard for the principles of Ecologically Sustainable Development (ESD) in accordance with *Section 7 of the Local Government Act 1993*.

The principles of Ecologically Sustainable Development are defined under the Local Government Act 1993 as follows:

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, public and private decisions should be guided by:

- i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
- ii) an assessment of the risk-weighted consequences of various options,

b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations,

c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:

- i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement
- ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste
- iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

The principles of ESD are incorporated into Council's plans and strategies, including the Management Plan, the Campbelltown Social Plan, the Community Plan, various Plans of Management for parks and reserves, section Business Plans, Development Control Plans and Local Environmental Planning instruments, environment strategies and internal policies. By incorporating ESD principles into Council's decision making processes and actions, Council can directly influence improved environmental, social, economic and heritage related outcomes.

The principles of ESD are also reflected in various other documents and practices within Council, including but not limited to the following initiatives which have been categorised in line with the structure of this State of the Environment Report;



Programs and Education Initiatives

- State of the Environment reporting (interim and comprehensive)
- Water Quality Monitoring Program
- Cities for Climate Protection Program
- Water and Energy Management Tool
- Development Application process
- Green Street Lighting Program
- Sustainable Schools Network
- Nature Photography Competition
- Environmental Review Program
- The Sustainability Blitz Program

Plans, and Policy and Strategy

- Campbelltown City Council Sustainability Committee
- Campbelltown City Council Social Plan
- Energy Savings Action Plan
- Sustainable Fleet Policy
- Bushfire Risk Management Plan
- Draft Koala Plan of Management
- Biodiversity Study
- Specific and generic Plans of Management
- Procurement/Management Procedures

A variety of performance indicators have been selected to report on the state of the Campbelltown environment for the 2008/09 SoE Report. The baseline year for each indicator is 2003/04 to allow for an assessment of changes in the indicator over time. However, the current review has identified that some of the indicators that were applied during the 2003/04 comprehensive report are no longer appropriate and as such have not been carried over.

In some instances, where it was not appropriate or feasible to apply indicators to certain issues, a descriptive or comparative analysis was carried out, providing a more effective means to measure change. It is recognised that over time, future SoE reports may need to have performance indicators reassessed and revised, with new indicators developed. Council will review the relevance of its SoE performance indicators in light of the development of the Community Plan and its associated environmental reporting components.



Our Land

2. Our Land

This section of the SoE Report describes the current condition of “Our Land”, pressures or threats to these lands and Council’s response and programs to address these threats.

2.1 State

The Campbelltown Local Government Area (LGA) is located on the south-western edge of the Sydney Metropolitan Area, approximately 53 kilometres from the Sydney CBD. The area extends from Glenfield in the north, to Menangle Park in the south, and comprises 32 suburbs.

Campbelltown was developed as a satellite city in response to the *Sydney Region Outline Plan* of the 1960s and is part of the Macarthur Growth Sector (together with Camden and Wollondilly (LGAs). The Campbelltown LGA is characterised by a variety of urban and rural land uses. The dominant housing form is low density detached dwellings with groupings of medium density housing in suburbs and some limited apartments in Campbelltown CBD.

The Campbelltown LGA is bordered by corridors of environmental protection land with the shallow gullies of the Nepean River and broad rolling hills of rural countryside of the ‘Scenic Hills’ to the west, the ‘Edge Scenic Protection Lands’ occurring at the moderate to steep gullies of the Georges River to the east, and Gilead and the Wedderburn Plateau to the south and south east of the LGA. The northern border of the Campbelltown LGA is its boundary with the Liverpool LGA.

The Campbelltown LGA occupies an area of approximately 312 square kilometres, and in 2006 had a population of 142,841 people. This population predominantly lives within a linear urban corridor that follows the alignment of the F5 Motorway/Hume Highway and the Main Southern Railway Line, and extends from Glenfield (North) to St Helens Park (South).

The Campbelltown LGA is surrounded by five other LGAs, including Camden to the west, Liverpool to the north and north-east, Sutherland to the east, and Wollondilly and Wollongong to the south.

The principles of Ecologically Sustainable Development require Council to responsibly care for and manage the land resource of the Campbelltown LGA.

Responsible management and care of our lands is important because they:

- form part of an ecosystem
- provide living space
- provide resources
- are essential for the generation of economic wealth
- are aesthetically pleasing
- provide attractions for tourists
- provide opportunities for recreational and spiritual pursuits.



Table1 highlights the main land uses within the LGA and the respective proportions that each land use comprises of the total land use area within the Campbelltown LGA.

Land use	2003/04	Proportion	2008/09	Proportion
Residential	3070	10%	3120	10%
Commercial	590	2%	590	2%
Industrial	740	2%	750	2%
Open space	3050	10%	3000	10%
Rural	4870	16%	4830	16%
Environmental Protection (up to 4 ha)	1300	4%	1320	4%

Central Hills land	1950	6%	1950	6%
Military Reserve	10230	33%	10230	33%
State Recreation Area	1770	6%	1770	6%
Other special uses	1350	4%	1360	4%
Road	2180	7%	2180	7%
Total	31100	100%	31100	100%

Table 1: Land Use Zones within the Campbelltown LGA (2003/04 vs 2008/09)

Comparison note between reporting periods: The table shows the extent of each zone has been largely static with a slight increase in area of 'residential' and 'industrial' with a corresponding slight reduction in area of 'open space' and 'rural'. This reflects expanding industrial activity and the location of parts of new Urban Release Areas on former rural land.

Urban Development

Campbelltown has experienced urban growth, predominantly occurring in the newer residential areas of Park Central, Macquarie Links, Macarthur Gardens, Glenfield Road, and Ingleburn Gardens. There has also been a mix of re-development and some infill of low to medium density housing in established urban areas. Some limited apartment development has occurred in and around the Campbelltown CBD.

Comparison note between reporting periods: According to the latest available data (ABS 2006), the total population of the Campbelltown Local Government Area decreased by 1.5% between 2001 and 2006, although occupied households in the same period increased by 1.2%. This reflects a reduction in household occupancy rates. The decrease in population is in contrast to the adjoining LGA's of Camden and Wollondilly which grew by 12.3 % and 7.9% respectively.

Agriculture

Land area under agriculture accounts for 16% of the LGA and is generally located within the southern parts (Gilead, Wedderburn and Menangle Park). There are also some limited semi-agricultural lands around Kentlyn and the Scenic Hills.

Comparison note between reporting periods: The amount of land used for agriculture within the Campbelltown LGA has remained fairly consistent since the last reporting period.



Manufacturing Industry

The Campbelltown LGA is fortunate to host a variety of manufacturing industries, with approximately 760 hectares of land in the Bunbury Curran/Bow Bowing Creek valley (Minto, Campbelltown and Ingleburn) zoned for industrial uses. The major land uses here consist of manufacturing, transport and service industries, all of which are located close to the southern railway and the F5 corridor.

Comparison note between reporting periods: Some 90% of this industrial zoned land has been developed as at 2008/09, which is 10% more than in 2003/04 when only 80% of the industrial zoned land within the Campbelltown LGA had been developed as of 2003/04.

Sand and Soil Extraction

Sand and soil extraction activities have been limited to the Menangle Sand & Soil facility located adjacent to the Nepean River at Menangle Park, although Council understands that a proposal for further extraction located in an area north of the Menangle Park village is proposed for the near future.

Comparison note between reporting periods: The aforementioned facility was operational between 2004 and 2008, however has since scaled back excavation operations and commenced rehabilitation works at the Menangle Park south site. Approximately 150m of riparian river bank have been restored as part of this rehabilitation.

Mining

The Campbelltown LGA is underlain by deep coal seams which provide a significant contribution to Campbelltown's natural resource base.

The South Campbelltown Mine Subsidence District has been proclaimed over the south western section of the LGA. Coal mining leases have been issued for the area, although to date there has not been any coal extraction.

Coal seam gas reserves have also been identified in the area. Regardless, a potential conflict exists between future urban development and mining land use in the area, an issue currently being investigated as part of a Local Environmental Study for the Menangle Park urban release area.

During the last reporting period, preparatory work was undertaken by Illawarra Coal Holdings Pty Ltd in association with the proposed expansion of the Westcliff and Appin long wall mines which would affect certain areas in the southern parts of the Campbelltown LGA. Information on the subsequent Environmental Assessment and the outcomes of the determination of the development application by the Department of Planning will be provided in a subsequent State of the Environment Report. An exploration licence was also granted for exploration in the Wedderburn district. All of these approvals have been issued by the NSW Government.

During the reporting period, assessments and detailed design occurred for the future extraction of coal seam gas reserves located under the southern and western parts of the Campbelltown LGA.

The alteration of habitat following subsidence due to longwall mining has been identified as a key threatening process and listed under the Threatened Species Conservation Act 1995, during the reporting period.

Waste/Recycling

Sources of household waste within the Campbelltown LGA include household items, packaging waste, food, greenwaste and electronic waste. To assist in addressing waste minimisation, Council continues to offer a domestic waste and recycling collection system consisting of:

- 140 litre garbage bin collected weekly,
- 240-litre recycling bin collected fortnightly, and
- 240-litre garden organics bin collected fortnightly.



Council has now reached a significant milestone in 2009 with the commencement of a contracted arrangement with WSN Environmental Solutions that sees all collected garbage disposed of at a new alternative waste technology recycling facility at Narellan.

Environmentally Sensitive Areas

The Campbelltown LGA is fortunate to contain the following environmentally sensitive lands:

- Wedderburn Plateau: characterised by steep-sided gorges within the O'Hares, Pheasants Creeks and Georges River Catchments. The area contains habitat corridors that provide ecological connectivity along the Georges River. Significant koala habitat has also been identified in this area.

- O'Hares Creek Catchment: located in the eastern part of the Wedderburn district and listed on the Register of the National Estate. The area contains a range of vegetation types including upland swamps, woodland and heath land in relative pristine condition.
- Georges River Regional Open Space: adjacent to the Georges River, is a highly distinctive and natural landscape with high ecological and aesthetic values. It contains significant areas of Shale/Sandstone Transition Forest as well as Cumberland Plain Woodland, both endangered ecological communities.
- The Scenic Hills: a highly distinctive rural and semi-rural landscape located between the Georges and Nepean River Catchments and characterised by gentle rolling hills. The area, also serves as a landscape buffer between the Camden and Campbelltown urban areas.
- Holsworthy Military Training Area: occupies 30% of the eastern part of the Campbelltown LGA and contains the largest remaining stand of Cumberland Plain Woodland. Bushland within this area is pristine and contains significant levels of biodiversity.
- Browns Bush: Humewood Forest, Woodhouse Creek, Nepean Creek, Menangle Creek, Nepean River Wildlife Corridor. This corridor represents an important habitat link between the Georges and Hawkesbury-Nepean River Catchments.

Comparison note between reporting periods: A data base has been developed which identifies ownership of all Parks and Reserves in the LGA. This was highlighted as an action during the last comprehensive report.

Soil Landscapes

The major soil landscapes are presented in Table 2.

Soil Landscape	Distribution	Major Properties	Major Constraints
Hawkesbury	Adjacent to the Georges River.	Sandy material in the upper horizons and light clay in the subsurface horizons.	High erosion hazard with low fertility and is generally not capable of urban development.
Lucas Heights	Ridgetops and plateaus throughout the Holsworthy Army Base adjacent to the Georges River.	Sandstone and shale parent material. Sandy loam materials in the upper horizons and clay loams/clays in the sub-surface horizons.	Upper horizons have low erosion hazard however the sub-surface horizons have a high erosion hazard.
Blacktown	Plains and rolling hills in the west of the LGA.	Shale parent material. Loams in top horizon and clay loams to light clay in the sub-surface horizons.	Moderately erodible and susceptible to waterlogging.
Luddenham	Rolling low hills west of the M5.	Shale parent material. Loams in the upper horizons and light to medium clays in the sub-surface horizons.	Moderate to high erosion hazard with moderate fertility.

Table 2: Soil landscapes and corresponding topography of the Campbelltown LGA.

Biodiversity

The Campbelltown LGA is fortunate to contain a significant array of biodiversity, including endangered and vulnerable vegetation communities, flora (plants) and fauna (animals).

Vegetation Communities

Vegetation communities that can be found in the Campbelltown LGA and listed as Endangered Ecological Communities include:

- Cumberland Plain Woodland;
- Shale/Sandstone Transition Forest
- River Flat Eucalypt Forest
- Turpentine Ironbark Forest.

Other vegetation communities comprise:

- Upper Georges River Sandstone Woodland
- Western Gully Forest
- Eastern Gully Forest
- Western Sydney Dry Rainforest
- Sedgeland
- Woodland Health Complex.



Cumberland Plain Vegetation

Comparison note between reporting periods: In early 2009, the Threatened Species Scientific Committee made a preliminary determination to list Cumberland Plain Woodland as a Critically Endangered Ecological Community under both the NSW *Threatened Species Conservation Act 1995* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1998*.

Comparison note between reporting periods: During 2003/04 the NSW DECCW commenced vegetation mapping of endangered Cumberland Plain Woodland. Since then, the Sydney CMS has undertaken a project to map vegetation communities at a much more accurate scale (1:2000 and 1:5000 vs the original 1:25000 scale) commenced. It is expected to be finalised at the end of 2010 and will cover 88% of the Georges River Catchment within the Campbelltown LGA.

Flora and Fauna

The total diversity of flora and fauna throughout the Campbelltown LGA is not fully known as comprehensive surveys have not been undertaken of all bushland located on private and public land.

Gaps in data include inaccessible sites such as steep sandstone gullies.

Comparison note between reporting periods: Surveys have been conducted by consultants within environmentally sensitive areas located in the Wedderburn district (2003), and the Scenic Hills Protection Corridor (2002/03). These surveys identified a total of 243 flora species (232 native, 11 introduced) and 158 fauna species (150 native, 8 introduced). During the reporting period two regionally significant flora species, floating bladderwort (*Utricularis gibba*) and *Rumex brownie* (Swampdock) not previously recorded in the Campbelltown LGA were found.

Preferred koala habitat extends along the Georges River corridor with the major habitats occurring in the vicinity of Wedderburn, St Helens Park and Kentlyn. The University of Western Sydney operates a Koala Hotline where koala sightings are reported.

Table 3 provides a summary of key biodiversity findings as of 2008/09:

Criteria	2008/09
Number of Endangered Ecological Communities	7
Number of threatened animal species	24
Number of threatened plant species	65
Number of regionally significant flora species	106 flora
Number of regionally significant fauna species	101 fauna
No of reports of koala observations to 'Koala hotline'	939



Table 3: State biodiversity findings within the LGA

Comparison note between reporting periods: Since the last comprehensive SoE report, the Gang Gang Cockatoo found throughout the Campbelltown LGA was listed as Vulnerable under the Threatened Species Conservation Act 1995 (during the 2005/06 reporting period). A review of the Environment Protection and Biodiversity Conservation Act 1998 indicated that the only additional flora and fauna identified in the Campbelltown LGA since 2003/04 was the Turpentine Ironbark Forest (within the Sydney Basin) which was listed as 'Critically Endangered'.

2.2. Pressure

Major threats to the quality of land and biodiversity within the Campbelltown LGA continue to include impacts associated with weed invasion, predation by feral animals, stormwater runoff, illegal dumping, inappropriate fire regimes, inappropriate use of open space (such as trail bike riding), and habitat loss/fragmentation associated with urban development.

These threats are discussed below.

Urban Development

The NSW Department of Planning has identified the Macarthur Region as an area to accommodate increased residential growth. The increased demand for residential dwellings, within the Campbelltown LGA during the reporting period has been accommodated by a mix of redevelopment of existing residential areas and new urban release areas.

One of the core functions of Council is as the consent authority for those residential developments that require development approval under the *Environmental Planning & Assessment Act 1979*. The level of approval of residential dwellings provides an indication of the associated potential impacts on the natural environment, as well as potential implications for those matters discussed in the 'Our Community' section of this SoE Report.

The description, approximate area, lot yield and major features of major new urban development areas within the reporting period, is summarised in Table 4.

Development	Area (ha)	Estimated Number of Lots	Major Features
Park Central at Campbelltown	37	612	Contains approximately 14ha of open space as well as aged persons and commercial precincts and remnant Cumberland Plain Woodland.
Macarthur Gardens at Macarthur	50	1,600	14ha of open space and riparian corridors.

Edmondson Park at Ingleburn	194	1,886	Contains Cumberland Plain Woodland, riparian corridors and regional open space.
Glenfield Road at Glenfield	79	1,100	Features approximately 3ha of open space and Cumberland Plain Woodland.
Minto Urban Renewal Project	Various	1,100 residential dwellings	Construction of new subdivisions, with works including; <ul style="list-style-type: none"> • new streets, • new stormwater management works, • utility services, • bulk earthworks, • public space, and • community facilities.
Menangle Park (planned)	958	3,600	Riparian corridors proposed to be established along creeklines and rivers. River Flat comprised of Eucalypt Forest.

Table 4: New urban development areas

For residential development where Council was the consent authority, a total of 1,446 dwellings were approved between 2004/05 and 2008/09. Figure 2.5 displays a comparison between the total number of new commercial/industrial buildings and new residential dwellings over the reporting period. There has been a general decline in the total number of new residential dwelling approvals each year over the reporting period.

The graph also indicates the numbers of complying development certificates issued during each year within the reporting period which refers to those applications received by Council where development applications are not required due to the satisfaction of established criteria. The complying certificates were largely issued by 'private certifiers' with a small number issued by Council.

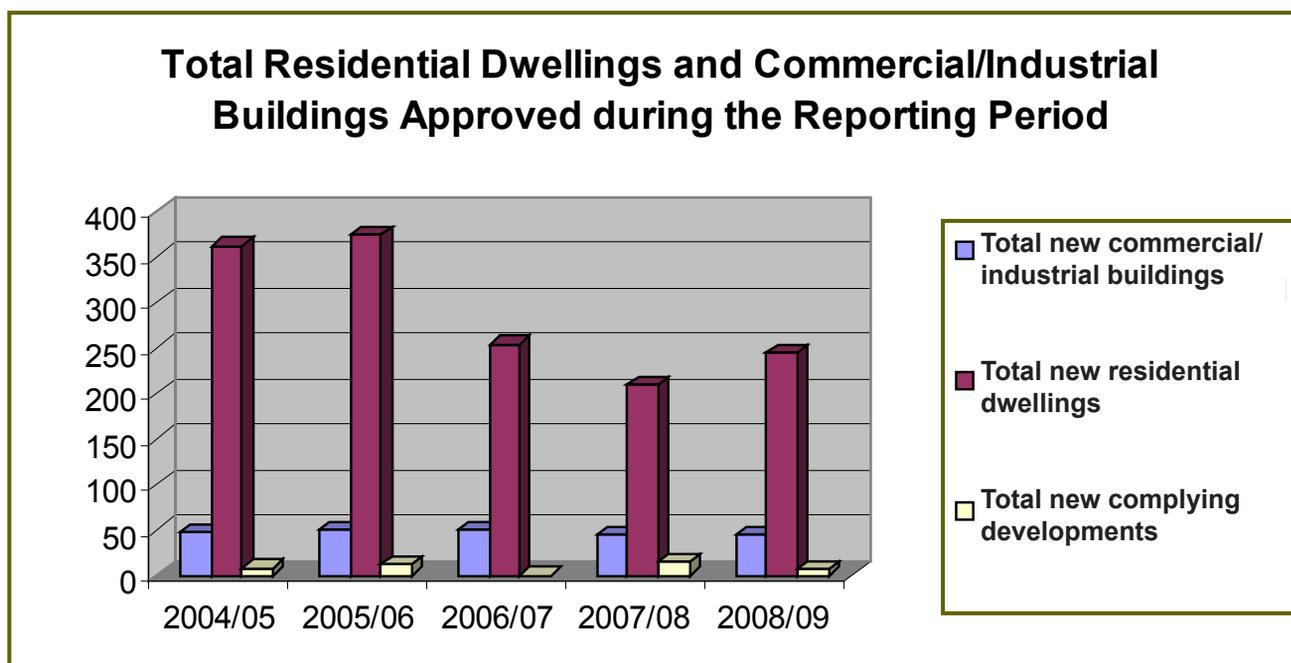


Figure 1: Total residential dwellings and commercial/industrial buildings approved during the reporting period.

Within the reporting period (July 2009-June 2009), residential dwellings approved by Council were mostly located in the new areas of Park Central, Macarthur Gardens, and Glenfield Road referred to in Table 4 and in-fill development (defined as development within existing residential areas) largely located in the suburbs of Campbelltown, Glenfield and Leumeah. Significant in-fill development also occurred as part of the Minto Renewal Project.

Mining operations

Longwall mining is an underground coal mining technique that involves removing a panel of coal which can cause the land above the mine out coal to destabilise resulting in potential subsidence impacts on the condition of the natural and built environment. In recognition of these impacts, 'Alteration of habitat following subsidence due to longwall mining' was listed as a Key Threatening Process in July 2005 by the NSW Scientific Committee established by the Department of Environment and Climate Change. Environmental assessments associated with underground longwall mining operations are required to consider this listing.

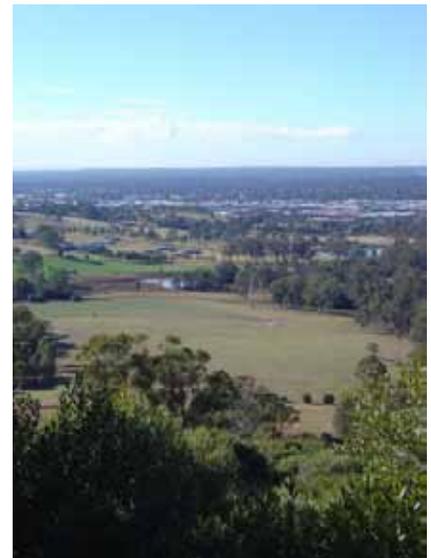
Further, in 2007, the State Government established an Independent Inquiry into Underground Coal Mining in the Southern Coalfields in response to expressed concern on the detrimental effects of coal mining, specifically in relation to damage to local waterways. The Inquiry as well as a range of scientific investigations identified the potential for loss of water within watercourses as a consequence of longwall mining. Key recommendations of the Final Report of this Inquiry included:

- a precautionary approach be taken to any new mining proposal that may have unacceptable impacts on significant natural features
- this approach should be implemented through the assessment of any longwall coal mining related projects
- environmental assessments for project applications should address subsidence effects, impacts and consequences by providing a minimum of two years baseline data, the identification and assessment of the significance of all natural features on the edge of longwalls and that key aspects of the subsidence assessment should be subject to an independent scientific peer review.

Bush fire

Residents of the Campbelltown LGA enjoy a diverse and regionally significant bushland area, however due to the close proximity of the bushland to urban neighbourhoods, this increases the risk of bush fire impacting on life, property and the environment. During the 2007/08 and 2008/09 financial years, Rural Fire Service volunteers attended 105 and 171 bushfires respectively in the Campbelltown LGA.

Although many homes within the LGA can be at potential risk from bush fire, the suburbs on Campbelltown's eastern urban/bushland fringe are most vulnerable. These areas include parts of Ingleburn, Macquarie Fields, Long Point, Minto Heights, Kentlyn, St Helens Park, Airds and Wedderburn.



Bush fire risk in the Campbelltown LGA is recognised in two principle documents, being the Macarthur Bush Fire Risk Management Plan (BFRMP) and the Bush Fire Prone Lands Map (BFPLM).

- The Macarthur Bush Fire Risk Management Plan: identifies areas of bush fire risk within the Campbelltown, Camden and Liverpool Local Government Areas, as well as provides treatment strategies/ actions for the mitigation of these hazards.
- The Bush Fire Prone Lands Map: has been prepared pursuant to the *Environmental Planning & Assessment Act 1979*. This map provides the foundation for planning for bush fire protection by imposing/incorporating bush fire safety provisions upon new developments on land located within bush fire prone areas, such as buffer zones. This map defines bushfire risk within the Campbelltown LGA on the basis of 2 vegetation categories.

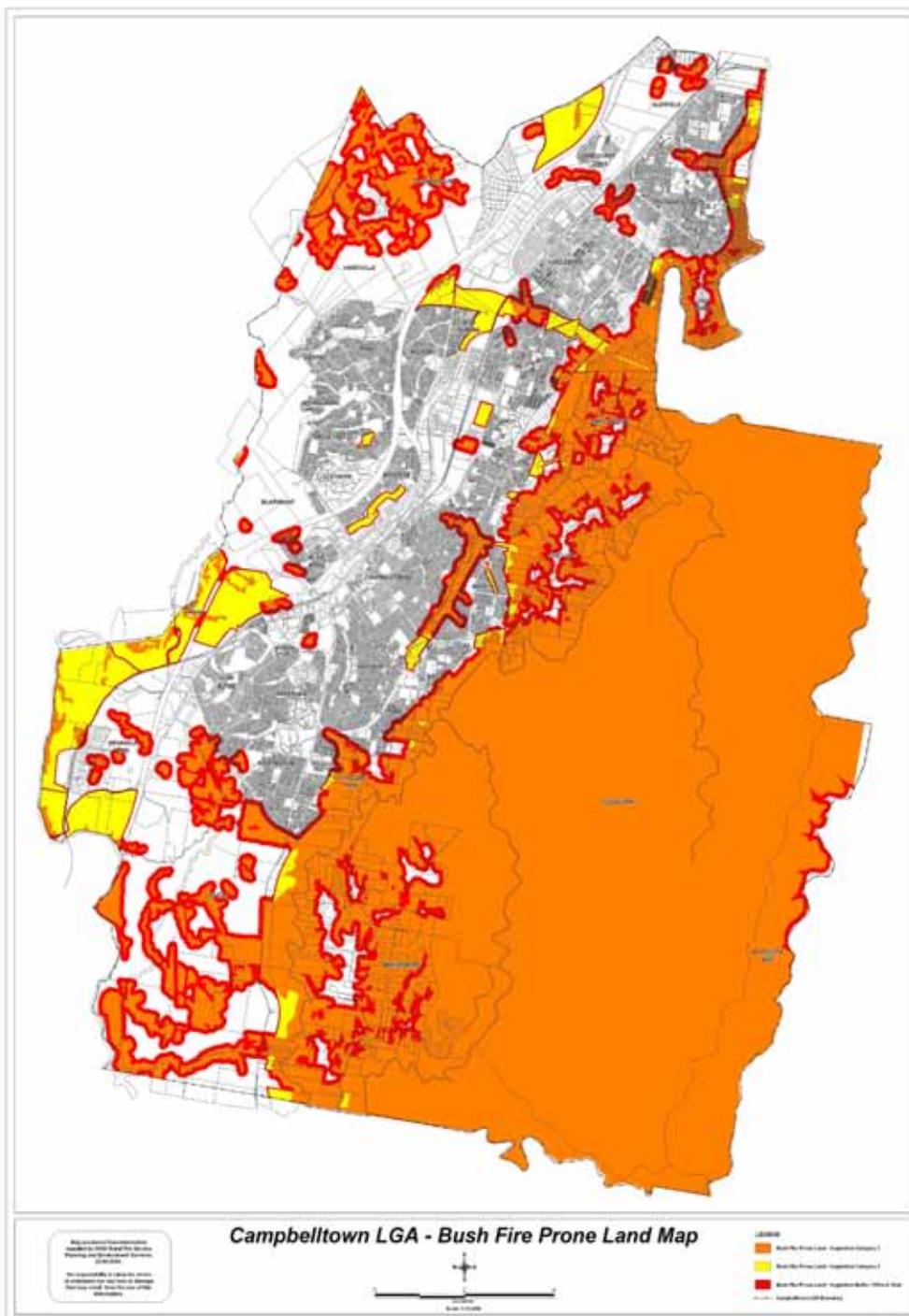
Table 5 describes two vegetation categories and their respective buffer zones under the Bush Fire Prone Lands Map.

Vegetation Category	Description	Map Identifier	Buffer zone width
1	Forest, woodlands, heaths and wetlands that are greater than 1 hectare	Orange	100m
2	Moist rainforests, shrub land, open woodlands, mallee and grasslands that are greater than 1 hectare.	Yellow	30m

N.B. Buffer zones are areas adjacent to vegetation also determined as bushfire zone and requiring management

Table 5: Vegetation Categories, Description and Respective Buffer areas.

Further information regarding bushfire management is provided within the 'Response Section' of Our Land, for Campbelltown LGA.



Map 1: Bush Fire Prone Land in the Campbelltown LGA

Waste Production / Illegal Dumping

The minimisation of waste generated per household and the increase of the recyclables-to-waste ratio are key objectives of Council's domestic waste and recycling management program. The fast decline of space available for landfill and the increasing amount of waste generated by the community, and associated environmental impacts have resulted in a rapid rise in the costs of landfilling. By minimising the amounts of waste that go to landfill, Council is helping to address threats to the environment associated with greenhouse gas emissions, water usage, energy consumption, landfill space and pollution.

Council continues to provide residents with four kerbside clean-ups per year as a part of an ongoing program to reduce the impacts associated with illegal dumping.

Illegal dumping takes many forms from cigarette butts thrown from a vehicle to truckloads of household items left on the side of a road. Illegal dumping often occurs in isolated locations such as bushland environments and undeveloped industrial estates. This creates visual eyesores as well as impacts on the terrestrial and aquatic environments. The data provided in Table 2.7 describes the number of phone calls received by Council regarding illegally dumped rubbish incidents, ranging from the dumping of a small number of items to large scale dumping.



Year	Illegally dumped rubbish
2004/05	1650
2005/06	1712
2006/07	2014
2007/08	1792
2008/09	2092

Table 6: Telephone calls received by Council regarding illegally dumped rubbish.

Further information on Council's management of illegal dumping is provided in The Response Section 2.3 of this report.

Comparison note between reporting periods: There has been a gradual increase in the incidence of rubbish dumping reported to Council during the reporting period, with the highest number of calls received during 2008/09. Refer to the 'Response' section within Our Land for information on Council's response to this increase.

Key Threatening Processes to Biodiversity

Comparison note between reporting periods: A threat can be listed under the Threatened Species Conservation Act 1995 (TSC Act) as a 'Key Threatening Process' (KTP) if it adversely affects threatened species, populations or ecological communities or if it could cause species, populations or ecological communities that are not threatened to become threatened. The determination in regard to the listing of a Key Threatening Process is made by the Department of Environment, Climate Change and Water (DECCW) based on the recommendations of a Scientific Committee. In this regard, the KTP's can apply to specific regions or a multitude of Local Government Areas.

The 2003/04 SoE report noted the following Key Threatening Processes listed by DECCW during the 2003/04 reporting period that are applicable and considered operative within the Campbelltown Local Government Area.

- invasion of native plant communities by exotic perennial grasses,
- infection of frogs by chytrid bacteria,

- removal of dead wood and dead trees,
- introduction of the large earth bumblebee, *Bombus terrestris*.

Since 2003/04, the DECCW has made a determination to list the following Key Threatening Processes of relevance to the Campbelltown LGA in addition to those already listed referred to above:

- predation, habitat degradation, competition and disease transmission by Feral Pigs, *Sus scrofa* Linnaeus (August 2004)
- competition and degradation by feral goats (November 2004)
- alteration of habitat following subsidence due to longwall mining (July 2005)
- invasion, establishment and spread of Lantana (*Lantana camara* L. sens. lat (September 2006) and
- loss of hollow bearing trees (October 2007).

Invasive Species

Noxious weeds have continued to place pressure on natural ecosystems within the Campbelltown LGA during the reporting period. Weeds diminish the aesthetic appeal of an area as well as lead to a loss of biodiversity, harbour pest animals and diminish quality of our waterways. They can also out-compete native vegetation for resources placing habitat pressure on native wildlife that rely on native species for food and shelter. A total of 109 noxious weeds have been declared for the Campbelltown LGA. Weed species commonly found in the Campbelltown LGA include blackberry, African boxthorn, balloon vine, privet and morning glory. Weed species are found on both private and public lands.



Impacts associated with feral animals include the invasion of ecological communities, competition, predation, and environmental degradation. There are several feral animal species common to the Campbelltown LGA (such as feral cats, rabbits and foxes), that prey on or out-compete native wildlife for food, habitat and other resources. Feral species occupy both public and private lands.

Illegal Activities

Impacts associated with trail bike riding, dumping and arson activities place considerable pressure on the biodiversity and the quality of the natural environment. Table 7 highlights the number of phone calls received by Council regarding illegal tree removal and complaints over trail bike riding in bushland and other reserve areas.

Year	Illegal Tree Removal	Illegal Trail Bikes Activities
2004/05	42	125
2005/06	44	132
2006/07	31	185
2007/08	36	121
2008/09	38	88

Table 7: Illegal tree removal and trail bike phone call complaints received by Council.

The impact of illegal trail bike riding within the Campbelltown LGA has generally been highest in bushland areas on the urban interface, however in recent years the impact has extended into local parks and reserves. Impacts associated with trail bike riding include:

- a reduction in aesthetic values

- damage to vegetation, fauna and their habitat
- water pollution
- spread of weeds
- soil disturbance
- damage to items of cultural significance
- a reduction neighbourhood amenity due to noise and safety issues
- a reduction in the quality of recreational experiences.

Arson activity puts pressure on biodiversity through depletion of the seedbed and increased frequency of fire. While the NSW Rural Fire Service does not maintain specific data regarding arson activity, they advise that a high proportion of bushfires can be considered linked to arson activity.

2.3. Response

This section outlines the actions and programs undertaken by Council during the reporting period to address identified threats to “Our Land”.

Local Planning Policies and Development Activity

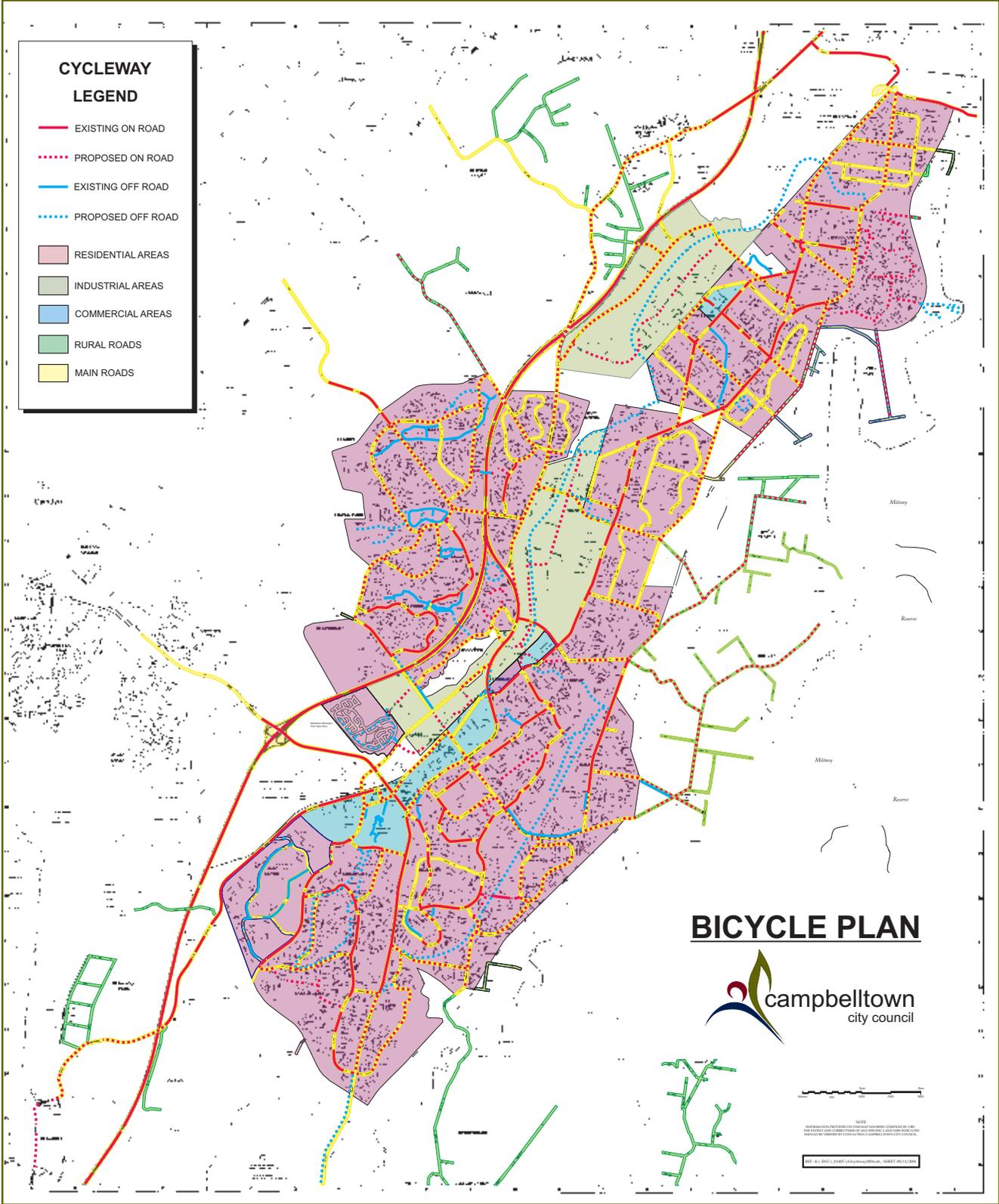
Council’s planning and development activities within the Campbelltown LGA during the reporting period were guided by Local Environment Plans, Interim Development Orders and the Campbelltown (Sustainable City) Development Control Plan as well as higher order State Planning Policies.

Comparison note between reporting periods: As reported in the 2003/04 SoE, Council drafted biodiversity guidelines for inclusion into the then Draft Campbelltown (Sustainable City) Development Control Plan. Council has since consolidated 120 development control plans and polices into the adopted Campbelltown (Sustainable City) Development Control Plan during the reporting period. This document aims to facilitate innovative development and encourage safe and liveable environments incorporating the principles of ecologically sustainable development. Specifically, development applications likely to have significant impact on native vegetation have to include a Threatened Species Assessment and Biodiversity Management Plan.



Bicycle Plan

Council’s Bicycle Plan was implemented during the reporting period, with eight new cycleways constructed of a combined length of 9.8km. 1.2km of walking tracks were designed and upgraded at two locations within environmentally sensitive areas (Simmos Beach and the Basin).



Map 2: The Bicycle Plan for the Campbelltown LGA

Waste/Recycling and Illegal Dumping

Council's LGA wide domestic waste and recycling management program has two key objectives:

1. to minimise the amount of waste generated per household,
2. to achieve the highest possible ratio of recyclables-to-waste produced per household.

Council is committed to meeting waste and resource recovery targets set by the State Government. The State targets are important drivers of waste recycling against a backdrop of a growing population in NSW and an economy that is producing more goods and services.

Council has developed and implemented the following programs and initiatives throughout the reporting period to encourage a decrease in waste generation and increase the quantity of resources recovered and recycled from Campbelltown's domestic waste stream:

- **Macarthur Resource Recovery Park:** Council joined with Camden, Wollondilly and Wingecarribee Councils to engage WSN Environmental Solutions in a contract to build and operate the Macarthur Resource Recovery Park, a high-tech waste-processing facility at Jacks Gully, Narellan. The operation of this facility has contributed to a total of more than 80% of all household waste collected in Campbelltown being re-used or recycled, and diverted from landfill.
- **Mobile Phone Recycling Program:** Council commenced a mobile phone recycling program where residents can dispose of their mobile phones, mobile phone batteries and mobile phone accessories. Council has collected more than 70 kilograms of mobile phones and accessories between 2007 and 2009.
- **Chemical Clean Out:** In conjunction with the NSW Department of Environment, Climate Change and Water, Council has organised and promoted an annual 'Chemical CleanOut'. This provides residents with the opportunity to dispose of household chemicals. A total of 117,000 kg of household chemicals has been collected between 2004 and 2009.
- **Clean Up Australia Day:** Campbelltown residents have displayed a relatively high level of participation, with an average number of 39 sites registered throughout the Campbelltown LGA each year. 49 sites were registered in 2009, which is the highest number of registrations received to date. Volunteers collected a total of 60 tonnes of waste from schools, parks, roadsides, creeks and bushland areas during the events held between 2004 and 2009.



1. Waste Diversion: The percentage of waste diverted from landfill to recycling (as a percentage of total weight collected by the three-bin system and clean up service).

Waste avoidance and resource recovery provides an effective means to assist in achieving Council's overall goals to preserve the natural environment, reducing greenhouse gas emissions, save water and save energy. The fast decline of space available for landfill and the increasing amount of waste generated by the community, and the associated environmental impacts have resulted in a rapid rise in costs of landfilling.

In addition, Council is committed to meeting waste and resource recovery targets set by the State Government. The state targets are important drivers against a backdrop of a growing population in NSW and a healthy economy that is producing more goods and services.

Council's 3-bin domestic waste and recycling collection system provides residents with an easy-to-use recycling service, which ensures a high percentage of household waste can be recovered and diverted from landfill. The percentage of waste diverted from landfill is an effective indicator in assessing the performance of Campbelltown City Council's kerbside recycling programme.

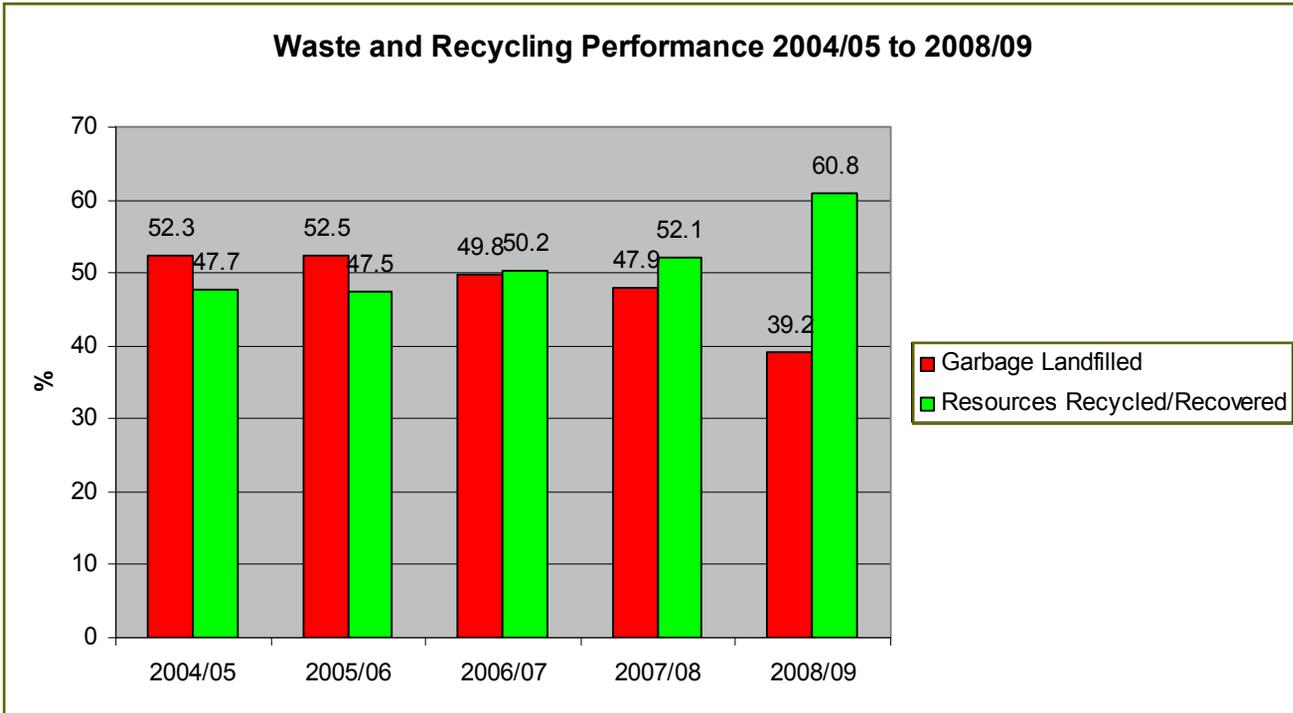


Figure 2: Waste landfilled and resources recovered/recycled as a percentage of total materials collected through the 3-bin system.

The percentage of waste diverted from landfill to recovery and recycling has increased steadily over the past four financial years. The most significant improvement occurred after the Macarthur Resource Recovery Park became fully operational in 2008/2009. The new waste processing facility resulted in nearly 5,000 tonnes (9%) of Campbelltown's domestic waste being diverted from landfill.

2. Waste Avoidance: The total tonnage of materials collected by the three-bin system.

Monitoring the total tonnage of materials collected via Council's domestic waste and recycling service assists in identifying the community's ability to embrace waste avoidance by reducing the amount of materials presented on the kerbside for disposal.

Campbelltown has succeeded in reducing the amount of waste to landfill, by relying on recycling and utilising the new waste processing facility at the Macarthur Resource Recovery Park. As a community, Campbelltown's next goal is to reduce the overall tonnage of waste produced, including recyclables and non-recyclables.



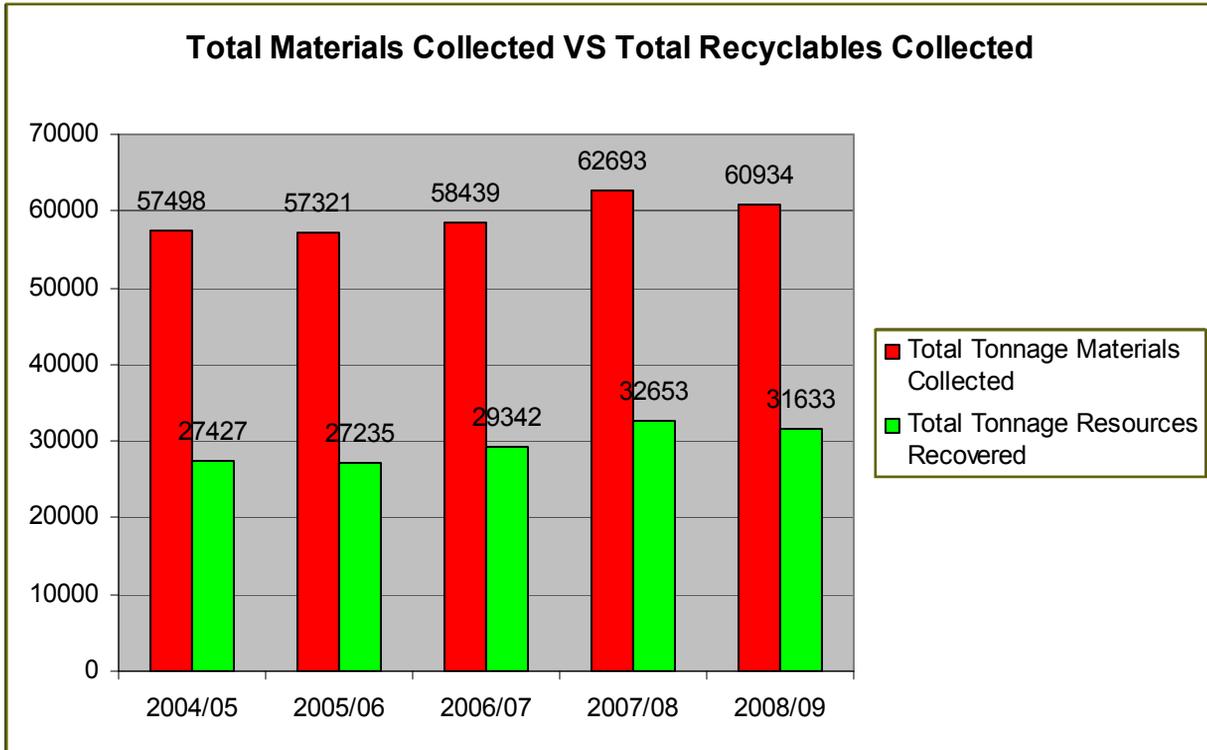


Figure 3: Total tonnage of materials collected through the three-bin system.

The graph above shows a steady increase in the amount of waste generated between 2004/05 and 2007/2008. However it is encouraging that 2008/2009 saw a reduction in the total amount of waste generated by Campbelltown’s residents.

Comparison note between reporting periods: Figure 2.11 shows that there has been a steady improvement in the ratio of recyclables-to-waste over the reporting period. The most significant improvement occurred in 2008/2009 when the Macarthur Resource Recovery Park became fully operational, resulting in nearly 5,000 tonnes of resources being removed from Campbelltown’s domestic waste stream, for recycling or re-use.

Figure 2.11 displays the waste and recycling performance in the Campbelltown LGA over the last four years.

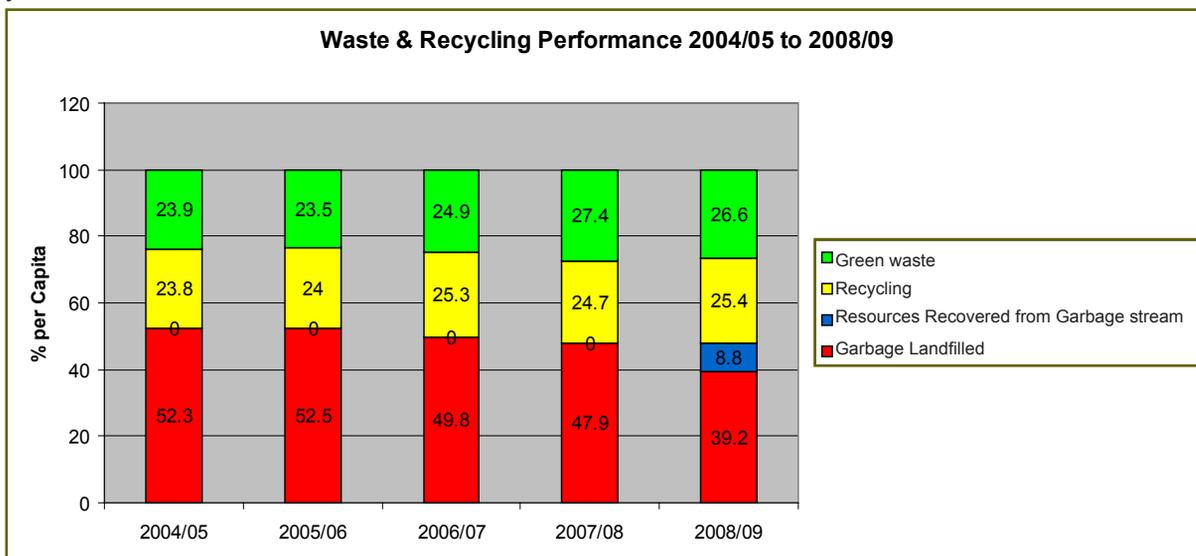


Figure 4: Waste and recycling performance and waste stream composition.

Campbelltown residents continued to remain among the best recyclers in NSW during the reporting

period, generating an average 199.93kgs of domestic waste per capita per annum and recycling an average 100.4kgs per capita per annum.

Council continues to provide residents with four kerbside clean-ups per year as a part of an ongoing program to reduce the impacts associated with illegal dumping. Clean-ups are provided all year-round on an on-call basis, with residents able to book clean-ups any time of the year whenever they require the service. The number of clean-ups booked in the 2004/05 to 2008/09 reporting period presented in Figure 2.12 displays a steady increase from 2005/06 to 2008/09.

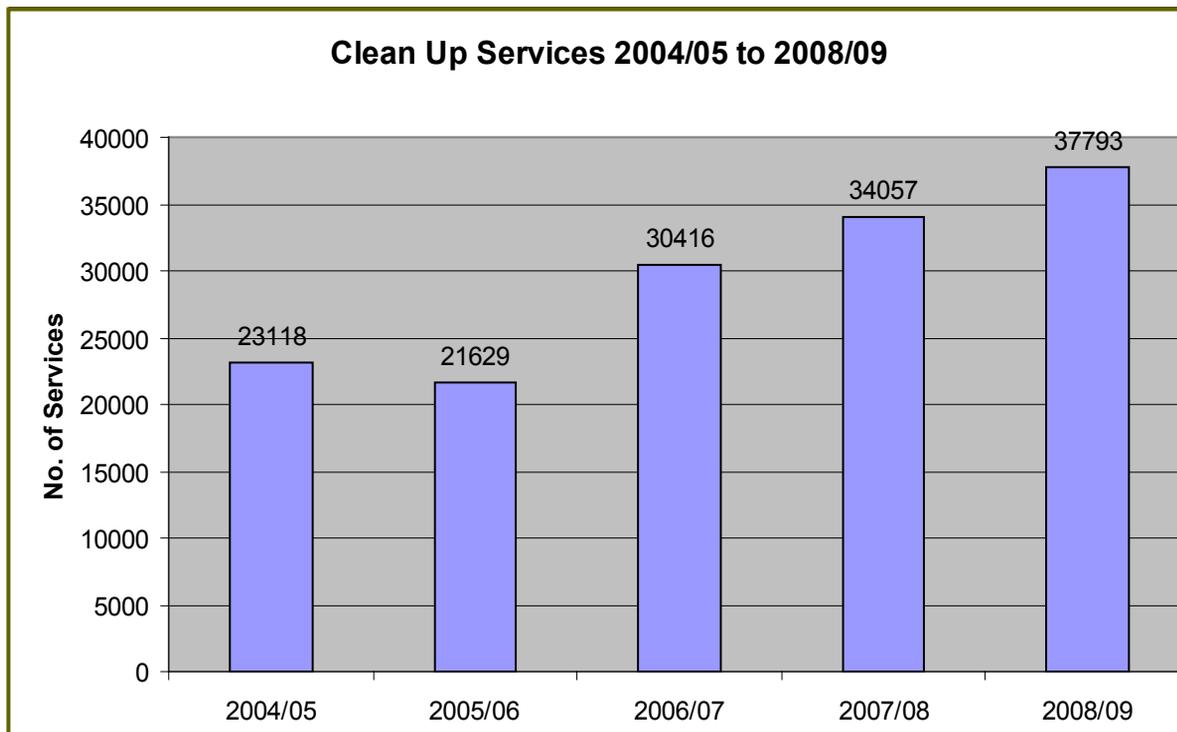


Figure 5: Campbelltown Council clean up services.

During the reporting period, Council continued to dedicate a truck and staff member for the removal of illegally dumped rubbish in the LGA. As a result, there has been a significant improvement in response times in both the reporting and the removal of dumped rubbish compared with 2003/04.

Council has also worked closely with Housing NSW, to engage the community in various joint projects to promote the waste services that Council provides to residents. These joint programs have been a major success in reducing the number of illegal dumping incidents in certain neighbourhoods in the Campbelltown LGA and educating the participating residents in the correct use of the waste and recycling services available.



Additionally, Council continued a community wide education program targeted at reducing litter, particularly cigarettes, being discarded from motor vehicles.

Comparison note between reporting periods: The 2003/04 SoE reported that six “litter from vehicle” operations were conducted resulting in the issuing of 47 penalty infringement notices to drivers observed illegally depositing litter from motor vehicles. Council’s surveillance and perseverance was ‘ramped’ up during the current reporting period, with a total of twenty “Litter from Vehicle” operations conducted resulting in the issuing of 124 penalty infringement notices, as shown in figure 2.13 below.

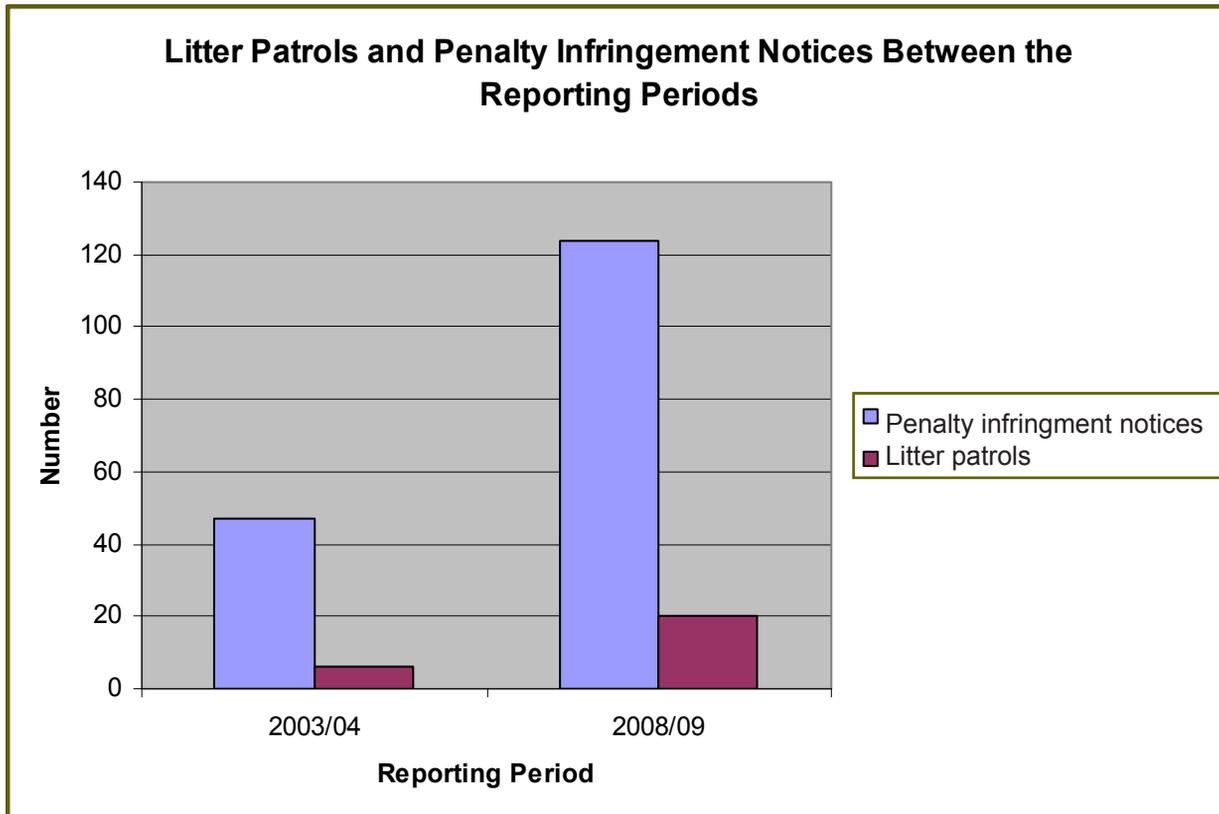


Figure 6: Litter patrols and penalty infringement notices issued for the two reporting periods.

Illegal Activities - Trail Bikes

Council initiated a number of activities to address threats to the natural and built environment from unrestricted trail bike riding such as:

- compliance patrols
- joint Council/Police patrols
- public reporting of illegal riding
- strategic fencing.

Comparison note between reporting periods: Council conducted six joint patrols in 2003/04 with the NSW Police (Macarthur District Trail Bike Squad and the Police Target Action Group) targeting illegal trail bike riding across the LGA. In 2008/09 only three patrols were conducted due to a limited number of staff and resources being available in this year, however over the last four years a total of 29 patrols were conducted.



Joint Trail Bike Patrols by Council with NSW Police			
Year	No of patrols	Penalty notices issued	Cautions issued
2004/05	5	65	24
2005/06	5	72	29
2006/07	9	53	31
2007/08	7	188	25
2008/09	3	97	4

Table 8: Outcomes of Joint Trail Bike Patrols

Infringement notices were issued to the adults riding trail bikes in Council Reserves while all juveniles were cautioned by Police in accordance with the Young Offenders legislation.

Vegetation Clearance

Vegetation clearance in bushland and rural areas has the potential to create significant impacts on vegetation communities and native flora including harm to listed threatened species and ecological communities. While Table 2.7 provides information regarding ‘illegal tree removal’, this only includes instances of reported tree removal within urban areas as Council does not currently hold specific data regarding clearance of native vegetation within bushland areas. The collation of more specific data regarding this issue will be investigated for subsequent reports.

Bushfire Management

As a member and active participant of the Bush Fire Management Committee, and as a significant landholder/manager, each year Council routinely undertakes strategic bush fire hazard reduction works on an average of 100 sites across the LGA.

These works include general road side mowing, as well as the establishment and maintenance of fire trails, Asset Protection Zones, Strategic Fire Advantage Zones and Land Management Zones. In ensuring that these works are environmentally sound, Council prepares Hazard Reduction Certificates in accordance with either the NSW Environmental Assessment Code or Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and adheres to requirements outlined in Council’s Plans of Management.



Comparison note between reporting periods: The 2003/04 SoE report commented that draft provisions relating to bush fire protection were included in the Draft Campbelltown (Sustainable City) DCP. To date, Council has adopted this Plan and endorsed these bush fire protection provisions. Developments occurring within ‘bushfire prone areas’ may also require a Bushfire Safety Certificate from the NSW RFS under the Integrated provisions of the *NSW EPA Act 1979*.

A total of 144 development applications were referred to the NSW Rural Fire Service for comment between 2004 and 2009. During the reporting period, Council undertook hazard reduction works at a number of priority locations to reduce bushfire risk to adjoining properties as outlined in Table 2.15.

Year	Private land	Council Land	Other	Total
2004/05	16	2	1	19
2005/06	8	1	2	11
2006/07	14	2	5	21
2007/08	30	29	7	66
2008/09	29	14	2	45

Table 9 Hazard reduction activities (HR) approved within the Campbelltown LGA

Comparison note between reporting periods: Hazard reduction activities for private and Council land during the 2003/04 reporting period totalled 31 and 10 respectively. These figures are similar to what has been documented for the 2008/09 reporting period.

Biodiversity

Stage 2 of the Campbelltown Biodiversity Study was adopted by Council in 2008. This study provided baseline data on the state of biodiversity for the Campbelltown LGA and identified areas of high, medium

and low biodiversity value as well as important local and regional habitat corridors.

In recognising the importance of conserving and enhancing bushland Council identified a priority list of 13 parks and reserves in 2002 that warranted the preparation of Plans of Management (PoM).

Comparison note between reporting periods: As of the last reporting period, six PoM's had been adopted by Council. Since 2003, this has increased to 10 PoM's for Noorumba Reserve, (Rosemeadow), the Keith Longhurst Reserve (formerly known as the Basin Reserve) Kentlyn and Bunburry Curran Park and Simmos Beach Reserve (both located at Macquarie Fields) being adopted by Council.

During the reporting period, Council endorsed a staged program of improvement works within Noorumba Reserve. Works included the preparation of a Bushland Restoration Plan, track upgrading, installation of fencing and bushland restoration work. Council's community Stream Care Group also undertook works on-site. Surveys conducted during these works identified the endangered Cumberland Land Snails (*Meridolum corneovirens*) and the rare Western Boobiella (*Myoporum montanum*) on site. The finding of this rare plant is particularly significant because the plant has not been sighted within the reserve for more than 12 years.



Koala Habitat Restoration Project

Council continues its commitment to preserving the local koala population and is overseeing the preparation of a comprehensive Koala POM. In this regard, Council consulted with the Department of Planning and Department of Environment, Climate Change and Water on aspects of the Plan during the reporting period. Council also adopted interim arrangements in 2005 to conserve koalas and koala habitat within the Campbelltown LGA and enable it to comply with its responsibilities outlined State Environmental Planning Policy No 44 'Koala Habitat Protection' until this POM is approved. In addition, during the reporting period, Council worked on a Koala Habitat Restoration Iconic Project at sites in Kentlyn and St Helens Park. Highlights of this project included the preparation of Koala Habitat Restoration Plan, bush regeneration and weed control works and site preparation for planting approximately 4000sqm of endemic tube stock.

Bush Regeneration Projects

Council initiated several successful bush regeneration projects at the following key locations throughout the Campbelltown LGA: Milton Park (3.4ha), Victoria Park (1.1ha), Smiths Creek (5.1ha), Menangle Park (0.5ha) and Pembroke Park (6.7ha).

The majority of bushland sites that received works were representative of the Endangered Ecological Community Cumberland Plain Woodland. Some common species that were targeted for removal/control included: Broadleaf Privet (*Ligustrum lucidum*); Narrow Leaf Privet (*Ligustrum sinense*); African Boxthorn (*Lycium ferocissimum*), Prickly Pear (*Opuntia stricita*) and African Olive (*Olea europaea*). These works have helped to ensure the ongoing preservation of the valuable and unique bushland that is found within the Campbelltown LGA.

Redfern Creek Rehabilitation and Community Education Project

Council conducted bush regeneration works, rubbish removal, provenance seed collection and tubestock propagation and planting along 1.5km of Redfern creek. This project was significant as the creek line forms part of the endangered ecological community Cumberland Plain Woodland. Local school groups and the Georges River Environment Centre were also engaged during the course of the project through various education initiatives and guided creek line walks. A community streamcare group is due to commence works on-site in order to protect and maintain this valuable piece of urban bushland.

Control of Introduced Species

Noxious Weed and Feral Animal control programs

Comparison note between reporting periods: Council undertook a total of 1,956 private property weed control inspections during the reporting period, resulting in successful weed control outcomes on private property across the LGA. During the 2003/04 reporting period, a total of 2,203 inspections were carried out.

Comparison note between reporting periods: During the current reporting period, Council progressively updated and improved its Noxious Weed Management Program. Specifically, Council reviewed and is currently updating its 2003 Noxious Weed Strategy with the addition of a pest animal management component, establishing strategic direction for pest animal and weed management activities within the Campbelltown LGA.

Numerous programmed public land inspections were conducted throughout the LGA targeting locally significant weeds including Alligator weed, Ludwigia, Salvina, Water Hyacinth, Serrated Tussock, Blackberry, Privet, St Johns Wort, Pattersons Curse, African Boxthorn and Balloon Vine. Additionally, Council coordinated annual control programs for mapped infestations of noxious weeds.

Key highlights of Council's Noxious Weed Control Program for the reporting period include:

- eight Nepean River Alligator weed treatment programs, conducted in collaboration with Campbelltown City Council, Wollondilly Shire Council and Camden Council, which targeted an estimated 60km of Alligator weed infested river each year
- twenty Council public notices printed in two local papers
- four community radio broadcast sessions
- two weed workshops hosted by Campbelltown City Council.

Treatment of Serrated Tussock at Menangle Park

Council also successfully delivered a project involving the treatment of infestations of Serrated Tussock (a noxious weed) at Menangle Park. Highlights of the project included weed control, repair of existing fences and direct application of native grass seed to outcompete Serrated Tussock. The project was highly successful and reduced the level of Serrated Tussock infestation by approximately 95% across an area of 122ha over five years.



Campbelltown Probation and Parole Working Group

Council again engaged with the Campbelltown Probation and Parole Office Community Service Orders (CSO) working group for the provision of basic bush regeneration and weed control activities on various work sites within the Campbelltown LGA. This working group provides Council with a low cost, yet highly productive, means for managing terrestrial weeds. This Council program was a runner-up finalist for the 2009 Environs Australia Sustainability Awards for Sustainability Partnerships. Sites worked by the group include:

- Fisher's Ghost Creek, Bradbury (2007)
- Redfern Creek, Ingleburn (2007-08)
- Milton Park, Macquarie Fields (2007-09)
- Smiths Creek, Ruse (2007-09)
- Victoria Park, Minto (2008)
- Botany Place, Kentlyn (2008)
- Ingleburn Reserve, Ingleburn (2008)
- Bunbury Curran Park (Glenfield) (2009).

These Awards recognise nine award categories for progressing sustainability at the local level by:

- Local Government individuals (Councillors and Officers),
- Local Government Authorities (LGA's),
- Local Government Partnerships.

2.4. Performance Indicators and Key Management Issues Relating to Our Land

Key Land Management Issues

Significant issues affecting land management in Campbelltown are:

1. urban development,
2. endangered species and communities,
3. invasive species,
4. waste production and illegal dumping,
5. bush fires,
6. trail bike riding,
7. pollution.



The following key actions relating to the management of Campbelltown's land resources have been identified for implementation during the next reporting period:

Key Action L1: Completion of the Campbelltown Biodiversity Strategy.

Key Action L2: Ongoing management of waste generation and ongoing increases in resource recovery ratios.

Key Action L3: Finalisation of a Local Planning Strategy and a Residential Strategy, informing the new Comprehensive Local Environment Plan.

Key Action L4: Adoption of the Varroville Reserve and the Lake Burrendah Plans of Management.

Key Action L5: Ongoing planning and management of invasive species.

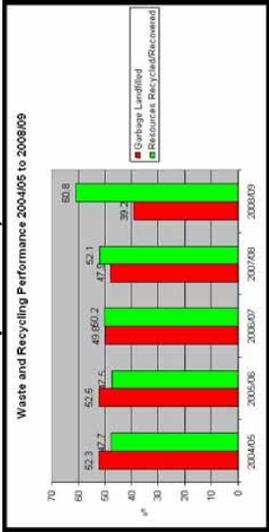
Key Action L6: Identify location of areas of high conservation value to ensure they are zoned for environmental protection purposes.

Key Action L7: Monitoring and analysis of impact of unrestricted trail bike riding and illegal activities across Campbelltown LGA.

Key Action L8: Conducting of consultation with relevant State Government agencies to minimise the impacts of underground mining on the natural and built environment within the Campbelltown LGA.

Table 10 Identifies key threats in relation to Our Air, and summarises the ways in which Council addressed/ is addressing the identified issues.

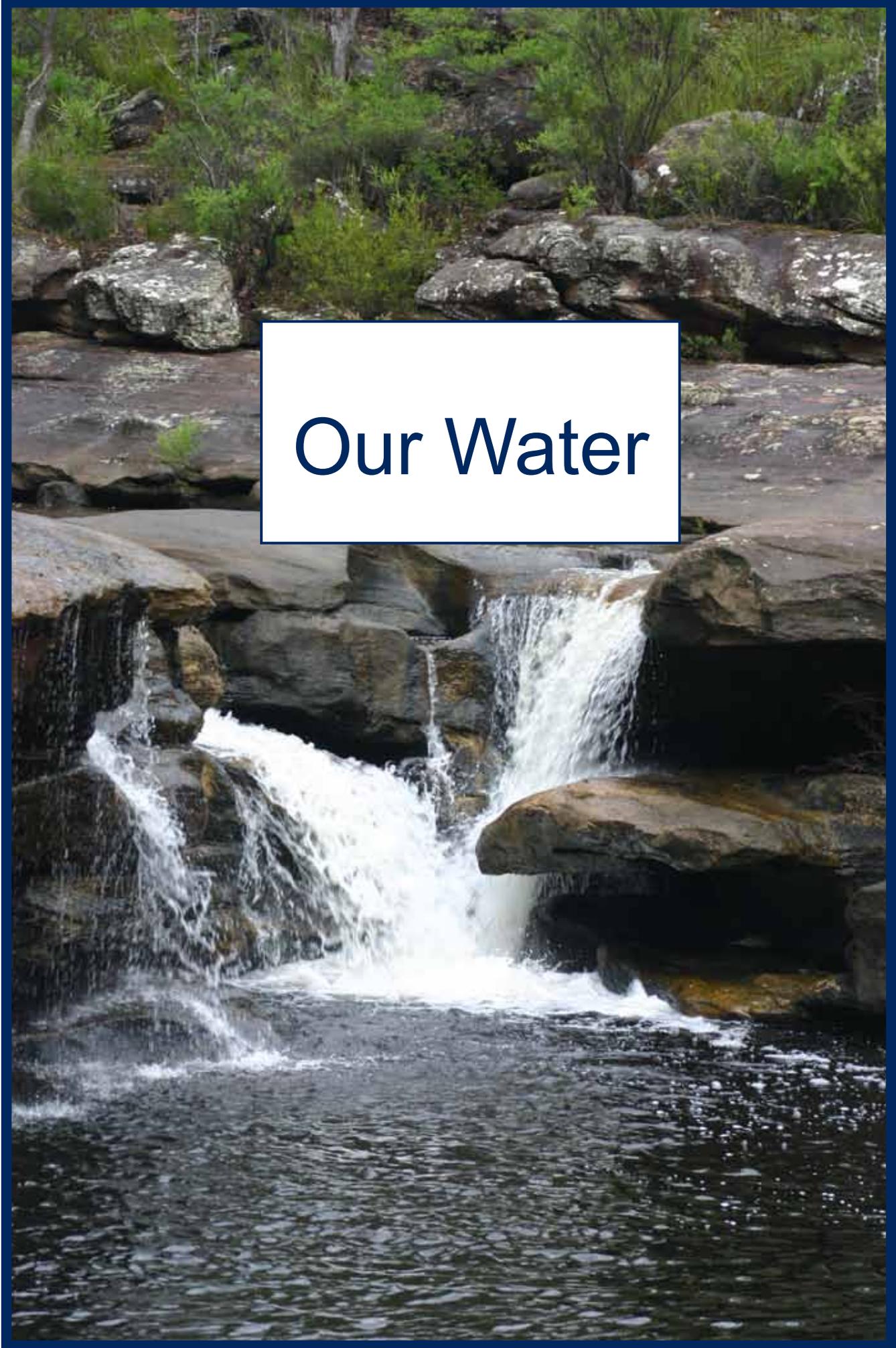
Key Performance Indicators

Key Threats to Our Land	How it is being addressed	Performance Indicators	About this Indicator
<ul style="list-style-type: none"> Urban Development 	<ul style="list-style-type: none"> State and Regional Planning Strategies and Plans Local Planning Instruments Campbelltown (Sustainable City) Development Control Plan 	<p>Proportion of land identified as having high conservation significance zoned for environmental protection purposes</p> <p>Total Area of land with high conservation significance: 14367 ha</p> <p>Total Area with environmental protection zoning: 1106 ha</p> <p>Proportion of significant land zoned environmental protection: 8 percent</p> <p>Data derived from the Campbelltown Biodiversity Study</p>	<p>The process of zoning lands for environmental protection purposes is part of the development of Council's Comprehensive Local Environment Plan. A database has been developed which identifies ownership of all Parks and Reserves in the LGA. Other areas of land that are zoned appropriately for environmental protection purposes include the Holsworthy Military Training Area, Dharawal State Recreation Area and Woronora 'special area' catchment.</p>
<ul style="list-style-type: none"> Bushfire 	<ul style="list-style-type: none"> Hazard Reduction Works Bushfire Management Committee 	<p>Number of hazard reduction works carried out.</p> <p>A total of 162 hazard reduction activities were carried out during the reporting period.</p>	<p>Council undertakes hazard reduction works at priority sites to reduce the bush fire risk to properties and important community assets.</p>
<ul style="list-style-type: none"> Invasive Species 	<ul style="list-style-type: none"> Noxious Weeds and Pest Animal Management Strategy Plans of Management for various parks and reserves 	<p>Number of private property weed inspections</p> <p>1956 noxious weed private property inspections were conducted during the reporting period.</p> <p>Number of S18 Weed Control Notices served.</p> <p>A total of 30 S18 Weed Control Notices served.</p>	<p>Council reports on the number of noxious weed private property inspections it undertakes each year. By controlling noxious weeds and educating the community about their spread, Council is assisting in reducing the impacts associated with weeds, such as human health allergies, bushland invasion and loss of recreation and aesthetic values within the LGA.</p>
<ul style="list-style-type: none"> Waste Production/illegal dumping 	<ul style="list-style-type: none"> Macarthur Resource Recovery Park contract Kerbside Recycling Program Minimise volume of waste generated and maximise recovery of recyclable materials. Community engagement and education activities and programs 	<p>1. The percentage of waste diverted from landfill to recycling (as a percentage of total weight collected by the three-bin system and clean up service).</p> 	<p>Waste avoidance and resource recovery provides an effective means to assist in achieving Council's overall goals to preserve the natural environment, reducing greenhouse gas emissions, save water and save energy. The percentage of waste diverted from landfill is an effective indicator in assessing the performance of Campbelltown City Council's waste minimisation programs.</p>

Key Performance Indicators

Key Threats to Our Land	How it is being addressed	Performance Indicators	About this Indicator
<ul style="list-style-type: none"> Trail Bike Riding 	<ul style="list-style-type: none"> Joint Trail Bike Patrols Police monitoring Bike seizures Strategic fencing Plans of Management for various parks and reserves 	<p>The percentage of waste diverted from landfill to recovery and recycling has increased steadily over the past four financial years. The most significant improvement occurred after the Macarthur Resource Recovery Park became fully operational in 2008/2009. The new waste processing facility resulted in nearly 5,000 tonnes (9%) of Campbelltown's domestic waste being diverted from landfill.</p> <p>2. The total tonnage of materials collected by the three-bin system.</p> <p>Campbelltown has succeeded in reducing the amount of waste to landfill, by relying on recycling and utilising the new waste processing facility at the Macarthur Resource Recovery Park.</p> <p>Number of trail bike patrols conducted. Total for the reporting period: 29.</p>	<p>Monitoring the total tonnage of materials collected via Council's domestic waste and recycling service assists in identifying the community's ability to embrace waste avoidance by reducing the amount of materials presented on the kerbside for disposal.</p> <p>Council initiated measures designed to address the impacts associated with illegal trail bike riding on the quality of the Campbelltown LGA. These include joint ranger patrols with the NSW Police and installation of fencing at certain reserves. There is a need to continue to conduct trail bike patrols in association with deterrents and community awareness to achieve positive outcomes in reducing the level of trail bike riding within the LGA.</p>

Table 10: Key threats in relation to Our Land, and how they are being addressed



Our Water

3. Our Water

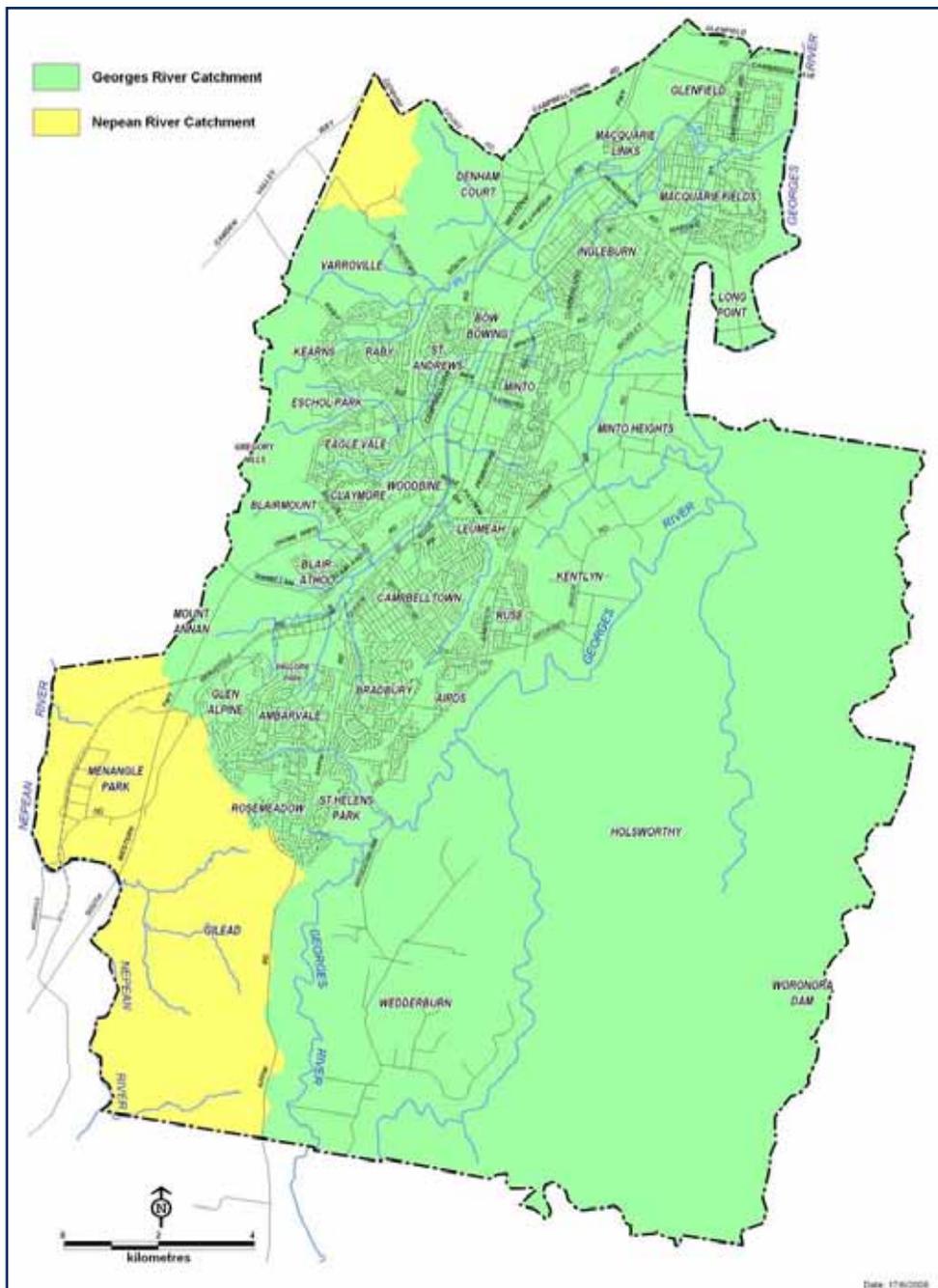
This section of the SoE describes the current condition of Our Water, pressures and threats to Our Water and Council's response/programs to address these threats.

3.1 State

The Campbelltown LGA boasts a number of natural waterways which support a diverse range of plants and animals. The quality of water in these waterways has a direct impact on the health of plants and animals living within them. These waterways offer a number of recreational opportunities for local residents as well as supporting a number of land uses that require water resources such as manufacturing, agriculture, and domestic uses.

Catchment and Rainfall

The majority of the Campbelltown LGA (86%) drains into the Upper Georges River Catchment. The River extends from its headwaters in east Appin through to Botany Bay and approximately 27,300 hectares of the catchment is located within Campbelltown. A small proportion (14%) of the Campbelltown LGA drains to the Nepean River, some 3900 hectares.



Map 3: The Georges River and Nepean River Catchments

Rainfall is important for the health of our local waterways and has a direct impact on water levels and flow rates in these waterways. Additionally, rainfall can also flush pollutants, such as sediment, rubbish, garden wastes, grease, petrol, oil and other chemicals into creeks and rivers.

Rainfall data has been collected from the following sites within the Campbelltown LGA during the reporting period: Glenfield (Harrow Road), Ruse (Denison St), Menangle Bridge (Nepean River), and Kentlyn (Georges River Rd), presented in Figure 7.

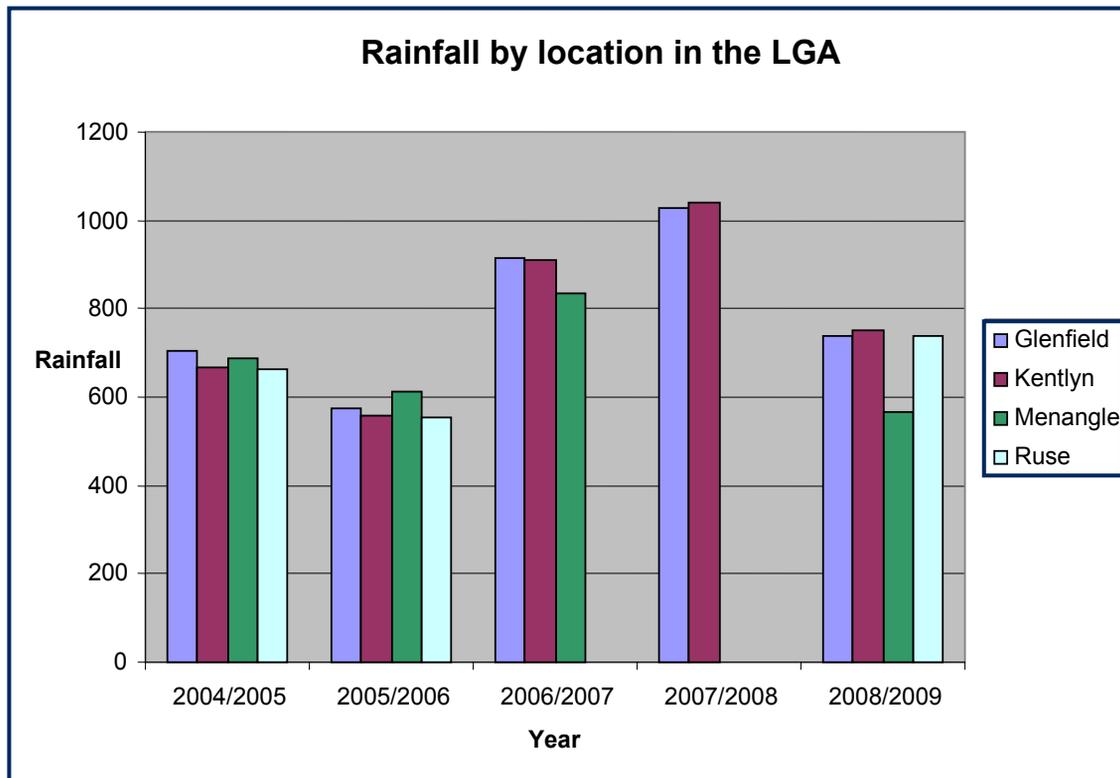


Figure 7: Annual rainfall recorded in the Campbelltown LGA. Please note there was insufficient data in 2006/07 to calculate annual rainfall at Ruse, and in 2007/2008 at both Menangle and Ruse.

Comparison note between reporting periods: Overall, the average annual rainfall for the Campbelltown LGA over the reporting period was 727mm/yr, which represents a moderate increase from the 660mm/yr which was reported in the 2003/2004 SoE.

Water Quality Monitoring

Council assesses water quality within the Campbelltown LGA against the Australian and New Zealand Environment Conservation Council (ANZECC) guidelines for assessing water quality. Council has been conducting water quality testing across the LGA for more than 15 years and has accumulated significant data. Parameters assessed include pH, temperature, nutrients, electrical conductivity, turbidity and faecal coliforms.

Water quality within the Campbelltown LGA is generally regarded as fair. There is sometimes a general decline in water quality following rain events, due to rubbish and other pollutants being washed into creeks and rivers. Council tested the following eight water quality sites on a monthly basis during the reporting period: Nepean River (Menangle Bridge), Wedderburn Gorge, the Woolwash, Frere's Crossing, Simmo's Beach, Harold Street Bridge, Kooringa Reserve and at the Minto detention basin.



The two primary recreational waterway sites within the Campbelltown LGA, Menangle Bridge and Simmo's Beach were monitored for their compliance with both primary and secondary recreational activities. Primary contact refers to activities such as swimming where there is a high level of contact with the water. Secondary contact refers to activities where there is a reduced level of contact with the water, such as kayaking. Simmo's Beach can be seen to be fair to good for primary contact recreation, and consistently good for secondary contact. Menangle Beach can be seen to have improved from poor in 2006-2007 to good in 2008-2009 for primary contact, and it has been consistently good for secondary contact.

A substantial amount of rain falls on impervious surfaces and enters man-made stormwater systems. 8,774ha of land within the Campbelltown LGA is considered to be urban. This equates to 28% of the total land area, with the remainder being non urban. These stormwater systems in the LGA carry a number of pollutants such as nutrients, sediment, litter, weeds, oil and grease into our waterways

Comparison note between reporting periods: The 2003/04 SoE Report noted that Council participated in the Regional Water Assessment and Management Program operated by the former Department of Infrastructure Planning and Natural Resources. This program measured recreational water quality specific to the Hawkesbury Nepean catchment, however no longer operates. Of interest, however, is Council's recent involvement with the Georges River Combined Council's Committee Riverkeeper Program 'River Health Monitoring Program' which is collecting water quality, riparian transect and macro invertebrate data from all Local Government Areas having frontage to the Georges River. This data will be available from early 2010, and will continue to be collected over the coming years.

Aquatic Biodiversity

Studies undertaken during the reporting period have identified 17 native fish and three crayfish species living within the Upper Georges River, and that the river provided high quality habitat for these species. Native species identified include the eel tailed catfish, and the Macquarie perch and silver perch. A number of exotic species were also identified, including goldfish, carp and gambusia (Mosquito fish).

Water Management

During the reporting period, 12 new Catchment Management Authorities (CMAs) were established across NSW. Of relevance to Campbelltown are the Hawkesbury Nepean and Sydney Metropolitan CMAs.

Comparison note between reporting periods: To date, both the Hawkesbury Nepean and Sydney Metropolitan CMAs are operating. However in 2003/04, only the Hawkesbury Nepean CMA had been created. Additionally, both CMAs have developed and published Regional Catchment Action Plans, in which Council is an identified stakeholder. Through CMA grant funded projects, Council has worked towards implementing parts of these Plans. Grant funded projects include Council's Urban Sustainability Upper Georges River Project involving the Sydney Metropolitan CMA, and the Serrated Tussock Management Project undertaken in partnership with the Hawkesbury Nepean CMA.

3.2 Pressure

The pollutants contained within stormwater will vary depending upon the land uses found within the catchment. Some common pollutants, sources of pollution and threats to the waterways of the Campbelltown LGA (which comprises urban, agricultural and bushland/rural land uses) include:

- point source pollutants such as chemicals, packaging and other products that - discharge into waterways or stormwater systems from an identifiable sources such as factories.
- degradation of the riparian zone - the riparian zone is the corridor



of vegetation adjacent to rivers, streams and creeks and plays a critical role in providing habitat for biodiversity. Weed invasion, sedimentation, erosion and rubbish contribute to poorer water quality here. Poor management of native vegetation, inappropriate development and introduction of exotic species all contribute to riparian zone degradation.

- stream flow modification - construction of weirs and dams significantly reduce stream flows, and also interfere with breeding cycles of fish. The Georges River is generally largely unmodified with the exception of Liverpool Weir. Conversely the Upper Nepean River has been modified, demand for irrigation water, stock watering, recreation, sand and gravel extraction, and disposal of wastewater all impacting upon water quality.
- on-site sewage management - over 900 rural properties within the Campbelltown LGA have on-site sewage management systems registered with Council. If these systems are incorrectly maintained or overworked they can contribute to poorer water quality.
- aquatic weeds - can reduce biodiversity and reduce the aesthetic and recreational values of a waterway. There have been several species of aquatic weeds identified within the Campbelltown LGA, including: Alligator Weed, Ludwigia and Water Hyacinth. Stagnant water, high nutrient loads and urban development all contribute to the proliferation of weeds.
- stormwater- generated any time rainfall exceeds the capacity of the ground to absorb the rain. The rain may mobilise a range of contaminants, which include nutrients, sediment, litter, weeds, oils and grease. Depending on the concentrations and loads of these contaminants, the ecosystem impacts may be either small or significant. All landuses have the potential to provide contaminants and control measures should be designed for the specific site and associated land use.



Aquatic weeds

Serious aquatic weeds like Water Hyacinth and Salvinia are notorious in terms of their impacts, across Australia, and have been recorded growing in the Campbelltown LGA during the reporting period. Infestations of Salvinia were persistent between 2004 and 2007 on both the Georges River and within the Campbelltown Golf Course (headworks of the Bow Bowing Creek). These infestations had measurable densities greater than 70% vegetation cover over the water body.

During 2005-06, Council discovered one previously unknown infestation of Water Hyacinth in the Campbelltown LGA, in an extension of Bunbury Curran Creek at Glenfield. This was the third recorded infestation in Campbelltown. As such, Council coordinated the control of the infestation, preventing Water Hyacinth from establishing within the LGA. Salvinia has previously been recorded growing at the Campbelltown Golf Course and the Georges River.

There are many other weeds that thrive in aquatic environments often out-competing local species and seriously affecting local ecology. Aquatic weeds can make their way from ponds into natural wetlands and waterways on the backs of birds, or when people release fish inappropriately from their tanks or ponds, where they rapidly reproduce.

The presence and proliferation of weeds such as Water Hyacinth and Salvinia within the Campbelltown LGA can be attributed to a number of factors, including:

- introduction to waterways from rural properties and residential gardens.
- escape from backyard ponds.
- the inappropriate disposal of aquarium fish and plants into waterways.

- downstream movement of weeds and their seeds in waterways from infestations higher up in the catchment.

Additionally, the growth of aquatic weeds is promoted by higher than average nutrient levels associated with stormwater and urban run off entering waterways. Council recognises these aquatic weed sources and has undertaken proactive measures aimed at both treating the weeds as they are found, and addressing the source of the infestation. Proactive measures are described in the Response section, however include water quality monitoring, private property inspection programs and regional cooperation and coordination and with neighbouring Council officers.

Invasive species that have been recorded within the Campbelltown LGA, and their locations, according to Council's 2007 Aquatic Weed Mapping include:

Aquatic weed species	Location	Density
Alligator weed (<i>Alternanthera philoxeroides</i>)	Georges River and associated tributaries (Bunbury Curran Creek, Macquarie Creek, Redfern Creek, Bow Bowing Creek), and the Nepean River.	Vegetation densities ranging between scattered (<5%) and high (>70%) across infestation sites.
Salvinia (<i>Salvinia molesta</i>)	Campbelltown golf course and the Georges River (Simmos beach to Glenfield causeway).	Greater than 70% vegetation coverage of the waterways.
Water Hyacinth (<i>Eichhornia crassipes</i>) Ludwigia (<i>Ludwigia peruviana</i>)	Kennett Park (Glenfield) and Varroville Reserve. Fishers Ghost Creek, Spring Creek, Bow Bowing Creek, Redfern Creek, Georges River, Smiths Creek, Leumeah Creek, and McBarron Creek.	Vegetation density considered medium (>30%). Vegetation densities ranging between scattered (<5%) and high (>70%) across infestation sites.

These weeds were introduced into the waterways of the Campbelltown LGA and have the potential to:

- Stagnate water bodies;
- Deplete food sources and breeding areas for wildlife;
- Provide shelter for mosquito populations;
- Reduce fish populations;
- Choke water systems; and
- Reduce oxygen levels.

Illegal dumping and Litter

Occurrences of illegal dumping and litter can result in toxic substances being introduced into stormwater, and also directly into our natural waterways. Once in the waterways, these pollutants can have a significant negative effect. The issue of illegal dumping and litter is a substantial pressure on the health of waterways throughout the LGA.



Urban Development

A large portion of the waterways within the Campbelltown LGA have been highly modified and urbanised. Impacts associated with stormwater pollution, erosion and sedimentation continue to place pressure on our waterways.

3.3 Response

Council's commitment to the sustainable management of water resources and improved water quality management is demonstrated through a number of initiatives.

Stormwater Management

Capital Works

Council has undertaken a number of works addressing the pressures on water within the Campbelltown LGA.

These include:

- installation of a boom on the Georges River, Glenfield causeway in 2005. This boom catches pollution and aquatic weed material as it flows downstream.
- installation of stormwater harvesting projects at Kooringa Reserve (Raby), Bradbury Oval (Bradbury), Ingleburn Tennis Club (Ingleburn), and the Old Ambulance Station (Broughton St Campbelltown).
- installation of trial subsurface irrigation system for one playing field at Milton Park (Ingleburn).
- trial installation of low water use urinals at the Council Civic Centre.
- installation of water efficient plumbing and rainwater tanks at the new Ingleburn Library and Centre.

Studies and Reviews

During the reporting period, Council prepared studies focussed on improving local water quality and decreasing potable water supply demand. These studies included:

- a Wetlands Feasibility Study which investigated opportunities for stormwater harvesting along Bunbury Curran Creek and parts of the Georges River.
- the Georges River Process Study which investigated opportunities for stormwater harvesting.
- a review of all Council owned water quality improvement devices in the LGA. A plan outlining these devices has been developed.

Water Sensitive Urban Design

The Campbelltown (Sustainable City) Development Control Plan 2009 recognises and embraces the concept of Water Sensitive Urban Design. Water Cycle Management Plans are required to be submitted with development applications in certain instances. Where appropriate, natural water courses are to be retained and reinstated as part of stormwater management measures.

Bring Back the Fish Project

During the reporting period, Ingleburn Weir was identified for restoration works to provide for an unrestricted fish passage. Unfortunately, due to the height of the water in the Georges River, works were not able to commence within the reporting period. Details of this project will be provided in future reports, given that the project concluded in August 2009.

Community Education Programs

During the reporting period, Council undertook a number of community education programs (Please refer to Table 11) relating to the sustainable management of water in the Campbelltown LGA. These have taken a variety of forms, reflecting the diverse nature of water management in a modern urban context.



Education Program	Years	Outcome
Streamcare	2004-09	Three new streamcare groups have been formed at various strategic locations throughout the LGA including Redfern Creek Ingleburn, Botany Place Kentlyn and Spring Creek St Helens Park. Activities include water quality monitoring, native and exotic vegetation identification, weed removal and bush regeneration.
Sustainability Blitz Community Workshops	2004-08	Eight community workshops were held with an average of 15-20 participants in each session. Workshop evaluation surveys concluded that residents highly valued these workshops and that they would be utilising the information to improve sustainability practices at home.
Water for Life	2007-09	Education and advertising for the “Water for Life” campaign to encourage the community to save water and improve water efficiency. Council designed a Water Tank Information Kit, intended to be a ‘one stop shop’ for residents who wanted to install water tanks. The kit contained: A water tank fact sheet, outlining the benefits of installing a water tank; <ul style="list-style-type: none"> • a Council fact sheet on water tank installation, outlining the regulations for Campbelltown residents in terms of installing a water tank, such as sizes and connections of tanks • a Sydney Water fact sheet on the Water Tank Rebate, outlining what the rebate covers, and how to apply for it.

Table 11: Water Based Community Education Programs implemented by Council.

Urban Sustainability

Campbelltown City Council secured \$2 million in funding over three years from 2007 to 2010 for the preparation and implementation of a strategic Environmental Management Plan for the Upper Georges River catchment. The plan is being prepared in partnership with Liverpool City Council, Wollondilly Shire Council, other stakeholders and the Community. The plan provides direction for on-ground works to improve the upper catchment environment. Priority working sites for on-ground improvements have been selected by the Project Steering Committee, and include: Milton Park (Ingleburn), Bunbury Curran Park (Glenfield) and Marsden Park (Park Central, Campbelltown).



Additionally, Council also secured \$250,000 in funding for the development of a Sustainable Environmental Management Plan for the Bow Bowling Creek headwaters (Campbelltown Golf Course), a project that will be completed in conjunction with the Golf Club.

Water Quality Monitoring

Council’s primary response to the identified pressures on the waterways of the Campbelltown LGA is to continue to implement its water quality monitoring program to obtain an understanding on the health of waterways and recreational and ecosystem health with respect to guidelines produced by the Australian and New Zealand Environment and Conservation Council (ANZECC). Two of these sites (the Georges River at Simmos Beach Reserve and the Nepean River at Menangle Park) are only monitored for compliance with recreational criteria. In 2006, Council expanded its water program to include an additional two sites at Koorunga Reserve and Minto to monitor water quality associated with stormwater infrastructure, bringing the total number of monitoring sites to 8.

Table 12 indicates that water quality is generally fair, apart from a period of two to three weeks after heavy rainfall when there is generally a reduction in water quality, which reflects the urbanised nature of the catchments.

	Samples over period	Ecosystem Criteria	Recreation Criteria: Primary Contact	Recreation Criteria: Secondary Contact
Wedderburn Gorge				
2006-2007	8	64		
2007-2008	12	64	NA	NA
2008-2009	12	55		
The Woolwash				
2006-2007	8	63		
2007-2008	9	62	NA	NA
2008-2009	11	66		
Frere's Crossing				
2006-2007	8	69		
2007-2008	11	62	NA	NA
2008-2009	12	64		
Harold Street Bridge				
2006-2007	8	63		
2007-2008	12	64	NA	NA
2008-2009	12	61		
Simmos Beach				
2006-2007	28	67	72	78
2007-2008	34	58	63	85
2008-2009	34	64	81	100
Menangle Bridge (Nepean River)				
2006-2007	28	30	45	79
2007-2008	31	46	66	100
2008-2009	32	49	90	100
Minto before GPT				
2006-2007	13	34	12	38
2007-2008	25	51	36	26
2008-2009	11	52	23	59
Koorunga Reserve				
2006-2007	17	*	67	50
2007-2008	27	38	36	23
2008-2009	13	36	56	77

Key	Good (>75%)	Fair (51-75%)	Poor (25-50%)	Very Poor (<25%)
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* - Invalid Data

Table 12: Percentage Compliance with ANZECC guidelines for water quality.
(The collection and analysis of this data forms a part of Council's response in the monitoring and addressing of threats to the waterways of the Campbelltown LGA.)

The results from the reporting period show that the ecosystem health of the Georges River is consistently fair, while the Nepean River at Menangle is generally poor. The sites at Minto and Raby, which are part of the Bunbury Curran/Bow Bowing Creek system, are generally fair to poor. Given both of these are located in stormwater channels, this is a reflection of the highly urbanised catchments that they are located in.

Comparison note between reporting periods: The water quality results for both Menangle Bridge and Simmos beach in the 2003/04 reporting period indicate very poor water quality at both sites in relation to primary contact, and good and fair water quality for secondary contact at the respective locations. During the 2008/09 reporting period, Menangle Bridge can be seen to have improved from very poor to good for primary contact and Simmos beach can be seen to be fair to good for primary contact. In relation to secondary contact, both sites meet contact requirements. This improvement in water quality for both these sites is a positive indicator for environmental health at both the water testing locations.

Historical data from the Menangle Bridge sampling location suggests water quality is relatively poor in relation to primary use, indicative of human activities and associated impacts such as stormwater and urban development.

The water quality data presented in Table 12 indicates that as stormwater flows through the Bunbury Curran/Bow Bowing Creek system its quality improves by the time it reaches the Georges River.

Pollution incident response

In conjunction with the Department of Environment, Climate Change and Water (DECCW), Council continued to manage incidences of pollution spills during the reporting period. In the event of pollution incidents, an investigation was carried out, advice is provided on how to prevent pollution, and where offences detected penalties issued and /or appropriate legal action was taken.

Comparison note between reporting periods: Council, during the reporting period, formally adopted the Pollution Incident Protocol that was developed during the 2003/04 reporting period.

Telephone calls to the DECCW in relation to pollution incidents in the LGA are outlined in Table 13. These figures have been separated to identify instances where Council was the appropriate body to respond to the issue, or when DECCW has been the appropriate body to respond to the relevant incident.

Reports to DECCW Pollution Line

Year	Chemicals	Pesticides	Water	Stormwater
<i>Reports where DECCW is the nominated authority</i>				
2004-05	11	2	47	0
2005-06	3	4	46	0
2006-07	6	3	10	0
2007-08	8	2	5	0
2008-09	2	0	7	0
<i>Reports where Council is the nominated authority</i>				
2004-05	0	0	1	5
2005-06	0	1	1	11
2006-07	0	1	1	9
2007-08	0	0	2	8
2008-09	2	0	0	4

Table 13: Reports to the DECCW Pollution Line concerning incidents in the Campbelltown LGA.

Each year, Council directly receives a number of enquiries regarding stormwater pollution and water quality. The water quality and stormwater pollution enquiries received by Council over the reporting period are outlined in Table 14.

Stormwater and water quality enquiries to Council		
	Stormwater Pollution	Water Quality
2004-05	34	5
2005-06	41	3
2006-07	39	5
2007-08	27	5
2008-09	29	2

Table 14: Reports received by Council regarding stormwater and water quality

During the reporting period, the number of water quality and stormwater pollution enquiries have remained fairly consistent.

Comparison note between reporting periods: In 2003/04 Council conducted an investigation into the suitability of having a pollution boom located on the Georges River at the Glenfield Causeway, Glenfield. As a result of this investigation, Council installed a purpose built pollution boom at the causeway after receiving appropriate advice from relevant State Government agencies. This boom now traps rubbish and weedy material, preventing further down stream pollution.

On-Site Sewerage Management

Throughout the reporting period, Council continued to undertake on-site sewerage management inspections. The inspections checked systems for compliance with public environmental health standards, and for tank structural integrity. A total of 742 on-site septic systems were inspected during the reporting period, consisting of 216 aerated wastewater treatment systems and 526 septic tank and absorption trench systems. This has ensured that at least 85% of Campbelltown's on-site septic systems are structurally sound and comply with public health and environmental standards. The remaining 15% were subject to Council's waste water education and compliance programs.

The predominant types of on-site sewerage management systems that have been identified in the Campbelltown LGA are:

- septic tank and absorption trench systems
- aerated Wastewater Treatment System (AWTS) and surface spray irrigation
- pump out
- pan service systems.

Council has identified Aerated Wastewater Treatment Systems (AWTS) as being prone to experience some shortcomings. AWTS systems are mechanical septic systems, and issues that have been identified include unsafe disposal, poor maintenance (with particular regard to chlorine tablet upkeep), and overall poor consumer knowledge on how the AWTS system works.

In response to these findings, Council has prepared and distributed educational material during the last reporting period, and has continued to undertake an inspection and follow-up program relating to sewerage treatment systems.

Aquatic Weed Control

Regional Planning

Council continues to be actively engaged with the South West Sydney Regional Weeds Committee and the Hawkesbury Nepean Aquatic Weeds Task Force. Both these committees play an important role in assisting Council to plan and implement coordinated programs to manage weed species.

Comparison note between reporting periods: Council continued to implement the joint Sydney Aquatics Weed Management Plan and the Sydney Regional Ludwigia Management Plan over the reporting period, as it did during the 2003/04 reporting period. These projects involved community education and weed control and mapping activities.

Comparison note between reporting periods: An extensive mapping project for Alligator Weed and Ludwigia infestations within the LGA was commenced during the 2003/04 reporting period and was completed in 2006/07. The mapping covers 195 kilometres of waterways within the Campbelltown LGA, and has been used to assist in the identification of priority areas for weed control and help assess the effectiveness of Council's current control programs.

Control Activities

Council has undertaken extensive aquatic weed management within the LGA with highly positive results. The Campbelltown Golf Course and Georges River salvinia infestations, which infested an area approximately 1.5km in length in 2007, have not returned. This is due to Council's control and eradication program, which is supplemented by regular inspections.

Council currently has active management programs for both Alligator Weed and Ludwigia in place. Sites that have previously had Salvinia and Water Hyacinth treatments are being monitored for reinfestation. To date, these infestations have not returned after Council's control measures had been implemented.

A total of 9 high priority control sites for the aquatic weed species received 3 herbicide control treatments each year, resulting in their continued suppression and control.

3.4 Performance Indicators and Key Management Issues Relating to Our Water

Key Water Management Issues

Issues affecting water resources in Campbelltown are:

1. stormwater management
2. waste and pollution incidents
3. stream flow modification
4. on-site sewerage management
5. securing ongoing funding for stormwater management projects
6. riparian vegetation management
7. protection and preservation of aquatic biodiversity
8. aquatic weeds management
9. need to review Council's Local Catchment Management Plans to maintain it's strategic value
10. community engagement
11. the review and enhancement Council's current Recreation Water Quality Monitoring Program.



The following key actions relating to management of Campbelltown's water resources have been identified for implementation during the next reporting period:

Key Action W1: Review Council's Stormwater Management Plans (Upper Nepean and Upper Georges River) to maintain their strategic value and ensure consistency with the aims, objectives and actions of the Catchment Action Plans prepared by the Sydney Metro and Hawkesbury Nepean Catchment Management Authorities and the principles of Water Sensitive Urban Design.

Key Action W2: Pursue information on the number and capacity of rainwater tanks installed in the Campbelltown LGA a result of the Sydney Water Rainwater Tank Rebate. This is an indication of the uptake of sustainability initiatives.

Key Action W3: Review and enhance Council's current Recreational Water Quality Monitoring Program to:

1. Assess historic data and analyse any associated trends and
2. To determine if current water quality monitoring sites are strategic and yield indicative water quality data of overall stream health.

Key Action W4: Actively engage more local residents with the topics related to water quality and conservation of water resources.

Key Action W5: Ongoing management of identified aquatic weed infestations.

Key Action W6: Collect and analyse new baseline data for macro-invertebrate fauna at key water quality monitoring sites.

Table 15 Identifies key threats in relation to Our Water, and summarises the ways in which Council addressed/is addressing the identified issues.

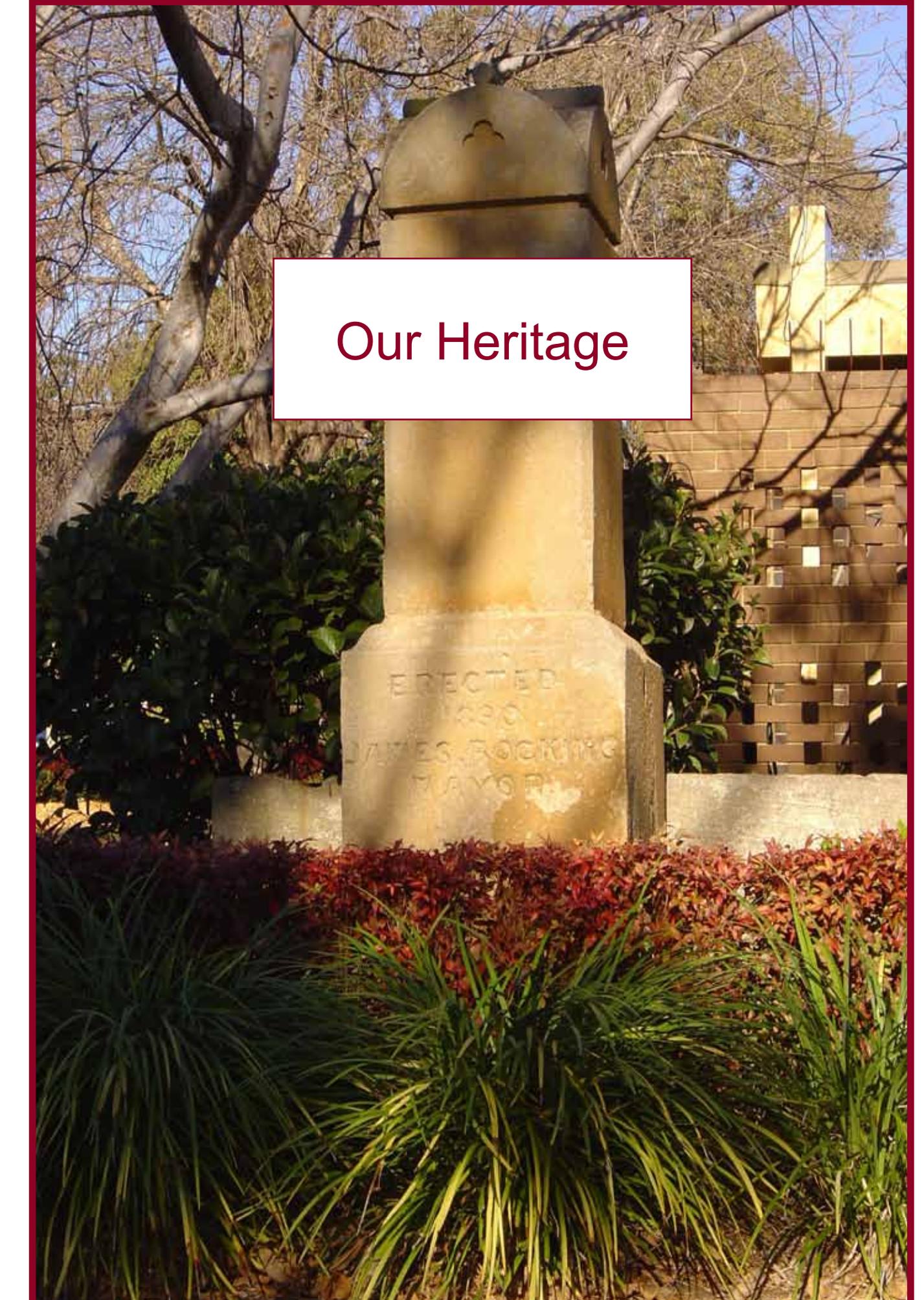
Key Performance Indicators

Table 3.5 identifies key threats in relation to Our Water, and summarises the ways in which Council has addressed/is addressing the identified issues.

Key threats to Our Water	How it is being addressed	Performance indicators	About this indicator
Stormwater and pollution	<ul style="list-style-type: none"> Community education programs Formalised Pollution Incident Response Monitoring of on-site sewage management systems Water For Life Program 	<p>1. Incidence of reported stormwater pollution events in local waterways.</p> <p>The overall number of pollution complaints directed toward Council has reduced by a small margin (Table 3.3), however there are still notable fluctuations from year to year. An exception is the incidence of calls to the DECCW pollution line about water, which has steadily decreased from 47 calls in 2004/2005 to seven calls in 2008/09.</p> <p>2. The total number of rain water tanks installed in the LGA.</p> <p>Data is sourced through the Sydney Water rainwater tank rebate scheme. At the end of the reporting period, 353 applications had been granted for the LGA. This is a significant increase over the 82 applications that were granted in the previous reporting period.</p>	<p>Stormwater pollution incidents are reported directly to Council or via the DECCW Pollution line. The number of reported incidents provides some indicative measure of the degree of success of Council's ongoing compliance and education programs, and will be indirectly supported by ongoing water quality monitoring data.</p> <p>This indicator provides an indirect measure of the level of community willingness to conserve water resources.</p>
Aquatic weeds	<ul style="list-style-type: none"> Aquatic weed management program Aquatic weed mapping and inspections Community education programs 	<p>1. Number of private property weed inspection</p> <p>1956 noxious weed private property inspections were conducted during the reporting period. (Targeting both terrestrial and aquatic weeds).</p> <p>2. Area of aquatic weed infestations treated</p> <p>A total of 195km of waterways were mapped and inspected during the reporting period. All known infestations of aquatic weeds received annual, repeat control treatments.</p>	<p>Council reports on the number of noxious weed private property inspections it undertakes each year.</p> <p>Council has resourced the control of all infestation sites during the reporting period.</p>

Key threats to Our Water	How it is being addressed	Performance indicators	About this indicator
<p>Poor water quality (and associated causes)</p>	<ul style="list-style-type: none"> • Water Quality Monitoring Program • GRCCC River Health Monitoring Project 	<p>1. Compliance with water quality in meeting primary and secondary ANZECC recreational water quality guidelines at specified monitoring locations.</p> <p>Water quality for ecosystem health is generally fair, and is fair to good for primary and secondary recreational contact. The notable exceptions are two sites within the Bunbury Curran/Bow Bowling Creek system, which is highly modified from its natural state and Menangle Bridge (Nepean River) which rates as poor for ecosystem criteria and fair on average for primary contact. Overall water quality within the LGA is fair to good, however it does reflect the influences in parts of an urbanised catchment area.</p> <p>2. Composition of macro-invertebrate fauna at water quality monitoring sites.</p> <p>This indicator will provide an indicative measure of aquatic biodiversity at selected water monitoring sites in the LGA. Monitoring is relatively inexpensive and simple to undertake, and will be undertaken by GRCCC staff.</p>	<p>This indicator provides a measure of water quality at designated locations within the catchment.</p> <p>Water quality data is collected for eight (8) sites throughout the LGA, and checked for compliance with the ANZECC guidelines for ecosystem health, primary contact recreation and secondary contact recreation. Council will undertake a thorough examination of all of its water quality monitoring data and report on this in the next reporting period.</p> <p>Currently there is no significant data available for this indicator. However Council is a partner with the GRCCC in undertaking a comprehensive study of the health of the Georges River system. This will involve examining macro-invertebrates, in collaboration with biophysical criteria. It is anticipated that Council will report on the outcomes of this study for the next reporting period.</p>

Table 15: Key threats in relation to Our Water and how they are being addressed.



Our Heritage

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JAMES ROCKING
MAYOR

4. Our Heritage

This section of the SoE discusses Campbelltown's heritage, challenges in managing heritage items and Council's programs and policies that afford protection to items of heritage significance.

4.1 State

Heritage comprises both natural and cultural elements. Natural heritage consists of ecosystems, biodiversity as well as land and water. Cultural heritage encompasses all types of places that have historic, scientific, social or spiritual significance to a group of people.

Campbelltown's heritage is a valuable resource that reflects the diversity of local communities and the life experiences of people in Campbelltown now and in the past. There is a strong legislative and policy framework to protect and conserve sites and places of cultural significance at Local, State and National levels. At a local level the Environmental Planning and Assessment Act 1979 enables Council to protect heritage items through planning controls such as Local Environmental Plans and Development Control Plans. Council is currently in the process of reviewing its planning controls to ensure that they afford a higher level of protection to Campbelltown's indigenous, natural, and built heritage. The NSW Heritage Act 1977 also provides for a significant level of protection and conservation.



Places of indigenous heritage significance are protected under the National Parks and Wildlife Act 1974, the NSW Heritage Act 1977, and the Environmental Planning and Assessment Act 1979.

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides protection for places of national heritage significance. The purpose of these registers is to inform decisions about the conservation of places of identified heritage significance.

Registered Items and Places of Cultural and Natural Heritage Value

The Australian Commonwealth, States and Territories and most local Councils keep registers of places of natural and/or cultural heritage significance. The purpose of these registers is to conserve places of identified heritage significance.

World Heritage List

World heritage sites are places that are important to and belong to everyone, regardless of where they are located. They have universal value that go beyond the value they hold for a particular country.

There are currently 17 places included on the world heritage list, which identifies heritage that is of outstanding universal value. There are currently no items on the World Heritage List that are located within the Campbelltown LGA.

Register of the National Estate

The Register of the National Estate lists natural, Indigenous and historic heritage places throughout Australia.

Following amendments to the Australian Heritage Council Act 2003, the Register of the National Estate (RNE) was suspended on 19 February 2007, which means that no new places can be added, or removed. The Register will continue as a statutory register until February 2012. This transition period is to allow for the transfer of identified places to appropriate heritage registers where necessary and to amend legislation that refers to the RNE as a statutory lists.

The RNE will be maintained after this time on a non-statutory basis as a publicly available archive.

National Heritage List

On 1 January 2004, a new national heritage system was established under the EPBC Act. This led to the introduction of the National Heritage List and the Commonwealth Heritage List.

The National Heritage List provides details of Australia's national heritage places that have exceptional natural and cultural values that contribute to Australia's national identity.

Currently within Campbelltown, there are no items listed on the National Heritage List.

Commonwealth Heritage List

The Commonwealth Heritage List comprises natural, indigenous and historic heritage places which are either entirely within a Commonwealth area or outside the Australian jurisdiction and owned or leased by the Commonwealth or a Commonwealth Authority.

The Commonwealth Heritage List identifies three Commonwealth listed items as being located within the Campbelltown LGA:

1. Cubbitch Barta National Estate Area (indigenous heritage)
2. Prefabricated Cottages Ingleburn Village, Bass Rd, Ingleburn Village, NSW, Australia
3. Ingleburn Army Camp, Campbelltown Rd, Ingleburn Village, NSW, Australia

The Prefabricated Cottages at Bass Road in Ingleburn Village, while listed as being located in Campbelltown LGA, are strictly speaking, located in the Liverpool LGA.

The Ingleburn Army Camp at Old Campbelltown Road in Ingleburn is partially located within the Campbelltown LGA. The Mont St Quentin Oval and the Mess Hall are part of the former Army Camp and are located within the Campbelltown LGA. The remaining parts of the camp are within the Liverpool LGA.

The NSW State Heritage Register

The NSW State Heritage Register contains almost 1500 items which have been recognised as having State Heritage Significance by the NSW Heritage Council.

Comparison note between reporting periods: In 2003/04 there were 21 items located within the Campbelltown LGA included on the State Heritage Register. Since 1999, no additional items located within the LGA have been added to the NSW State Heritage Register.

Campbelltown Heritage Register

Heritage items within Campbelltown are listed under Campbelltown's Local Environmental Plans (LEPs), and Interim Development Orders (IDOs). Listed items include items of local, state, and national significance.

The Campbelltown Heritage Register contains items of heritage significance and items of potential significance that are under investigation for future statutory listing.

There are currently 105 statutory (LEP) listed heritage items and one heritage conservation area (Queen Street Heritage Conservation Area which comprises 10 individual



heritage buildings) included on the Campbelltown Heritage Register.

Comparison note between reporting periods: Since 2003/04 two items have been added to Schedule 1 of Campbelltown (Urban Area) LEP 2002. These are:

- Mess Hall, Ingleburn Army Camp, Old Campbelltown Road, Edmondson Park
- Mont St Quentin Oval, including gates, Edmondson Park.

A number of items are currently being investigated for consideration for potential future listing under Campbelltown's forthcoming comprehensive Local Environmental Plan. It is the Council's position that generally, privately owned items may be added to the comprehensive LEP subject to owner's consent and the outcome of the studies/investigations being carried out by Council.

The National Trust of Australia Heritage Register

The Trust maintains a Register of landscapes, townscapes, buildings, industrial sites, cemeteries and other items or places which the Trust determines have cultural significance and are worthy of conservation. Currently, there are some 12,000 items listed on the Trust's Register. The Trust's Register is intended to perform an advisory and educational role. Notably, the listing of a place on the National Trust Register has no legal purpose.

There are currently 98 sites listed by the National Trust (NSW) within Campbelltown LGA. It should also be noted that The National Trust retains sites which have been demolished, on its register.

Register	1999/00	2003/04	2009
National Estate	30*	41	45
Commonwealth Heritage List	-	3	2
National Heritage List	-	0	0
National Trust	53	93	98
NSW State Heritage Register	16	21	21
Statutory Heritage Items listed under Campbelltown LEPs & IDOs - total number of items listed	16	103 (22**)	105 (25**)
Statutory Listed Conservation Areas	1	1	1

Table 16: Heritage Items registered in the Campbelltown LGA

Key:

* Value reported as "more than 30"

** Items owned by Campbelltown City Council on the register

4.2 Pressure

The following issues have been identified by Council as potentially impacting upon heritage items:

- urban consolidation and subdivision
- CBD redevelopment
- planning policies on the urban fringe and the cost and demand for residential land
- the identification and viability of suitable uses for heritage items
- security, maintenance and vandalism including maintenance
- dealing with development adjacent to heritage items
- costs associated with conserving heritage items
- effective and appropriate management of heritage items.

The following development activities have been identified by Council as potentially impacting on specific

heritage items:

- structural changes to the exterior or interior of a building (alterations, additions, extensions, detail, fabric, finish or appearance)
- new building (on the site of a heritage item or nearby)
- excavation
- subdivision
- moving a heritage item
- demolition, which includes damaging, defacing, destruction, pulling down or removal of heritage items in the whole or part
- changes of use
- advertising signs
- rebuilding a heritage item
- re-roofing
- replacement of other building elements such as windows and doors.

4.3 Response

Review of Campbelltown City Council's Heritage Study and Local Heritage Register

As part of the preparation of a new comprehensive Local Environmental Plan for the Campbelltown LGA, Council is undertaking a review of the existing heritage study (prepared in 1994) and its register of heritage items. This review commenced late in the current reporting period and is scheduled for completion at the end of 2009.

The review includes updating the existing study and the background information for each existing heritage item, and integrating new and additional information that has been received since the previous Heritage Study was prepared in 1994. The review also includes investigating the potential addition of a number of buildings and places that could be added to Council's Heritage Register, subject to the agreement of the owners of those buildings and places. The list of potential items to be investigated is based on recommendations from Council's Heritage Protection Sub Committee, and previous resolutions of Council to investigate the listing of particular buildings and places.



Development Controls

Campbelltown (Urban Area) Local Environmental Plan 2002 provides controls to ensure any development that has the potential to affect listed heritage items is appropriately assessed by the relevant consent authority including Council. Importantly though, the Plan provides an incentive for owners in the form of a simplified approval process for minor works, which would otherwise require a formal development application to be lodged for consideration and approval.

Other applicable controls for development of listed heritage items are provided in a number of environmental planning instruments covering the non-urban areas of Campbelltown, in addition to the Sustainable City Development Control Plan and Development Control Plan No. 83: Heritage Policy. Work is currently being undertaken to update and integrate the existing suite of development controls that are applicable across the whole of the Campbelltown LGA in the forthcoming consolidated LEP.

Local Heritage Fund

Council promotes the conservation and maintenance of privately owned heritage items in the Campbelltown LGA through the administration of its Local Heritage Fund. The Fund is available to all owners of heritage listed places for repair and maintenance works valued at up to \$1500, and funding is provided on a dollar

for dollar basis. Examples of eligible work include repairs/re-instatement of verandahs, roof cladding and guttering, and structural work, through to painting of projects. The recreation of heritage gardens can also be funded under this grant program.

In the 2008/09 financial year, Council considered and approved funding for four separate projects relating to the following heritage items:

- external lattice gates at Taminier House
- replacement of the flag pole and painting of the clock tower at St Peter's Church
- restoration of gardens and landscape works within the curtilage of Varroville Cottage
- restoration of a timber outbuilding at Denfield House.



Comparison note between reporting periods: There has been an increase in the amount of funding made available for heritage improvement/repair works from \$1000 to \$1500 per heritage item between the 2003/04 and 2008/09 reporting periods.

Heritage Week Events

Council has continued to conduct annual Heritage Week programs during the reporting period. In 2009, Council's Heritage Week program was held in conjunction with the annual National Trust Heritage Festival from 4 -19 April 2009.

Campbelltown City Council's Heritage Week program in 2009 aimed to broaden mainstream community awareness of Heritage and Conservation and included events presented by Campbelltown Arts Centre, Council's Library Services and Campbelltown's Visitor Information Centre (Quondong). The Campbelltown Arts Centre engaged two emerging filmmakers to produce two short films that explored the concept of "Our Place in Space Under the Southern Cross".

Representatives of the Campbelltown Visitor Information Centre (Quondong) presented the exploration of the military heritage of the region, visiting venues including Dredges Cottage, the Ingleburn Military Heritage Precinct and the School of Military Engineering.

The 2009 Heritage Week Medallions were awarded on the basis of a significant contribution made to one or more of the following selection areas:

1. the conservation of Campbelltown's built or natural heritage
2. increased community awareness about Campbelltown's built or natural heritage
3. greater community participation in planning the built environment
4. increased community awareness of built environment issues such as sustainability and the impact of the built environment on the natural environment.

Ingleburn Weir

The Ingleburn Weir is located on the Georges River and has been identified as having local heritage significance due to its pre-war construction as a recreation facility for the local community.

In 2007, Council prepared a Heritage Impact Statement (HIS) in accordance with the Heritage Branch of the Department of Planning Guidelines, to determine the impact of works proposed by NSW Department of Primary Industries (now incorporated into housing & Investment NSW to facilitate sustainable fish passage along this section of the Georges River. Fortunately the HIS concluded that although the weir had heritage significance at a local level, the proposed works would not impact on the identified heritage value of the structure.

The commencement of works on the weir was unfortunately delayed to after the reporting period, due

to unsuitable weather.

Promoting Aboriginal Heritage

Council continued to support and coordinate a range of activities and practices throughout the reporting period to promote Aboriginal Heritage, as outlined following.

Aboriginal Advisory Sub-Committee

The Aboriginal Advisory Sub-Committee, consisting of 10 Aboriginal community members and nominated Councillors, was established during the reporting period to provide a direct link between the Aboriginal and Torres Strait Islander Community and Council. The Sub-Committee meets regularly to discuss issues of concern to the Aboriginal and Torres Strait Islander community and to make recommendations to Council on matters of Indigenous significance including Indigenous heritage.

Comparison note between reporting periods: It was anticipated in the 2003/04 SoE Report it was stated that it was anticipated that Council would adopt draft guidelines for Aboriginal Heritage Impact Assessment in the then Draft Campbelltown (Sustainable City) Development Control Plan. Council adopted these provisions in 2007. Design requirements for new developments must now:

- take appropriate account of the significance of heritage items, heritage conservation areas, relics and their settings
- respect the City's indigenous and non-indigenous heritage resource
- promote the protection or conservation of those resources wherever possible.

Campbelltown Intergenerational Aboriginal Project

The Campbelltown Intergenerational Aboriginal Project commenced in 2006 and is conducted by the NSW Office for Ageing, Department of Ageing, Disability and Home Care in partnership with Campbelltown City Council. The Project involved Aboriginal men and women aged 45 years and over who live, work or use services in the Campbelltown LGA, capturing their life stories.

By collecting life stories the project aimed to increase awareness across generations of the valuable contributions that the City's older Aboriginal people have made to the community. The stories and experiences of the women and men collectively represent a history of a generation of NSW Aboriginal people beyond the borders of cities and towns.

The Campbelltown Intergenerational Aboriginal Project produced two companion books, *Tell me my Mother* and *My Father, My Brother*, featuring the stories of local Aboriginal women and men respectively.

Acknowledgement of Land

During the reporting period, Council resolved to have an "Acknowledgement of Land" presented at the commencement of all Council Sub Committee meetings. Consequently, a formal acknowledgement is now made to the Traditional Custodians, the Dharawal people, prior to Council's Committee and Sub Committee meetings as well as prior to ordinary full Council meetings.

NAIDOC Week

NAIDOC Week celebrations are held across Australia each year to celebrate the history, culture and achievements of Aboriginal and Torres Strait Islander peoples. As part of NAIDOC Week 2009, Council's Campbelltown Arts Centre presented a two day workshops program for young Aboriginal writers from across Australia.



The 'Young Indigenous Writer Initiative' supports young Indigenous writers to improve their skills and get their work published. Once they are accepted into the program they are mentored by an Indigenous professional writer to create a story for Federation for Aboriginal and Torres Strait Islander Languages (FATSIL's) "Voice of the Land" magazine – a collection of stories, artwork, images, poems and thoughts that celebrate the colour, depth and joy of Indigenous languages.



Aboriginal Dance Development Project

Council through the Campbelltown Arts Centre in partnership with the National Aboriginal and Islander Skills Development Association Dance College (NAISDA), presented an Aboriginal community dance development project *The Ink is Black, the Page is White* for Aboriginal dance students from secondary schools in South-west Sydney in August 2009.

The workshops provided school students with the opportunity to learn and develop new skills and new forms of both traditional and contemporary Indigenous dance practice. The school students worked with senior students from NAISDA, Australia's most acclaimed tertiary Indigenous dance training institution, and renowned Indigenous independent dance choreographer Vicki Van Hout.

Archaeological Excavations at Rosemeadow Noorumba Reserve (Lysander Avenue)

Lysander Avenue Reserve, (located near Copperfield Drive, Rosemeadow) was identified by Council as being suitable for the provision of recreation facilities for the local Rosemeadow community as well as a formalised entrance to the adjacent Noorumba Reserve. Following the identification of a number of Aboriginal artefacts as part of the consultation process associated with the installation of these facilities, Aboriginal Cultural Heritage Management Plans (ACHMPs) for both Reserves were prepared during 2007 at a cost of approximately \$10,000. The following outlines the findings of each of the ACHMPs and the response by Council to these findings:

Lysander Avenue Reserve, Following the receipt of the necessary permit from DECCW in February 2009, archaeological excavations resulted in the identification of a significant number of artefacts (nine). A key finding from the archaeological excavations included the identification that the Reserve was periodically visited for periods of short duration for the purposes of foraging and hunting by Aboriginal people.

Noorumba Reserve, The ACHMP for this reserve identified a number of items of significance and concluded there was a high potential for the existence of subsurface archaeological deposits to be present over the majority of the reserve. Details of the cultural significance of the Reserve will be provided in the next State of the Environment Report given that this project is only partially complete.

4.4 Performance Indicators and Key Management Issues Relating to Our Heritage

Key Heritage Management Issues

Issues affecting heritage items (or places of significance) in Campbelltown that were identified in the 2003/04 SoE report include:

1. urban consolidation and subdivision
2. planning policies on the urban fringe and the cost and demand for residential land
3. the identification of compatible uses for heritage items
4. security, maintenance and vandalism including maintenance and allocation of resources for Council

owned heritage items

5. dealing with development adjacent to heritage items (sympathetic and appropriate curtilages)

6. costs associated with conserving heritage items

7. effective and appropriate management of heritage items.

The following key actions relating to management of Campbelltown's Heritage resources have been identified for implementation during the next reporting period:

Key Action H1: Implementation of the review of Council's existing heritage study and its register of heritage items.

Key Action H2: Continuation of heritage grant funding for local heritage conservation works.

Key Action H3: Completion of works on the Ingleburn Weir, consistent with the Heritage Impact Statement and requirements of fish passage construction.

Key Action H4: Development of strategies in consultation with local Aboriginal groups for the management of identified culturally significant items and sites.

Key Action H5: Ongoing archaeological excavations and appropriate management of these sites at Noorumba and Lysander Avenue Reserves and in consultation with the local Indigenous communities.



Key Performance Indicators From the Last Reporting Period

The following provides a summary of the relevant indicators as identified in the 2003/04 report:

KPI Description	How it was/is being addressed
The condition of non Aboriginal sites listed in Council's local environmental planning instruments, The Register of the National Estate, the Register of the National Trust and the State Heritage Register.	Council is undertaking a comprehensive review of all listed and a number of potential heritage items within the Campbelltown LGA which is scheduled for completion in late 2009. This work has involved extensive consultation with all landowners and relevant stakeholders, and will guide the preparation of the comprehensive LEP which is scheduled for completion in 2011.
Impact on Aboriginal and non Aboriginal heritage items from any form of development.	The impact on all items from development has been managed through implementation of environmental controls prescribed by Council's planning instruments, and assessment of environmental impacts potentially arising from development, in accordance with the relevant provisions of the Environmental Planning and Assessment Act 1979. Where relevant, impacts on identified Aboriginal items have been appropriately managed in conjunction with the permit requirements of the Department of Environment Climate Change and Water.
Number of events that Council participated in which explore and promote Aboriginal and non Aboriginal heritage.	The preceding section outlines the main events relating to the promotion of Aboriginal and non-Aboriginal Heritage. These events are conducted annually.

Table 17: A summary of the relevant indicators as identified in the 2003/04 report

Table 17 summarises the ways in which Council will measure its performance with respect to preserving and enhancing heritage within the LGA.

Table 18 Summarises the revised heritage performance indicators in relation to Our Heritage, and summarises the ways in which Council addressed/is addressing the identified issues.

Key Performance Indicators 2009/2010

Key threats to Our Heritage	How it is being addressed	Performance indicators	About this indicator
Security, maintenance and vandalism of heritage items	Heritage funding	Number of heritage items assisted with funding and financial assistance outlayed by Council.	Promote heritage funding for listed items.
Items not being listed, or not complying with relevant listing criteria	Local heritage listings	Number of items in the LGA that have been reviewed, and considered for listing, in accordance with the NSW Heritage Branch guidelines.	Review Council's list of heritage items to ensure compliance with relevant listing criteria.
Urban consolidation, subdivision and new development	Heritage Impact and development assessment	Planning instruments and controls that adopt contemporary conservation controls. Heritage Protection Sub Committee considers major development applications with implications for heritage. Number of development applications and policies considered by the HPSC.	Inclusion of heritage assessment criteria in Council's planning instruments and policies and the active consideration of heritage impacts in the development assessment process.
Lack of community awareness regarding items/places of heritage value	Promotion of heritage events Educational material	The number of heritage events promoted by Council on an annual or regular basis. Distribution of heritage conservation guidelines/ brochures.	Active promotion of aboriginal and non-aboriginal heritage events by Council to the local community.
Incompatible uses for heritage items (ie. potential risk to significance)	Heritage impact assessment	Heritage Protection Sub Committee considers major development applications with implications for heritage. Number of development applications and policies considered by the HPSC.	Facilitate the involvement of the local community in heritage decision making processes by Council through the Heritage Protection Sub Committee (HPSC).

Table 18: Summary of the revised heritage performance indicators for the 2009/10 reporting period.



Our
Community

5. Our Community

This section of the SoE profiles Our Community and how the environment and community interact, pressures on Our Community and how Council has addressed these pressures .

5.1 State

Located approximately 50kms from the Sydney CBD, the Campbelltown LGA continues to emerge as a significant regional centre in Sydney's South West. The latest Census data from the ABS indicates that Campbelltown LGA was home to 142,841 residents in 2006. The latest population projections estimate that the population of Sydney will grow by an additional 1.7 million persons by 2036 (39%) and will require an approximately 768,900 additional dwellings to cater for this demand. The NSW Government's Metropolitan Strategy released in 2005, which was based on lower population and dwelling estimates than previously mentioned, indicated that South West Sydney, would require a minimum of 100,000 additional dwellings by 2031, of which the Campbelltown LGA would need to cater for approximately 25,000 additional dwellings.

As well as the impacts on the environment from an increasing population, the following socio-economic factors influence how residents interact or value the environment:

- age structure
- gender
- indigenous status
- ethnicity and language spoken at home
- dwelling type
- household size and structure
- household income
- household tenure
- level of education achieved
- employment status
- industry of employment profile
- car ownership
- public transport patronage
- overall socio-economic level.

Several of these socio-economic characteristics are discussed below, and have been benchmarked against information that has been obtained from the Australian Bureau of Statistics 2006 Census data for the Sydney Metropolitan Area (Sydney SD).

These factors, when combined and reviewed in conjunction with environmental considerations, provide a unique snapshot of the Campbelltown community in terms of its demographic, economic wellbeing, health and resource utilisation. In addition, these factors will become increasingly pertinent in how Campbelltown responds to its emerging role as a regionally important centre, with particular regard to increased density and housing choices through redevelopment and major urban renewal programs.

Population

As of 2006, Campbelltown's population was 142,841 persons and has remained relatively stable during the past 10 years as indicated by the following table. In comparison, the population of Sydney SD increased by more than 10% (see Table 19)



	1996	2001	2006	% Change in Pop'n (1996-2006)
--	------	------	------	----------------------------------

Campbelltown LGA	143,773	145,860	142,841	-0.6
Sydney Metropolitan Area	3,741,290	3,997,321	4,148,571	10.9

Table 19: Population of Campbelltown compared to Sydney metro area across the last 3 Census years.
 Source: ABS Census of Population and Housing (2006)

NB. Based on place of enumeration – figures may vary with other stated figures elsewhere in document

Comparison note between reporting periods: The 2003/04 SoE Report predicted that population increases were expected to be modest following new urban release projects in the LGA in 2004/05. In fact, as at 2006, there were 143,077 persons residing in Campbelltown LGA which represented an overall decrease of 2750 residents since 2001. This decline can largely be attributed to net outward migration, and large scale urban renewal programs undertaken by Housing NSW including the “One Minto” project.

Indigenous Status

As of 2006, there were 3831 Aboriginal and/or Torres Strait Islanders residing in Campbelltown. The Campbelltown LGA is home to the fifth largest urban Indigenous population in the Sydney region. The median age of Indigenous residents in Campbelltown is 17 years.

Aboriginal people in Campbelltown continue to access a range of natural environments in order to maintain a form of cultural and spiritual connection. Thus, maintaining a natural environment is of the utmost importance to Aboriginal people. In 2002, over 350 sites, places and relics in the Campbelltown area were documented as being of Aboriginal significance. However, difficulties in managing these places or relics include vandalism, development, weathering and insufficient maintenance.

Age Profile of Residents

With regard to personal behaviour, age is an important determinate of persons undertaking pro-environment activities. A survey conducted by DECC in 2006 (*Who Cares about the Environment?*) found that young persons are less likely when compared with older residents to undertake pro-environment activities such as reduce water and energy consumption, avoid plastic bags to carry shopping, or compost food and/or garden refuse. However, younger residents are more likely to recognise the association between recycling and water, energy and fuel saving. Notwithstanding recent consultations as part of Council’s preparation of its Social Plan have revealed that young persons in Campbelltown value the environment very highly which suggests that young persons may perceive the environment and environmental impacts differently when compared with older residents.



Figure 8 below illustrates the age profile of the Campbelltown community. In general, the Campbelltown LGA has a considerably younger age profile when compared to metropolitan Sydney with approximately 32% of the total population under 20 years of age compared with 26% for metropolitan Sydney.

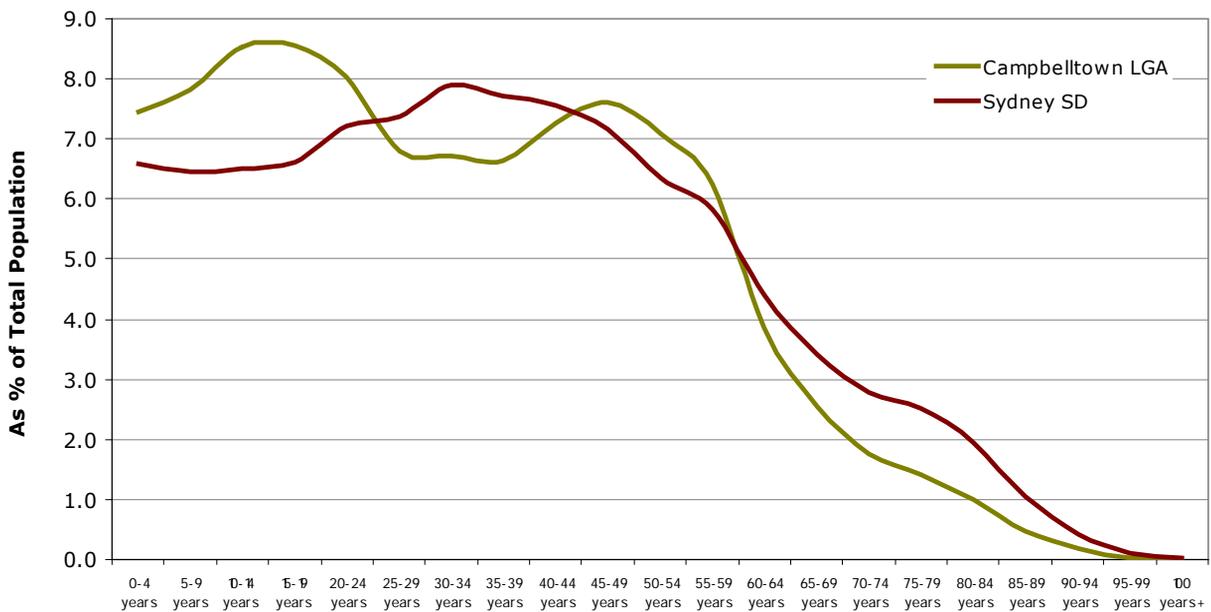


Figure 8: Campbelltown LGA age profile compared with Sydney SD. Source: ABS Census of Population and Housing (2006)

Despite this younger age profile, the number of residents aged 65 years and older increased by 16% between 2001 and 2006 indicating an ageing population. By 2031, it is estimated that Campbelltown's 55+ years population will almost double.

Language Spoken at Home

As of 2006, there were approximately 31,500 residents in the Campbelltown LGA who spoke another language at home representing approximately 24% of the total Campbelltown resident population. In contrast 31% of residents across the Sydney SD speak another language at home. Despite this lower rate, the proportion of persons speaking another language at home has been gradually increasing since 1996 as shown in the diagram below.

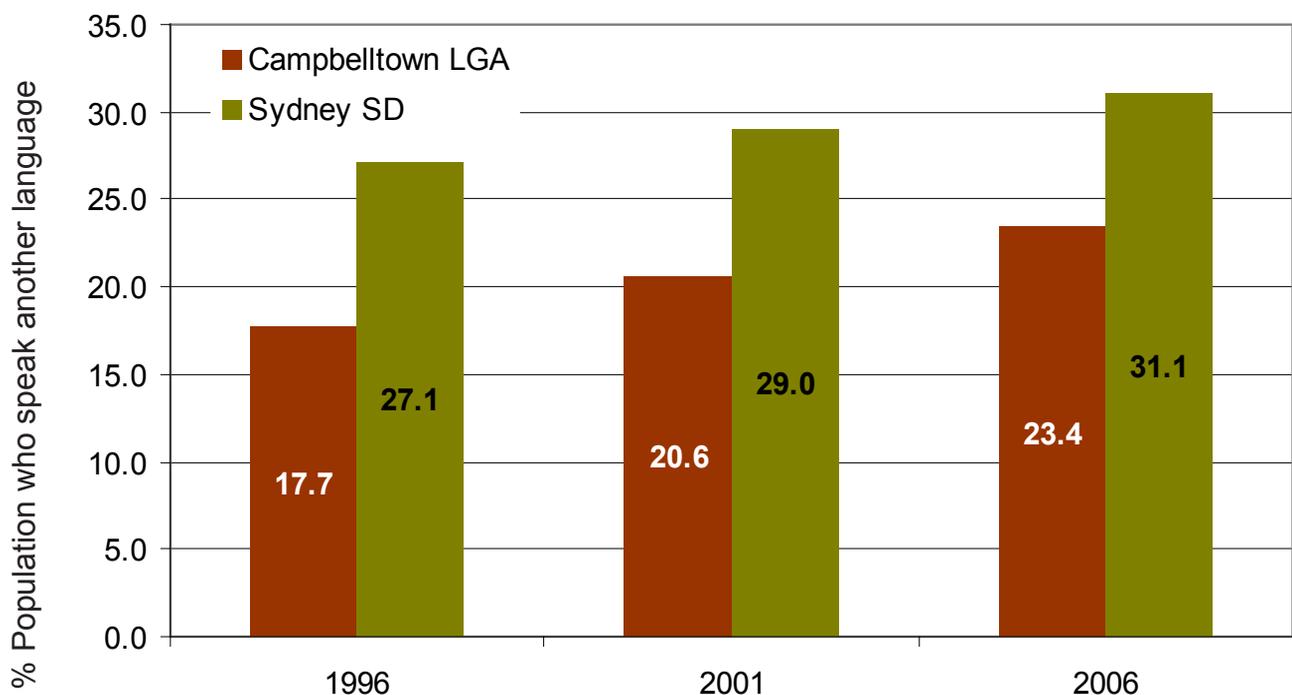


Figure 9: % of population who speak another language comparison between Campbelltown LGA and Sydney SD by census year. Source: ABS Census of Population and Housing (2006)

The top 20 languages spoken at home in the Campbelltown LGA are tabled below.

20 languages spoken at home	
Arabic (includes lebanese)	3,872
Spanish	2,482
Samoan	2,433
Hindi	2,343
Tagalog (excludes Filipino)	1,612
Bengali	1,398
Filipino (excludes Tagalog)	1,088
Lao	1,000
Cantonese	965
Italian	892
Greek	878
Vietnamese	859
Mandarin	727
Croatian	688
Polish	662
Tongan	530
Urdu	529
French	519
Khmer	407
Indonesian	362

Table 19: The top 20 languages spoken at home in the Campbelltown LGA

Comparison note between reporting periods: There has been a steady increase in the proportion of Campbelltown residents who speak another language at home, rising from 17.7% in 1996, to 20.6% in 2001 and 23.4% in 2006.

Household Tenure

As at the 2006 census, the majority of households were either in the process of purchasing (43%) or owning their own home outright (24%) as shown in Figure 10. The outright ownership as a tenure across the Sydney metropolitan area is 36% higher than for the Campbelltown LGA.

A third (32.2%) of all households in the Campbelltown LGA are renting which is a similar percentage to that for the Sydney metropolitan area. The Campbelltown LGA has a significantly higher rate of public housing compared to the Sydney metropolitan area. In total, public housing accounts for approximately 13% of all households in Campbelltown LGA compared to 8.5% (1 in 12) for metropolitan Sydney.



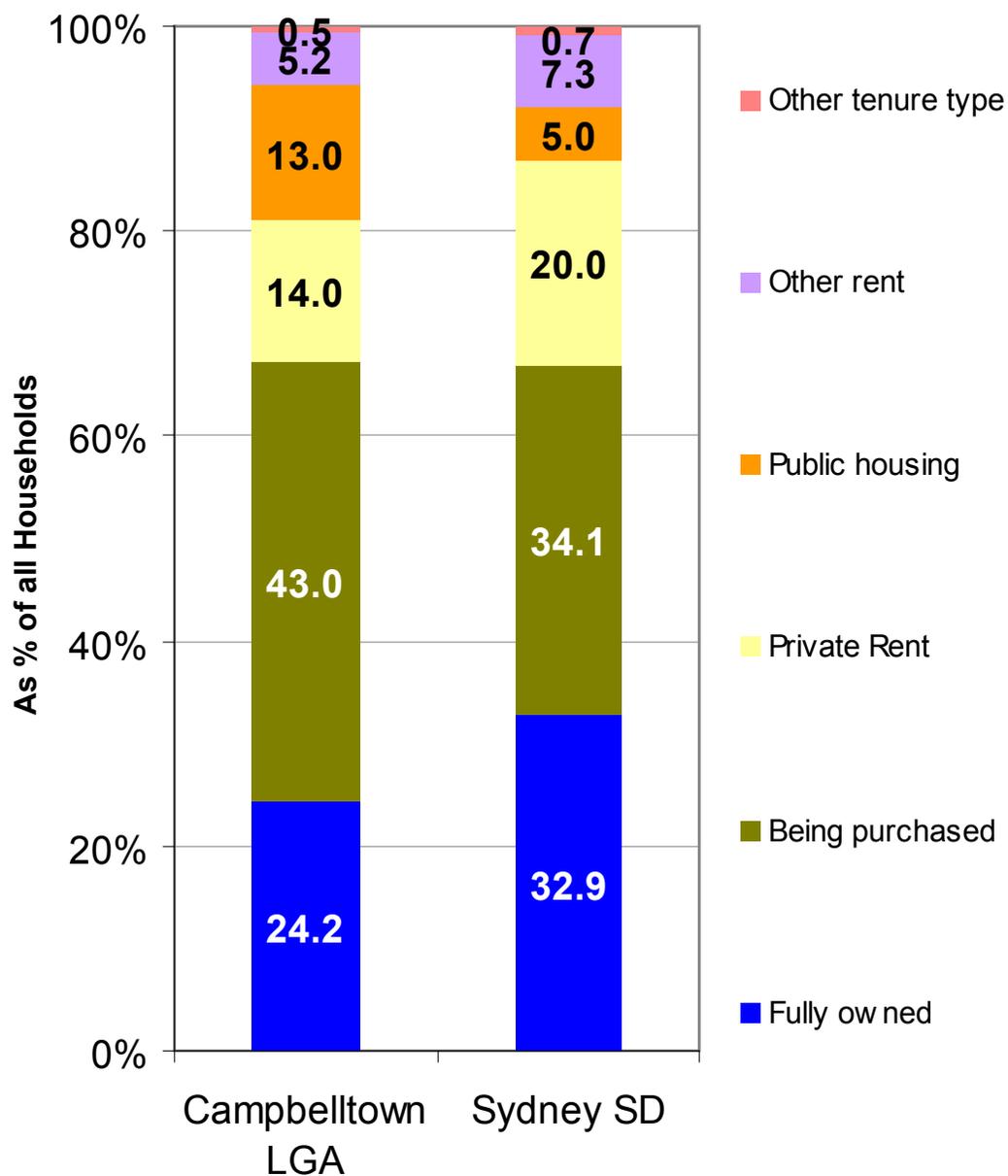


Figure 10: Comparison of household choice and breakdown of housing type between Campbelltown LGA and Sydney SD. Source: ABS Census of Population and Housing (2006)

Household Income

As of 2006, the median household income in the Campbelltown LGA was \$1066 per week and is slightly lower when compared with the Sydney SD (\$1154). Since 2001, the median household income in Campbelltown LGA has increased by \$29 (CPI adjusted) per week or 2%. However, there are a large number of suburbs within the Campbelltown area that still have a significantly lower median weekly household income (when compared to the Sydney SD) including Claymore (\$474), Airds (\$503), Minto (\$883) and Macquarie Fields (\$859).

Dwelling Type

As of 2006, traditional detached housing continued to dominate the housing profile in Campbelltown, accounting for 81% of all dwellings. This is illustrated in Figure 11.

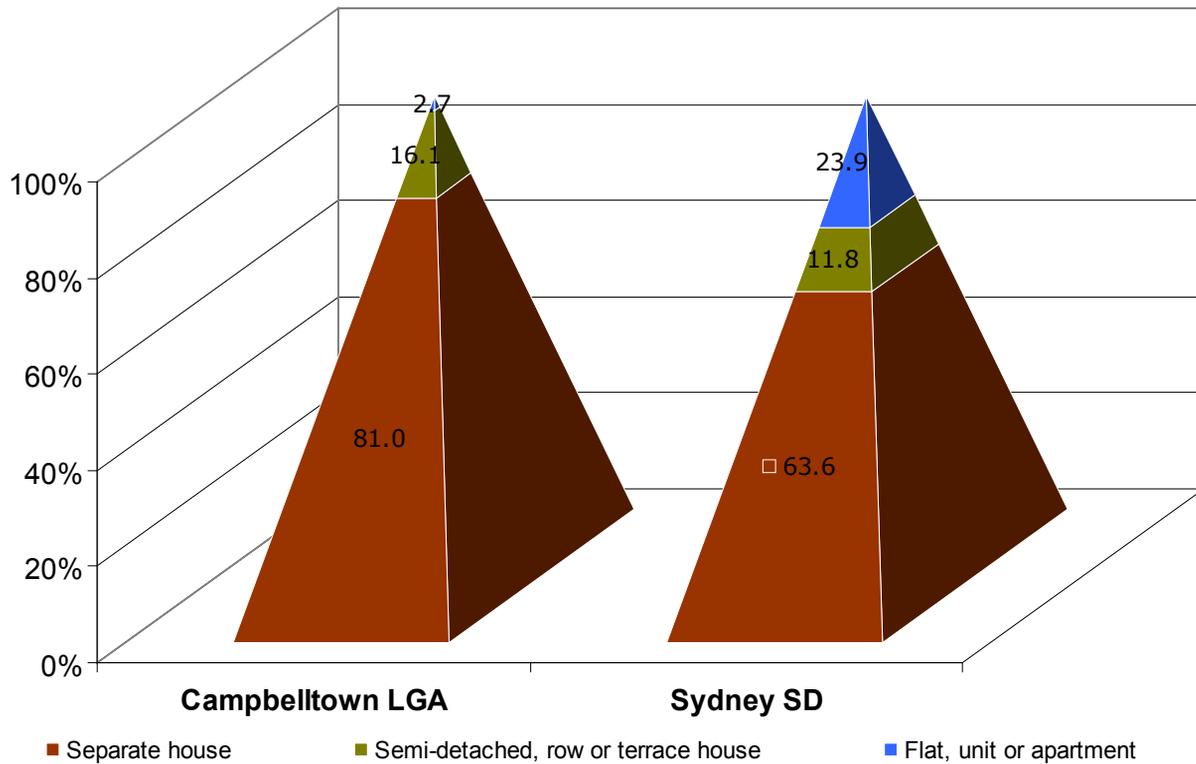


Figure 11: % dwelling comparison between Campbelltown LGA and Sydney SD.

Household Size and Structure

The mean household size of Campbelltown is currently 3.0 persons per dwelling which is higher when compared with Sydney SD (2.7). Despite this higher (mean) household size, the average number of persons has been steadily decreasing from 3.4 in 1991 as the following graph illustrates.

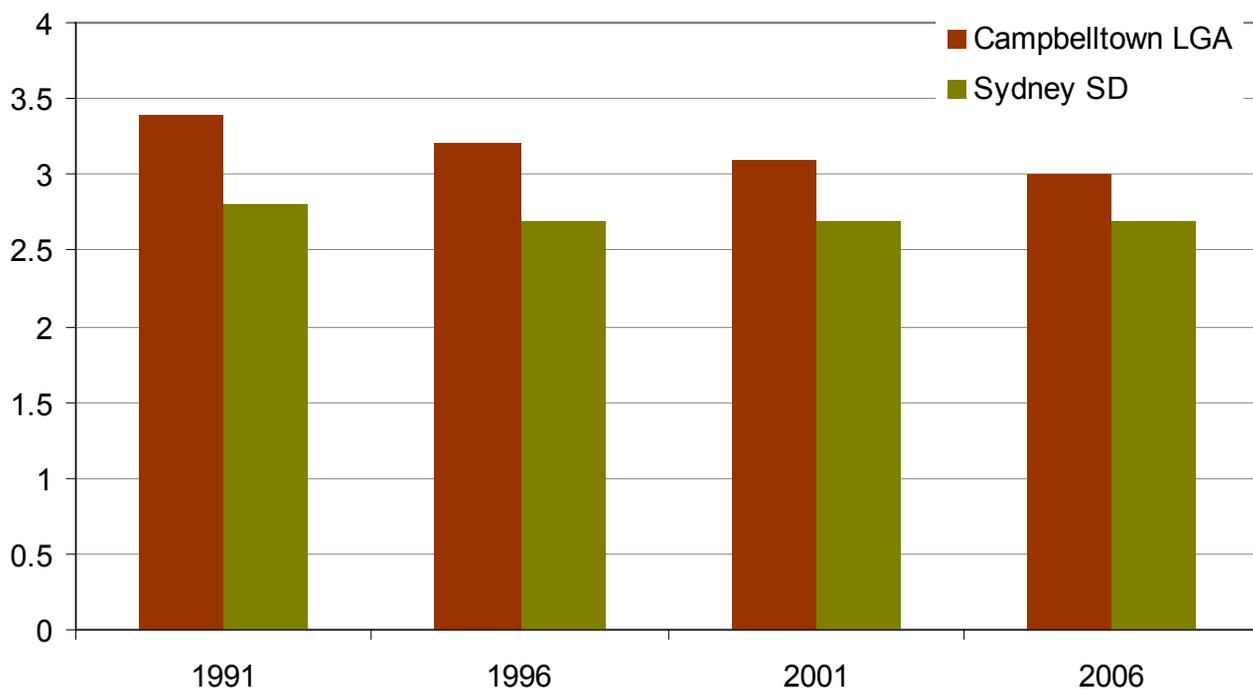


Figure 12: Mean household size comparison between the Campbelltown LGA and Sydney SD by census year.

Source: ABS Census of Population and Housing 2001 and 2006

Car Ownership and Public Transport Patronage

The number of motor vehicles per dwelling in the Campbelltown LGA is shown in Figure 13 and is compared with metropolitan Sydney. Overall, the Campbelltown LGA has a higher proportion of dwellings with two or more motor vehicles when compared with metropolitan Sydney. This slightly higher proportion of households with a car indicates a higher propensity to drive rather than to use public transport. This may be partly attributable to the diffused nature of employment in the greater Sydney region and the level of access to public transport by Campbelltown residents.

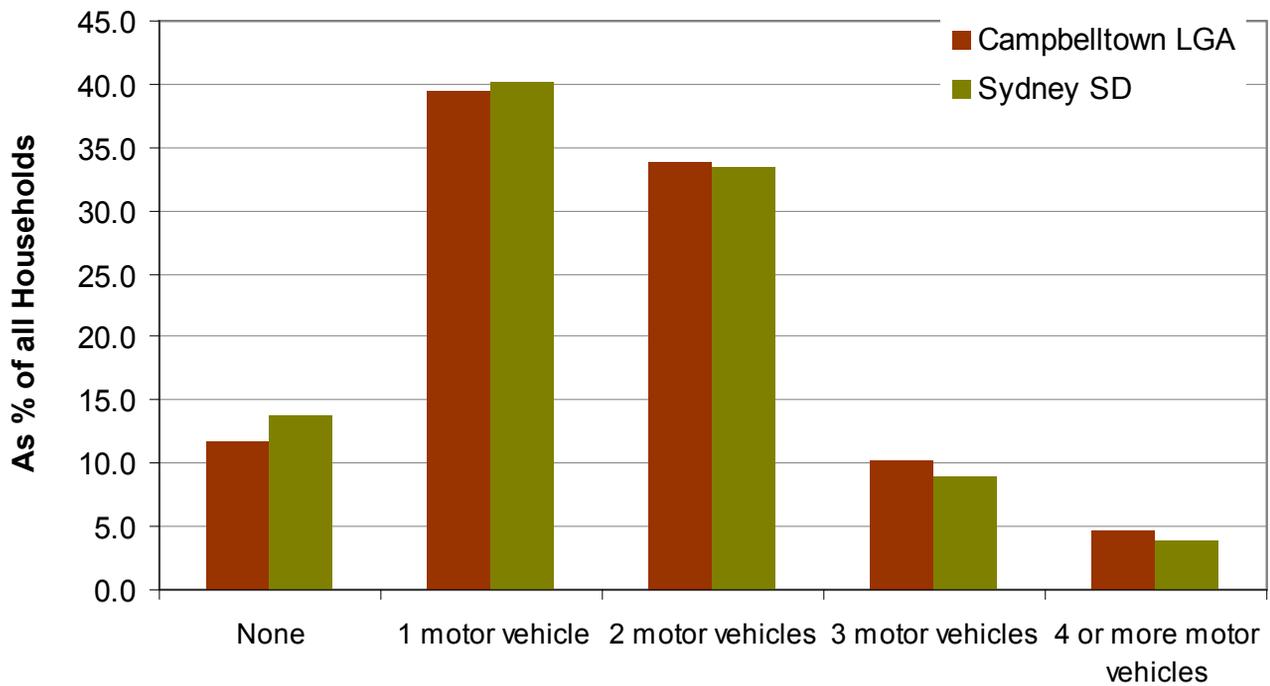


Figure 13: No. of Motor Vehicles by Dwellings comparison between Campbelltown LGA and Sydney SD

Source: ABS Census of Population and Housing (2006)

With respect to public transport patronage, Campbelltown LGA has a lower proportion of persons who use public transport to get to work. Approximately 15% of workers living in Campbelltown catch public transport compared with 18% across Sydney. In contrast, 75% of workers in the Campbelltown LGA drive to work compared to 70% across the Sydney SD. This is shown in Figure 14.



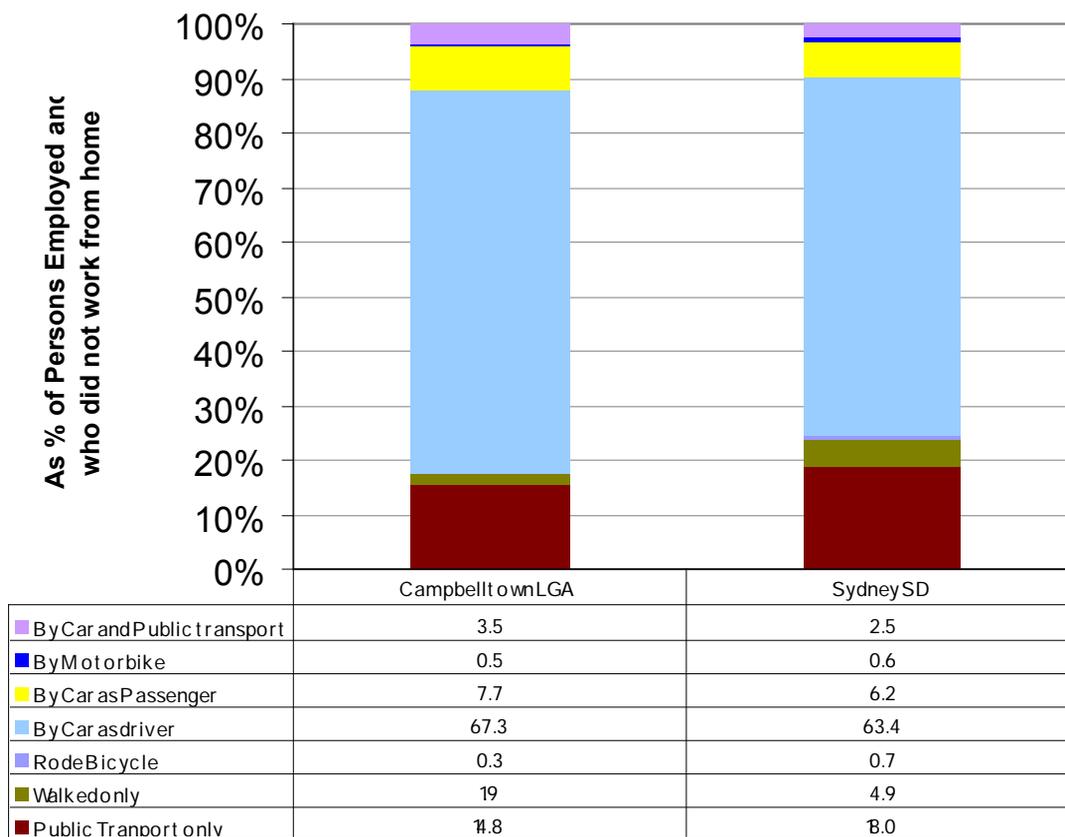


Figure 14 Method of travel to work comparison between Campbelltown LGA and Sydney SD 2006

Source: ABS Census of Population and Housing (2006)

Industry of Employment

As of 2006, there were approximately 38,000 persons employed in the Campbelltown LGA, representing an increase of 2207 employees or 6% since 2001.

Campbelltown’s economic base is wide and varied. Figure 15 illustrates the proportion of persons employed in Campbelltown LGA by Industry of Employment. As shown the Campbelltown LGA has a very high proportion of persons employed in manufacturing which accounts for 18% of all workers. Also, the proportion of persons employed in the retailing sector was also considerably higher than for Sydney SD.

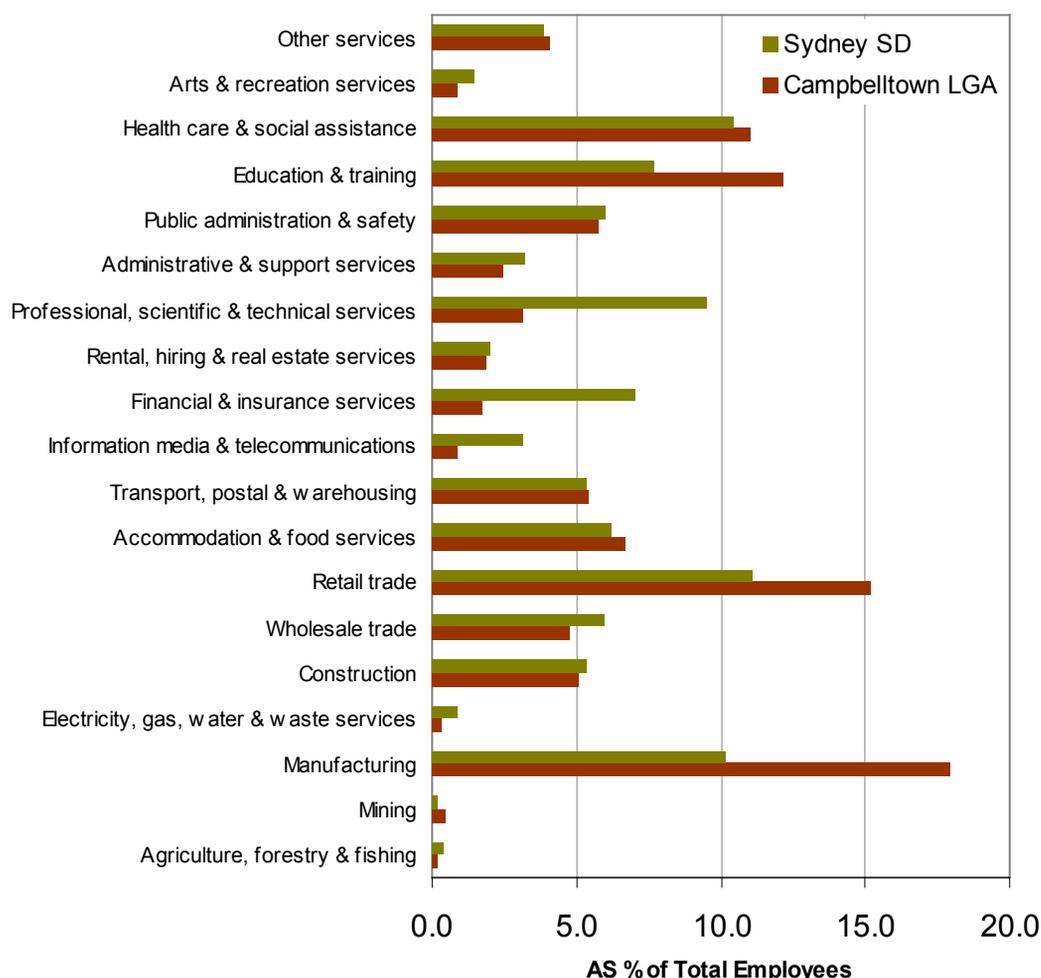


Figure 15 Industry of Employment comparison between Campbelltown LGA and Sydney SD 2006
Source: ABS Census of Population and Housing (2006)

The following table details the location quotient (LQ) of Campbelltown's Industry base (from Figure 15) compared with Sydney SD. An LQ greater than >1 indicates an industry of specialisation. Also shown is the actual number of jobs by industry in Campbelltown LGA.

Industry	Location Quotient	Number of Jobs
Mining	2.1	166
Manufacturing	1.8	6,765
Education & training	1.6	4,580
Retail trade	1.4	5,715
Accommodation & food services	1.1	2,528
Other services	1.1	1,541
Health care & social assistance	1.1	4,161
Transport, postal & warehousing	1.0	2,041
Public administration & safety	1.0	2,169
Construction	0.9	1,905
Rental, hiring & real estate services	0.9	708
Wholesale trade	0.8	1,799
Administrative & support services	0.8	921
Arts & recreation services	0.6	325
Agriculture, forestry & fishing	0.5	73
Electricity, gas, water & waste services	0.4	132
Professional, scientific & technical services	0.3	1,187
Information media & telecommunications	0.3	335
Financial & insurance services	0.2	646

Table 21: Location quotient and number of jobs by industry group for the Campbelltown LGA

Again, as varied as the economic base of Campbelltown is, so is the environmental impact of each industry. For example, manufacturing tends to have greater resource inputs in comparison with information media and telecommunications. Understanding the differing environmental impacts of each industry will continue to evolve and Council will endeavour to minimise impacts through development and compliance actions.

5.2 Pressure

Comparison note between reporting periods: The 2003/04 SoE Report identified that Council aimed to develop a clear planning vision for the Campbelltown LGA in 2025 and to ensure the future needs and expectations of the community could be met. In response, Council prepared the Campbelltown City Council Social Plan (2004-09) and the Campbelltown 2025 Looking Forward document, both adopted by Council in 2004.

The following key issues have been recognised as being pertinent to the Campbelltown LGA.

A Growing Region

By 2031, the Campbelltown population is expected to grow by approximately 44,000 persons whilst the greater Macarthur region is expected to increase by a further 140,000 residents. This growing population will require additional dwellings, education and employment opportunities, and increased funding for both hard (roads, bridges, railway stations etc) and soft (child care centres, libraries, open space etc) infrastructure by all levels of government. Accommodating this growth in a sustainable fashion will require Council, the State and Federal governments as well as the community to invest heavily to meet the projected population. The demand on infrastructure in Campbelltown will impact heavily on Council's finances and will likely require investigation into innovative measures for capturing financing in order to fund these significant infrastructure upgrades.



An Ageing Population

An ageing population in Campbelltown LGA and the broader Sydney region has the potential to increase demand for services and facilities, in particular health services. An ageing population will of course also have positive benefits including:

- increased spending in the short term after retirement, but this will tend to decline with superannuation withdrawals
- increased employment in the health sector
- increased volunteering opportunities by which current Streamcare and similar environmental programs could benefit.

Increasing Ethnic Diversity

The entire community have an interest in the Campbelltown LGA environment; however messages about the environment may not be heard due to cultural and language barriers. 24% of Campbelltown residents do not speak English at home as their first language, and so environmental campaigns and initiatives produced in English may go unheard. This emphasises the need for environment education programs to target specific socio-linguistic groups within the Campbelltown LGA.

Access to Affordable Housing

A recent Council study, *Analysis of Housing Stress in Campbelltown* (undertaken for Council by consultants id.), indicates Campbelltown LGA displays slightly elevated levels of housing stress in comparison to the greater Sydney region, with approximately 6300 households experiencing some form of housing stress. Housing Stress is defined as the number of low income households (below 40th percentile of all household incomes) who pay in excess of 30% of their gross household income on rent or mortgage repayments.

In addition, the most recent data released by Housing NSW indicates that the median weekly rent for a three bedroom dwelling in the Campbelltown LGA has increased by 25% since June 2007 in comparison to 22% for the greater Sydney region.

Attracting Skilled Workers

As Campbelltown CBD continues to grow as a significant regional centre, there will be increased demand for higher order employment and skilled workers. Campbelltown will need to grow a variety of training and education opportunities to meet the requirement of these sectors and provide individuals with necessary skills and training. In order to attract these higher skilled workers, Campbelltown will require additional and suitable housing, better transport linkages, services and frequency, as well improved cultural and recreation facilities.

Of note is the approval by Council in the reporting period, of a sizeable factory outlet retail centre at Campbelltown with more than 20,000m² of retail floor space. The centre is scheduled to open in December 2009.

Traffic and Parking Congestion

Strong population growth in the Macarthur region and to some extent the Campbelltown LGA is increasing traffic levels along Campbelltown's arterial road network and major thoroughfares. Major economic infrastructure in the Campbelltown CBD including the UWS, Campbelltown public and private hospitals, Macarthur Square and industrial areas are major employment generators and which, in turn, give rise to increased numbers of vehicular trips. Congestion on major roads such as the F5 have major detrimental social impacts including reduced recreation time and opportunities (at both individual and households level), as well as potential environmental concerns relating to increasing air and noise pollution.



5.3 Response

In light of these socio-economic factors and the emerging implications for Campbelltown LGA as a growing and significant regional centre, Council is updating its Planning policies, upgrading community services and facilities and other infrastructure and the promotion and development of environmental education campaigns. Major initiatives are listed below:

Planning Policies

Campbelltown Social Plan 2010-2012

Council is currently undertaking a review of the Campbelltown Social Plan 2004-2009 which is expected to be completed by April 2010. The review will update the Plan with recent demographic analysis, economic, crime and health statistics, recent changes to public policy, and acknowledge an increased

awareness and importance of social issues affecting Campbelltown.

The 2010-2012 Plan will build on successful actions undertaken during the previous five years, including improved coordination between local service providers, improvements to amenity including tree planting and other beautification projects, delivery of an extended bike path network, and leadership on issues important to Campbelltown such as public transport and congestion on the M5.

Relevant findings arising from community consultations undertaken as part of the review of the Social Plan have thus far indicated that:

- residents enjoy the country atmosphere of the Campbelltown area and surrounds
- residents enjoy Council's public parks
- more parking and disabled parking is required near railway stations which will help to encourage public transport patronage
- increased street plantings and other beautification projects are supported
- maintain and restore heritage significant items
- youth value the environment highly
- protect items of aboriginal cultural heritage
- there are some concerns regarding air pollution in the Campbelltown region.

The strategies arising from the 2004-2009 Social Plan were subsequently developed in response to the identified key issues and strategic challenges. The actions resulting from the Social Plan represent Council's focus and commitment in addressing the quality of life needs of the City's residents including the development of cultural services and facilities. By having access to cultural facilities and associated services, the community actively engaged with and developed culture.



Campbelltown 2025

The Campbelltown 2025 Looking Forward document is a statement of broad town planning intent for the longer term future of the Campbelltown LGA that:

- responds to what Council understands people want the City of Campbelltown to look feel and function like
- recognises likely future government policies and social and economic trends
- provides for the foundations for a new town plan, that will help achieve that future.

Campbelltown Cultural Plan

Comparison note between reporting periods: The 2003/04 SoE Report noted that Council was about to commence the preparation of a comprehensive Cultural Plan. In 2004 Council released its Cultural Plan 2004-2008.

The Cultural Plan was developed to set a strategic direction for the development and delivery of cultural services across the City over a five-year period. The Plan is directed by seven key outcomes:

1. the community will have access to cultural programs that develop community well being, local identity and a sense of place
2. the City's cultural, social, natural and historical assets will be identified, conserved and enhanced
3. community needs will be addressed through developing existing and new cultural facilities and programs
4. the economic, social and environmental benefits of developing a culturally engaged community will be demonstrated
5. sustainable and resource efficient cultural programs will be developed and delivered

6. cultural development will be integrated into Council's management and strategic planning processes
7. employment and professional development opportunities for local artists and cultural industry workers will be developed.

By developing and providing cultural facilities and services, Campbelltown City Council is enhancing community life by leading and responding to the cultural needs and issues of its residents.

Campbelltown Crime Prevention Plan

Comparison note between reporting periods: In 2003/04 Council took a proactive role in coordinating efforts to reduce crime in the community, including programs to reduce the incidence of graffiti. Council then established two Community Safety Committees which investigated crime in cooperation with the Police Service and community representatives. During the 2005/06 reporting period, Council adopted its Crime Prevention Plan and appointed a permanent full time Community Safety Officer to implement the plan and its crime prevention strategies. In 2008, Council developed mobile graffiti response units which patrol the Campbelltown LGA and remove graffiti on a priority basis.

Environmental Awareness Initiatives

Programs to increase environmental awareness among the general community

Environmental Education Officer

Council recognises the integral role of education in achieving long lasting change in environmental attitudes and behaviours by both business and residents. To assist in this process, an Environmental Education Officer commenced employment with Council in 2006 and is responsible for planning, implementing and reviewing a broad range of environmental education activities and resources on a broad range of environmental topics.

A key outcome of the Environmental Education Officer's role is the preparation of an Environmental Education Strategy that will guide Council's environmental initiatives in an holistic and strategic manner, and will draw on Federal and State guidelines for environmental education, as well environmental reporting undertaken by Council such as the State of the Environment reporting.

Macarthur Sustainable Schools Network: During the reporting period, Council continued to be an active participant and supporter of the Macarthur Sustainable Schools Network. This network comprises a group of schools, Department of Education and Training environmental education centres and Councils from across the Macarthur region involved in promoting sustainability initiatives within local schools. The network meets quarterly and also has an established email network to distribute information to the school participants.



Macarthur Sustainable Schools Expo: Council also continued to be a supporter of the Macarthur Sustainable Schools Expo which is an initiative undertaken by a committee of representatives from the Macarthur Sustainable Schools Network, and features a day of hands-on workshops for local students on a range of sustainability topics. A key feature of the Expo, which attracts up to 240 students each year, is that it features 'peer to peer' learning with workshops presented by fellow students rather than a teacher. During the reporting period, an 'Expo kit' was developed for use by other schools and Councils so that they can develop their own environmental expos.

Promotion of environmental matters at Council community events: Council had a high visibility presence

at a number of annual community events over the reporting period where Council staff presented a wide variety of resources on local environmental topics, and answered enquiries from local community members. A key community event is the annual Riverfest held at Koshigaya Park, Campbelltown, to coincide with World Environment Day. The aim of this growing festival is to celebrate and promote a sustainable community for Campbelltown, and features a number of stalls and workshops which reflect Campbelltown's diverse community and environmental interests. Other events attended include "Ingleburn Alive", "Festival of Fisher's Ghost Street Fair", and the Campbelltown Youth Markets.

Council promoted two new environmental competitions during the reporting period:

1. Macarthur Nature Photography Competition-This competition encouraged entrants to share their experiences of the local environment through their photography and attracts approximately 120 entries each year. The initiative has now become an annual event held in association with Camden and Wollondilly Councils.
2. Threatened Species Art Competition-Council conducted this competition, which was designed to raise awareness of local threatened species, as part of Threatened Species day activities.

One of the key methods for ensuring the ongoing preservation of features of the natural environment is to increase the knowledge and awareness of the community and to foster an appreciation of the environment. In this regard, a performance indicator of this SoE designed to monitor the activities of Council in achieving this, refers to the number of community events held per reporting period. The following high profile community events (and the number of times they were held) took place during the reporting period:

- Riverfest (4)
- Clean Up Australia Day (4)-various sites
- Macarthur Centre for Sustainable Living Spring Fair (4)
- Chemical Clutter Clean Out (4)
- Australia Day (4)-2 sites
- Ingleburn Alive Festival (4)
- Festival of Fisher's Ghost (4)
- NAIDOC Week (4)
- National Tree Day (4)
- Sustainability Blitz Community Workshops (20)
- Campbelltown City Garden Competition (4)
- Threatened Species Art Competition (3)
- Macarthur Nature Photography Competition (3)
- Waterwise Workshops (7)
- Heritage Festival (4)
- Youth Week (4)
- Environmental Audits (44)
- Specific and general community consultation
- Streamcare (48) - 2 sites.



Overcoming Language Barriers

The Macarthur Diversity Service Inc (MDSI), a Campbelltown based organisation providing innovative programs and services for migrants, conducts environmental education sessions. These sessions target non-English speaking groups and deliver environmental messages and education on issues such as energy consumption, water savings, recycling, green gardening and sustainability.

In addition, Council is investigating opportunities for further integration of current environmental awareness initiatives into Council's main environmental community festival, Riverfest, and other activities.

Another opportunity for Council is to garner environmental knowledge through linkages into community based initiatives facilitated at the grass roots level. For example, as part of Housing NSW's urban

regeneration project in Claymore there is a community garden for community residents to grow flowers, herbs and vegetables in a sustainable manner. One community member involved in this initiative has established more than 10 no-dig garden patches in residential backyards in Claymore.

Streamcare

A key initiative by Council in the reporting period has been the establishment of a 'Stream care Volunteer Group' at Noorumba Reserve, Rosemeadow (in July 2005). This group is supervised by a co ordinator and undertakes a range of activities including the removal of weeds and water quality testing.

Table indicates the hours undertaken by the Community Stream care Group at Noorumba Reserve.

Years	Total hours worked by volunteers
2005/06	290
2006/07	170
2007/08	300
2008/09	190

Figure 16: Streamcare hours worked.

Key activities undertaken have included:

- water quality monitoring
- native and exotic vegetation identification
- wetland assessment
- weed removal and bush regeneration.

In addition to the Noorumba Reserve group, Council has also committed to establishing new groups at St Helens Park, Redfern Creek and Kentlyn which have been chosen for their high ecological significance. It is anticipated that these groups will be established in early 2010, and their progress will be further reported in subsequent State of the Environment Reports.



Recreation and Cultural Facilities

In order to provide Campbelltown residents with high quality and sustainable facilities, Council has undertaken significant upgrades to Council owned properties and reserves during the reporting period. Major upgrades or initiatives include:

- a new \$10 million Campbelltown Arts Centre that officially opened on 30 June 2005. The Campbelltown Arts Centre is a multidisciplinary arts space that engages with, and reflects the diverse communities of Campbelltown and South-West Sydney.
- a new neighbourhood community centre at Blair Athol. The community centre will be supplemented by a playground at John Kidd Reserve. These projects are both located in a semi-bushland setting and required significant environmental investigation and consultation with the Indigenous community. Environmental initiatives incorporated as part of the design include:
 - Installation of a solar hot water system
 - a 7,000L bladder located beneath the centre with water harvested used in toilets and landscape irrigation
 - the building is constructed of 87% recyclable materials.
- eight new cycleways were created as well as upgrades and development of new walking trails during the reporting period.
- Council committed to, and began the construction of recreation facilities at Lysander Avenue Reserve. These facilities will formalise the entrance to the adjacent Noorumba Reserve (Streamcare).

Key aspects of the plan include an elevated play space in the shape of a threatened species the Cumberland Land Snail.

Other upgrades to community facilities in Campbelltown LGA undertaken during the following period include the following:

Sportsground

- Ambarvale Sportsgrounds
- Bensley Sportsground
- Blinman Park
- Bradbury Park
- Braeside Reserve
- Clark Reserve
- Eschol Park
- Fields Road Reserve / Monarch Oval
- Fullwood Reserve amenities
- Gilchrist Oval
- Hazlett Park
- Jackson Park
- Kayess Park
- Kennett Park
- Kooringa Reserve
- Macquarie Fields Park / Fourth Avenue Park
- Memorial Oval
- Milton Park
- Oswald Reserve
- Raby Sports Complex amenities
- Riley Park Playing Fields
- Rosemeadow Playing Fields
- Sarah Redfern and upgrade to playing surface, disabled toilets
- Seddon Park
- St Helens Park
- Stromferry Reserve fields and cricket net
- Thomas Acres Reserve
- Victoria Park
- Waminda Oval
- Woodlands Road Baseball Complex

Improvements made

- New awning
- New awning and barbeque area
- Upgrade to car park
- New storage and disabled toilet facility
- New Play area and landscaping
- Upgrade to playing surface
- Upgrade to playing surface
- Upgrade to playing surface
- New change rooms and
- Upgrade to floodlighting
- New all seasons cricket pitch
- Extension to amenities building
- Building refurbishment
- Improvement to fencing
- Upgrade to floodlighting
- New change rooms and storage
- New cricket net facility
- Upgrade to floodlighting, canteen and dugouts
- New storage facility
- New storage facility and upgraded
- New awning
- New storage facility
- Canteen and amenities extension
- New cricket net facility
- New spectator area
- Reconfiguration of rugby league
- Upgrade to floodlighting
- Floodlighting upgrade
- Fencing upgrade
- New amenities building.



Public Transport Options

The main objectives of the Integrated Transport Strategy are:

- to provide improved transport options for residents of Camden and Campbelltown
- to reduce the dependence on the private motor vehicle
- to encourage residents of the region to make more sustainable transport choices.

Council continued the implementation of the Integrated Transport Strategy with significant on-ground

works being carried out including:

- intersection improvement works
- government agency engagement for improvement of public transport options
- production of the F5 Gridlock DVD for lobbying RTA, resulting in the widening of the F5 freeway
- creation of new cycleways and walking tracks throughout the Campbelltown LGA.



Comparison note between reporting periods: At the time of the 2003/04 SoE Report, Council was instigating a public transport forum to bring together major stakeholders in public transport in the local area, to work towards a Public Transport Strategy for Campbelltown. The result of this was the development of the Integrated Transport Strategy.

Affordable Housing Strategy

Council is currently in the process of developing an Affordable Housing Strategy, due to be completed by mid 2010, which will identify the current supply of affordable housing in Campbelltown and project future need. The results and recommendations in the strategy will provide input into Council's forthcoming Comprehensive Local Environmental Plan and identify the need for specialised accommodation including group homes, respite care, boarding houses, and high care nursing homes.

Minto Urban Renewal Project

The Minto Renewal Project is the revitalisation and redevelopment of an existing public housing estate. The key project partners for the project are Department of Housing and Campbelltown City Council, with Landcom acting as Development Manager and funder for development works. The project will see the demolition of some 800 existing public housing dwellings and the creation of a new vibrant community featuring quality streets and open space. More than 700 of the homes created will be for the private market, and some 300 will be utilised for public housing.

Following completion of the project, \$10 million dollars will have been spent on community facilities including six parks, community centre, childcare facilities, as well as associated landscaping and footpaths throughout estate.

Aboriginal Employment Strategy

Council is in the process of preparing an Aboriginal Employment Strategy which will help to facilitate for greater employment opportunities for indigenous persons in Campbelltown LGA. The Strategy will explore opportunities to link Indigenous persons with environmental focused employment in the Campbelltown area.

5.4 Performance Indicators and Key Management Issues Relating to Our Community

The Key management issues affecting community well being are

1. the development and diversification of new employment opportunities, particularly for highly skilled workers
2. adequate and affordable housing choices for all members of the community
3. enhanced public transport access
4. planning, development and management of community facilities and services to address the changing demographic profile of the city

5. integrated environmental education programs that target specific demographic groups within the Campbelltown LGA
6. address significant crime and safety issues in the Campbelltown community including Graffiti, theft, and domestic violence.

The following key actions relating to the management of community issues have been identified for

Key Action C1: A range of key performance indicators need to be revised in light of Council's new Community Plan.

Key Action C2: Facilitate culturally appropriate access to available services and facilities.

KeyAction C3: Increase awareness of issues associated with biodiversity and sustainability through environmental education.

Key Action C4: Encourage community participation in Council activities and events.

Key Action C5: Developand recruit new Streamcare/Bushcare groups.

Key Action C6: Ongoing review and assessment of public transport options.

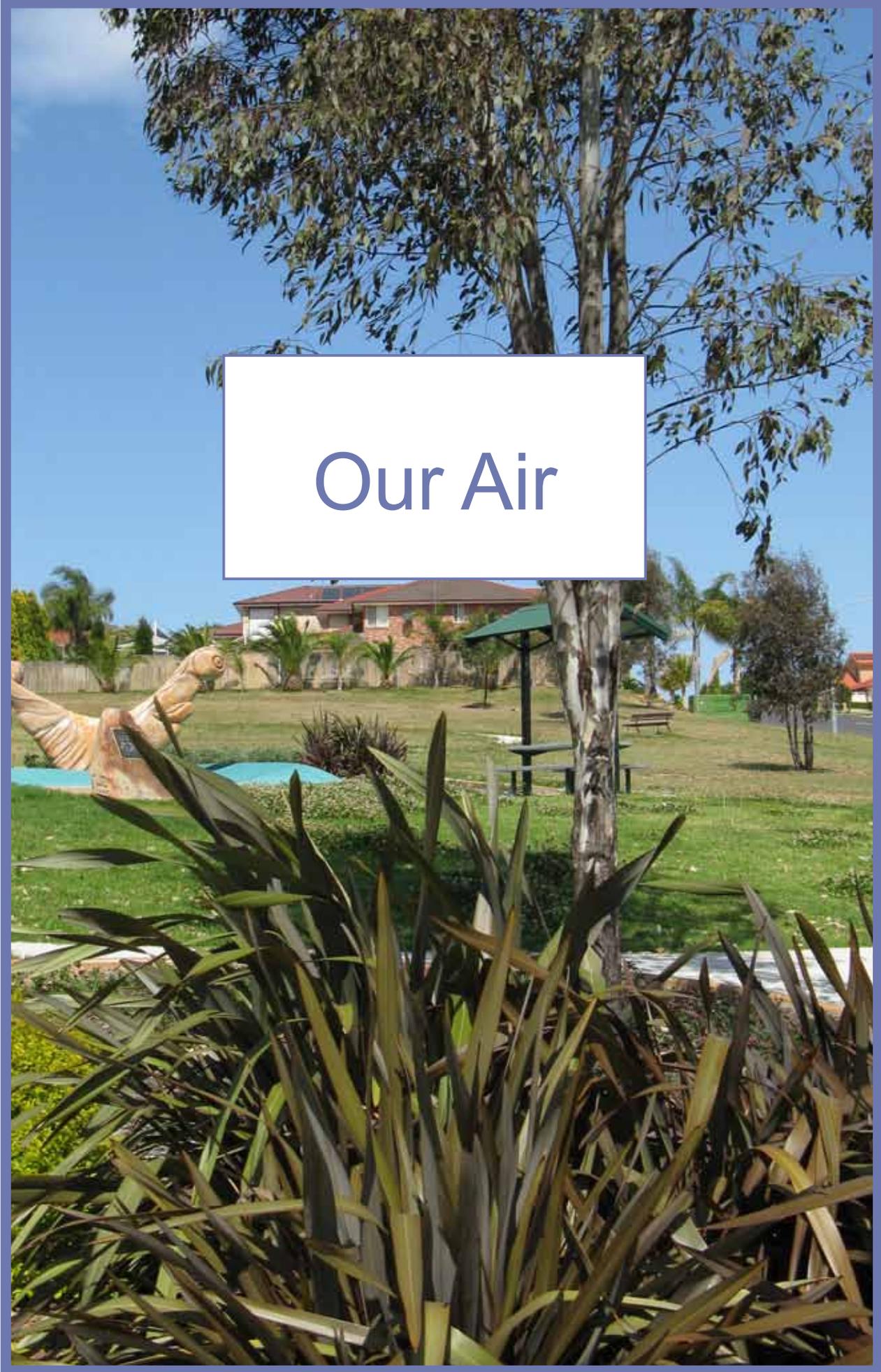
Table 23 provides a summary of the key issues relating to the management of Campbelltown's community and summarises actions and key performance indicators for the next reporting period.



implementation during the next reporting period:

Key issues Associated with Our Community	How it is/was being addressed	Performance indicators	About this indicator
<ul style="list-style-type: none"> Community Challenges . Quality of life issues. 	<p>Social Plan 2003-2009 implementation.</p> <p>Development of the new Social Plan 2010-2012.</p> <p>Community consultation meetings.</p>	<p>Complete the Social Plan and associated performance measures/indicators.</p> <p>Scheduled to be completed by 2012.</p>	<p>The Plans will include up to date demographic analysis, economic, crime and health statistics, recent changes to public policy, and in-created awareness and importance of social issues affecting Campbelltown.</p>
<ul style="list-style-type: none"> Affordable housing and access to appropriate housing. 	<p>Campbelltown (Sustainable City) Development Control Plan.</p> <p>Department of Housing Urban Renewal Projects.</p> <p>Preparation of Affordable Housing Strategy</p>	<p>Development of the Campbelltown (Sustainable City) Development Control Plan.</p> <p>Mean house price compared to household weekly income for LGA.</p>	<p>The plan guides the development of a range of housing types throughout the Campbelltown LGA.</p>
<ul style="list-style-type: none"> Community engagement. 	<p>Community based education and engagement events, including Riverfest, Clean Up Australia Day, National Tree Day, Sustainability Blitz Community Workshops, Water-wise Workshops, Campbelltown City Show, Youth Week.</p> <p>Employment of an Environmental Education Officer.</p>	<p>Number of community engagement events/opportunities.</p> <p>A total of 171 community based events were conducted over the reporting period.</p>	<p>By having community based education days available to local residents, communities can contribute to defining a local identity and sense of place within their environment. One key method of ensuring ongoing preservation of key features of the natural environment is to increase the knowledge and awareness of the community and to foster their appreciation of the environment.</p>
<ul style="list-style-type: none"> Diversity of dwelling types. 	<p>DCP/LEP</p>	<p>Dwelling type graph (ABS data).</p>	<p>Campbelltown currently has a diverse range of dwelling types throughout the LGA. The development of the DCP & LEP will ensure that this diversity is maintained into the future.</p>
<ul style="list-style-type: none"> Public Transport. 	<ul style="list-style-type: none"> Bicycle Plan. Integrated Transport Strategy. 	<p>Number of new transport initiatives.</p> <p>Traffic modelling and intersection upgrade works.</p> <p>Eight new bicycle ways created.</p> <p>New walking tracks created specifically Simmos beach and the Basin Reserve.</p>	<p>The Macarthur region is undergoing significant population expansion and as such, community requirements for new and upgraded public transport options will increase.</p>

Table 23: Key issues in relation to Our Community, and how they are being addressed.



Our Air

6. Our Air

This section of the SoE describes concerns associated with greenhouse gas emissions associated with the burning of fossil fuels and Council's response. It also discusses urban air quality within the Macarthur region and associated sources.

6.1 State

Climate Change

Changes to the global climatic system are recognised amongst the scientific community as being attributed to human activities. Since 1988, the Intergovernmental Panel on Climate Change (IPCC) has reviewed, interpreted and summarised scientific findings relating to climate change, its causes and impacts. The panel concluded that warming of the climate system is unequivocal.

Human activities, particularly the burning of fossil fuels (coal, oil and natural gas) for energy generation and consumption, agriculture and land clearing are increasing the concentrations of the gases that trap heat. Although only making up approximately 0.1% of the atmosphere by volume, greenhouse gases are considered to be a natural and crucial component of the earth's atmosphere. This is because they maintain the earth's surface temperature at a level necessary to support life by absorbing and re-radiating the sun's warmth. The main naturally occurring greenhouse gases include water vapour, carbon dioxide, methane, nitrous oxide and ozone.

Known as the enhanced greenhouse effect, this is contributing to the warming of the earth's surface and consequently climate change.

Urban Air Quality

In accordance with the Department of Environment, Climate Change and Water (DECCW) survey "Who Cares about the Environment in 2006", air quality is identified to be the second most importantly recognised environmental issue in NSW (following water conservation and management/drought). Although current indications identify that air quality in NSW is generally good, two main problems persist within the Greater Metropolitan Region (consisting of Sydney, Lower Hunter and Illawarra regions), which is home to around 70 cent of the NSW population. These problems are photochemical smog (ground level ozone) and particle pollution (brown haze).



The management of air pollution is considered in a number of National, State and Local Government Acts, regulations and policies. They include, but are not limited to:

- The Environmental Planning and Assessment Act 1979 (EP&A)
- The Protection of the Environment Operations Act 1997 (POEO)
- Action for Air (1998)
- Approved methods for sampling and analysis of air pollutants in NSW (2005)
- Approved methods for modelling and assessment of air pollutants in NSW (2005)
- Draft Policy: Assessment and management of odours from stationary sources in NSW (2001).

6.2 Pressure

Climate Change

The impacts of greenhouse gas emissions and the enhanced greenhouse gas effect have been modelled by the IPCC. These models looked at the earth's climate system, and have been used to simulate future climate change, as well as to facilitate the assessment of climate change impacts.

In estimating future climate change, models have identified the following climatic changes:

- eleven of the past 12 years (1995 – 2006) rank amongst the 12 warmest years
- atmospheric concentrations of carbon dioxide have increased from a pre-industrial value of 280 parts-per-million to 379 parts-per-million in 2005
- global average sea level has risen
- climate change is *likely* (>95%) to lead to some irreversible impacts, including species extinctions
- observed decreases in snow and ice extent are consistent with warming. According to satellite data since 1978, the annual average Arctic sea ice extent has shrunk by 2.7% per decade, with larger decreases of 7.4% per decade in summer.

Urban Air Quality

Sources contributing to air pollution can be grouped into two categories being either biogenic (natural) or anthropogenic (human). Biogenic factors include bushfires, trees and windborne dust, whilst anthropogenic can be further refined to include:

- commercial businesses,
- domestic activities,
- industrial premises,
- off-road mobile craft,
- on-road mobile.

6.3 Response

Climate Change

During the reporting period Council committed to reducing, its greenhouse gas emissions through the development and implementation of a number of strategic documents and initiatives. These initiatives are considered to be diverse and are facilitated within a number of Council's operational areas. They include:

- participation in the Integral Energy Campbelltown Energy Challenge
- preparation and implementation of an Energy Savings Action Plan
- preparation and implementation of a Water Savings Action Plan
- participation in the Cities for Climate Protection Program;
- installation of energy efficient green street lighting
- fleet management and fuel savings initiatives programs
- green energy contracts
- participation in Earth Hour
- construction of a co-generation Waste Management Facility as part of Council's new waste disposal contract;
- construction of energy and water efficient facilities - the SITA depot
- tree planting projects
- preparation of Campbelltown City Council (Sustainable City) Development Control Plan
- schools Environmental Education Projects
- engagement of the Macarthur Centre for Sustainable Living; 'Sustainability Blitz' community workshops
- preparation of an Environmental Review Program.



During the reporting period, the Campbelltown LGA was recognised as a developing regional city. In this regard, Council was required to provide additional facilities, as well as upgrade existing facilities. This redevelopment and growth has resulted in a slight increase in Council's overall energy consumption and greenhouse gas emissions, as shown below in Figures 17 and 18. Notwithstanding this, it is considered

that without Council's investment and commitment to a greener, more sustainable future, its greenhouse gas emissions would have been greater.

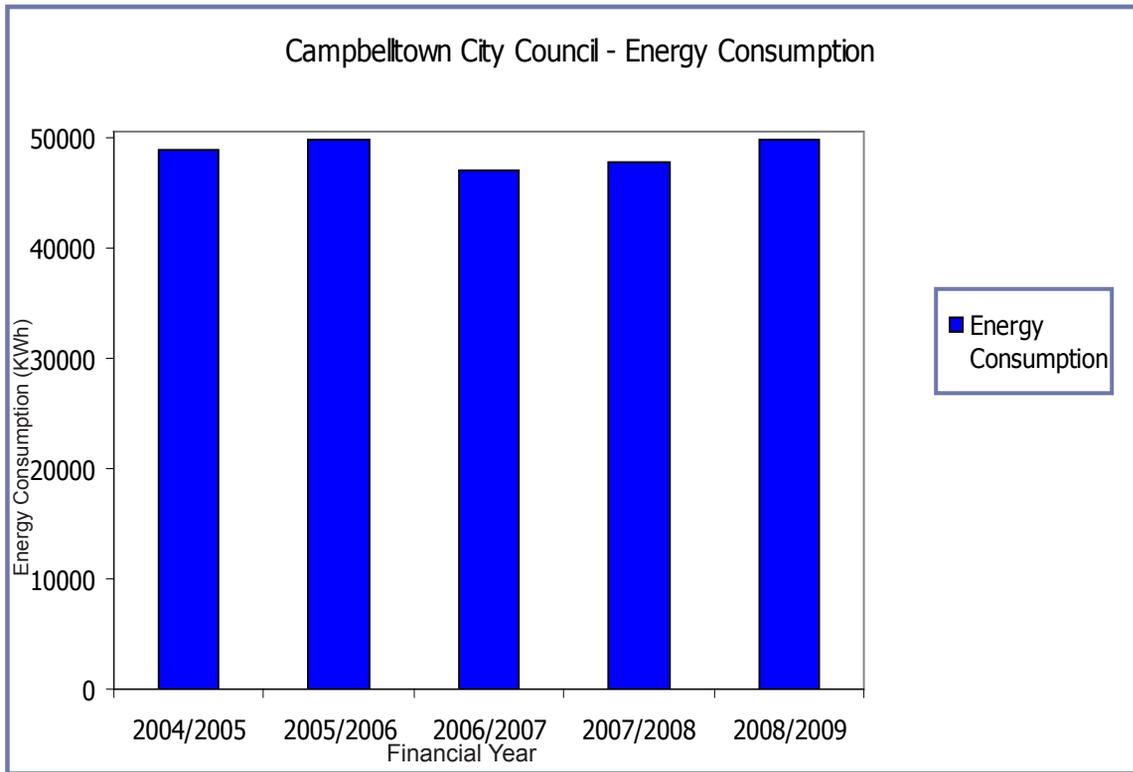


Figure 17: Council energy consumption over the reporting period. *Data source - Planet Footprint*

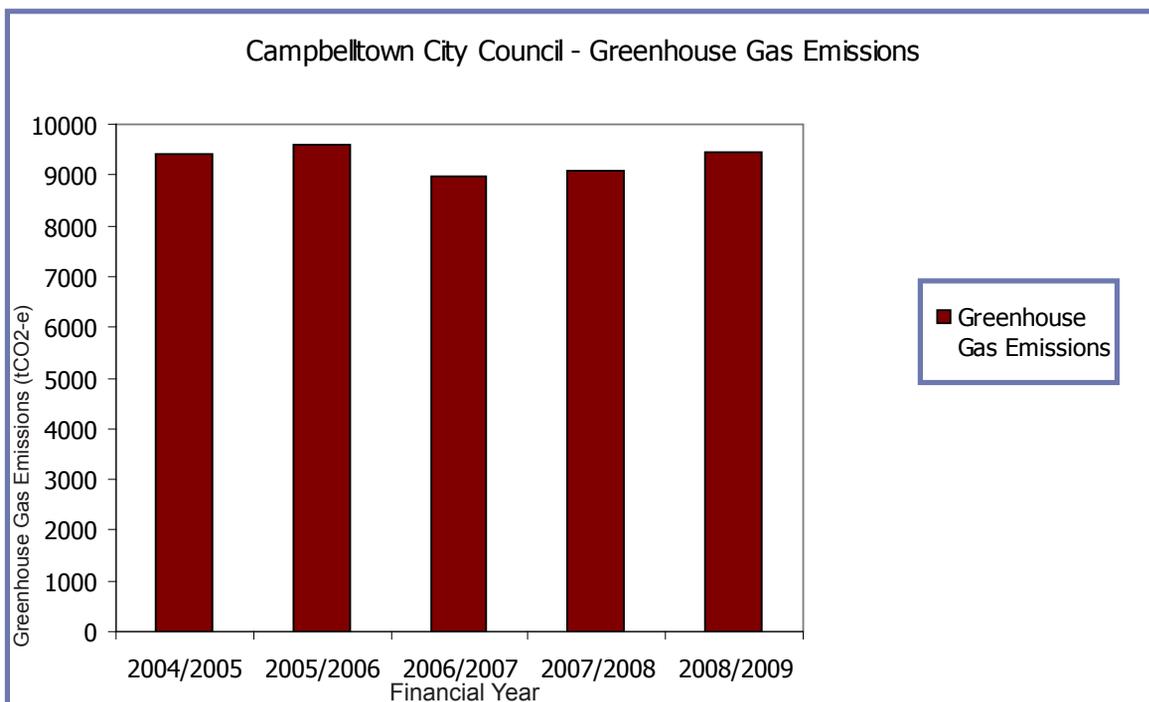


Figure 18: Council greenhouse gas emissions. *Data source - Planet Footprint*

Green Energy

Figure 19 indicates the greenhouse gas abatements achieved through the purchasing of Green Energy for Council's large operating sites during the reporting periods.

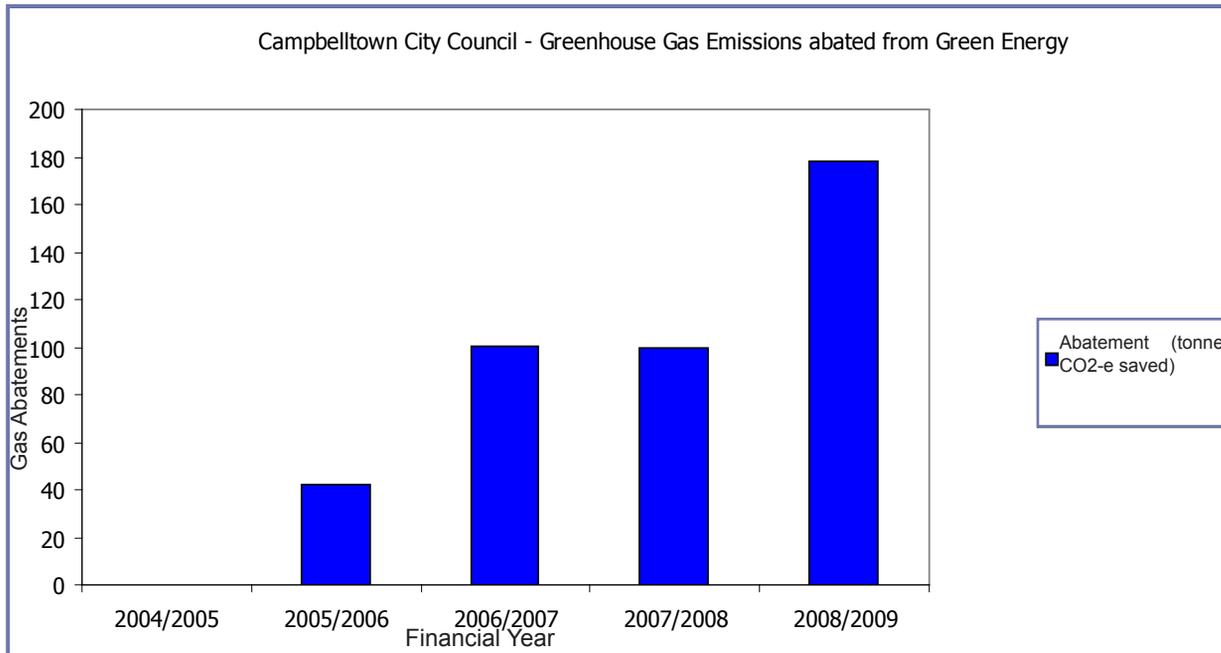


Figure 19: Greenhouse gas abatements.

Comparison note between reporting periods: The 2003/04 SoE Report notes that Council had identified the need to gather information on the type and rate of energy consumption however at that time the information was not available. Council has progressed this issue considerably, and is now in the favourable position of being able to quantify not only the type and rate of its energy usage, but also the quantity of associated green house gas emission and its renewable energy usage.

Cities for Climate Protection

Council was accepted into the Cities for Climate Protection (CCP) Program in October 2007. This Program, originating from a United Nations Summit declaration, aims to improve air quality and enhance urban sustainability and to encourage local government to reduce greenhouse gas emissions. Council has been actively working toward achieving the Action Agenda set out within the Program.

Council in July 2008 engaged the specialist energy/water auditing consultancy firm “Planet Footprint” to assist Council in completing its inventory. Planet Footprint offers a reporting and ‘data on demand’ Program for Local Government, which delivers historical and current account specific information on energy (electricity and gas) and water consumption, as well as the related costs and greenhouse gas emissions.

In May 2009 ICLEI-Oceania (the Program administrators) received advice from the Australian Government that as of the 30 June 2009 Federal funding support for the CCP Milestone Support Program would conclude. In the absence of funding support from the Australian Government, ICLEI-Oceania subsequently concluded its CCP Milestone Support Program and projects. Despite this, Council has resolved to individually continue with the Action Agenda.

Due to the conclusion of the CCP Milestone Support Program, ICLEI-Oceania advised participating Councils that it was reviewing and refocusing its CCP Partners Program. Subsequent to the review, Council in July 2009 elected to again participate in the CCP Partners Program. In participating in the CCP Partners Program, Council has been advised that its support will assist ICLEI-Oceania in positioning the local government sector in negotiations leading up to and during the United Nations Conference of Parties (COP) 15, which will be held in December 2009.

Energy Savings Action Plan

In October 2005, the NSW Government introduced the preparation of an Energy Savings Action Plan

(ESAP) as a legal requirement for designated high energy users. As a result, Council in mid 2007 endorsed the Campbelltown City Council ESAP. The ESAP identified Council's top 13 energy-using assets, developed a list of cost effective and administrative energy saving measures, as well as established a collective reduction target of 10%.

The development of Council's ESAP was a proactive step towards the strategic implementation of energy efficient initiatives throughout the organisation. In this regard, Council's ESAP was prepared to accommodate a large variety of cost effective initiatives that were linked to Council's financial planning process. During the reporting period, Council undertook its first Annual Review, which included the following components:

1. Annual report on energy use:

For each of the assets identified in the ESAP, Council was required to examine its energy (gas and electricity) consumption and greenhouse gas emissions during the 2008 calendar year, and compare it against the energy consumption and greenhouse gas emissions recorded during the 2006 calendar year (as per ESAP).



2. Management Review:

For each of the 12 Management Actions identified in the ESAP, Council was required to indicate whether the Management Action has been completed, and if so, when.

3. Energy Savings Measures:

Council provided a list of each of the energy savings measures implemented during the review period, and attempted to analyse the corresponding energy, greenhouse gas and cost savings.

Highlights from the Annual Review include:

- collective energy reduction of 1,609,872 KWh between Council's top nine assets. This is comparable with a greenhouse gas reduction of 1,692 tonnes of carbon dioxide equivalent (tCO₂-e)
- the Campbelltown Swimming Centre achieved the single greatest energy reduction of 611,130 KWh
- the introduction of energy efficient 'Green Street' Lamps across Council's street lighting network
- the responsible use of energy was advocated
- sections across the Council organisation adopted informal localised energy saving processes, including turning off photocopiers and computer monitors at the end of the day, reducing printing, printing double sided and recycling unwanted paper
- Council is well on target to achieving its ESAP recommendation of attaining a passenger vehicle fleet with a proportion of at least 85% of four cylinder vehicles by 2011. The percent of four cylinder vehicles comprising Council's passenger fleet increased from 35% in 2006 to 83% in 2008
- Council's heavy plant continues to use Biodiesel wherever possible, with 100% of the heavy plant using Biodiesel as the preferred fuel.

Council successfully implemented all of the ESAP 'cost effective' measures scheduled to be completed in the 2006/07 and 2007/08 financial year period. With regard to Council's largest energy consuming asset, the Civic Centre, cost effective initiatives included:

- the installation of a Power Factor Correction (PFC) unit to assist with achieving maximum building energy efficiency
- the introduction of a Building Management System (BMS) to automate the monitoring and control of the air conditioning system, security lighting and fire stair lighting through the use of sensors, controls and activators.

Additionally Council resolved to establish an Energy Savings Fund to capture the monetary savings gained from the implementation of energy efficient measures, for reinvestment into sustainability initiatives.

Council is currently undertaking a detailed energy meter audit and review of its energy usage recording and reporting processes. The review will provide Council with information regarding the streamlining of its energy systems and the development of more formal reporting processes. This will result in the formalisation of Council’s Water and Energy Management Tool (WEMT), which is currently under development.

Council’s ESAP has provided a framework for the implementation of energy efficient practices and technologies. Thus far the review has identified areas where Council can enhance its approach to energy and asset management. Over the next year, Council’s Energy Performance Group (now known as the Sustainability Committee) will continue to drive the implementation of energy efficient technologies, as well as investigate additional initiatives for Council to pursue.

Green Street Lighting Lamps

Council achieved a greenhouse gas reduction of 134 tonnes of carbon dioxide during the reporting period by installing more energy efficient street lighting. Providing a 69 percent (%) energy saving, approximately 970 “Green Street” lamps have been installed in all new subdivisions including Macarthur Gardens, Park Central and the Glenfield North urban release area, as well as in some pre-existing areas where it was found that the lighting did not meet relevant street lighting standards.

Figure 20 identifies the number of Green Street Light Lamps installed in the LGA Campbelltown during the reporting periods.

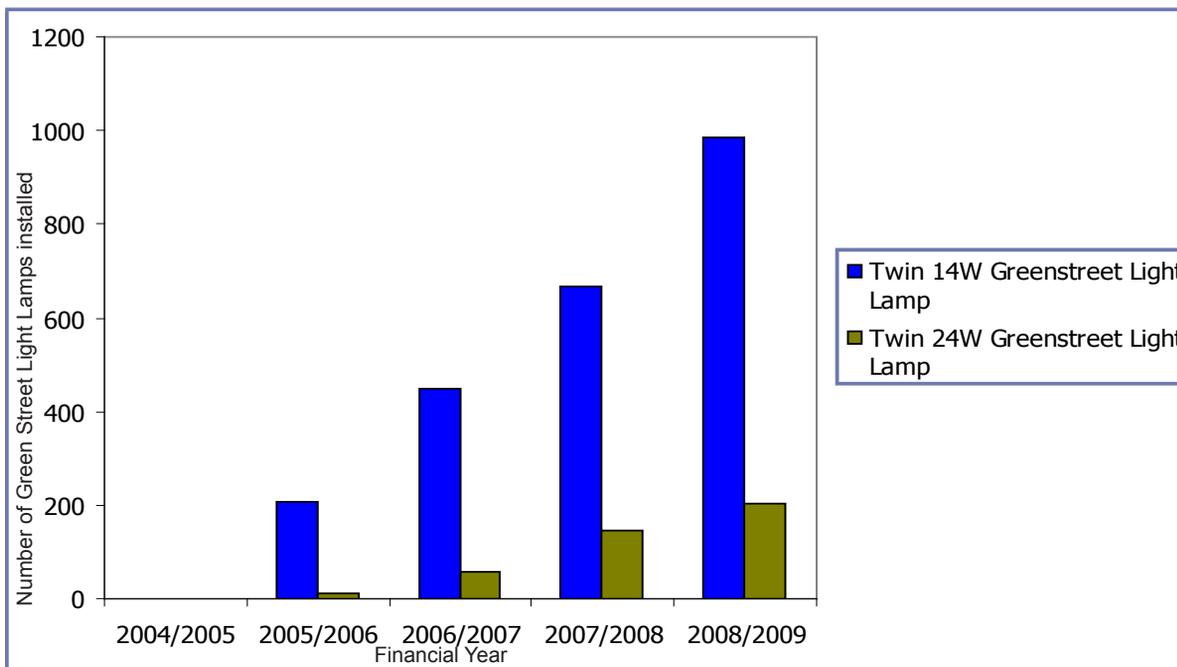


Figure 20: Green street lighting installations.

Earth Hour

Earth Hour was created by the World Wildlife Fund (WWF) in 2007 to inspire people to take action on climate change.

During 2008 Council and its employees reduced greenhouse gas emissions by 4.9 tonnes of carbon dioxide (CO₂-e). Council also participated in Earth Hour in 2009.



By participating in Earth Hour 2009, Council joined 1 billion people from more than 4000 towns, cities and municipalities across 88 countries around the world in turning off its lights for one hour. By simply switching off lights, Earth Hour 2009 demonstrated the world’s concerns regarding climate change.

Council facilities that turned off non-essential lighting included the HJ Daley Library, Eagle Vale Library, Glenquarie Library, Ingleburn Library, Minto Library, the Civic Centre, Animal Care Facility, Campbelltown Stadium, Sanitary Depot and the Campbelltown Arts Centre.

Council has participated in Earth Hour since its introduction and anticipates that it will continue to support and participate in Earth Hour each year.



Campbelltown (Sustainable City) Development Control Plan 2009

Council's Campbelltown (Sustainable City) Development Control Plan 2009 (SCDCP) encourages energy efficiency and the sustainable use of renewable natural resources.

Comparison note between reporting periods: During the 2003/04 reporting period Council was preparing to incorporate the NSW State Government's Building Sustainability Index (BASIX) tool for residential development into its Development Control Plan. The plan, adopted in 2007, incorporates BASIX which aims to deliver equitable and effective water and greenhouse gas reductions through the use of sustainable housing features on new residential developments such as rainwater tanks, efficient showerheads, insulation and external shading.

The controls in the Campbelltown (Sustainable City) Development Control Plan will be further strengthened leading up to and following the completion of Council's new comprehensive Local Environmental Plan (LEP). The combined effects of the two documents will encourage a reduction in greenhouse gases through planning controls that are focussed on sustainability and the efficient use of energy and other resources.

Sustainability Committee

During the 2008/09 reporting period, an extensive review of the roles and responsibilities of Council's Energy and Water Performance Groups were undertaken. In accordance with the review, these groups were integrated to establish a Sustainability Committee (the Committee). The establishment of the Committee recognises the corporate value of sustainability within the organisation, and the need for a 'cultural shift' in thinking. It is considered that the Committee will provide the formal and coordinated mechanism to support and facilitate the delivery of sustainable outcomes in the areas of policy, innovation, education, budget/resourcing, as well as reviewing, reporting and monitoring. This will include the development of a Sustainability Strategy.

Urban Air Quality

Regional and Local Air Quality Inventory

The Department of Environment, Climate Change and Water (DECCW – formally known as the Department of Environment and Climate Change) measured and recorded ambient levels of air pollutants across Sydney, Illawarra, the Lower Hunter and selected rural sites around NSW twice daily during the reporting period. Monitoring stations located in the Sydney South West Region include Macarthur, Bringelly, Liverpool, Bargo and Oakdale. The information provided by these stations assists Council in identifying the nature and severity of air pollution within the Campbelltown LGA.

Comparison note between reporting periods: Prior to the 2008/2009 reporting year, pollutant data was recorded and represented as Regional Pollution Index (RPI). The RPI measures five pollutants in line with National Standards. The five pollutants include ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide and air particles. During the 2003/04 reporting period, a 'High Pollution Index' was recorded on 12 occasions within the South West Sydney Region.

In 2008 this process was revised and a new index proposed. Known as the Regional Air Quality Index (RAQI), the index is based on the five criteria pollutants (as per national standards) plus visibility (as per a standard set by NSW). The RAQI values are categorised as very good, good, fair, poor, very poor or hazardous. Very good has a value of 0-33; good has a value of 34-66; fair has a value of 67-99; poor has a value of 100-149; very poor has a value of 150-199 and hazardous air quality has a value of greater than 200. For 2008/09, regional air quality in the Sydney South West Region did not meet the poor criteria, however it did meet the fair criteria on 14 occasions.

Figure 21-25 indicates the monthly Macarthur AQI and Sydney South West RAQI values for the Campbelltown LGA during the five reporting periods.

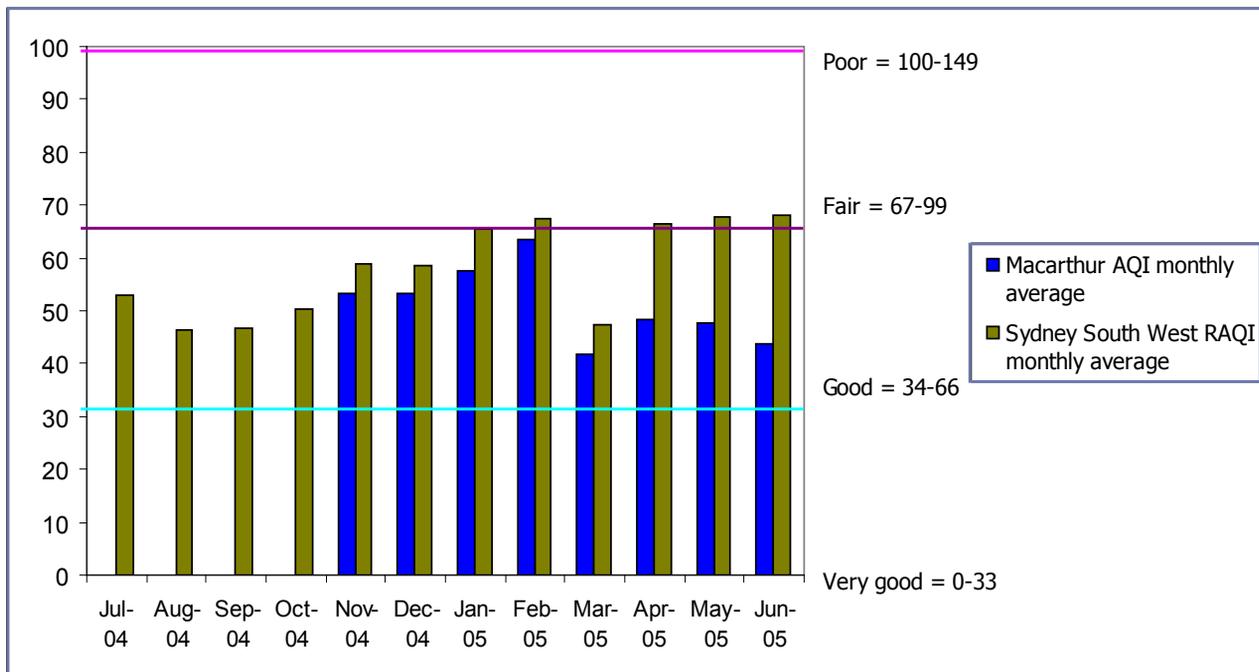


Figure 21: 2004/05 air quality inventory and performance indicators.

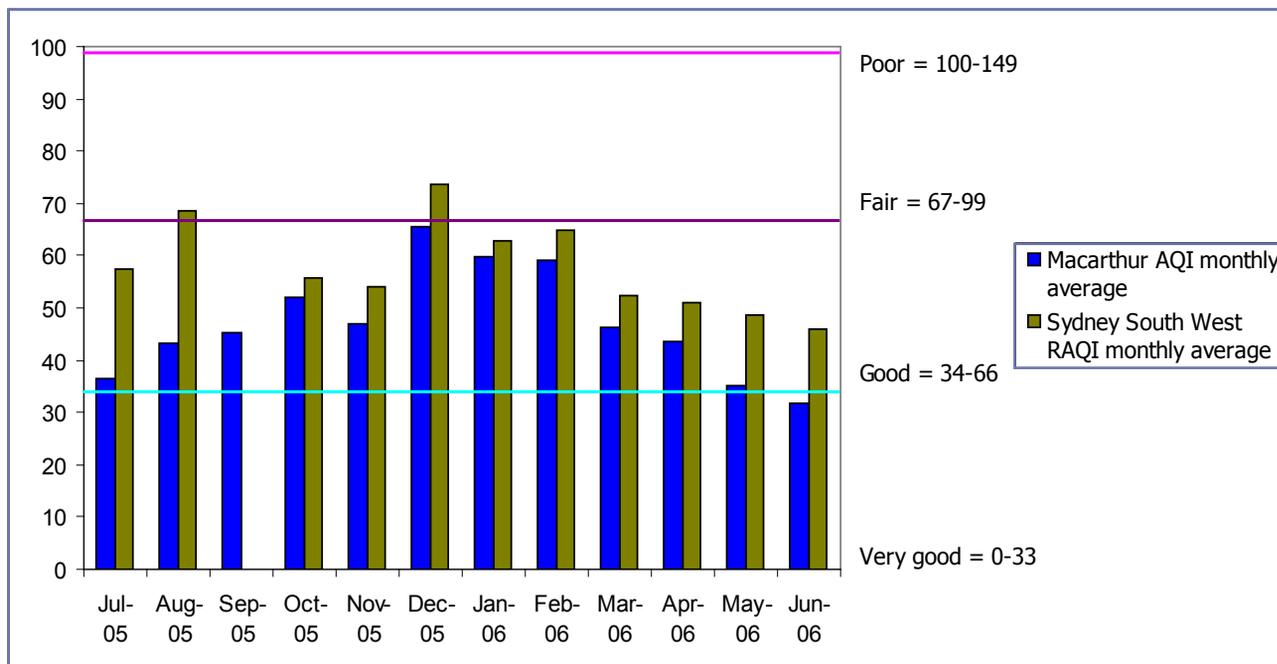


Figure 22: 2005/06 air quality inventory and performance indicators.

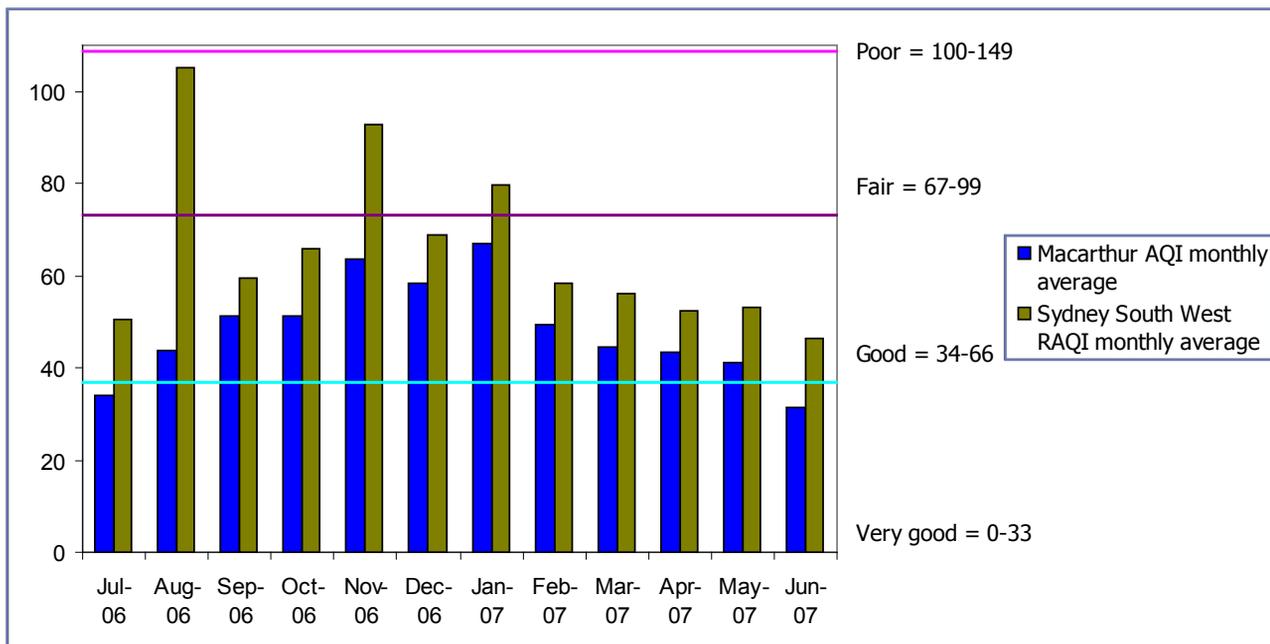


Figure 23: 2006/07 air quality inventory and performance indicators.

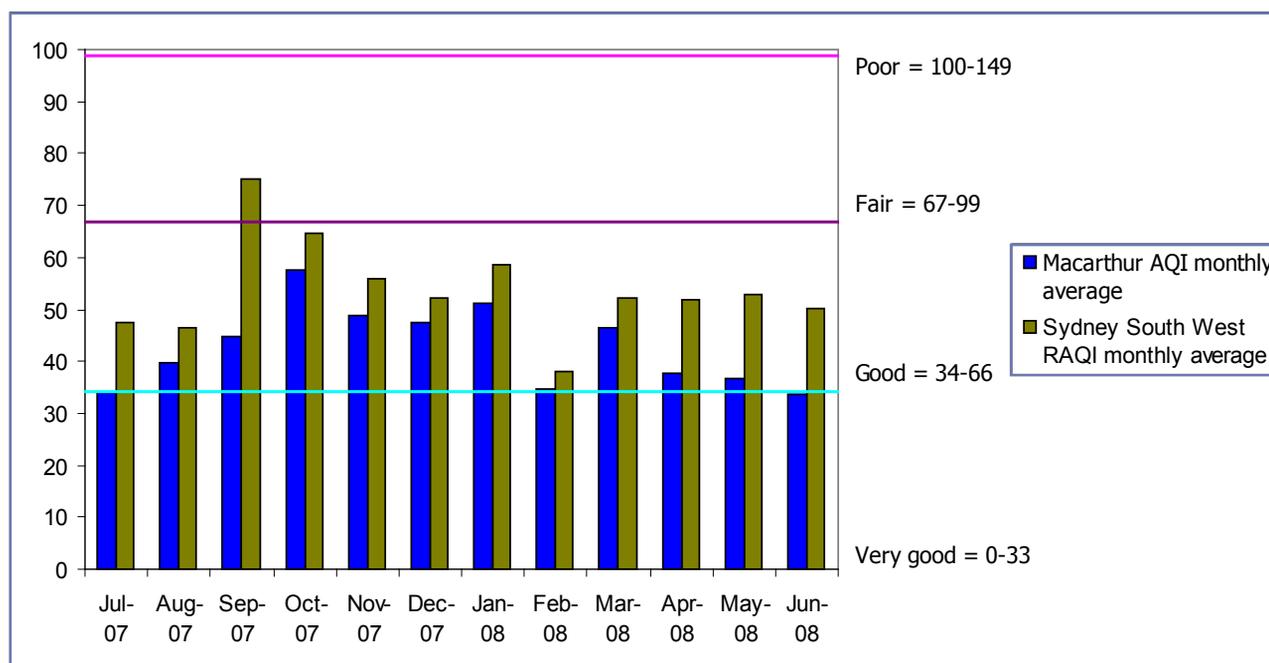


Figure 24: 2007/08 air quality inventory and performance indicators.

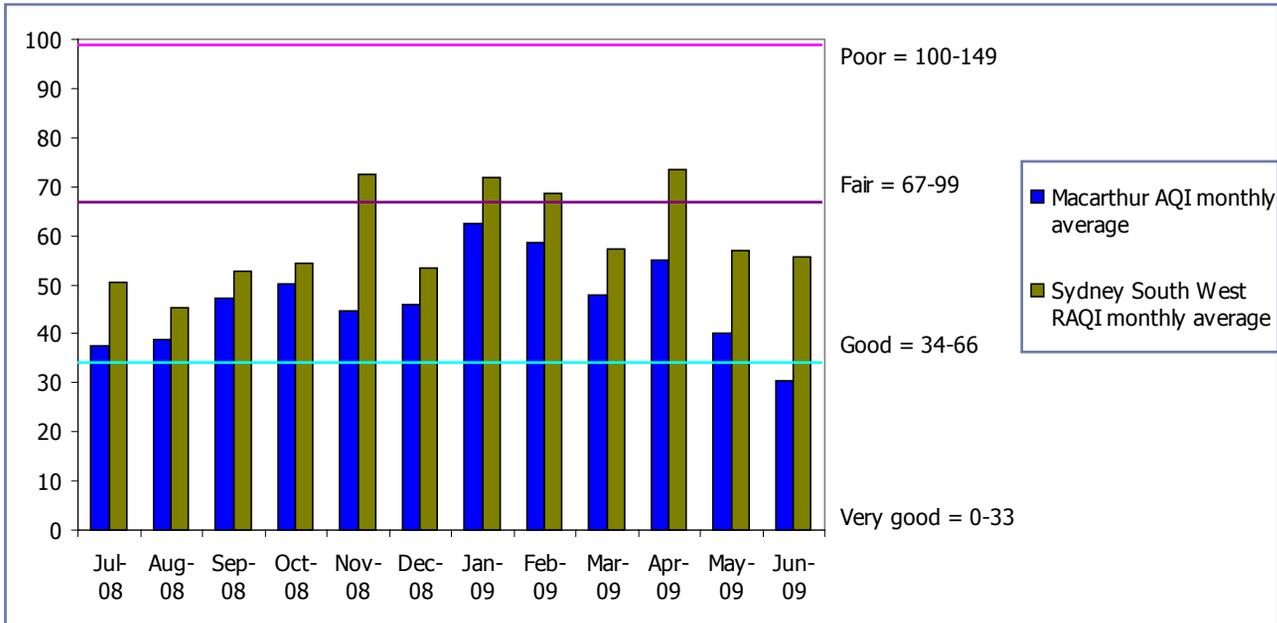


Figure 25: 2008/09 air quality inventory and performance indicators.

Data sourced from the Department of Environment Climate Change and Water

The data displayed in figures 6.5-6.9 indicates that during the summer months air quality tends to decrease, falling within the 'fair' range on a seasonal basis.

Council's Passenger Fleet

During the reporting year, Council continued to work toward achieving a sustainable green passenger vehicle fleet. Council currently maintains a fleet of 84% 4 cylinder vehicles. Council has phased out all 8 cylinder vehicles from the fleet, and has progressively reduced six cylinder vehicles by two thirds.

Figure 26 identifies the distribution of eight, six and four cylinder vehicles within Council's passenger fleet during the five reporting periods.

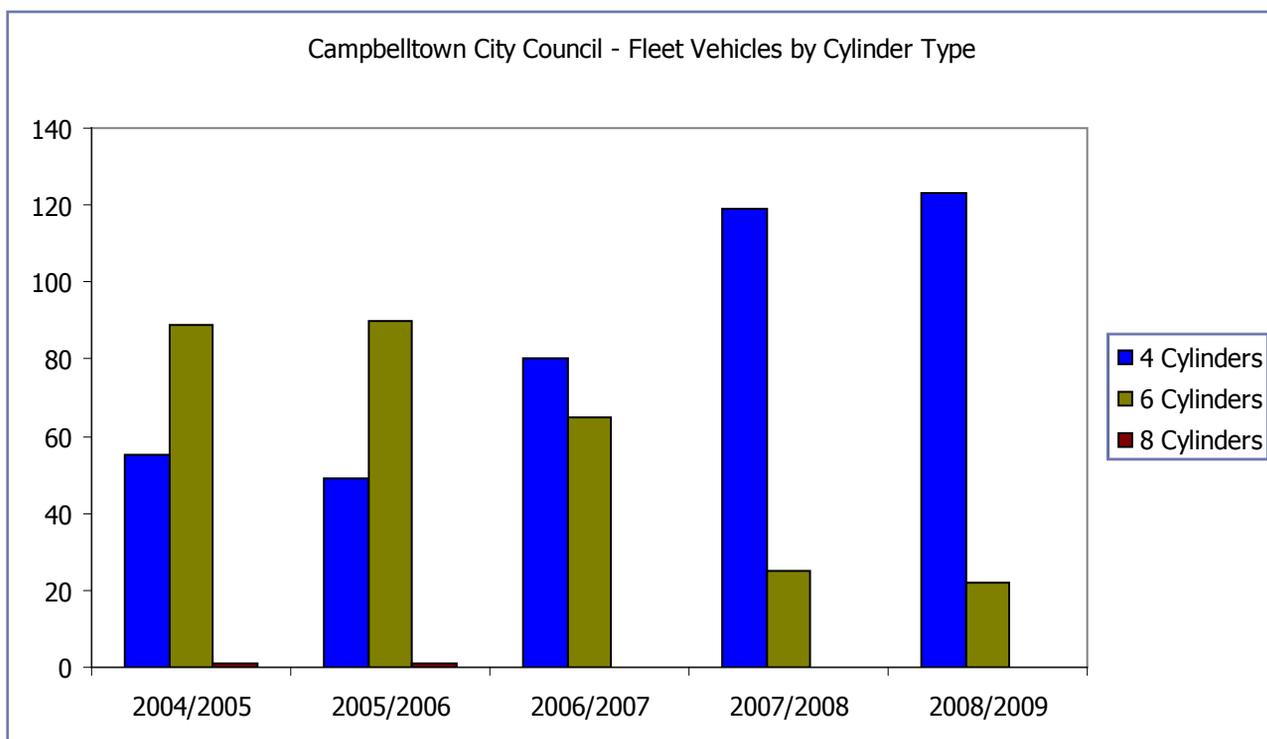


Figure 26: Council fleet composition.

Hazard Reduction Burning

During the 20/2009 financial year, approximately 125 hectares of hazard reduction burning was undertaken. To assist with the mitigation of bush fire hazards, hazard reduction works are undertaken in conjunction with the Macarthur Zone Bush Fire Management Committee (BFMC) recommendations on a strategic basis every financial year. Most of the major land tenure holders within the Macarthur Zone (including Campbelltown, Camden and Liverpool) are represented on the BFMC.

Local Air Quality Initiatives

Council routinely responds to a range of air quality concerns raised by the local community. Residents who are the subject of complaints are generally provided with advice and education. However, where air pollution concerns continue Council has a variety of enforcement options available under the Protection of the *Environment Operations Act 1997* to ensure that all sectors of the community comply with acceptable air quality standards.

Figure 22 indicates the number and type of air quality concerns received by Council during the reporting period.

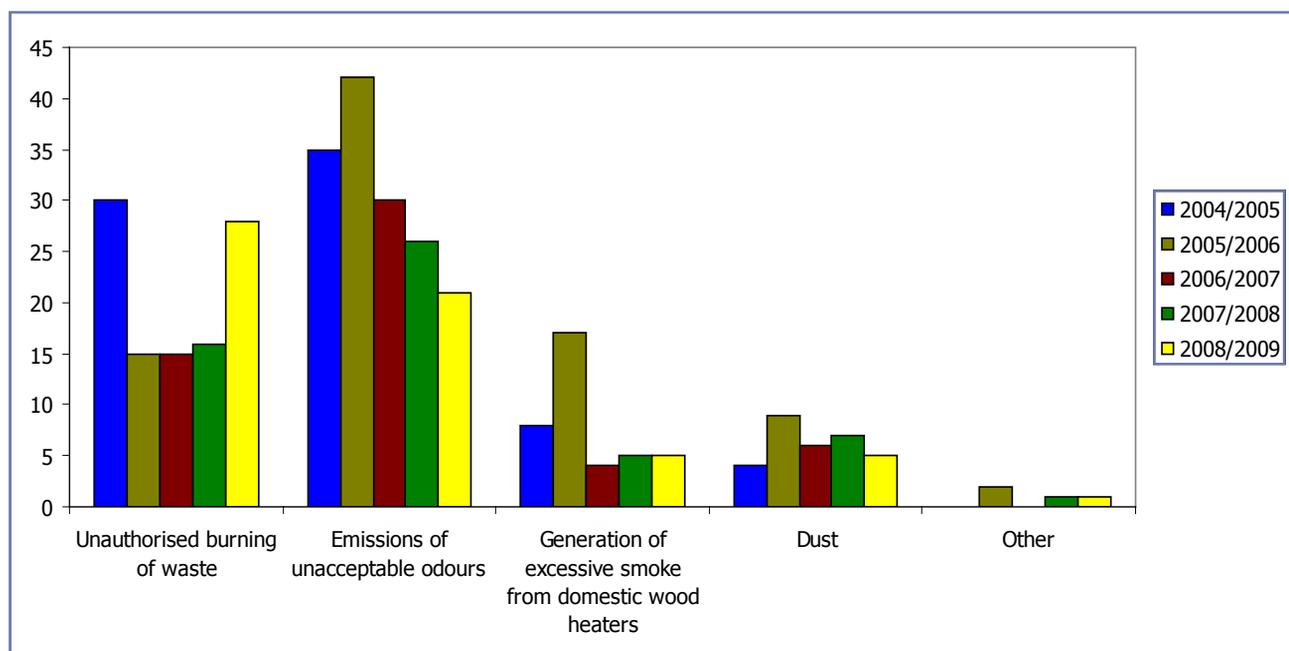


Table 22: Air quality complaints received by Council.

Submission on Air Quality Issues Associated with the Leaf Gully Gas Fired Power Station Development

In April 2009, AGL submitted an application to Department of Planning under Part 3A of the Environmental Planning and Assessment Act 1979 for the construction of a Gas Fired Power Station at Gilead. Given the highly specialist field of air quality modelling and the interpretation of potential air quality impacts associated with the facility, Council secured the services of a specialist consultant to review the air quality assessments attached to the application. The consultant was required to review the adequacy of these assessments in terms of the approach used in the modelling, the assessment of cumulative impacts on regional air quality associated with the facility and the assessment of greenhouse gas emission issues. This report identified a number of deficiencies within the application including an inadequate assessment of the interaction between the oxides of nitrogen emitted from the proposed facility and its interaction with the already elevated background levels of ozone. Consequently, Council's submission

on the overall project application requested that the implications of emissions associated with any future urban growth in the Macarthur region be accurately assessed and that the proposed development use 'world's best practice' to reduce greenhouse gas emissions.

6.4 Performance Indicators and Key Management Issues Relating to Our Air

Key Air Management Issues

Key management issues affecting our air:

1. climate change:

- bushfire
- flooding
- storms (hail)

2. poor air quality:

- backyard burning
- motor vehicles
- wood heaters
- industry/commercial sources
- bushfire.



The following key actions relating to management of Campbelltown's Air issues have been identified for implementation during the next reporting period:

Key Action A1: Ongoing monitoring and review of Daily Air Quality Index Ratings (DECCW) as well as Regional Air Quality Index Ratings.

Key Action A2: Aim to achieve a vehicle fleet consisting of 85% 4 cylinder vehicles (currently at 84%, up from 35% in 2006)

Key Action A3: Continually monitor, report on and review Council's greenhouse gas emissions.

Key Action A4: Continue the progression of the Cities for Climate Protection Program and the Energy Savings Action Plan.

Table 23 Identifies key threats in relation to Our Air, and summarises the ways in which Council addressed/ is addressing the identified issues.

Performance Indicators

Key threats to Our Air	How it is being addressed	Performance indicators	About this indicator
Climate Change: <ul style="list-style-type: none"> • Bushfire • Flooding • Storms (hail) 	<ul style="list-style-type: none"> • Bushfire Risk Management Plan • Flood Studies • Education Programs • Development of a Sustainability Strategy • Energy Savings Action Plan • Water Savings Action Plan • Energy audits/reviews 	<ol style="list-style-type: none"> 1. Reduction in greenhouse gas emissions (tCO²-e) through target realisation. 2. Reduction in energy consumption (Kwh) through target realisation. <p>Targets to be met by 2012. Council is progressing with these reductions, and has already made significant progress with a 50% increase in four cylinder vehicles in the fleet, replacing six and eight cylinder vehicles, resulting in greenhouse gas emissions reductions.</p> <p>Overall, Council is aiming for a 10% energy reduction over the four year life of the plan, which concludes in February 2012.</p>	<p>Key facilities identified for energy consumption and greenhouse gas reduction targets by 2012 include: Civic Centre and Hall, leisure centres, libraries, works depot. Other targeted items include street lighting and heavy plant equipment.</p> <p>Energy consumption reduction target: between 5 and 15% for identified sites as identified in the ESAP.</p> <p>These energy consumption reductions will translate into greenhouse gas emissions reductions.</p>
Poor Air Quality: <ul style="list-style-type: none"> • Backyard burning • Motor vehicles • Wood heaters • Industry/commercial sources • Bushfire 	<ul style="list-style-type: none"> • Council reviews and considers the Daily Air Quality Index Ratings (DECCW) as well as Regional Air Quality Index Ratings. • Council investigates air quality concerns raised by community members • Enforcement of the Protection of the Environment Operations Act 1997. 	<p>Review and comparison of data with Regional Air Quality Index (RAQI), ranging from hazardous, very poor, poor, fair, good and very good.</p> <p>Air quality within the Macarthur region is regarded as ranging midway between fair and good.</p>	<p>The index is based on five criteria pollutants plus visibility. The index measures ozone, carbon monoxide, sulphur dioxide, nitrogen dioxide and air particles.</p>

Table 23: Key threats in relation to Our Air, and how they are being addressed.

7. Conclusion

7. Conclusion

The Campbelltown LGA continues to be characterised by a rich landscape tapestry comprised of corridors of forests, woodlands and grasslands, large waterways, rolling hills, rural lands and residential/commercial/industrial lands. The numerous parks, reserves, open space areas and waterways preserve a diverse range of flora and fauna the majority of which is still accessible to the public and through careful planning and management, can be sustained and improved for future generations to enjoy.

Despite the significance of Campbelltown's extensive environmental assets, pressures from human activities are impacting upon some of the City's sensitive areas such as the Georges River, Edge Scenic Protection Lands, Wedderburn, the Scenic Hills and the Georges River Regional Open Space.

Key issues identified in this report for each respective section are summarised below:

Our Land

- Urban development, consolidation and subdivision
- Waste generation and illegal dumping
- Invasive species
- Biodiversity decline
- Bushfires
- Trail bike riding
- Pollution

Way Forward: The presence of several endangered species and ecological communities indicates that the potential impacts on biodiversity is an ongoing issue that will need to be addressed, in the first instance, through the completion of Council's Biodiversity Strategy. Future management priorities will be based on an understanding of what biodiversity exists in the area, its sensitivity to human activities and what the Campbelltown community stand to potentially lose should we fail to adequately address these risks.

Similarly, controlling weed colonisation, minimising the volume of waste generated and improving the recovery of recyclable materials are continuing factors that can impact on local biodiversity and will be addressed via ongoing local and regional strategies and programs.



Our Water

- Stormwater and associated poor water quality
- Waste and pollution events
- Stream flow modifications
- Aquatic weeds
- Degraded riparian vegetation
- On-site sewerage management

Way Forward: Available water quality data suggests that human activities continue to have a detrimental effect on local waterways, an issue that will be of particular focus during subsequent reporting periods. The review of Council's Water Quality Monitoring Program, historic water quality data and Stormwater Management Plans will help ensure the effectiveness of on-ground work programs and strategically focused water resource planning.



Our Heritage

- Urban consolidation and subdivision
- Cost and demand for residential land
- Security, maintenance and vandalism of heritage items
- Incompatible uses for heritage items
- Costs associated with heritage conservation

Way Forward: Council will continue its ongoing commitment to protect items of heritage as developable land becomes more scarce. Council will need to deal with increasing pressures to develop land adjacent to items of heritage significance. In this regard, the importance of reviewing and updating Council's heritage controls cannot be understated. Heritage grant funding will continue to provide crucial support for local heritage conservation initiatives, supporting the community with financial assistance. The anticipated implementation of the review of the heritage study and heritage item register will assist in the management and protection of those items of heritage significance. Council will continue to assess natural and cultural landscapes in order to examine strategies to best manage these landscapes.



Our Community

- Employment opportunities
- Access to public transport
- Crime and safety
- Adequate and affordable housing supply
- Facility and service provision to a changing demographic

Way Forward: Although generally considered a 'young' city, the Campbelltown population is maturing and appropriate planning will need to be undertaken to ensure its future needs are met in terms of facilities, employment and recreational opportunities. Council remains committed to working with the local community and other relevant stakeholders to maintain and preserve the quality, amenity and appeal of the local environment. A range of performance indicators will need to be revised in light of Council's new Community Plan. Council will embark on community consultation meetings and the development of a new Social Plan, which will provide a blueprint for future planning and development in order to achieve economic, cultural, environmental and social sustainability for the LGA.



Our Air

- Climate Change
 - * Bushfire
 - * Flooding
 - * Storms
- Poor Air Quality
 - * Backyard burning
 - * Motor vehicles
 - * Wood heaters
 - * Industry/commercial sources
 - * Bushfire

Way Forward: Council is committed to achieving a significant reduction in greenhouse gas emissions and in the amount of energy and water used throughout the organisation via implementation of action plans. Council aims to achieve a 10% energy reduction across the top 13 energy using sites and activities. Key actions endorsed by Council which will progress sustainability within the organisation include ongoing progression of the Cities for Climate Protection Program and the Energy Savings Action Plan. The quality of the air in Campbelltown plays an important role in relation to community health and remains relatively unchanged from the previous reporting period. In many respects air quality is influenced by prevailing weather patterns and pollution loads across greater metropolitan Sydney. Air quality within the Macarthur region is an ongoing issue of concern for Council, and it will continue to enforce and develop policies relating to the management of the air resource. Additionally, Daily Air Quality Index Ratings and Regional Air Quality Ratings provide data for ongoing monitoring and assessment of air quality.



Council has identified a range of negative threats, in addition to those summarised above, that require careful consideration and forward thinking. These threats are currently, and will continue to be, addressed through key strategic planning documents including:

- Campbelltown (Sustainable City) Development Control Plan
- Noxious Weed and Pest Animal Management Strategy
- Plans of Management for parks and reserves
- Biodiversity Study
- Bushfire Risk Management Plan
- Sustainable Fleet Policy
- Heritage Register
- Integrated Transport Strategy
- Heritage Study
- Environmental Education Strategy
- Energy Savings and Water Savings Action Plans
- Social and Community Plans.

7.2 Progress Towards Sustainability

In 2003, Council prepared a list of ecologically sustainable development indicators to help monitor its progress towards sustainability. Some of these indicators have been assessed using data collected during the reporting period, while new performance indicators have been included in this SoE report based on data collected and the programs that Council has implemented during the last four years. While some data is available for a limited number of indicators, some still require several reporting periods of data to be collated before a realistic interpretation of the values can be made by Council.

Additionally, during the current review and compilation of this report, it has become clear that some of the indicators identified in the 2003/2004 comprehensive report are no longer relevant or feasible for data collection. These were not carried over, instead, modified and/or new performance indicators were substituted and provide a more accurate indication of Council's progress towards sustainability.

Council has embarked on several programs and carried out associated data collection on issues of significant environmental importance. As such, progress towards sustainability within Campbelltown Council has begun to be recorded, measured and assessed. However, data will continue to be collected as projects progress, new policies will be developed and future reporting requirements become more apparent. Council will review the relevance of its SoE performance indicators in light of the development of the Community Plan and associated environmental reporting components.

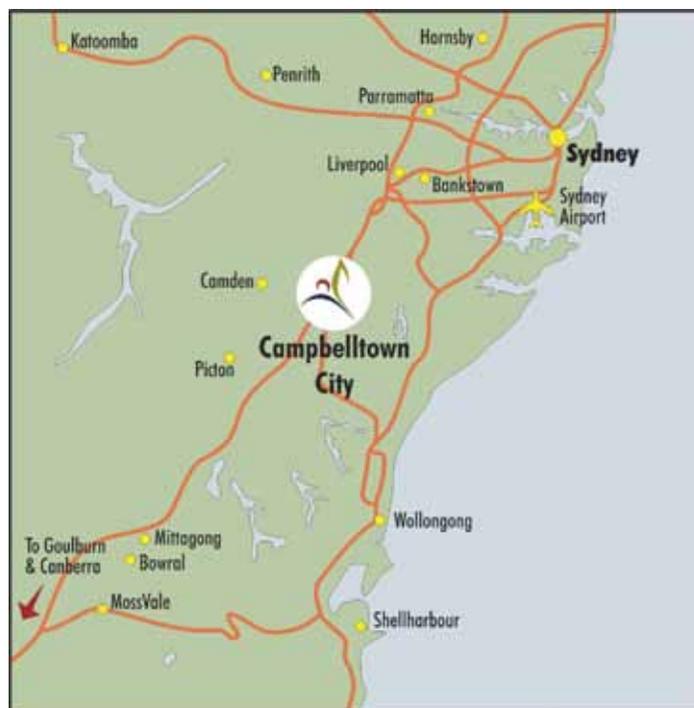
The principles of Ecologically Sustainable Development require Council to responsibly care for and manage the environmental resources of the Campbelltown Local Government Area. These principles have been incorporated into Council's plans and strategies, including the Management Plan, the Campbelltown Social Plan, the Community Plan, various Plans of Management for parks and reserves, section Business Plans, Development Control Plans and Local Environmental Planning instruments, environmental strategies and internal policies.

As highlighted in this report, the principles of Ecologically Sustainable Development have been reflected in various documents and practices, generating a variety of initiatives including but not limited to the following:

- Campbelltown City Council's Sustainability Committee;
- State of the Environment reporting (interim and comprehensive);
- Water Quality Monitoring Program;
- Cities for Climate Protection Program;
- Water and Energy Management Tool;
- Development Application process;
- Green Street Lighting Program;
- Sustainable Schools Network;
- Nature Photography Competition;
- Environmental Review Program;
- Streamcare Program; and
- Sustainability Blitz.

Ongoing reviews of performance indicators (including data collection) listed in this document will assist Council in progressing sustainability as an important element of its core business. Ongoing annual reviews of the issues affecting environmental management in Campbelltown will continue and be guided by the key actions identified in this report. The 2008/09 Comprehensive State of the Environment Report is the last report to be compiled in its current format. For future reports, Council will have an opportunity to refine its environmental review and reporting focus in a way that is integrated with the environmental objectives of the Community Strategic Plan.





a city of choice and opportunity in a natural environment