

campbelltown city council state of the environment report 2010-2011



Introduction

The SoE Report is compiled at the conclusion of each financial year by Council in accordance with requirements of the *NSW 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 a snap-shot of information to local residents of the state of the environment pressures impacting on the environment within the local area, and the Council's major achievements in response to these pressures.

The 2010-2011 SoE is a supplementary report, which provides an overview of the current state of seven key environmental areas within the Campbelltown LGA:

- Our Land
- Our Biodiversity
- Our Waste
- Our Water
- Our Air
- Our Heritage
- Our Community.

Each section of the report provides a summary of the identified annual indicators for each environmental area and shows any trend over the last three reporting periods (↑ increase, ↓ decrease, ↔ minimal change) against the mean value. These indicators have been identified to provide for an accurate indication of progress toward ecologically sustainable development over time. The review and analysis of such information on an annual basis, as part of SoE reporting, helps guide the future strategic direction of Council activities, as well as assist in the identification of future actions to address pressures to Campbelltown's environment.



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CBD	Central Business District
CMA	Catchment Management Authority
DCP	Development Control Plan
DECCW	NSW Department of Environment, Climate Change and Water (former name of the NSW Office of Environment and Heritage)
DLG	NSW Department of Local Government
<i>EP&A Act</i>	<i>NSW Environmental Planning and Assessment Act 1979</i>
<i>EPBC Act</i>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
GHG	Greenhouse gas emission
GPT	Gross pollutant trap
GRCCC	Georges River Combined Councils Committee
I&I NSW	Industry and Investment NSW
Kwh	Kilowatt hour
LEP	Local Environment Plan
LGA	Local Government Area
NSW	New South Wales
<i>NSW FM Act</i>	<i>NSW Fisheries Management Act 1995</i>
<i>NSW TSC Act</i>	<i>NSW Threatened Species Conservation Act 1995</i>
OEH	NSW Office of Environment and Heritage
SEMP	Strategic Environmental Management Plan
SMCMA	Sydney Metropolitan Catchment Management Authority
SoE	State of the Environment Report
USP	Urban Sustainability Project
WQMP	Water Quality Monitoring Program
WSUD	Water Sensitive Urban Design





our land



The Campbelltown LGA is located on the south-western edge of the Sydney metropolitan area, approximately 53 kilometres from the Sydney CBD and occupies an area of approximately 312 square kilometres. The LGA, which extends from Glenfield in the north to Menangle Park in the south, comprises 32 suburbs and is surrounded by five other LGAs including Liverpool, Camden, Wollondilly, Sutherland and Wollongong. The population predominantly lives within a linear urban corridor that follows the alignment of the F5 Motorway/Hume Highway and the Main Southern Railway line.

Campbelltown was developed as a satellite city in response to the Sydney Regional Outline Plan of the 1960s and is part of the Macarthur Growth Sector (together with the Camden and Wollondilly LGAs). In 2010, the NSW State Government finalised the Metropolitan South West Regional Strategy which sets out a vision for the management and development of the south west region incorporating the Campbelltown, Camden, Wollondilly and Liverpool LGAs. This strategy identified the Campbelltown LGA as a major centre with the potential to become a regional centre.

The current land use within the 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 a limited number of apartments located in the CBD.

In accordance with the charter for Local Government under the *Local Government Act 1993*, the principles of Ecologically Sustainable Development require Council to responsibly care for and manage the land resources of the Campbelltown LGA.

Responsible management and care of our land resources 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.

The key pressures on Campbelltown's land resources include:

- greenfield and infill urban development
- natural events such as bushfire and flooding
- invasive species
- habitat destruction
- mining
- illegal dumping
- population increases.

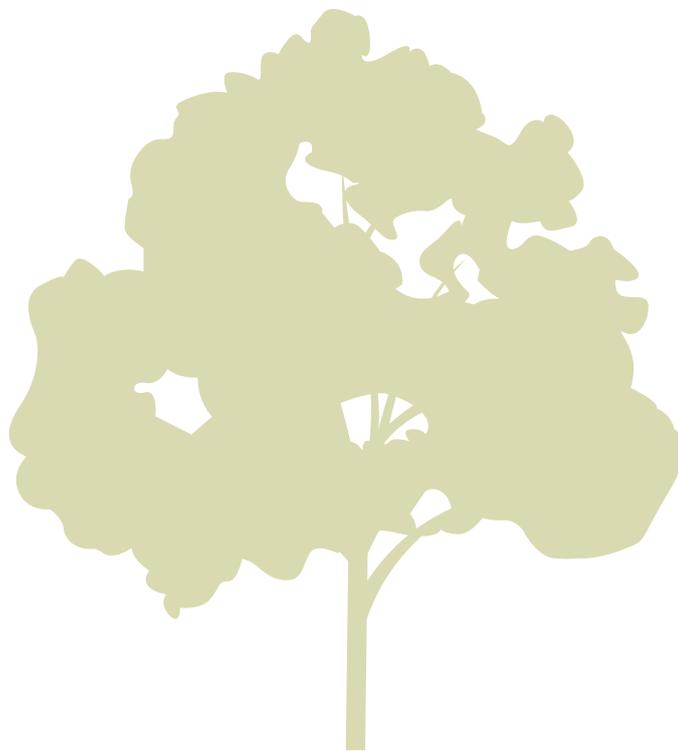


table 1 our land - reporting on indicators

The following table (Table 1) provides an account against environmental indicators for the last three reporting periods relating to Our Land and any noticeable trend.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Bushfire	Area subject to hazard reduction (ha)	475.10	592.30	434.15	↓
	Area burnt by bushfire (ha)	65	75	95	↑
	Length of fire trail maintenance (km)	90	10.50	11.97	↓
	Number of assets protected	-	1432	2599	↑
	Number of hazard reduction sites	-	82	118	↑
Landuse	Variation in proportion of landuse classifications	No change	No change	No change	↔
	Number of approvals for residential dwellings	245	335	437	↑
	Number of approvals for commercial premises	10	12	18	↑
	Number of approvals for industrial premises	40	35	25	↓
	Length of new road construction (km)	1.8	1.6	2	↔
	Number of Part 3A or Part V (EP&A Act 1979) applications lodged for the LGA	2	4	2	↔
Compliance	Number of premises licenced to pollute (air and water)	17	17	17	↔
	Number of complaints relating to illegal construction and development	236	288	313	↑
	Number of complaints relating to the environment	251	271	290	↑
	Number of trail bike complaints	88	103	77	↓
	Number of joint trail bike patrols with the NSW Police Service to deter illegal trail bike riding	3	8	3	↓
	Number of penalty notices associated with illegal trail bike activity	97	104	125	↑
	Number of juvenile cautions associated with illegal trail bike activity	4	14	4	↓
	Number of bike seizures associated with illegal trail bike activity	13	4	10	↔
	Number of charges associated with illegal trail bike activity	13	15	14	↔
	Number of Tree removal applications	38	38	40	↔
	Number of private property inspections	167	208	212	↑
	Number of specialist litter patrols	3	3	3	↔
	Number of litter penalty notices issued	53	52	66	↑
Public amenity	Length of cycleways constructed (m)	5,000	600	630	↓
	Number of walking tracks constructed	0	260	0	↓
Contaminated land sites	Number of new State registered sites	0	0	0	↔
Plans of Management	Number of performance indicators in Plans of Management achieved	67	65	70	↑

The Camden Gas Project

The Camden Gas Project is a project of AGL which involves the extraction of methane gas from coal seams in the southern coalfields within the Camden, Campbelltown and Wollondilly LGAs. The NSW Government is the determining authority for this project, which means Council's involvement is limited to providing comment on the proposal on behalf of the community and considering requests to access Council land where Council is the land owner. The following summarises Council's involvement with the stages of the Camden Gas Project relevant to the Campbelltown LGA during the reporting period.

a) Stage 2

Stage 2 of the project includes the installation of approved wells within the Menangle Park area, with four of these either in operation or in the process of being established and drilling yet to commence on the remaining six wells. At its meeting on 12 April 2011, Council resolved not to enter into an access agreement with AGL for the operation of two of these wells on land it owns or will own in the future.

b) Stage 3

An application for Stage 3 of this project, applying to the western and north western sections of the Campbelltown LGA, was lodged by AGL with the NSW Department of Planning and Infrastructure (DPI) in February 2009. In October 2010, Council was invited by the DPI to provide comment on a draft amended Environmental Assessment (EA). Council advised the DPI that it considered the amended EA had not adequately addressed previously raised issues in relation to inadequate assessment of impacts on water resources (both surface and ground) and biodiversity.



In December 2010, Council lodged a detailed submission on the EA that was placed on public exhibition. Council's submission objected to project determination by the NSW DPI on a number of grounds that included an inadequate assessment of environmental impacts. A key feature of the submission was a specialist report in relation to the groundwater component of the document which advised that there was an insufficient level of baseline data and assessment to allow for a comprehensive peer review. In March 2011, AGL initiated a groundwater investigation and

monitoring program in response to issues raised during the public exhibition period. Details of the outcomes of this investigation will be provided in the 2011-2012 State of the Environment Report.



Bushfire Management

Bushfire management on public lands within the LGA is undertaken by Council in collaboration with the NSW Rural Fire Service, NSW Fire & Rescue and other government agencies. Each year, Council routinely plans and undertakes strategic bushfire hazard reduction works as a member of the Macarthur Bush Fire Management Committee, and as a significant landholder/manager. These works are particularly important in the urban/bushland areas which are most at risk to bushfire, such as Kentlyn, Wedderburn, Minto Heights, Macquarie Fields, Long Point, Airds, Ingleburn and St Helens Park. The management of fire breaks, fire trails, roadside vegetation and hazard reduction burning are Council's main treatments for managing this risk.

The major activities and achievements of Council in relation to bushfire management within the LGA during the reporting period included:

- the review and update of the Bush Fire Prone Lands Map for the Campbelltown LGA and submission to the NSW Rural Fire Service for approval
- the mapping of all of Council's Asset Protection Zones and roadside slashing sites and production of booklets for Council's Operations staff, contractors and Correctional Service workers
- the commencement of Council's inaugural Bushfire Management Plan in the Campbelltown LGA for Simmos Beach Reserve Macquarie Fields, which will provide an overall framework for bushfire management within the reserve.



Implementation of adopted Plans of Management for Parks and Reserves

Council has adopted a list of priority parks and reserves that are considered to have high levels of conservation significance, have the greatest capacity to deliver the best social and environmental outcomes for the community and therefore warrant the preparation of a specific Plan of Management (PoM). So far, Council has planned and adopted six Plans of Management on this list as well as an additional plan for Marsden Park adopted in July 2010.

Each of these adopted PoMs contain an implementation schedule which includes objectives, actions and performance criteria to address individual management issues. During the 2010-2011 reporting period, the implementation of a number of Council's adopted PoMs included the following major activities:

- Noorumba Reserve – the completion of extensive bush regeneration work within Cumberland Plain Woodland and preliminary assessment and surveys associated with the upgrading of sections of existing tracks
- Bunburry Curran Park – the completion of major stormwater treatment works to treat urban runoff prior to it entering Bunburry Curran Creek and ultimately the Georges River
- Simmos Beach – the preparation of a Bushfire Management Plan for the reserve, designed to maintain the fire regimes of the vegetation communities while minimising the fire risk to adjoining properties
- Marsden Park – the installation of a gross pollutant trap, as part of a range of strategies designed to improve the condition of the creekline and wetland within the park.

Preparation of the draft Campbelltown (Sustainable City) Development Control Plan (DCP) 2011

The broad purpose of a DCP is to guide future development. Council is currently preparing the Campbelltown (Sustainable City) DCP that consolidates and replaces existing DCPs in a staged process. The draft Stage 4 of the document prepared as part of this process was completed during the reporting period. The key features of the document, which was publicly exhibited from 4 May until 3 June 2011 include:

- a review of the previously adopted Volume 1 of Sustainable City DCP 2009 as part of stages 1,2 and 3 of the preparation process
- the inclusion of six new parts which addressed:
 - * public consultations
 - * religious establishments
 - * vegetation management
 - * telecommunication facilities
 - * sex industries
 - * rural residential development.

A report regarding the outcomes of the public exhibition of Stage 4 of the DCP is anticipated to be presented to a meeting of Council in early 2012.

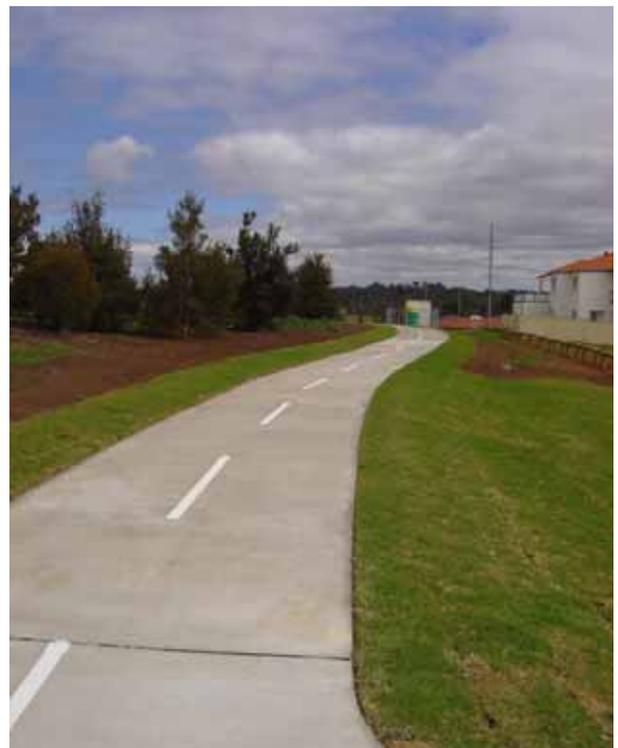
Revision of the Campbelltown Bike Plan

The purpose of the original Bike Plan for the LGA (adopted in 2001) was to provide improved options for local residents to reduce dependence on private motor vehicles and encourage the use of more sustainable transport choices. The key aspects of this plan are maps showing existing and proposed on-road cycleways and associated facilities.

Since then, transport planning within the Sydney Metropolitan Area has become more focused on sustainable modes for financial, environmental and health reasons. Consequently, Council conducted a review and update of the Bike Plan during the reporting period to encourage cycling as a viable alternative transport mode and promote the adoption of active lifestyles within the LGA. The review process involved the following key activities:

- a review of the current Bike Plan, existing facilities and associated maps
- conducting surveys of bicycle usage within the LGA and community consultation
- development and mapping of new and amended networks of off and on-road cycleways that includes additional networks linking new growth areas to Campbelltown and associated facilities.

A report regarding the draft amended Bike Plan and consultation undertaken will be considered at a Council meeting in late 2011.







our biodiversity



Biodiversity or biological diversity refers to the variety of all life forms on earth. This includes the different plants, animals and micro-organisms, the genes they contain and the range of ecosystems that they form within terrestrial, marine and aquatic environments. Biodiversity underpins the ecological processes that makes life on earth possible. It provides fresh food and water, clean air and climate regulation, soils and nutrients, as well as seed dispersal and pollination services. Biodiversity also contributes to the formulation of medicines, fuel, and building materials, as well as assisting in pest and disease regulation. Biodiversity is also a key component of cultural systems as it links with spiritual values, recreation, aesthetics and knowledge.

Campbelltown supports a high level of native biodiversity. Approximately 17,940 hectares or 58% of the LGA still contains native vegetation which supports a diverse range of flora and fauna species, including species of conservation significance. This vegetation is made up of 18 vegetation communities, seven of which are listed as threatened ecological communities under the *NSW TSC Act 1995*.

The largest areas of intact vegetation are located in the eastern portion of the LGA within the Holsworthy military area and along the Georges River Corridor. However, other significant remnants and vegetated corridors have been retained throughout the city's urban and rural environments.

Key pressures on Campbelltown's biodiversity include the following:

- clearing and fragmentation of native bushland for development
- weed invasion
- illegal dumping
- plant diseases such as myrtle rust
- climate change impacts
- altered and inappropriate fire regimes
- stormwater runoff
- predation by domestic and exotic animals
- unauthorised vehicle access (such as trail bike riding).

Council strives to maintain the biodiversity values of the LGA and in order to address threats to biodiversity, Council continues to develop and implement a range of strategies, plans and on ground works in association with the community and key stakeholders.



table 2 our biodiversity - reporting on indicators

The following table (Table 2) provides an account against environmental indicators for the last three reporting periods relating to Our Biodiversity and any noticeable trends.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Biodiversity protection	Number of Threatened Ecological Communities listed under the <i>NSW TSC Act 1995</i> as 'Critically Endangered'	-	1	1	↔
	Number of Threatened Ecological Communities listed under the <i>NSW TSC Act 1995</i> as 'Endangered'	-	6	6	↔
	Number of Threatened Ecological Communities listed under the Commonwealth <i>EPBC Act 1999</i> as 'Critically Endangered'	-	1	1	↔
	Number of Threatened Ecological Communities listed under the Commonwealth <i>EPBC Act 1999</i> as 'Endangered'	-	2	2	↔
	Number of Threatened Terrestrial Flora listed under the <i>NSW TSC Act 1995</i> as 'Endangered'	-	12	12	↔
	Number of Threatened Terrestrial Flora listed under the <i>NSW TSC 1995</i> as 'Vulnerable'	-	10	10	↔
	Number of Threatened Terrestrial Flora listed under the <i>EPBC Act 1999</i> as 'Endangered'	-	6	6	↔
	Number of Threatened Terrestrial Flora listed under the <i>EPBC Act 1999</i> as 'Vulnerable'	-	10	10	↔
	Number of Threatened Terrestrial Fauna listed under the <i>NSW TSC Act 1995</i> as 'Critically Endangered'	-	0	1	↑
	Number of Threatened Terrestrial Fauna listed under the <i>NSW TSC Act 1995</i> as 'Endangered'	-	7	6 ¹	↓
	Number of Threatened Terrestrial Fauna listed under the <i>NSW TSC Act 1995</i> as 'Vulnerable'	-	31	31	↔
	Number of Threatened Terrestrial Fauna species listed under the <i>EBPC Act 1999</i> as 'Endangered'	-	3	3	↔
	Number of Threatened Terrestrial Fauna species listed under the <i>EBPC Act 1999</i> as 'Vulnerable'	-	7	8	↑
	Number of Threatened Aquatic Fauna listed under the <i>NSW FM Act 1995</i> as 'Endangered'	-	1	1	↔
	Number of Threatened Aquatic Fauna listed under the <i>NSW FM Act 1995</i> as 'Vulnerable'	-	1	1	↔
	Number of Aquatic Threatened Fauna species listed under the Commonwealth <i>EPBC Act 1999</i>	-	1	1	↔
	Number of illegal clearing events reported to Council	-	1	1	↔

table 2 - reporting on indicators cont.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Noxious Pest and Weed Management Plan	Community Service Order bush regeneration hours	5,616	9,360	8,586	↑
	Number of complaints regarding pest animals and weeds	4	12	48	↑
	Number of noxious weed inspections on private property	307	218	63	↓
	Number of priority noxious weed inspections	7	6	20	↑
	Number of noxious weed inspections on nurseries/aquaria	36	36	3	↓
	Number of noxious weed inspections for aquatic environments within the LGA	-	14	39	↑
	Number of Weed Advice Program letters issued	31	22	15	↓
	Number of Proposed Weed Control S18A and Weed Control S18 notices issued under <i>Noxious Weeds Act 1993</i>	16	19	12	↔
Bush Regeneration	Total area of native bushland in parks, reserves and waterways that received bush regeneration and weed control (m ²)	339,000	506,911	386,000	↓
	Number of trees planted by Council	13,000	20,500	11,000	↓

¹ The Regent Honeyeater has been uplisted to 'critically endangered'.

Revised Environmental Assessment Process for Council Works and Activities

Council must comply with a wide variety of environmental legislation in conducting its day-to-day operations. In order to keep up to date with recent legislative changes, Council has commenced work on a revised environmental assessment process for activities which do not require development consent. These activities are known as exempt development under the *EP&A Act 1979*. The revised process will provide guidance on:

- when an environmental impact assessment is required
- what level of environmental assessment is required for various types of work
- how an environmental assessment is to be carried out and recorded
- what the implications and expectations are once an Environmental Impact Assessment has been completed.

This revised process will provide greater certainty for Council in terms of meeting its legislative responsibilities, and will produce improved environmental outcomes. It is anticipated to be completed during the next reporting period.

Flora and Fauna Survey of Simmos Beach Reserve

During the reporting period, Council completed a flora and fauna survey within part of Simmos Beach Reserve (predominately within the reserve's Asset Protection Zone and Strategic Fire Advantage Zone). The purpose of this survey was to identify threatened biodiversity which had the potential to be impacted on by current and future hazard reduction works. This survey confirmed the presence and/or likely presence of three threatened ecological communities, four threatened flora species and 11 threatened fauna species within the reserve. Subsequently, a series of mitigation measures were developed to protect the threatened biodiversity within the proposed hazard reduction area. These mitigation measures will be employed during future hazard reduction works as outlined in the forthcoming Fire Management Plan for the Reserve.



Cumberland Plain Recovery Plan

The NSW Office of Environment and Heritage (formerly known as the Department of Environment, Climate Change and Water) adopted the Cumberland Plain Recovery Plan in January 2011 under the *NSW TSC Act 1995*. The purpose of this Plan is to provide for the long-term survival of the Cumberland Plain's threatened biodiversity and to inform land use planning decisions that may impact on this critically endangered ecological community. Under the plan, Council has been identified as a responsible authority for the implementation of a number of recovery actions which includes the undertaking of all relevant restoration works in accordance with the Recovery Bushland on the Cumberland Plain – best practice guidelines for the management and restoration of bushland (DECC 2005).

Council has also worked collaboratively with the Office of Environment and Heritage in relation to the investigation and remediation of native bushland cleared with authorisation in accordance with the Plan.

John Kidd Reserve Rabbit Control program

The European Rabbit is a declared pest animal under the NSW Rural Lands Protection Act (1998). Council as a Land Manager, has a legal responsibility to control rabbits where they occur on land that is under its care, control and management.

A pest rabbit control program was conducted at John Kidd Reserve during this reporting period. The three week program was effective in controlling one third of the reserve's rabbit population. Follow up treatments will continue to be undertaken to ensure ongoing control.

Indian Myna Trapping Program

Indian Myna birds have a significant impact on local fauna species as they compete with native birds and other dependent fauna for tree hollows.

Council commenced an Indian Myna trapping program in 2008 which has continued to operate during the reporting period.

Approximately 300 Myna birds have been trapped during the reporting period. The program focuses on lending traps to residents in an effort to assist residents to control Myna birds in various locations across the LGA.



major achievements cont.

Noorumba Streamcare

During the reporting period, Streamcare volunteers donated 415 hours at Noorumba Reserve. Some of the significant weed removal included:

- Privet – 48 large and medium trees/shrubs removed and 13kg of smaller shrubs
- African Olive – 113 large and medium trees/shrubs removed
- Moth Vine – 23 large vines controlled weighing 209kg
- Fireweed – 27kg removed
- Prickly Pear – 30m treated.

St Helens Park Streamcare

During the reporting period, Streamcare volunteers donated 87 hours at St Helens Park Reserve. Almost 13 large bags of rubbish were removed from the site and more than 1250m² of land was weeded. Some of the significant weed species removed included the following:

- Large and Small Leaf Privet
- African Olive
- Bridal Creeper
- Asparagus Fern.

Redfern Creek Streamcare

During the reporting period, Streamcare volunteers donated 113 hours at Redfern Creek. Four large bags of rubbish were removed from the site and more than 1540m² of land was weeded. Some of the significant weed species removed included:

- Large and Small Leaf Privet
- African Olive
- Bridal Creeper
- Asparagus Fern.

Noorumba Reserve Bush Regeneration

Contractors undertook almost 360 hours of bush regeneration works within Noorumba Reserve during the reporting period. These works were undertaken as part of a five year work plan for the reserve that was developed in conjunction with the reserve's Plan of Management and Vegetation Restoration Plan.

Menangle Reserve Bush Regeneration

Community Service Order working crews have continued to undertake primary weed control works throughout Menangle Reserve in Menangle Park, donating more than 8000 hours in volunteer time. Two hectares of Riparian Forest were treated during this reporting period, resulting in the improved natural regeneration of endemic species. In addition, 1000 native seedlings were planted in heavily disturbed areas in an effort to increase the resilience of the habitat, inhibit further weed growth and reduce erosion.

Bunbury Curran Reserve Bush Regeneration

Bush regeneration works were undertaken within 1.5ha of remnant Cumberland Plain Woodland along the Bunbury Curran system. The works included major primary weed

control targeting species including Privet, Morning Glory, African Boxthorn and Balloon Vine. The works will be followed by secondary weed control and revegetation works (to be undertaken during the next reporting period).

Five Sites Bush Regeneration

Bush regeneration was undertaken at five key sites, selected based on ecological value, during the reporting period; Noorumba Reserve at Rosemeadow, Redfern Creek at Ingleburn, Botany Place at Kentlyn, Smiths Creek at Leumeah and Milton Park at Macquarie Fields. Primary and secondary weed control works continued to further build ecosystem resilience at these sites.

Photo of Bunbury Curran Reserve before works

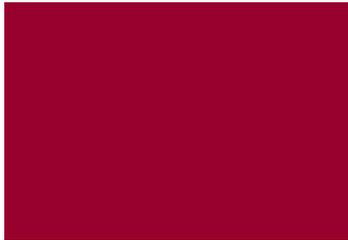


Photo of Bunbury Curran Reserve after works





our waste



Council has three key objectives in managing domestic waste management in Campbelltown:

1. to minimise the amount of waste generated per household
2. to achieve the highest possible ratio of recyclables-to-waste produced per household
3. to reduce the impacts associated with illegal dumping.

To assist residents to meet these objectives, Council continues to offer a waste and recycling collection system consisting of:

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

The reporting period saw steady improvement in the ratio of recyclables-to-waste compared to the two previous reporting periods. Campbelltown experienced an increase in the overall waste generated and resources consumed, with residents producing 414kg, per capita when compared to 407kg per capita in 2009-2010. The overall increase in domestic waste collected from the kerbside was the result of an improvement in the amount of recyclables and garden organics collected and diverted from landfill.

Key pressures on Campbelltown's waste include:

- illegal dumping
- increased population
- increased consumption
- increased cost of disposal
- ongoing capacity of, and access to landfill.

Performance data presented below shows that Campbelltown residents generated a total of 63,405 tonnes of waste during the reporting period, of which 43,291 tonnes were recycled, reused and recovered. Campbelltown achieved a diversion rate of more than 68% of resources recovered from the waste collected in domestic waste, recycling and garden organics bins (see Figure 1). Recyclables to waste ratios between this reporting period and the last remained fairly constant (see Figures 2 and 3).

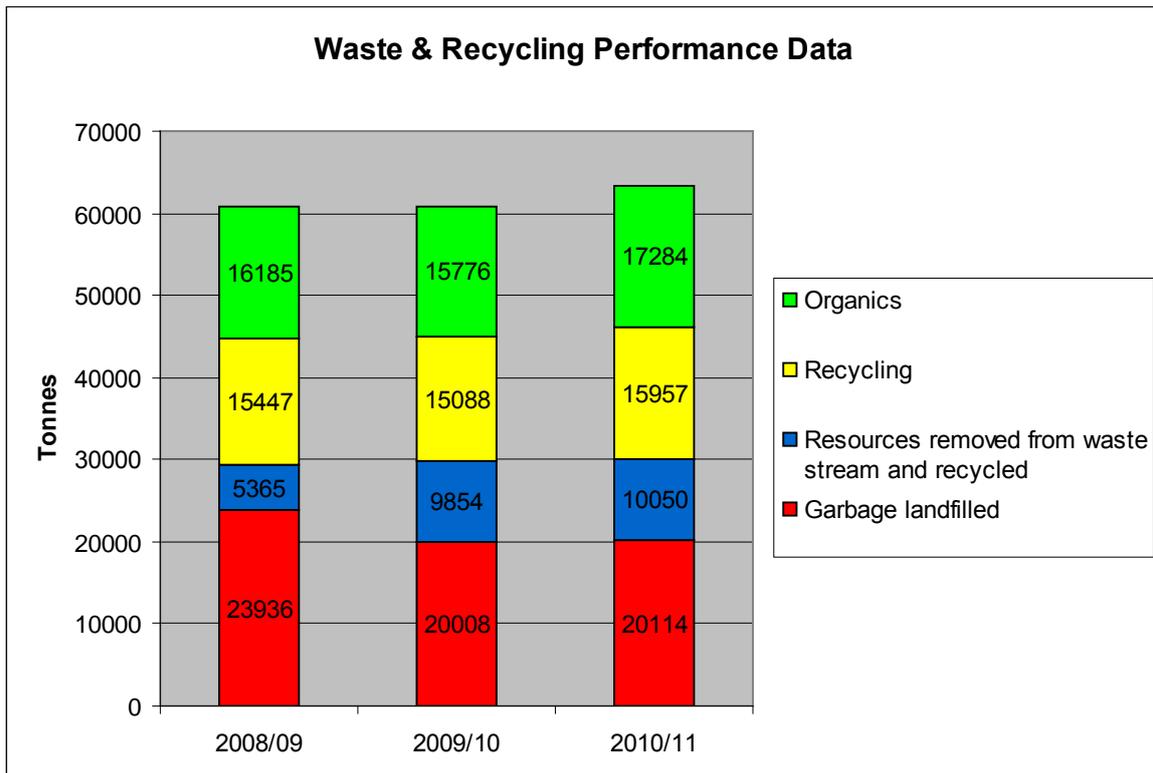


Figure 1. Waste and Recycling Performance Data for 2010-11 compared to 2008/09 and 2009/10

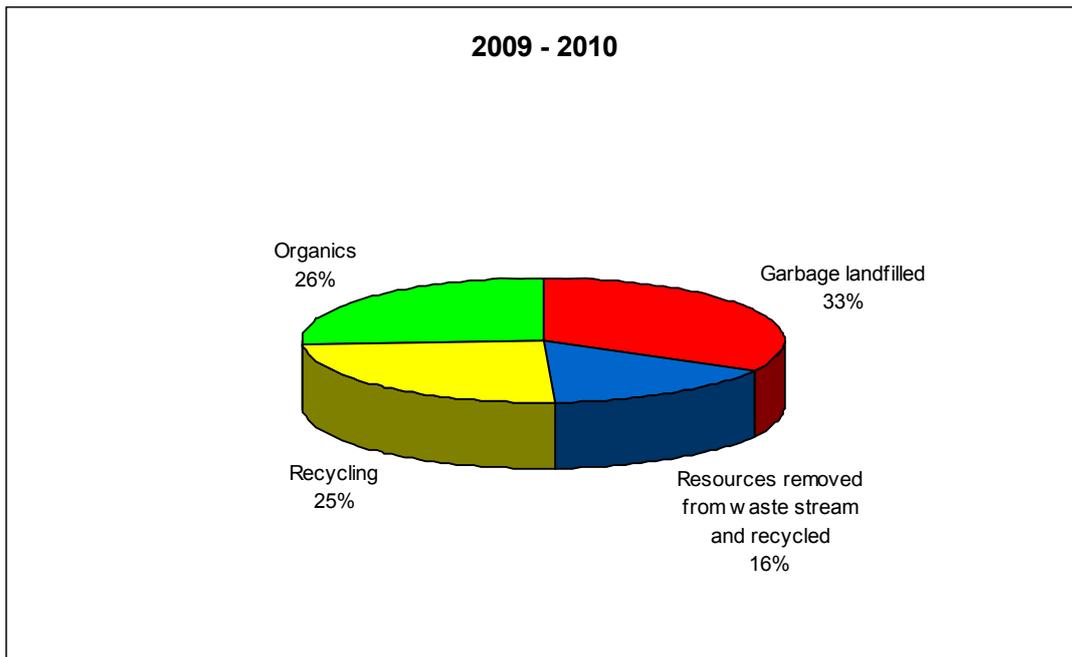


Figure 2. Recyclables to waste ratio for Campbelltown LGA in the 2009-2010 reporting period

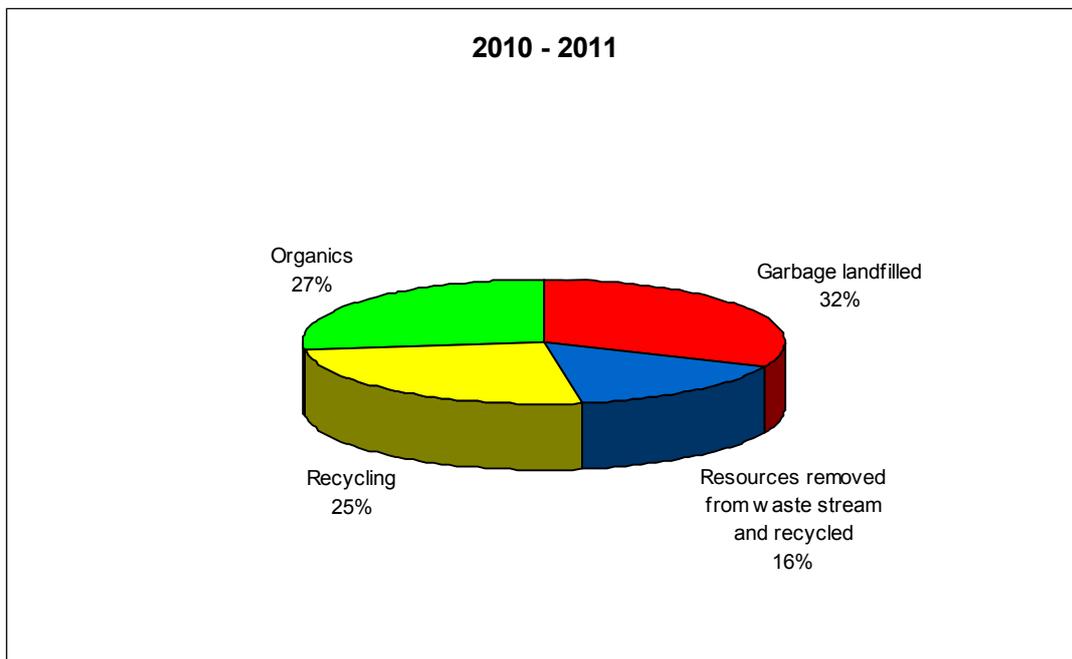


Figure 3. Recyclables to waste ratio for Campbelltown LGA in the 2010-2011 reporting period

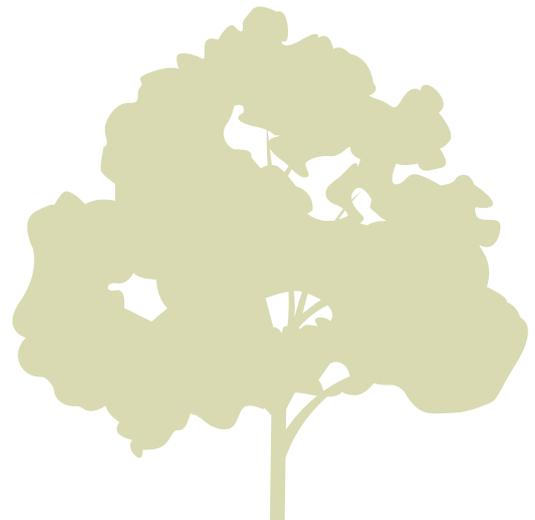


table 3 our waste - reporting on indicators

The following table (Table 3) provides an account against environmental indicators for the last three reporting periods relating to Our Waste and any noticeable trends.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Waste	Waste per person per year (kg)	413	407	414	↑
	Number of reports of illegal dumping	2,091	2,150	2,271	↑
	Amount of illegally dumped rubbish collected (tonnes)	501	548	550	↑
	Total waste to landfill (tonnes)	23,936	20,008	20,114	↓
	Total waste recovered (tonnes)	36,998	40,718	43,291	↑
	Resources recovered from waste stream (tonnes)	5,365	9,854	10,050	↑
	Number of Council cleanups	37,793	38,861	33,751	↓

Photos of Illegally dumped rubbish



Recyclables Drop Off Day

The annual Free Recyclables Drop-Off Day was held on 8 January 2011 and provided residents with the opportunity to drop off any excess recyclables accumulated over the Christmas/New Year period. This was the third time that Council has run the event and residents were again able to drop off polystyrene, which cannot be disposed of in domestic recycling bins, and is a material that is commonly accumulated around the festive season.

The event attracted 224 participants and was sponsored by WSN Environmental Solutions, SITA Environmental Solutions and the Colossal Box Company. Residents disposed of 4.49 tonnes of recyclable materials, which is equivalent to filling around 360 domestic recycling bins. A total of 3.57 tonnes of paper and cardboard and nearly one tonne of mixed recyclable containers such as plastic bottles and containers, glass bottles and containers and aluminium cans were collected on the day. A total of 30 cubic metres of polystyrene was also collected for recycling and diverted from landfill.

Recyc-Olympics

Council continued to provide the waste-related interactive and educational activity, Recyc-Olympics for children at various events, schools and child care centres.

The Recyc-Olympics is a relay race where each team is provided with a set of small mobile garbage bins (garbage, recycling and garden organics, each with the appropriately coloured lid), as well as a corresponding set of mock waste items. The race continues until all items have been disposed of in the correct set of bins.

At the conclusion of each race, the teams take part in a bin inspection where the contents of their bins are checked, and any items put in the wrong bin are identified. The correct disposal method of each of these items is then explained to the participants.

In the reporting period, more than 500 Campbelltown students participated in the Recyc-Olympics, proving to be successful in educating children on the correct use of household bins, the importance of recycling, and the benefits of placing the correct items in organics and recycling bins. The program is now used as a supplement to the sustainability subjects in the school curriculum.



Light Globe and Fluorescent Tube Recycling Program

Council continued to offer residents a free drop off point for fluorescent tube, compact fluorescent lamp (CFL) and incandescent globe during the reporting period. Residents of Campbelltown can safely dispose of CFLs and fluorescent tubes, which contain small amounts of mercury at Council's Civic Centre. Recycling these globes ensures resources such as mercury, aluminium, glass and phosphor powder are diverted from landfill, recovered for recycling and then reused by a number of industries.

Mobile Phone Recycling Program

Council continues to collect unwanted mobile phones for recycling under the MobileMuster campaign. Residents can drop off their old mobile phones, chargers and accessories at any of Council's five libraries or Civic Centre.

During the reporting period, Council collected more than 300 mobile phones, chargers and accessories. With more than 90% of the material in mobile phones recyclable, the program ensured close to 25 kilograms of valuable resources were recovered from the mobile phones for reuse in new products.

Chemical CleanOut

The Household Chemical CleanOut event was held on 24 and 25 July 2010 and provided residents with the opportunity to drop off unwanted chemicals, free of charge, for safe disposal and recycling. Chemicals accepted at the event included paint and paint related products, pesticides and herbicides, solvents and household cleaners, motor oils and fuels, batteries, gas bottles, fire extinguishers, fluorescent tubes, pool and hobby chemicals.

Approximately 600 residents participated in the two-day event and more than 23 tonnes of chemicals were collected.



Clean Up Australia Day

Clean Up Australia Day was held on 6 March 2011. More than 240,000 volunteers at 2871 registered sites participated in the event state-wide, removing 6316 tonnes of rubbish from the environment in NSW.

Locally, there were 54 sites registered in the LGA, with Schools Clean Up Day accounting for 29 of these sites, one

site for Business Clean Up Day, and 24 sites registered for the main event. Nearly eight tonnes of rubbish was collected from parks, bushland and waterways across Campbelltown.

Illegal Dumping and Litter Management Plan

In the reporting period, Council drafted an Illegal Dumping and Litter Management Plan. The purpose of the plan is to document and integrate the systems and procedures currently implemented for managing both the issues of littering and illegal dumping, and propose actions to resolve each issue.

There are three key target areas which have been identified to integrate Council's approach to managing illegal dumping and litter problems in the LGA:

1. prevention
2. infrastructure
3. enforcement.

It is envisaged that the plan will be endorsed and implementation will begin the second half of 2011.





our water



The Campbelltown LGA is located within the catchments of two principal Sydney waterways, the Georges and Nepean River systems. These waterways support a diverse variety of plants and animals, as well as provide for community amenity and recreation opportunities.

The majority of Campbelltown's urban waterways flow into the Upper Georges River, either directly to the Georges River itself or via the Bow Bowing/ Bunbury Curran Creek system. The percentage of the LGA which lies within the Georges River catchment is approximately 86%. The remaining 14% of the LGA feeds into the Hawkesbury / Nepean River.

Overall, water quality in the LGA remains fair. Water quality results for the reporting period have demonstrated poorer results within the Bunbury Curran catchment. In addition, results obtained under the GRCCC River Health Monitoring Program show that water quality within the Georges River is generally good. However, detrimental effects due to urbanisation are evident downstream of confluences with urban catchments such as Spring Creek and Bunbury Curran Creek.

Water quality over time has been influenced by rapid urbanisation. Currently, 99% of Campbelltown's population resides within the Georges River Catchment. In addition, 100% of the LGA's commercial, industrial areas and business centres are also located within this Catchment and more specifically the Bunbury Curran Catchment.

The distribution and density of urban areas in close proximity to Campbelltown's major waterways has resulted in increased volumes of stormwater being discharged into these systems. In most cases, the stormwater is contaminated with pollutants such as sediment, chemicals, litter, excess nutrients and oils.

Key pressures on Campbelltown's water resources include:

- urbanisation and associated impervious infrastructure
- stormwater
- pollution spills
- illegal dumping
- litter accumulation
- aquatic noxious weeds;
- degraded riparian vegetation
- altered flooding patterns.



table 4 our water - reporting on indicators

The following table (Table 4) provides an account against environmental indicators for the last three reporting periods relating to Our Water and any noticeable trends.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Climate and Stream Flows	Variation to monthly mean maximum and minimum temperatures (°C)	+0.17	+0.84	-0.5	↓
	Yearly and monthly rainfall (mm)	727	647	673	↔
	Maximum height of the Georges River (m)	1.5	1.4	1.8	↑
	Minimum height of the Georges River (m)	0.1	0.1	0.1	↔
	Maximum flow rate of the Georges River (mL/day)	1600	900	1247	↔
	Minimum flow rate of the Georges River (mL)	0	0	0	↔
	Floods (% AEP ¹ – annual exceedance probability)	1	1	1	↔
Water Quality	Compliance with water quality objectives in the catchment ²	Fair	Fair	Fair	↔
	Average Electrical Conductivity (EC) results at water quality monitoring sites (µc/cm)	174-1456	176-1242	152-1563	↑
	River Health Monitoring Report Card Rating for Upper Georges Catchment	Not Sampled	B	B	↔
Aquatic Weeds	Number of Alligator Weed infestations	85	81	81	↔
	Percentage of Alligator Weed Infestation coverage	30-70	5	5	↓
	Number of Ludwiggia infestations	97	85	85	↓
	Percentage of Ludwiggia infestation coverage	30-70	5	5	↓
Point Sources of water Pollution	Number of licensed discharge points to water	5	5	5	↔
	Number of sewage outfall events	Not Reported	3	Not Reported ³	N/A
	Total discharge of outfall events (mL)	Not Reported	101.11	Not Reported ³	N/A
	Number of sewage overflow incidences	Not Reported	17	Not Reported ³	N/A
	Volume of sewage overflow incidences (kL)	Not Reported	249.35	Not Reported ³	N/A
	Number of septic systems within the Campbelltown LGA	>900	>900	>900	↔
	Number of septic systems inspected for compliance	Not Reported	105	110	↑
	Percentage of septic systems that complied on initial inspection	85	67	63	↓
Percentage of septic systems that continued to fail after notice was given	Not Reported	44	3	↓	
Water Quality Improvement Devices	Number of water quality improvement devices installed	0	20	2	↓
	Volume of pollutants collected from GPTs (m ³)	593	350	472.6	↔

table 4 - reporting on indicators cont.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Compliance	Number of compliance reports for water issues	31	37	40	↑
	Number of water quality complaints received by the OEH (including stormwater)	7	16	14	↔
Water Extraction	Number of surface water licences	30	30	30	↔
	Number of licensed groundwater bores	26	33	37	↑

¹ Annual exceedence probability

² As per Council's water quality monitoring strategy

³ Information unavailable at time of report preparation



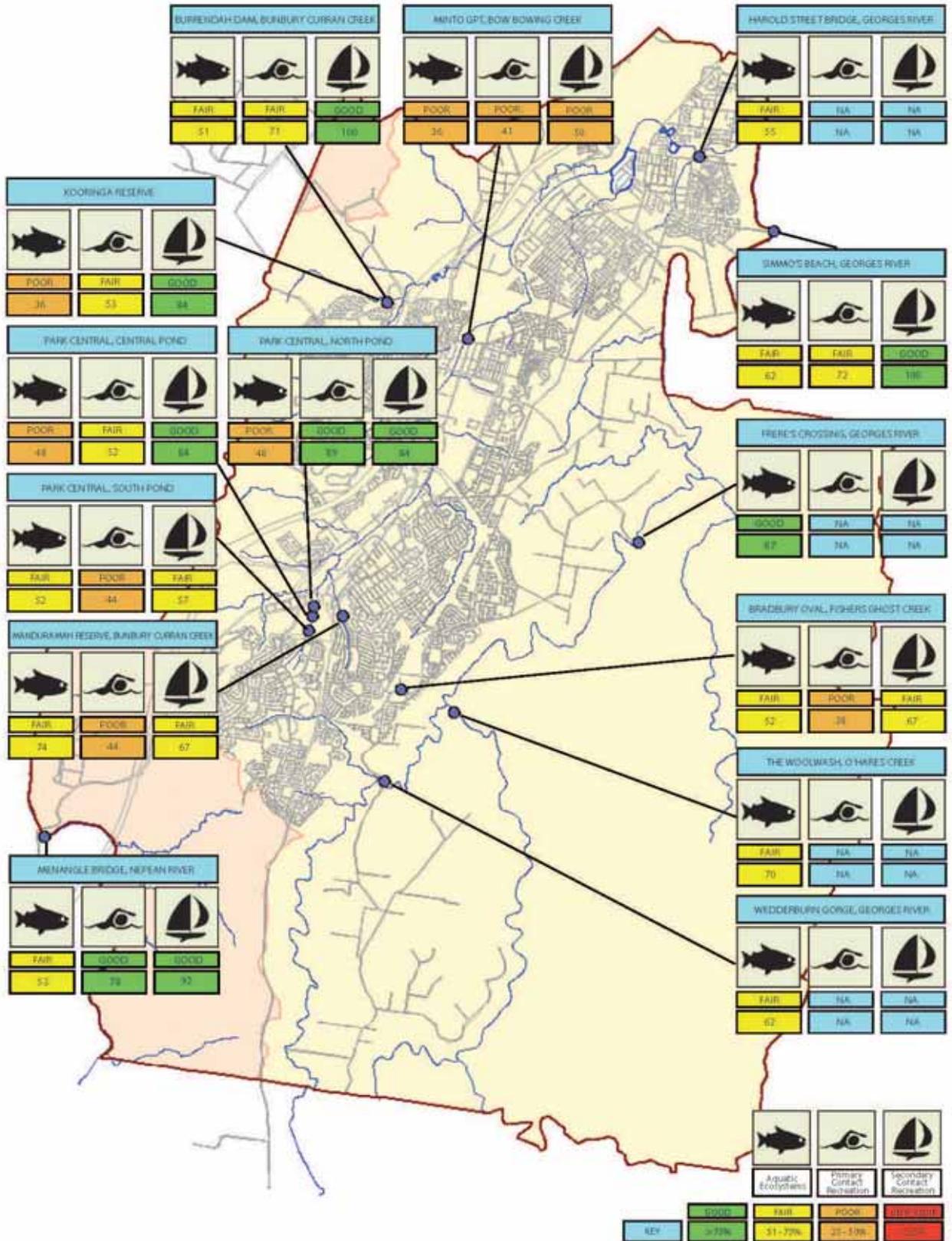
Water Quality Monitoring Program

Council continues to undertake water quality testing at a number of strategically selected sites within the LGA. Council's current WQMP includes the sampling and monitoring of 14 strategically selected sites within the Georges River and the Nepean River Catchments against National Guidelines for Fresh and Marine Water Quality, developed by the Australian and New Zealand Environment and Conservation Council (ANZECC 2000). Results from WQMP are provided in Figure 4 and Table 5 below.

In addition, the results from the GRCCC's River Health Monitoring Program since spring 2009 are provided in Table 6. Further information about the River Health Monitoring Program is contained in the section on the GRCCC.



Figure 4. Average percentage compliance with ANZECC guidelines for water quality at Council's water quality monitoring sites



* Please note that although each site is analysed against primary and secondary contact criteria, only two sites are recognised as providing for primary contact recreational activities - Menangle Bridge and Simmos Beach. In the case of other locations, analysis is conducted for benchmarking purposes only.

table 5 - reporting on indicators cont.

Table 5. Percentage compliance with ANZECC water quality trigger values for aquatic ecosystems, primary contact recreation and secondary contact recreation criteria for sites tested under the WQMP for the Campbelltown LGA

		Bushland and Rural Landuses						Urbanised Landuse							
		The Woolwash, O'Hares Creek	Menangle Bridge, Nepean River	Wedderburn Gorge, Georges River	Frere's Crossing, Georges River	Simmo's Beach, Georges River	Harold Street Bridge, Georges River	Kooringa Reserve, Varroville	Minto before GPT, Bow Bowling Creek	Park Central, South Pond	Park Central, Central Pond	Park Central, North Pond	Manduramah Reserve, Bunbury Curran Creek	Burrindah Dam, Bunbury Curran Creek	Bradbury Oval, Fisher's Ghost Creek
 Aquatic Ecosystems	Dissolved Oxygen	70	71	40	100	54	11	30	40	70	30	100	30	30	
	pH	90	93	100	100	100	100	90	8	50	80	100	80	80	
	Electrical Conductivity	90	67	80	100	86	100	50	92	100	100	90	100	70	
	Turbidity	30	21	40	100	14	44	25	25	10	30	50	100	70	60
	Total Nitrogen	69	27	38	73	64	23	0	8	23	23	8	31	15	0
	Total Phosphorus	38	27	15	45	18	31	0	23	38	23	15	38	23	38
 Primary Contact	Chlorophyll A	100	64	100	91	100	77	50	55	38	54	62	38	85	
	Faecal Coliform	n/a	83	n/a	n/a	50	n/a	33	67	100	0	33	67	33	
	Enterococci	n/a	50	n/a	n/a	67	n/a	33	0	67	0	33	0	67	0
 Secondary Contact	Faecal Coliform	n/a	100	n/a	n/a	100	n/a	100	100	100	67	67	100	100	
	Enterococci	n/a	83	n/a	n/a	100	n/a	67	0	67	67	67	100	33	

Key	Good >75%	Fair 51-75%	Poor 25-50%	Very Poor <25%
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ANZECC Guideline Trigger: Values used are values for South-east Australia- Lowland - Eastern Flowing Coastal Rivers (Source ANZECC, 2000).
 Dissolved Oxygen 85-110 (% saturation) ; Electrical Conductivity 125 -2200 (us/cm) ;Turbidity 6-50 (NTU) ; Total N 350 (ug/L) ; Chlorophyll A 5 (ug/L)
 Faecal coliform Primary Contact: The medium of a minimum of 5 samples should not exceed 150 organisms/100mL
 with 4 out of 5 samples <600/100ml(org/100ml)
 Faecal coliform Secondary Contact: The medium of a minimum of 5 samples should not exceed 1000 organisms/100mL, with 4 out of 5 samples less than 4000/100mL
 Enterococci Primary Contact: The medium of a minimum of 5 samples should not exceed 35 enterococci/ 100mL. Maximum number in any one sample 60 - 100 / 100mL
 Enterococci Secondary Contact: The medium of a minimum of 5 samples should not exceed 230 enterococci/100mL. Maximum number in any one sample 450 - 700 /100mL

table 6 - reporting on indicators cont.

Table 6. River Health report card grades for sites monitored within the LGA under the GRCCC River Health Monitoring Program

Site	Autumn 2011 Grade	Spring 2010 Grade	Autumn 2010 Grade	Spring 2009 Grade
Stokes Creek	A	A+	A+	A
Woolwash O'Hare's Creek	A	A	A-	A
Woolwash Georges River	B	B	B	B+
Georges River Ingleburn Weir	A+	A+	A+	A+
Georges River Simmo's Beach	B+	B	B	B-
Georges River Cambridge Ave	B	B	B-	C+



Birunji Creek Stilling Basin and Environmental Protection Works

Council, with partial funding from the Caring for Our Country grant program administered by the Sydney Metropolitan CMA, has constructed works in Birunji Creek which address issues of bank instability, erosion, sedimentation and lack of amenity.

These works are environmentally sympathetic, and will achieve the aim of protecting the downstream Cumberland Plain Woodland ecological community. The works incorporate the reinforcement of the banks with sandstone rocks. The arrangement of rocks of varying size minimise maintenance and allow for plantings to occur. These works protect the banks from further erosion, stabilise the creek bed, dissipate the velocity of water from the culverts and provide opportunity for plant growth in protected interstices in the rock which in turn provides habitat for wildlife, as well as improved amenity.

This design affords a similar level of protection as hard engineering works, however, it is achieved with minimal concrete and the use of mainly soft, environmentally sympathetic engineering treatments. The site works will afford the creek with a suitable level of environmental protection from upstream flows. They will create habitat and provide the opportunity for riparian vegetation expansion within the site of the works. By consolidating the location for collection of gross pollutants at two locations (the upstream stilling basin and the trash rack), maintenance will be facilitated and provide a more cost effective solution than previously existed at the site.

Photo of environmental protection works in Birunji Creek



Coronation Park Bioribbons

During the reporting period, a bio-ribbon was installed in the pavement of the Coronation Park carpark. Sheet flow from the carpark will enter the bio-ribbon. This bio-ribbon will allow runoff from the carpark to be treated by both the vegetation in the bio-ribbon and the micro-organisms that attach themselves to the soil within the bio-ribbon. Carparks are traditionally high generators of hydrocarbons which will be broken down by the micro-organisms in the bio-ribbon. Litter will also collect on the surface of the bio-ribbon, stopping it from blowing around the carpark and allowing more centralised collection.

Photo of bio-ribbon installed at Coronation Park



Campbelltown Golf Course Urban Sustainability Program

In 2009, Council received \$250,000 funding from the NSW Environmental Trust for an USP focusing on the headwaters of the Bow Bowling Creek within the Campbelltown Golf Course. The project primarily aims to improve water quality within the catchment and engage with key stakeholders including the golf club and local community.

During the reporting period, an environmental management plan was prepared for the course incorporating an Environmental Management System (EMS), Waterway Management Plan and Agronomic Assessment. The EMS provides an environmentally sound operational policy framework, which includes procedures for chemical and pesticide use, waste disposal and equipment. Golf club staff are due to undertake training in implementation of the EMS in the next reporting period.

Wetland restoration works and bush regeneration have been undertaken across the course during the reporting period under the auspice of the project. A program of works, based on recommendations from the Waterway Management Plan, is currently under development and will be implemented as part of the final stage of the project.

The project is due to conclude in February 2012.

Upper Georges River Urban Sustainability Program

In 2008, Campbelltown Council in partnership with Liverpool Council and in association with Wollondilly Shire Council and the GRCCC, received \$2 million from the NSW Environmental Trust for USP focused on the Upper Georges River. During the reporting period the project achieved a number of significant milestones. Several large on-ground projects were completed, the Strategic Environment Management Plan was finalised and one of the major community engagement events "The River Project" was staged.

On Ground Works Highlights

A significant number of onground works projects were completed within the reporting period. One of the major projects was the Victoria Road Stormwater and Bunbury Curran Weed Removal Project. The project represented a two step approach to addressing water quality issues and weed infestation within the old meanders of the Bunbury Curran creek. The first stage involved works undertaken to mitigate the impact of high velocity stormwater discharging into the old meanders. This project also sought to address a number of water quality issues in the sub catchment, particularly in regard to reducing erosion and suspended solids. Following the finalisation of stage 1, significant weed removal and bush regeneration has been undertaken through the riparian corridor. The area is now being managed to assess the capacity for the native vegetation to regenerate, without the competition from the weeds.

The SEMP

The finalisation of the SEMP was an important milestone for the project. The purpose of the SEMP is to guide decision making in regard to the Upper Georges River catchment, including water quality, biodiversity and community engagement/education. The SEMP is designed to assist decision makers, planners, managers, key stakeholders and the community in understanding the issues facing the Upper Georges River and to put in place appropriate responses, which in time, will address these issues.

Importantly, the SEMP will represent a major legacy beyond the timeframe of the Upper Georges River project as it will continue to guide and inform all decisions that have the potential to impact on the Upper Georges River for the next several years.

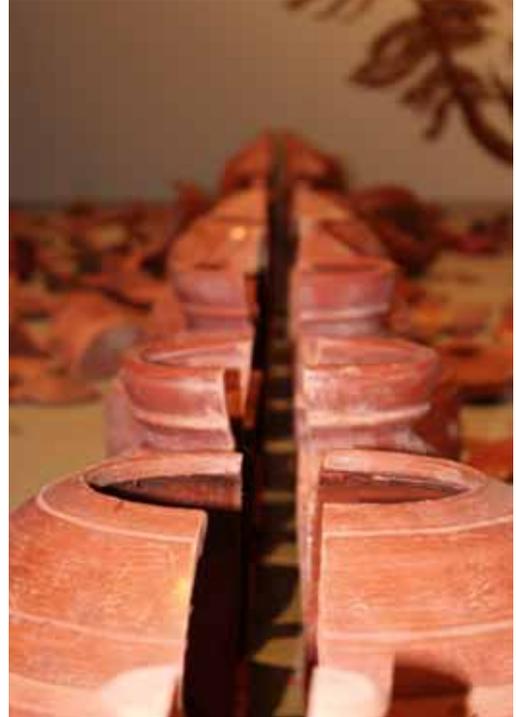
The River Project

The River Project brought together 20 artists from the Asia Pacific region to exhibit works across a variety of formats, that addressed the social and environmental impacts of the changing nature of river systems across the Asia-Pacific region.

From the Yangtze River in China, the Indus River that runs through Pakistan, to the Georges River that connects south-west Sydney, these river systems were chosen to represent our interconnectedness, our fragility and our histories.

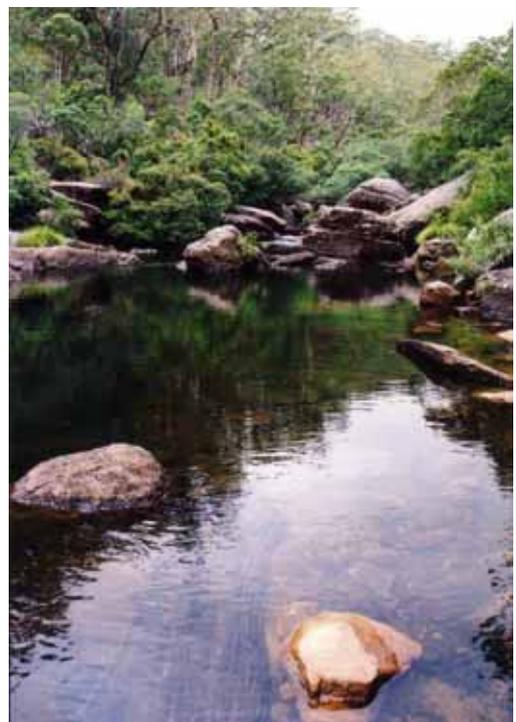
The exhibition opened with a gala evening in August 2010 with more than 700 people attending. During the next three months, a further 18,000 people viewed the exhibition. The

exhibition closed with a River Symposium to discuss issues facing the Georges River, featuring keynote speaker Dr Ian Wright (from the University of NSW) and a presentation by Dr Ann Young a recognised academic in Physical Geography.



The Upper Georges River 2011-2012

In July 2011, the Upper Georges River USP was granted a 12 month extension to enable a number of the actions within the SEMP to be delivered. The project is now due for completion in June 2012. Staff are currently preparing project plans to begin the implementation of the SEMP. This represents another critical step in addressing the issues facing the Upper Georges River.



Council's Membership of the Georges River Combined Councils' Committee

The GRCCC represents local councils in the Georges River Catchment of NSW. Members include nine local councils: Rockdale City, Sutherland Shire, Kogarah City, Hurstville City, Bankstown City, Liverpool City, Fairfield City, Campbelltown City and Wollondilly Shire councils. It is an incorporated association of local councils working in partnership with State and Federal Government agencies and community representatives within the Georges River Catchment.

Formed in 1979, the GRCCC's mission is to advocate for the protection, conservation and enhancement of the health of the Georges River, by developing programs and partnerships and by lobbying government organisations and other stakeholders.

Council is an active member of the GRCCC and works in association with the Committee on a range of projects including the Upper Georges River Urban Sustainability Project. Other projects of note are outlined below:

Community River Health Monitoring Program

The Program, which is funded by the Federal Government's Caring for Country Program, involves the monitoring of macroinvertebrates, water quality and riparian vegetation at 42 selected sites along the Georges River Catchment. The data collected is being used to produce a series of program 'report cards' which provide a snapshot of the health of the Georges River.

The Program aims to gain a greater understanding of the Georges River system. The Program identifies areas of high biodiversity that should be protected; areas where on-ground works have been effective; areas where remediation works could be carried out in the future; and areas where future investigation may be required. The results will inform more rigorous studies and guide expenditure for environmental works with the catchment through the identification of problem areas.



The Riverkeeper Program

The Program aims to improve the health and amenity of the Georges River and undertakes activities such as rubbish removal, control and management of terrestrial and aquatic weeds and monitoring of the Georges River for illegal activities and river health. It also assists in raising

awareness and appreciation of the natural environment amongst the community along the Georges River.

The Program works regularly with teams of volunteers from organisations such as the National Parks Association, National Green Job Corps Program and other interested community groups. Additionally, the GRCCC partners with Corrective Services NSW using work teams comprised of individuals on Intensive Correction Orders for assistance in delivering the Riverkeeper Program.



The projects that are undertaken in each LGA are agreed upon in collaboration with member councils. Within the Campbelltown City Council LGA, the Riverkeeper Program routinely undertakes rubbish removal from the following sites:

- Mount Erin Drive, Blair Athol
- Bow Bowing Park Gross Pollutant Trap
- Park Central, Campbelltown
- St. Helens Park Gross Pollutant Trap
- Marysfield Reserve, Blair Athol
- Bow Bowing Creek, behind Leumeah Station, Leumeah
- Fisher's Ghost Creek, The Parkway, Bradbury
- Kyngmount Reserve, Eagleview Road, Minto
- Pembroke Park, Pembroke Road, Minto

The Program also undertakes bush regeneration at Eagle Farm Reserve, Eagle Vale.

During the reporting period the Riverkeeper Program worked a total 527 hours within the Campbelltown LGA; collected 3,740kg of rubbish and treated 1,015m² of vegetation for bush regeneration.







our air



Climate change

Changes to the global climatic system are widely recognised among the scientific community as being attributable to human activities. There is now wide scientific agreement that in the absence of action being taken to reduce GHG emissions, climate change is projected to affect temperatures and sea levels, cause significant changes to rainfall and increase the incidences of extreme and dangerous weather events including storms, bushfires cyclones, floods and droughts. 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, based on this evidence, 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, GHG's 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 GHG's include water vapour, carbon dioxide, methane, nitrous oxide and ozone. Known as the enhanced greenhouse effect, this is contributing to a warming of the earth's surface and consequently climate change.

In accordance with the Department of Environment, Climate Change and Water (DECCW) survey Who Cares about the Environment in 2009, more than three-quarters of respondents (78%) believed that climate change is happening or is going to happen and 69% agreed that the NSW Government should take urgent action on climate change regardless of the current social and economic conditions. 38% believe that climate change is currently occurring while 31% believe that climate change would not happen for another 20 years. In addition, the survey identified that knowledge of the greenhouse effect increased from 41% in 2006 to 51% in 2009.

Urban Air Quality

The survey also revealed that, from the people surveyed, air quality is identified to be the third most important environmental issue in NSW (tied with energy/fuel and following water conservation and management/drought and climate change). 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% of the NSW population. These problems are photochemical smog (ground level ozone) and particle pollution (brown haze).

The main sources that contribute to air pollution include motor vehicles, smoke from wood heaters and industry as well as commercial and domestic sources. Other factors include burning for bush fire hazard reduction and agricultural purposes.

Regional and Local Air Quality Inventory

The DECCW measures and records ambient levels of air pollutants across Sydney, Illawarra, the Lower Hunter and selected rural sites around NSW twice daily. Monitoring stations located in the Sydney south west region include Macarthur, Bringelly, Liverpool, Bargo and Oakdale. The information provided by these stations helps in determining the nature and severity of air pollution within the LGA.

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.

In 2008, this process was revised and a new index instigated. Known as the Regional Air Quality Index (RAQI), the index is based on the five criteria pollutants (as per the national standards) plus visibility (as per a standard set by the NSW Government). The RAQI values are categorised as follows:

- very good, 0-33
- good, 34-66
- fair, 67-99
- poor, 100-149
- very poor, 150-199
- hazardous, >200.

Local Air Quality

Clean air is fundamental to the health of the community and the natural environment. Council maintains a registry of air pollution concerns raised by residents which are actively inspected by compliance officers. Air quality concerns predominantly include excessive smoke from domestic wood heaters and motor vehicles, unauthorised burning of waste, unacceptable odours and dust. Residents who are the subject of complaints are generally provided with advice and education. However, where air pollution continues, Council has a variety of enforcement options available to ensure that all sectors of the community comply with acceptable air quality standards. These standards are detailed in the *Protection of the Environment Operations (Clean Air) Regulation 2010*.

Key pressures on Campbelltown's air quality include:

- pollutants from motor vehicles
- smoke from bushfires
- smoke from domestic woodfires
- emissions from industry
- emissions from the unauthorised burning of waste.

table 7 our air - reporting on indicators

The following table (Table 7) provides an account against environmental indicators for the last three reporting periods relating to Our Air and any noticeable trends. Figures 5 and 6 provide graphical representations of the Macarthur Air Quality Index monthly average compared against the Sydney South West Regional Air Quality monthly average for this reporting period as well as the 2009-10 reporting period. The data shows that the air quality index has improved between the two reporting periods. Figure 7 shows the number of domestic home saver rebates issued for the LGA against the type of rebate for this reporting period and the previous one.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Climate change	Electricity consumption by Council (kWh)	14,802,096	15,663,967	Not Reported	↓
	Percentage of green energy purchased (large Council facilities)	10	10	10	↔
Air quality	Number of rebates granted to residents	1,553	4,025	4,943	↑
	Macarthur Air Quality Index monthly average (rating)	59 = Good	55 = Good	44 = Good	↓
	Sydney South West Regional Air Quality Index monthly average (rating)	59 = Good	70 = Fair	52 = Good	↓
	Number of air quality complaints received by Council	60	55	74	↑
	Number of air quality complaints received by the Office of Environment and Heritage	61	9	20	↓
	Number of facilities with current pollution licences	10	10	Data Unavailable	↔

*Data regarding facilities with current pollution licences has not been released by OEH at time of reporting.

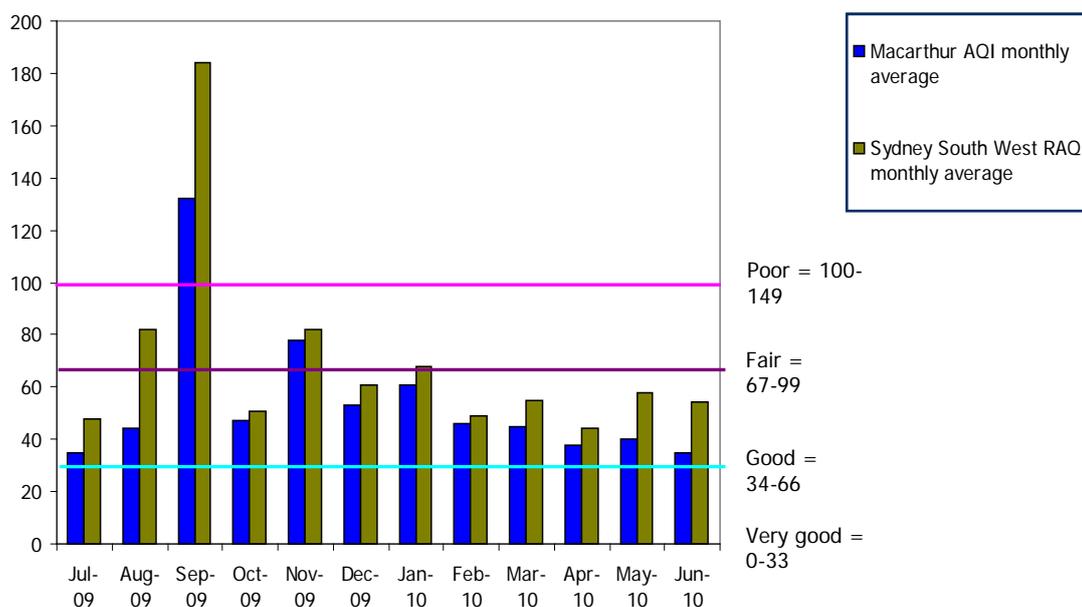


Figure 5. 2009-2010 Macarthur Air Quality Index monthly average compared against the Sydney South West Regional Air Quality monthly average.

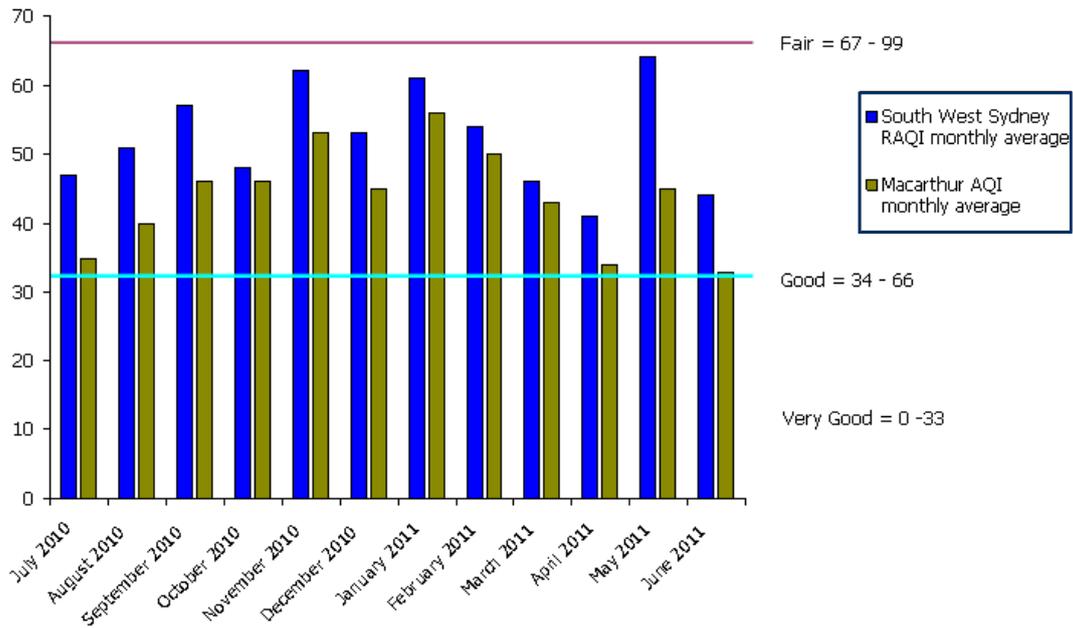


Figure 6. 2010-2011 Macarthur Air Quality Index monthly average compared against the Sydney South West Regional Air Quality monthly average.

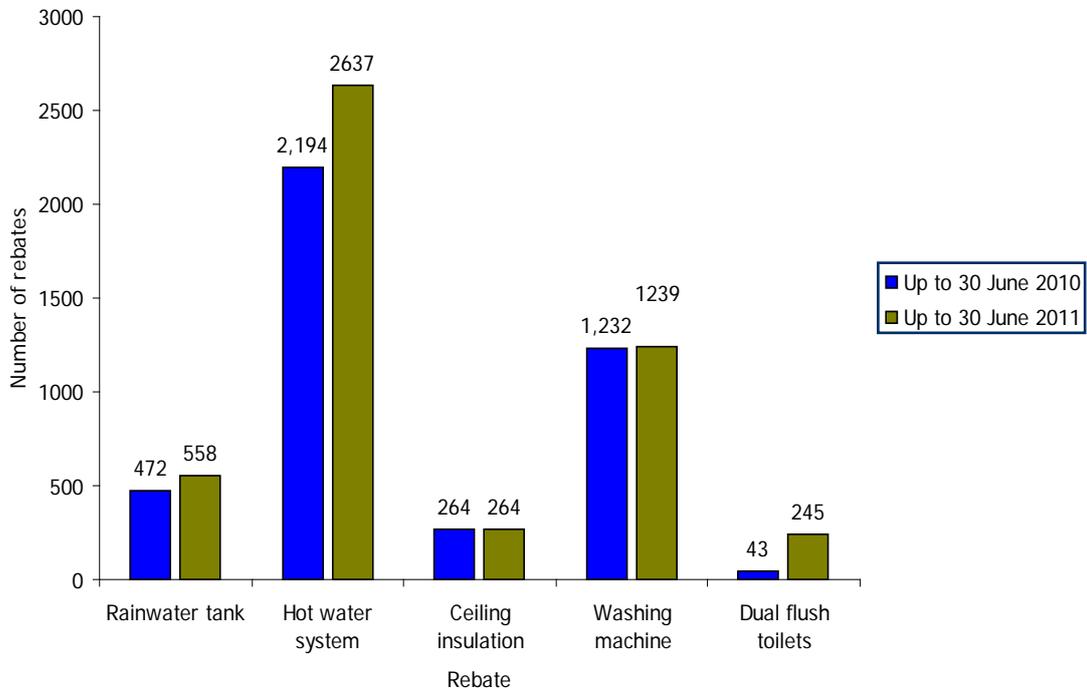


Figure 7. Number of domestic home saver rebates issued during the reporting period for the LGA.

major achievements

During the reporting period, Council continued to reduce its GHG emissions through the development and implementation of a number of strategic documents and initiatives. These initiatives are diverse and are facilitated within a number of Council's operational areas. They include:

- implementation of an Energy Savings Action Plan
- fleet Management and Fuel Savings Initiatives Programs
- development of a Sustainable Event Management Policy
- development of a Sustainability Accounting Tool
- participation in the Waste and Sustainability Improvement Payments program
- ongoing operation of a corporate Sustainability Committee
- commencement of a paper usage review
- development of a Sustainable Procurement Policy.

Sustainable Event Management Policy

Council has an important role to play in the implementation and achievement of sustainable practices. Events, whether they are small team meetings or large festivals, include internal stakeholders, external stakeholders or community members/representatives, provide an opportunity for Council to lead by example and to demonstrate its commitment to sustainable practices. Sound and sustainable event management can assist Council to minimise its ecological footprint and associated financial costs, by reducing energy and water consumption, GHG emissions and waste.

In recognising that there are a number of constraints associated with planning an event, the policy is divided into seven principle areas which aim to provide a broad coverage of potential practices for adoption:

- venue/site selection - selection of a sustainable venue/site, for example, considering the venue's proximity to public transport
- event promotion - reducing unnecessary waste associated with the printed promotion of an event and using alternate measure for promotion such as Council's website and other mediums
- catering - sustainable ways to source food and reduce food waste
- power - reducing power usage through the efficient use of equipment
- water - reducing water usage
- waste management - applying the waste hierarchy (avoid, reduce, reuse, recycle)
- other - reducing the overall impact of an event on the environment. (eg include discussions on the achievements and challenges of running a sustainable event at team meetings).

Waste and Sustainability Improvement Payments

Since 2008, Council has received annual funding from the NSW Government's Waste and Sustainability Improvement Payments (WaSIP) Scheme. Last year, Council received approximately \$564,000 to support the implementation of 11 projects which were considered to provide positive benefits to Council and the community in the areas of energy and water reduction, environmental restoration, climate change,

sustainable transport and sustainable purchasing.

During the reporting year, Council continued to implement the 11 projects, as well as introduced a further 16 projects with the support of an additional \$755,000 in funding.

Some of the projects which were implemented during the reporting period included:

- Sustainability Accounting Tool - development and implementation of a business solution which will integrate and report on information relating to Council's electricity, gas, water and paper consumption, as well as its vehicle fleet emissions and waste production
- Power Factor Correction Units (PFCU's) – the installation of PFCU's assist in the efficient energy consumption of a building by ensuring that it is only drawing the power required. PCU's were installed at Campbelltown Swimming Centre, Eagle Vale Central, HJ Daley Library and the Arts Centre
- energy initiative review - development of an Energy Management Plan which will strategically guide the implementation of energy efficient initiatives within Council's top 10 energy consuming facilities
- solar at the Works Depot – installation of a 9.95 kW photovoltaic system at Council's works depot to reduce energy consumption by at least 10%
- solar pool heating at Eagle Vale and Campbelltown Swimming Centres -installation of a solar pool heating system to reduce gas consumption associated with pool heating. The system was installed at the Campbelltown centre in December 2010. An analysis of the gas consumption data between January and February 2011 estimated cost savings of \$4300 for this period.



Carbon Neutral 'Fisher's Gig'

Recognised as being Macarthur's largest youth entertainment, arts and cultural event, Fisher's Gig is held annually in conjunction with the renowned Festival of Fisher's Ghost. Fisher's Gig provides a supportive environment for volunteers to develop skills in event management and performance.

Recent community consultation identified that young people across Campbelltown have generally demonstrated a high awareness of environmental issues, and shown a strong willingness to participate in local environmental initiatives. In partnership with the organising committee, Council piloted its first ever entirely sustainable event at Fisher's Gig 2009 by:

- purchasing renewable energy to offset emissions associated with the energy consumption of the event
- planting trees to sequester emissions associated with attendee and performer transport
- ensuring recycling bins were made available at the event.

The event was again held in its sustainable format on 6 November 2010 at Bradbury Oval and featured three well-known Australian headlining acts and six local bands. On the day, the significance of Council's carbon-neutral efforts were highlighted through event signage and promotional messages, and attendees were also encouraged to sign up for the tree planting day the following weekend.

With the help of a group of volunteer young people, 50 native trees were planted, mulched and watered at a site within the Bradbury Oval complex (adjacent to the location where the event was held) in an effort to offset emissions associated with the event.





our heritage



Heritage is the most tangible evidence of our history and culture. It includes places, objects and landscapes that have aesthetic, natural, historic or social significance or special values for our people. It links us to our past and provides a sense of belonging. Heritage comprises both natural and cultural elements. Natural heritage consists of ecosystems, biodiversity, as well as land and water.

The original inhabitants of the Campbelltown area were the Tharawal Aboriginal people. European settlement dates from the early 1800s, with land used mainly for agriculture, particularly wheat farming, sheep grazing and dairy farming.

The Campbelltown area boasts a rich European heritage, being one of the first areas of European colonisation in Australia. There are 105 local heritage items identified within the LGA including buildings, monuments, churches, railway stations, bridges, cemeteries, reservoirs, dams, water canals and forests. 21 of these items are also recognised as being of state significance on the NSW State Heritage Register.

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 *EP&A Act 1979* enables Council to protect heritage items through planning controls such as LEPs and DCPs. 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.

These heritage items have the potential to be impacted on by a number of factors, including the development and redevelopment of land. The cost of maintaining heritage items, particularly those in private ownership, and finding appropriate new uses for heritage buildings, are also issues of concern.



Indigenous Heritage

The Aboriginal people of southern Sydney and the Illawarra region refer to themselves as the Tharawal people. The Tharawal people lived in the area from the south side of Botany Bay, around Port Hacking to the north of the Shoalhaven River and inland to Campbelltown and Camden. Within the Campbelltown LGA, the Georges River and its associated landscapes provided the Tharawal people not only with food and shelter, but also a rich resource for the expression of their cultural and social heritage. The diversity and number of known Indigenous sites, places and relics within the LGA is a reflection of this, with more than 350 known sites, places and relics having been recorded.

Indigenous heritage sites within the LGA have suffered damage from human activities such as clearing, development, earthworks and vandalism. The natural forces of wind, water and sunlight also cause damage to sites through erosion and fading. Council faces the challenge of addressing such impacts on Indigenous heritage. While places of Indigenous heritage significance are protected under the *National Parks and Wildlife Act 1974* and the *NSW Heritage Act 1977*, the inclusion of planning controls within the Campbelltown (Sustainable City) DCP affords another layer of protection and is one way in which Council seeks to conserve Indigenous heritage.

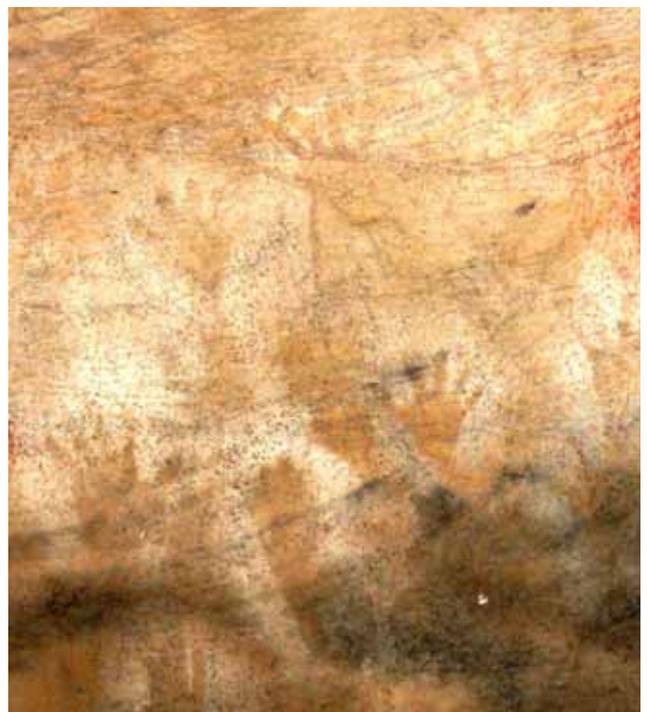


table 8 our heritage - reporting on indicators

The following table (Table 8) provides an account against environmental indicators for the last three reporting periods relating to Our Heritage and any noticeable trends.

Category	Indicator	Reporting Year			
		2008/2009	2009/2010	2010/2011	3 year trend
Heritage items within LGA	Number of heritage items listed on the Commonwealth Heritage Register	2	2	2	↔
	Number of heritage items listed on the NSW State Heritage Register	22	22	22	↔
	Number of heritage items listed on the Local Heritage Register	105	105	105	↔
Heritage protection	Amount of funding provided to conservation projects from Council's annual Local Heritage Fund (\$)	5000	5000	5000	↔
	The number of heritage items assisted with funding per financial year	4	4	2	↓
	The number of development applications considered by the Heritage Protection Sub-Committee (HPSC)	-	2	4	↑
	Number of main heritage events held by or in conjunction with Council	-	5	3	↓

European Heritage

Heritage Festival Activities

The Campbelltown Arts Centre coordinated a Heritage Festival Program in April 2011 involving a range of activities:

- The Heritage Forum

The theme for the 2011 Heritage Forum was Amazing Stories. Consistent with this theme, Campbelltown Arts Centre presented an evening of community oral histories that included the past, present and future of Campbelltown's built, natural and cultural heritage. At the same time, the forum celebrated the launch of a commissioned film by emerging Indigenous artist and award winning photographer, Bindi Cole.

- Behind the scenes tour

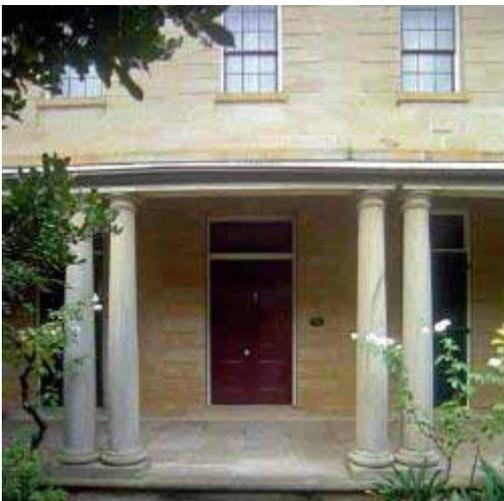
This event included a discussion tour of Campbelltown Arts Centre's permanent collection of historical and locally significant artworks.

- Uncover Campbelltown tour

Campbelltown's Visitor Information Centre hosted a guided tour through the main street to explain the historic landmarks and reveal intriguing tales of days gone by, such as colonial scandals and haunted houses.

- Stories In Pictures and Amazing But True

The historic, two-storey Georgian sandstone home, Glenalvon, hosted two events celebrating the city's unique history, including 'Stories in Pictures' and 'Campbelltown Amazing But True'. A range of activities took place including a display of images, guest speakers and a parade of convicts, bushrangers, victims and heroes.



Local Heritage Fund

Council promotes the conservation and maintenance of privately owned heritage items in the LGA through the provision of funding under its Local Heritage Fund Program. The fund is available to all owners of heritage listed places

for repair and maintenance works. The funding is provided on a dollar for dollar basis. The maximum funding per applicant in the reporting period was \$1500. An applicant can only apply for funding once a year.

In the reporting period, Council considered and approved funding for two separate projects:

- The Pines House, Menangle Park
- Tamin House, Campbelltown.

The total amount of funding spent under the Local Heritage fund during the reporting period was \$2960.



Heritage Review – Heritage Study and Heritage Register

Council has recently undertaken a review of its Heritage Study and Heritage Register, as part of the research for the preparation of its new comprehensive LEP.

In April 2011, Council endorsed and adopted the findings of the Campbelltown Heritage Study and Register Review, subject to further consultation being undertaken with owners and the community as part of the preparation of the new comprehensive LEP for the LGA.

Indigenous Heritage

Recognition of the Impact of the Appin Massacre

Council recognises the impact of the Appin Massacre on the Aboriginal community both in history and the present day. The memorial flag raising ceremony, held on the lawn of the Council Civic Centre, is held annually to remember the Tharawal people killed in the massacre of 17 April 1816.

Koori Toastmasters

Council was successful in receiving seed funding during 2009 through CDSE (Clubs NSW) to form a Campbelltown Koori Toastmasters Club. The club has been in operation since mid 2009.

NAIDOC Week

NAIDOC celebrations are held annually around Australia in the first week of July to celebrate the history, culture and achievements of Aboriginal and Torres Strait Islander people.

NAIDOC Week provides an opportunity for the

major achievements cont.

Campbelltown community to acknowledge the contribution that Indigenous people make to our local area. This year's theme was 'Change: The next step is ours' which symbolises taking responsibility for the future, and to control the changes needed to plan and take action to make it happen.

NAIDOC Week events included an official flag raising ceremony, street march, family cultural and information fun day and a touch football competition at Sarah Redfern Oval.



This year's Koori Flow has expanded with Thomas Reddall, Ambarvale, Robert Townsend, Airds, Picton and Camden High Schools committing to run Koori Flow in their schools. The workshops have also shifted focus with traditional Indigenous games now running as the focus moves towards the engagement of young Indigenous people and health services in the area.

Aboriginal Advisory Sub Committee

Council's Aboriginal Advisory Sub Committee (AASC) is made up of Aboriginal community representatives who provide a direct line of communication between the Aboriginal community and Council. The aim of the AASC is to raise the profile of Indigenous people in the LGA, to provide recommendations to Council and coordinate particular projects and activities for Indigenous people. The AASC continued to meet throughout the reporting period.

Koori Flow

Koori Flow is a program run by Council in conjunction with a range of community organisations across Macarthur.

The aim of the program is to connect Indigenous young people to:

- youth services
- their elders and community
- local health services
- their culture.

The initial program included art workshops that were run in Camden, Picton and Thomas Reddall High Schools, by youth workers in those areas.

The art workshops were developed in the fourth school term in 2010, drawing from the Aboriginal dreamtime story of how the White Waratah came to be, delivered by local Aboriginal artist Danielle Mate.

At the end of the term, the three schools came together for an event at The Australian Botanic Garden Mt Annan to share their art and knowledge, take part in a smoking ceremony by local Aboriginal elder Uncle Ivan and tour the Indigenous flora at the gardens.







our community



Our health and wellbeing as a community is directly impacted by the quality of the environment in which we live. Additionally, the environment has an intrinsic value that is beyond the scope of our wellbeing - that is it deserves to be conserved for its own sake.

Themes such as water quality, biodiversity (or species richness) and climate change are all areas which humans have the potential to influence, for better or worse. As our community grows, human activities increasingly encroach on these natural areas and ecological systems. Campbelltown is currently home to approximately 153,000 people within approximately 50,000 dwellings. The latest population estimates project a 39% growth in Sydney's population by 2036, translating to about 25,000 new dwellings being needed within the LGA to accommodate this growth.

Community engagement and environmental education play a key role in ensuring that residents have the knowledge to make sustainable lifestyle choices, so that our local natural areas and wildlife continue to thrive, and we can continue to enjoy them for generations to come.

Council facilitates and holds a large number of community events each year in order to foster a community spirit, improve the lifestyle and wellbeing of residents, and inspire meaningful connections with the local environment. Council also endeavours to provide advice and promote environmentally sustainable messages and practices at these events through the provision of Council stalls and technical staff. These endeavours continue to be guided by the Environmental Education Strategy, which was created as a holistic and strategic framework for implementation of community engagement regarding environmental issues.

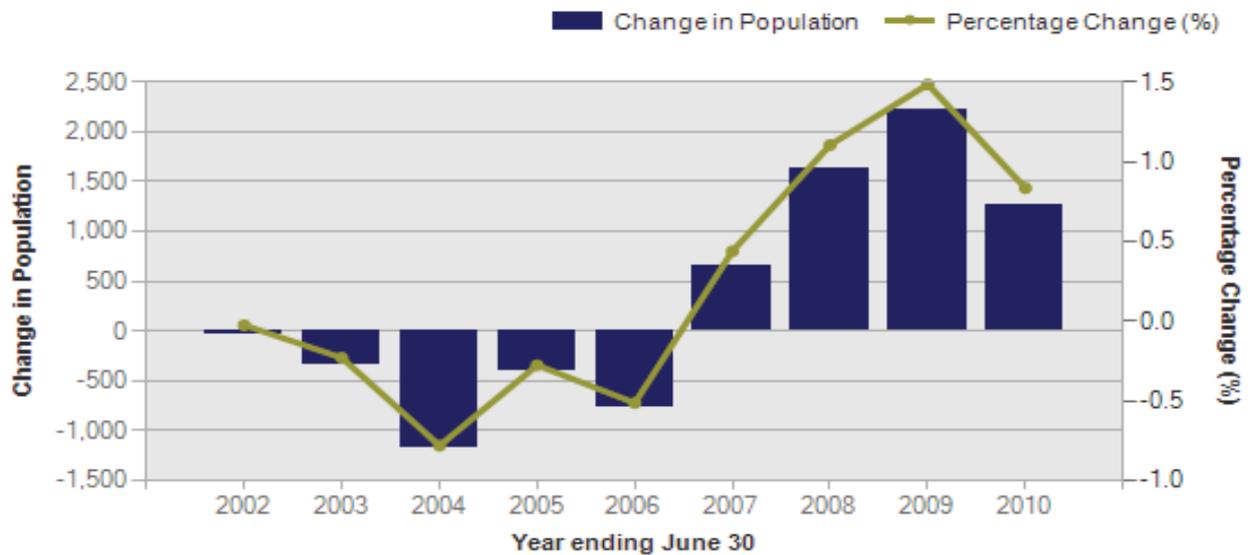
Key pressures on Our Community include:

- waste generation
- population increases
- access to transport and infrastructure
- illegal dumping
- noise, water and air pollution
- food security.

table 9 our community - reporting on indicators

The following table (Table 9) provides an account against environmental indicators for the last three reporting periods relating to Our Community and any noticeable trends. Figure 8 shows the estimated percentage change in population for the Campbelltown LGA for each financial year since 2002.

Category	Indicator	Reporting Year			
		2008-2009	2009-2010	2010-2011	3 year trend
Community	Number of community events	12	11	13	↔
	Number of Streamcare locations (groups)	1	4	3	↑
Population	Estimated population	149,727	151,952	153,222	↑
	Estimated number of residential properties	50,099	50,211	50,466	↑
	Estimated number of business properties	2,742	2,774	2,768	↔
	Estimated number of farmland properties	70	69	67	↓
	Estimated number of mining properties	0	0	3	↑



Source: Australian Bureau of Statistics, Cat. No. 3218.0 - Regional Population Growth, Australia, 2009

Figure 8. Change in estimated resident population for the Campbelltown LGA

Promotion of Environmental Matters at Council Community Events

A number of annual community events were held over the reporting period in which Council provided a wide variety of resources and information on local environmental topics, including:

- Chemical Clutter Clean Out
- Clean Up Australia Day – 54 sites
- Ingleburn Alive Festival
- Festival of Fisher's Ghost
- NAIDOC Week
- National Tree Day
- Campbelltown City Garden Competition
- Heritage Festival
- Youth Week
- Campbelltown City Show
- Macarthur Sustainable Schools Expo
- Streamcare – three sites

Macarthur Nature Photography Competition

2010 marked the fifth and most successful year of the highly popular Macarthur Nature Photography Competition, attracting more than 200 entries and generating a high level of community interest. The competition is a Macarthur regional initiative which seeks to actively engage people with the local environment through nature photography.

While participation was open to anyone, images were required to be from within the Macarthur region, whether from Council reserves, public bushland, or entrants' own backyards. Images received reflected the diverse natural and environmental heritage of the Macarthur region, depicting a range of subject matter, from cascading waterfalls to the delicate threads of a dragonfly wing.

Council has been the major sponsor and administrator of the event since it began. The annual competition is held in conjunction with the Festival of Fisher's Ghost. The competition culminated in November at an awards night at Ingleburn Community Centre, where photographer Nick Moir of the Sydney Morning Herald presented a slideshow of some of his images of wildlife, storms and bushfires, and shared the stories behind them. Prizes were issued to first, second and third place in four categories including "People's Choice".

In addition to the travelling exhibition across the Macarthur region, an online gallery made the competition's images accessible to the public.

Threatened Species Art Competition

In recognition of National Threatened Species Day held annually on 7 September, Biodiversity month in September, and the United Nations International Year of Biodiversity, Council once again held its annual Threatened Species Art Competition in order to promote awareness of the importance of protecting Campbelltown's unique biodiversity to the children of Macarthur.

The competition has been held annually since 2008. This year was the most successful year yet, with 41 entries. It

also expanded to become a regional event, with children from Camden and Wollondilly LGAs eligible to enter.

Participating children were required to research a threatened species in the Macarthur region and to prepare a drawing or collage artwork relating to it. Prizes were awarded to place winners in each age category. Artworks were exhibited at several locations throughout the Macarthur, and the first, second and third place winners in each of the four age group categories were compiled into a 2011 calendar for publication.

Entries have consistently displayed a high artistic quality, as well as a strong level of engagement with the topic of local threatened species.

It is evident that many entrants undertake significant research into their selected threatened species. For this reason, the competition has been successful in increasing community understanding regarding local biodiversity and threats to wildlife.

Community Catchment Care Days

Catchment Care Days are part of a new program introduced in 2011 to engage residents in their local environment and inspire them to actively take part in its care and upkeep. These events aim to raise awareness among the community of the connections between their actions and behaviours and the health of their local environment.

The original concept for Catchment Care Days came from community concern over the health of certain wetland locations and issues affecting local waterways, including the health of resident bird populations, water turbidity, occurrence of algal blooms and the presence of weed species.

These days involve residents volunteering to plant seedlings, clean up litter, remove weeds and participate in educational activities and discussions relating to stormwater processes, riparian habitats and overall catchment health.

During the reporting period, the inaugural catchment care day was held at Eagle Vale Pond with more than 70 residents attending. Following from this success, further events at other priority locations have been scheduled for the next year. The event proved to be an extremely positive exercise in connecting people to their environment.



Macarthur Sustainable Schools Network and Expo

In 2010, Council once again played a leading role in promoting environmental education in the Macarthur region as the major sponsor and organiser of the Macarthur Sustainable Schools Expo. The expo, held in September, attracted approximately 167 students from 24 schools across the Macarthur region to learn about sustainability issues. Council provided both financial and in-kind support, and supplied the prizes for the winning schools.

The purpose of the expo is to actively educate students on environmentally sustainable practices that can be done at school and at home. It utilises an innovative peer to peer learning approach in which students present to their fellow students on topics such as no-dig gardening, composting, plant propagation, keeping chickens at home, solar ovens, frog ponds, worm farms, and preventing stormwater pollution.

The expo is organised by members of the Macarthur Sustainable Schools Network, which consists of Camden Park Environmental Education Centre, the Department of Education and Training, Campbelltown, Camden and Wollondilly Councils, and representatives from area schools. The network aims to promote sustainability initiatives within local schools. Council maintains a strong presence within the network, providing support and financial assistance where possible.



Streamcare

Council's Streamcare program aims to engage volunteers with their local environment, while providing them with new skills and knowledge which can be utilised in the wider community.

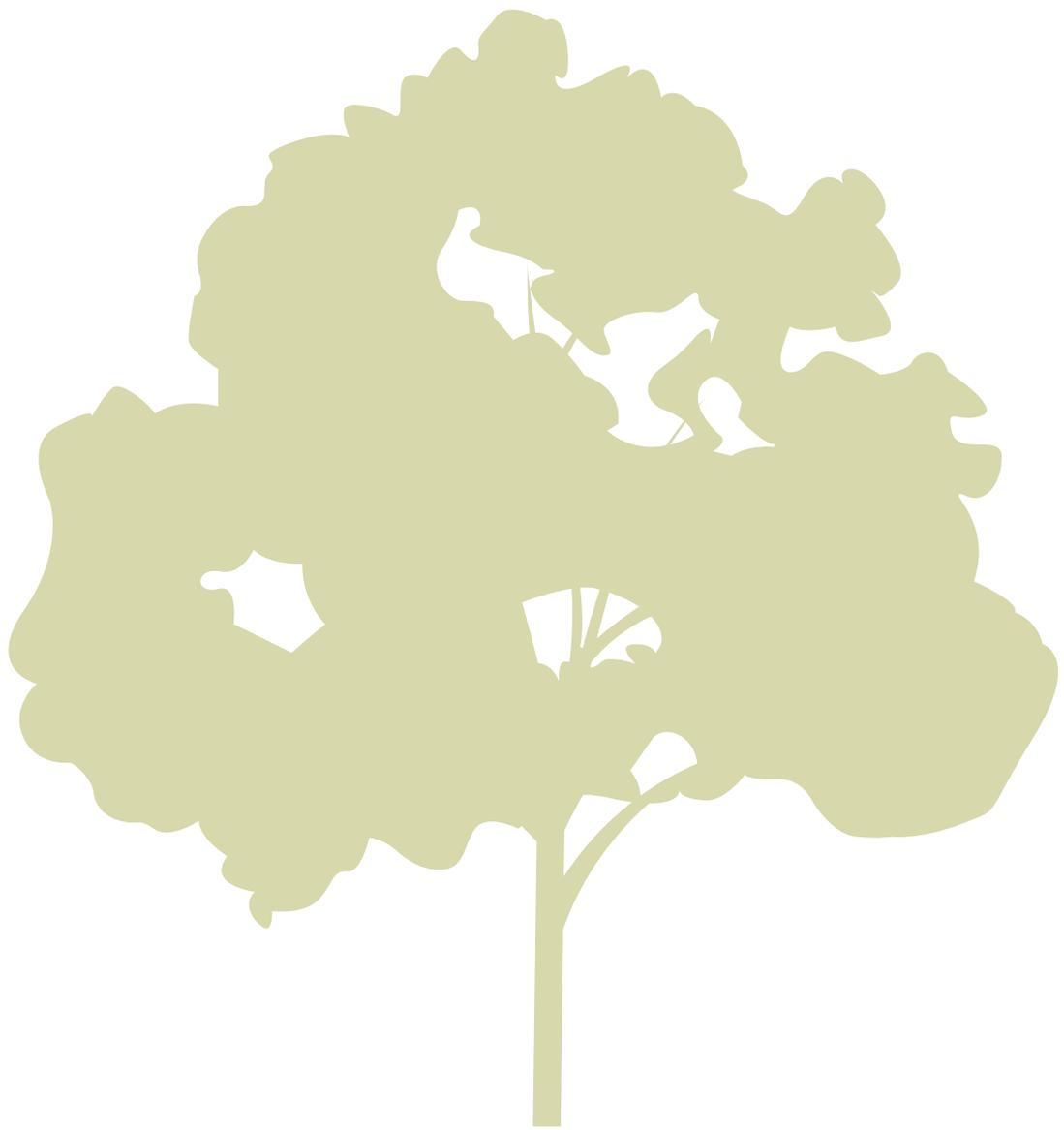
The program recruits and coordinates volunteers from the local community to undertake bush regeneration and conservation activities such as water quality monitoring, rubbish and weed removal, plantings and seed collection at ecologically significant locations across the LGA.

In the reporting period Council continued to operate three groups at:

- Noorumba Reserve, Rosemeadow
- Redfern Creek, Ingleburn
- Spring Creek, St Helen's Park.

Currently there are more than 30 volunteers registered with the program, who collectively worked more than 615 hours, collected more than 20 large bags of rubbish, and have treated more than 24,181m² of land for removal of noxious and environmental weeds in the reporting period.







conclusion



conclusion

The 2010-2011 State of the Environment report acknowledges that the main pressures on the environment in Campbelltown continue to be:

- commercial and urban development
- inappropriate land use such as illegal trail bike riding
- clearing of native vegetation and habitat
- noxious weed invasion
- illegal dumping and litter
- pollution
- heritage destruction and degradation.

In an effort to address these threats, Council is pursuing the following initiatives:

- development of a comprehensive LEP and associated planning controls;
- development of a Biodiversity Strategy;
- development and implementation of an Illegal Dumping and Litter Management Plan;
- development of a Sustainability Strategy;
- development of a Review of Environmental Factors (REF) process for Council development;
- undertaking a Water Quality Monitoring Review;
- preparation of Plans of Management for Council's parks and reserves;
- delivery of a strategically focused compliance program
- delivery of Council's Noxious Weed and Pest Animal Management Strategy 2009-14
- delivery of a Council cleanup program
- implementation of the 2009-12 Environmental Education Strategy.



