



# campbelltown city council state of the environment report 2009-2010



a city of choice and opportunity in a natural environment

# Introduction

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

This year's report, the 2009/10 State of the Environment Report, provides a snapshot of the current state of seven key environmental areas within the Campbelltown Local Government Area (LGA):

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

Each section of the report provides an account against identified annual indicators for each environmental area. 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 and assists in the identification of future required actions to address threats to Campbelltown's environment.

The report also outlines Council's major achievements within each of these key environmental areas during the 2009/10 financial year.

The 2009/10 State of the Environment Report is the last SoE Report to be compiled in its current format. Under the proposed Integrated Planning and Reporting reforms, Councils will be encouraged to strengthen their annual reporting arrangements through the ability to prepare their SoE Reports in an integrated way and in line with the environmental objectives of the Community Strategic Plan (for example focusing on the environmental issues of concern to the local community and issues within Council's influence).



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## our land



Campbelltown is located on the south-western edge of the Sydney Metropolitan Area, approximately 53 kilometres from the Sydney Central Business District and occupies an area of approximately 312 square kilometres.

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 Camden and Wollondilly LGAs). The Campbelltown LGA is characterised by a variety of urban and rural land uses. The dominant housing form is low density detached dwellings with groupings of medium density housing in suburbs and some limited apartments located in the Campbelltown CBD.

The LGA extends from Glenfield in the north to Menangle Park in the south, and 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.

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.

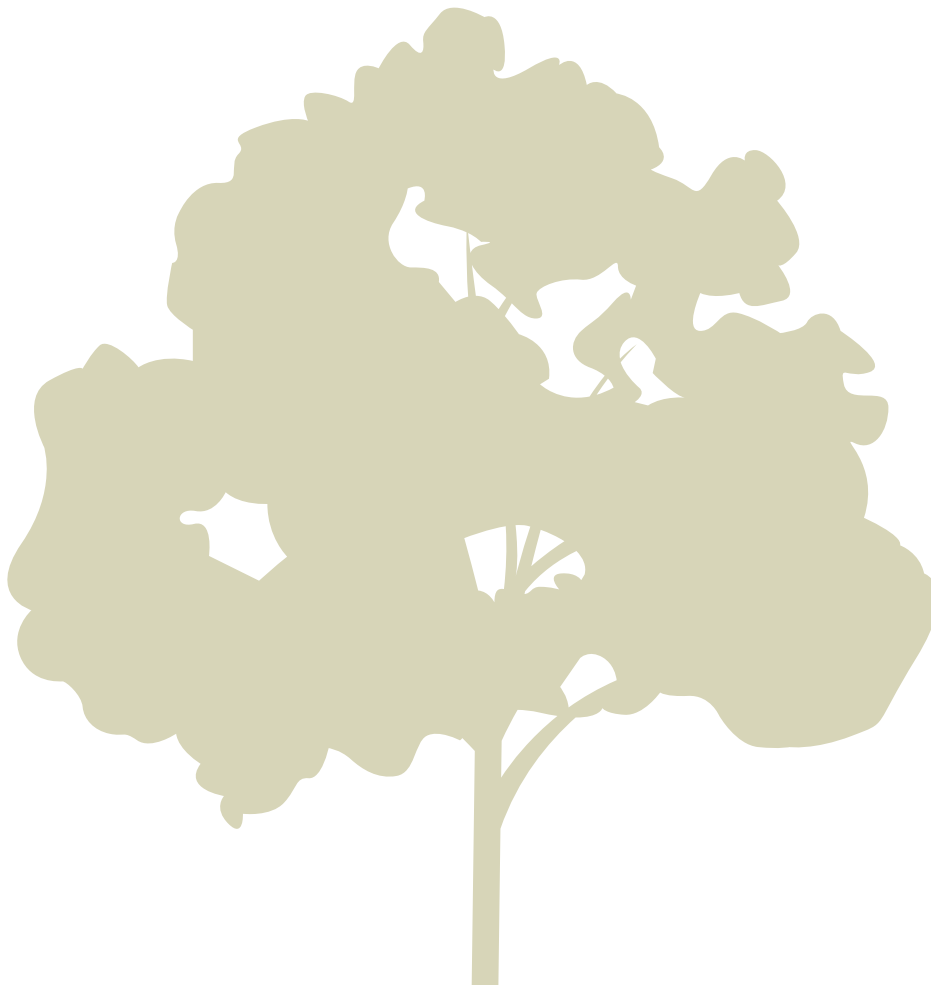
Responsible management and care of our land resources is important because they:

- 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 following table (table 1) provides an account against environmental indicators relating to Our Land.

Each indicator is classified under a category, and is either a measure of the pressure on the environment, state of the environment or response by government to the environmental issues.

The table provides a commentary on any apparent change in the indicator for the last two years. A detailed description of the indicators for Our Land can be found in Appendix 1.



# table 1 - reporting indicators

Table 1 Our Land – Reporting on Indicators

| Category | Indicator Number | Indicator  | P/S/R | 2008/09         | 2009/10              | Comment   |
|----------|------------------|--|-------|-----------------|----------------------|---|
| Bushfire | 1.1              | Area subject to hazard reduction                   | R     | 475.10ha        | 592.30ha             | Overall there was a 25% increase in total area subject to hazard reduction between reporting periods<br>There was a 44% increase in the area treated by mechanical means (removal of vegetation) and a 28% reduction achieved by non-mechanical means (by burning). |
|          | 1.2              | Area burnt by bushfire                             | P     | 65ha            | 75ha                 | This data provided, by the New South Wales Rural Fire Service, indicates a slight increase in total area burnt during the reporting period.   |
|          | 1.3              | Lengths of fire trail                              | S     | 90 Km           | 90 Km                | No new or additional sections of fire trails were constructed during 2009/10. However, 10.5km of existing fire trails were upgraded.  |
| Landuse  | 1.4              | Variation in proportion of landuse classifications | S     |                 | No change from 08/09 | The proportion of land use classifications remained unaltered due to no rezonings occurring during the reporting period.  |
|          | 1.5              | Number of  | P     | • 245 dwellings | • 335 dwellings      | Residential development   |

Key:

- P/S/R
- P = Pressure
- S = State
- R = Response

table 1 - reporting indicators cont.

| Category | Indicator Number | Indicator   | P/S/R | 2008/09  | 2009/10  | Comment  |
|----------|------------------|---|-------|--|--|--|
| Landuse  |                  | approvals for residential, commercial and industrial premises |       | <ul style="list-style-type: none"> <li>40 complying development</li> <li>40 industrial premises</li> <li>10 commercial premises</li> </ul> | <ul style="list-style-type: none"> <li>60 complying development</li> <li>35 industrial premises</li> <li>12 commercial premises</li> </ul> | <p>approved by Council was largely located in the areas of Park Central, Macarthur Gardens, Leumeah and Glenfield Urban Release Area. The development of the Park Central area is expected to near completion during 2010/11</p> <p>Significant in-fill development (defined as development within existing residential areas) also occurred as part of the Minto Renewal Project. Other in-fill development was largely located in the suburbs of Eagle Vale and Macquarie Fields and took the form of single dwelling houses</p> <p>Complying development was largely for alterations and additions to residential development</p> |
|          | 1.6              | Length of new road construction                               | P     | 1.8 Km   | 1.6 Km   | All of the new roads constructed were located within the Glenfield Urban Release Area, Park Central and at Leumeah   |
|          | 1.7              | Number of Part 3A   | P     | 2 applications   | 4 applications   | Part 3A applications notified to   |



table 1 - reporting indicators cont.

| Category | Indicator Number | Indicator  | P/S/R | 2008/09   | 2009/10   | Comment  |
|----------|------------------|--|-------|---|---|--|
| Landuse  |                  | or Part V (EPA Act 1979) applications lodged for LGA   |       |   |   | <p>Council during the reporting period included:</p> <ul style="list-style-type: none"> <li>• The Bulli Seam (mining) Project:</li> <li>• The northern extension of the Camden Gas Project Stage 3</li> <li>• The Leppington/Glenfield (Southwest) railway extension proposal</li> </ul> |
|          | 1.8              | Number of premises licenced to pollute                 | S     | 17 premises   | 17 premises   | No licences were surrendered to Council, or approved by DECCW  |
|          | 1.9              | Number of development and pollution related complaints | S     | 236 complaints relating to illegal construction and development and 251 complaints relating to the environment were received by Council | 288 complaints relating to illegal construction and development and 271 complaints relating to the environment were received by Council | There was approximately a 20% increase in complaints received relating to illegal development and a 10% increase in the number of complaints relating to pollution   |
|          | 1.10             | Number of trail bike complaints                        | P     | 88 complaints received by Council   | 103 complaints received by Council  | The increase in the number of trail bike riding complaints during 2009/10 does not necessarily translate to an increase in trail bike activity, as the indicator is mostly reliant on the receipt of   |

table 1 - reporting indicators cont.

| Category   | Indicator Number | Indicator   | P/S/R | 2008/09   | 2009/10  | Comment  |
|------------|------------------|---|-------|---|--|--|
| Compliance | 1.11             | Number of joint trail bike patrols with the NSW Police Service to deter illegal trail bike riding | R     | 3 joint patrols undertaken  | 8 joint patrols undertaken   | complaints by Council.<br>Council aims to conduct four joint patrols in each reporting period in association with the NSW Police Force in identified priority areas. Patrols in excess of this targeted number were conducted during 2009/10, given the availability of additional police resources. |
|            | 1.12             | Compliance action associated with illegal trail bike activity and detected by Council             | R     | 97 penalty notices,<br>4 juvenile cautions,<br>13 bike seizures<br>bikes<br>13 charges. | 104 penalty notices<br>14 juvenile cautions<br>4 bike seizures<br>15 charges | There was an increase in compliance action during the reporting period most likely attributable to the increase number of patrols outlined above.  |
|            | 1.13             | Tree removal applications.  | P     | 38 tree removal requests received by Council  | 38 (36 from urban and 2 from non urban areas) received by Council            | Data distinguishing tree removal requests between urban and non urban areas was not collated in 2008/09. A distinction will also be made between native and non-native species.  |
|            | 1.14             | Number of private property inspections  | R     | 167 inspections conducted by Council  | 208 inspections conducted by Council   | Inspections of private land were conducted in relation to reported instances of overgrown land, dumping of rubbish and pollution. There was a 25 percent increase  |

table 1 - reporting indicators cont.

| Category            | Indicator Number | Indicator                                       | P/S/R | 2008/09  | 2009/10  | Comment   |
|---------------------|------------------|---|-------|--|--|---|
| Compliance          |                  |   |       |  |  | in the number of inspections undertaken during the 2009/10 reporting period compared to the 2008/09 reporting period.   |
|                     | 1.15             | Litter patrols and compliance action undertaken | R     | 3 specialist patrols undertaken<br>53 penalty notices issued | 3 specialist patrols undertaken<br>52 penalty notices issued | No significant change was observed between reporting periods  |
|                     | 1.16             | Length of cycleways constructed                 | R     | 5Km of cycleways constructed                                 | 600m adjacent to Park Central                                | The significant reduction in cycleways constructed is due to the emphasis of activities on the review of Council's Bike Plan.   |
| Public amenity      | 1.17             | Walking tracks constructed                      | R     | 0  | 260 metres   | Preliminary design and assessment for the 260m section of track upgraded in 2009/10 at Simmos Beach Reserve, occurred during 2008/09.   |
|                     | 1.18             | Number of new DECCW registered sites            | S     | 0  | 0  | There were no sites registered during the reporting period. The total number of current contaminated sites in the Campbelltown LGA remained at 0, as the only site previously registered as contaminated has been remediated. |
| Plans of Management | 1.19             | Number of performance                           | R     | 67 performance indicators                                    | 65 performance indicators                                    | Council currently has adopted the following specific Plans of   |

# table 1 - reporting indicators cont.

| Category            | Indicator Number | Indicator                                   | P/S/R | 2008/09  | 2009/10  | Comment  |
|---------------------|------------------|---|-------|----------|----------|--|
| Plans of Management |                  | indicators in Plans of Management achieved. |       | achieved | achieved | <p>Management that are available for viewing on its website:</p> <ul style="list-style-type: none"> <li>• Ingleburn Reserve;</li> <li>• Keith Longhurst Reserve at Kentlyn;</li> <li>• Pembroke Park at Minto;</li> <li>• Simmos Beach Reserve at Macquarie Fields;</li> <li>• Bunbury Curran Park at Macquarie Fields; and</li> <li>• Noorumba Reserve at Rosemeadow.</li> </ul> <p>Council is currently preparing a PoM for Varoville Reserve.</p> |

# major achievements

## Simmos Beach track restoration

A project to upgrade a 500m section of existing walking track at Simmos Beach Reserve, Macquarie Fields, one of the city's most scenic and popular recreation areas was completed during the reporting period. The works were undertaken as a part of the implementation of Council's adopted Plan of Management for the reserve.

The works involved the upgrade of a 260m section of existing track, easily accessible from a car parking area, which now enables wheelchair users and people with reduced mobility, to experience some of the bushland within the reserve. In addition, a viewing area overlooking the Georges River was installed to provide the community, including wheelchair users, with a view of the river and surrounding bushland.

Detailed design plans for the track upgrading were prepared. This planning included the preparation of an Aboriginal Cultural Heritage Management Plan, a disability access audit and targeted flora surveys to identify the presence of threatened species. In addition, an assessment conducted under Part 5 of the Environmental Planning and Assessment Act 1979 concluded the works would not have a significant impact on the endangered ecological community it traverses or any threatened species identified in close proximity to the track.

The works were jointly funded by Council and the NSW Department of Planning under the Metropolitan Greenspace Program.

It is anticipated that providing greater access to the site will assist in the promotion of the area and raise community awareness of the need to conserve such areas. It is important that this area be conserved as it contains habitat for a range of different species, including the koala and the Shale/Sandstone Transition Forest, which is listed as an endangered ecological community at both the State and Federal levels.



# major achievements cont.

## Bushfire

Bushfire management on public lands within Campbelltown is undertaken by Council in co-operation with the NSW Rural Fire Service (RFS), NSW Fire Brigade and other relevant government agencies within the LGA. As a member and active participant of the Macarthur Bush Fire Management Committee, and as a significant landholder/manager, Council each year routinely plans and undertakes strategic bushfire hazard reduction works at sites within the LGA. This work is particularly important in urban/bushland interface areas such as Kentlyn, Wedderburn, Minto Heights, Macquarie Fields, Long Point, Airds, Ingleburn and St Helens Park. These areas are subject to discernible bushfire risk. The management of fire breaks, fire trails, roadside vegetation and hazard reduction burning are the Council's primary response to managing this risk.



Key achievements in bushfire management for the LGA are highlighted below in Table 2

Table 2 - Bushfire management hazard reduction mechanical works

| Land    | Number of sites | Number of treatments | Area (ha) treated | Number of Assets |
|---------|-----------------|----------------------|-------------------|------------------|
| Private | 4               | 4                    | 2.1               | 14               |
| Council | 59              | 297                  | 500.7             | 1418             |
| Other   | 0               | 0                    | 0.0               | 0                |
| Total   | 63              | 301                  | 502.8             | 1432             |

## Key achievements during the reporting period

- Mechanical hazard reduction activities were undertaken by Council in partnership with the NSW RFS at seven reserves and a range of other localities across the LGA
- Environmental assessments in accordance with the New South Wales Bushfire Environmental Assessment Code were conducted in a number of localities including Wedderburn and Kentlyn as part of the preparation of Hazard Reduction Certificates for properties in these areas
- The Macarthur Bush Fire Risk Management Plan (BFRMP) 2009
- 2014 was approved by the NSW Bush Fire Coordinating Committee on 4 March 2010. The plan maps bushfire risk across the Campbelltown, Camden and Liverpool LGAs and outlines strategies that land managers plan to undertake to manage identified bushfire risks. The plan addresses protection of life and property, protection of heritage, threatened species and cultural values
- Amendments to Council's Bush Fire Prone Lands Map for the Campbelltown LGA have been submitted to the Rural Fire Service for approval
- A temporary Bushland Management Officer position was created within Council to coordinate bushfire hazard reduction works in the LGA with consideration of biodiversity and asset protection
- Mapping of hazard reduction works conducted (historical and recent) within the LGA is ongoing and will provide useful information for future development of bushland and bushfire Plans of Management for Council
- A review of the Council's Fire Trail Register is currently underway in partnership with the Rural Fire Service
- State funding was granted for a new NSW RFS fire station at Kentlyn, the development application is being finalised and the Koala Plan of Management for the application is awaiting approval by the NSW Department of Planning. Subsequently Council will then be in a position to determine the application
- State funding of \$50,607 was granted to Council from the RFS Fire Mitigation Works Fund for hazard reduction works across the LGA. Additional state funding of \$54,500 was granted for the upgrade of fire trails and execution of hazard reduction burns. Funding for fire trails saw the upgrade and maintenance of fire trail networks in St Helens Park, Minto Heights, Kentlyn and Wedderburn.

## Mining operations

The Campbelltown LGA is underlain by deep coal seams which provide a significant contribution to the natural resource base within the Macarthur region. These coal seams also include methane gas reserves that have been commercially extracted for electricity generation in previous years in both the Camden and Wollondilly LGAs situated to the west and south of the Campbelltown LGA.

All applications for proposed developments involving the extraction of these resources are classified as State Significant development and are currently assessed and determined by the Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979*. The following provides a summary of Council's activities in regard to mining and gas extraction projects of relevance to the Campbelltown LGA during the reporting period:

### (i) Coal extraction

The 2008/09 Statement of the Environment Report advised that preparatory work had been undertaken by Illawarra Coal Holdings Pty Ltd as part of the proposed expansion of the Westcliff and Appin longwall mines, which would affect certain areas in the southern part of the Campbelltown LGA. Longwall mining is an underground coal mining technique that involves removing a panel of coal which can cause the land above the removed coal to destabilise resulting in potential subsidence related impacts on the condition of the natural and built environment.

In November 2009, the Environmental Assessment for the proposed expansion of the Westcliff and Appin longwall mines was placed on public exhibition. Council's subsequent submission to the Department of Planning objected to the project on a number of grounds that included considered unacceptable risks associated with the granting of a 30 year project; inadequacy of the assessment of impacts on the condition of the Georges and Nepean Rivers and their tributaries; as well as the built environment. Council also provided a subsequent submission to a Planning Assessment Commission (the Commission) established by the State Government to review the project application in February 2010. Council also provided a presentation at a public hearing organised by the Commission outlining its concerns with the project. Information regarding the outcomes of the review of the project by both the State Government and the Commission are not as yet available although it will be provided in a subsequent report.

### (ii) Gas extraction

The extraction of methane from coal seams has occurred in previous years in the adjoining Camden and Wollondilly LGAs, as well as at Menangle Park as part of the Camden Gas Project. However, a draft Environmental Assessment for the northern extension of this project (Stage 3), applying to the north and central western sections of the Campbelltown LGA, was provided to Council for comment in its capacity as a local government authority, during early 2010. Council's submission on the draft document focused on the potential impacts of the proposed development on the significant social and ecological values of the Scenic Hills district, the condition of the Georges and Nepean River Catchments, cumulative impacts on the air quality of the local region and potential adverse implications for current and future Council

strategies and policies. In this regard, the submission (sent in May 2010) raised a number of concerns and comments that Council requested the State Government address prior to the placement of the Environmental Assessment on public exhibition, anticipated to be late 2010.

## South West Rail Link

The SWRL involves the construction of approximately 13.1 kms of dual-track electrified railway between Glenfield and Leppington. It also includes an upgrade to Glenfield Station, new flyovers at Glenfield junction, two new stations at Edmondson Park and Leppington and a train stabling facility in east Rossmore.

Approval for the South West Rail Link (SWRL) Concept Plan, Environmental Assessment and Stage A works (which include works at Glenfield north and south Junctions) were granted following exhibition of the South West Rail Link Concept Plan and Environmental Assessment and the preparation of a Submissions report in early 2007. The Concept Plan was prepared under Part 3A of the *Environmental Planning and Assessment Act 1979* and provided details of the proposed rail corridor, alignment, stations and other key items of infrastructure associated with the project.

The Concept Plan includes a two stage construction:

- Stage B1 - Glenfield Junction Interchange and a new car parking facility at Glenfield
- Stage B2 - the rail corridor, two new train stations and a train stabling facility.

The assessment for Stage B1, under Part 5 of the *Environmental Planning and Assessment Act 1979*, was undertaken in 2008 and 2009. It was approved by the Transport Infrastructure Development Corporation in April 2009. Works on Stage B1 have since commenced.

It was determined that approval for Stage B2 required further assessment under Part 3A of the *EP&A Act 1979*. Subsequently, an Environmental Assessment for Stage 2 works was prepared and placed on public exhibition from Wednesday 19 May to Monday 21 June 2010.

During the reporting period, Council lodged a submission on the Environmental Assessment for the Stage 2B works which addressed the following key areas:

- Land Use, Property and Infrastructure Planning
- Heritage (European and Indigenous)
- Biodiversity (flora and fauna)
- Climate Change
- Drainage
- Construction
- Implications for Surrounding Development
- Visual Impact
- Noise and Noise Attenuation.

## Proposed Appin Sewerage Scheme

The proposed Appin sewerage scheme involves the construction and operation of a sewerage reticulation system in Appin. Sewage will be collected from individual properties and transferred via a new collection network and transfer system to the existing Glenfield sewerage system for treatment at the Glenfield Sewage Treatment Plant. The Environmental Impact Assessment and determination of the scheme is being undertaken by Sydney Water under Part 5 of the *EP&A Act 1979*. Sydney Water has prepared a Review of Environmental Factors (REF) for the scheme which was placed on public exhibition on 10 May 2010 for four weeks. Two community information sessions were also held during the exhibition period.

Council officers undertook a detailed assessment of the REF and prepared a submission on the scheme. Areas of concern addressed in Council's submission included:

- potential impacts on existing detention basins
- amenity issues associated with the design of the sewerage pumping station and chemical dosing unit buildings
- a lack of information regarding amenity impacts such as odours and noise within the REF
- the apparent lack of consultation with Aboriginal Stakeholders regarding proposed mitigation measures that will be adopted to protect items/places of Aboriginal significance
- A lack of detail regarding the extent of rehabilitation works that will be undertaken in terms of the rehabilitation/reconstruction of areas of native vegetation.

Following the exhibition of the REF, a final decision report on the scheme will be prepared by Sydney Water incorporating community feedback on the proposal. The report will help identify whether Sydney Water should proceed with the Scheme as outlined in the REF or whether changes should be made to the project to further mitigate any environmental impact. It is anticipated that this document will be available during the next reporting period.



## Plan of Management for Marsden Park

Marsden Park forms the open space component of the Park Central precinct, located between Campbelltown Public Hospital and the Macarthur Square shopping complex. The park, constructed in stages by the developer - Landcom, has become a regional and public facility with a high level of recreational usage. The park is comprised of a series of created wetlands, formal park areas and remnant Cumberland Plain Woodland (a Critically Endangered Ecological Community protected under both State and Federal legislation).

In early 2009, Council was successful in obtaining a \$46,000 grant from the Sydney Metropolitan Catchment Management Authority (SMCMA) for the development of a Plan of Management for Marsden Park. The draft plan of Management for Marsden Park was prepared in the second half of 2009 and, publicly exhibited between November 2009 and February 2010. During the exhibition period, the draft Plan was available for viewing at local libraries, Council's website and at the Civic Centre. A public meeting was held as a further part of the consultation process. The feedback received by Council welcomed the preparation of the draft plan and was largely positive with most comments relating to traffic movement and parking availability within Park Central, as well as recreation facilities. The plan was subsequently adopted by Council in June 2010.

In accordance with the requirements of the funding program, a focus of the plan relates to water quality and stormwater and flooding control issues associated with the substantial wetlands located within Marsden Park. However, the plan also recognises the recreational value of the wetland, bushland and parkland components of the park and their relationship to the Park Central precinct as a whole. In addition, it also addresses traffic movement and parking availability related issues within the Park Central complex that are of relevance to the management of the park. The plan can be viewed on Council's website and will be implemented over the next 10 years based on identified priorities and as funding becomes available.







## our biodiversity



The Campbelltown LGA is bordered by corridors of environmental protection land with the shallow gullies of the Nepean River and broad rolling hills of rural countryside of the Scenic Hills to the west and the Edge Scenic Protection Lands occurring on the moderate to steep gullies of the Georges River to the east. The LGA contains significant areas of protected bushland boasting high levels of biodiversity and a significant number of threatened ecological communities and species. The largest areas are located adjacent to the Georges River with isolated significant remnants occurring in the remainder of the LGA.

As identified in previous SoE reports, major threats to biodiversity continue to include impacts associated with noxious and environmental weeds, predation by and competition with feral animals, stormwater runoff, illegal dumping, inappropriate fire regimes, inappropriate use of open space (such as trail bike riding), and habitat loss/fragmentation associated with urban development. An additional threat of increasing relevance to the biodiversity of the Campbelltown LGA are impacts associated with coal and gas extraction activities. Council in association with the community and key stakeholders continued to play a leading role in the development and implementation of strategies and improvement works in an effort to protect these resources.

The following table (Table 3) provides an account against environmental indicators relating to Our Biodiversity. Each indicator is classified under a category, and is either a measure of the pressure on the environment, state of the environment or response by government to the environmental issues. The table provides a commentary on any apparent change in the indicator for the last two years. A detailed description of the indicators for Our Biodiversity can be found in Appendix 2.

A summary of the major achievements for Council during the reporting period follows.



# table 3 - reporting on indicators

**Table 3 Our Biodiversity – Reporting on Indicators**

| Category                | Indicator Number | Indicator   | P/S/R | 2008/09 | 2009/10   | Comment  |
|-------------------------|------------------|---|-------|---------|---|--|
| Biodiversity Protection | 2.1              | Extent and Condition of Remaining Native Vegetation   | S     |         | 17,940ha (approx) or 58% of land within the LGA is covered by native vegetation. Of this 13,300ha is exposed to low or minimal human disturbance and 3,604ha is exposed to moderate or high disturbance | In terms of other vegetation within the LGA approximately 513ha is covered by introduced vegetation. |
|                         | 2.2              | Proportion of native vegetation identified as being of high, medium or low biodiversity value | S     |         | 12,750ha (71%) – high biodiversity value<br>2,900ha (16%) – medium biodiversity value<br>2,290 (13%) –  | This is the first year this indicator has been reported  |

Key:

P/S/R

P = Pressure

S = State

R = Response

table 3 - reporting on indicators cont.

| Category                | Indicator Number | Indicator  | P/S/R | 2008/09 | 2009/10   | Comment   |
|-------------------------|------------------|--|-------|---------|---|---|
| Biodiversity Protection | 2.3              | Number of Threatened Ecological Communities within the Campbelltown LGA listed under TSC Act 1995  | S     |         | low biodiversity value<br>7 Threatened Ecological Communities listed under TSC Act 1995   | This is the first year this indicator has been reported<br><br>The Campbelltown LGA has 18 vegetation communities recorded in total.<br><br>During the reporting period the conservation status of Cumberland Plain Woodland has changed under both the NSW TSC Act 1995 and Commonwealth EPBC Act 1999 whereby it has been uplisted from 'endangered' to a 'critically endangered' ecological community. (See Table 4 for further comparison). |
|                         | 2.4              | Number of Threatened Ecological Communities within the Campbelltown LGA listed under EPBC Act 1999 | S     |         | 3 Threatened Ecological Communities listed under the EPBC Act 1999                        |   |
|                         | 2.5              | Number of threatened flora species within the LGA listed under TSC Act 1995                        | S     |         | 20 flora species including; 10 'Vulnerable' and 10 'Endangered' listed under TSC Act 1995 | This includes one (1) endangered plant population - <i>Marsdenia viridiflora subsp viridiflora</i> however, no individuals of this population have been recorded within the Campbelltown LGA to date.   |
|                         | 2.6              | Number of threatened flora   | S     |         | 14 flora species including; 9   | No additional flora species have been listed under either the TSC Act or the  |

table 3 - reporting on indicators cont.

| Category                | Indicator Number | Indicator  | P/S/R | 2008/09 | 2009/10  | Comment   |
|-------------------------|------------------|--|-------|---------|--|---|
| Biodiversity Protection |                  | species within the LGA listed under <i>EPBC Act 1999</i>                         |       |         | 'Vulnerable' and 5 'Endangered' listed under the <i>EPBC Act 1999</i> .  | <i>EPBC Act</i> during the reporting period, nor has there been a change to the conservation status of any currently listed species.  |
|                         | 2.7              | Number of terrestrial threatened fauna species listed under <i>TSC Act 1995</i>  | S     |         | 38 fauna species previously recorded, including; 32 'Vulnerable' and 6 'Endangered' listed under <i>TSC Act 1995</i> | During the reporting period five new bird species previously recorded in the LGA; the Little Lorikeet, the Flame Robin, the Little Eagle, the Scarlet Robin and the Varied Sittella were listed as 'Vulnerable' species under the <i>TSC Act</i> . In this regard, the number of terrestrial Threatened Fauna previously recorded within the Campbelltown LGA increased by 5 species during the 09/10 reporting period. |
|                         | 2.8              | Number of terrestrial threatened fauna species listed under <i>EPBC Act 1999</i> | S     |         | 10 fauna species including; 7 'Vulnerable' and 3 'Endangered' listed under the <i>EPBC Act 1999</i>                  | In addition, 42 bird species which are listed as migratory species under the <i>EPBC Act</i> could also potentially utilise the Campbelltown LGA on occasion.   |
|                         | 2.9              | Aquatic Threatened Fauna species listed under the <i>TSC Act 1995</i>            | S     |         | 2 aquatic species including; 1 'Vulnerable' and 1 'Endangered' listed under <i>TSC Act 1995</i>                      | There were no changes to these listings during the reporting period   |

table 3 - reporting on indicators cont.

| Category                | Indicator Number | Indicator  | P/S/R | 2008/09 | 2009/10   | Comment  |
|-------------------------|------------------|--|-------|---------|---|--|
| Biodiversity Protection | 2.10             | Aquatic Threatened Fauna species listed under the EPBC Act 1999  | S     |         | 1 'Endangered' listed under the EPBC Act 1999.  |  |
|                         | 2.11             | Number of illegal clearing events reported to Council  | P     |         | 1 substantial illegal clearing event was reported to Council during the reporting period.                     | Council is unable to provide details about the extent of vegetation that was removed as a result of this event due to current legal proceedings.   |
|                         | 2.12             | Area (in hectares) or % of native vegetation cleared in the past year and since 1788                             | P     |         | 13,210ha (est) of native vegetation has been cleared within the Campbelltown LGA since 1788.                  | No record of the amount of native vegetation that has been removed during this or previous reporting periods is available. However collection of this data is recommended for future reporting periods.  |
|                         | 2.13             | The extent and type of native vegetation protected by appropriate zoning, overlay controls or other conservation | R     |         | 14,340ha (80%) of the remaining native vegetation is considered to occur within an appropriate land use zone. | No additional native vegetation is currently protected by biodiversity overlay controls or private conservation agreements under Council's current planning controls. The current development of Council's Comprehensive LEP is examining this issue to determine if effective |

table 3 - reporting on indicators cont.

| Category   | Indicator Number | Indicator  | P/S/R | 2008/09  | 2009/10   | Comment  |
|--|------------------|--|-------|--|---|--|
| Biodiversity Protection<br>Noxious Weeds and Pest Animal Management Plan |                  | agreements   |       |  |   | protection is appropriately applied to all of Campbelltown's native vegetation.  |
|  | 2.14             | Bush regeneration hours carried out by Probation and Parole working groups | R     | 5,616 hours (average of 6 participants, three days per week over the year).                                  | 9,360 hours (average of 10 participants, three days per week over the year).                              | The Campbelltown Probation and Parole working group program expanded during the reporting period, with an increase in the number of participants in the program over the year. |
|  | 2.15             | Litres of pesticide used by Council for weed control across LGA            | R     | 11,482 Litres of pesticide applied.  | 13,428 Litres of pesticide applied.   | An increase in the use of pesticide between the reporting periods is due to expanded coverage by the aquatic weed control program.   |
|  | 2.16             | Number of complaints regarding pest animals and weeds                      | S     | 4 registered complaints received.  | 12 registered complaints received.  | There was an increase in the number of complaints received by Council between reporting periods.   |
|  | 2.17             | Number Noxious weeds inspections undertaken by Council.                    | R     | 371, including 307 private property inspections, 7 priority noxious weed inspections<br>36 nurseries/aquaria | 274 total, including 218 private property inspections, 6 priority noxious weed inspections, 36 nurseries/ | The focus of Council's private property inspection program shifted to accommodate additional rural land inspections on larger lots.  |

table 3 - reporting on indicators cont.

| Category                                      | Indicator Number | Indicator                                      | P/S/R | 2008/09  | 2009/10  | Comment   |
|---|------------------|--|-------|--|--|---|
| Noxious Weeds and Pest Animal Management Plan |                  |  |       | inspections  | aquaria inspections,<br>7 Alligator weed waterway infestation inspections; and<br>7 Ludwigia weed waterway infestation inspections |   |
|   | 2.18             | Compliance action for noxious weed inspections | R     | 31 Weed advice program letters,<br>14 Proposed weed control notice and<br>2 Weed control notices | 22 Weed advice program letters<br>15 Proposed weed control notice<br>4 Weed control notices  | During the reporting period Council continued to enforce the provisions of the Noxious Weeds Act 1993, resulting in successful weed control outcomes. The advice program (letters) continue to demonstrate success as an initial compliance measure.  |
| Bush regeneration                             | 2.19             | Hectares of bushland regenerated (Ha)          | R     | A total area of<br>33.90ha<br>received bush regeneration and weed control treatments.            | A total area of<br>50.69ha<br>received bush regeneration and weed control treatments.  | This included; <ul style="list-style-type: none"> <li>• 3ha Milton Park,</li> <li>• 0.6ha Botany Place,</li> <li>• 2.2ha Redfern Creek,</li> <li>• 11.3ha Varroville Reserve,</li> <li>• 0.5ha Worrell Park Ruse,</li> <li>• 9ha Spring creek,</li> <li>• 0.2ha Kennet Park,</li> <li>• 2.9ha Wattle Reserve Ruse,</li> <li>• 6.7ha Ingleburn Reserve,</li> <li>• 10.4ha Noorumba Reserve,</li> </ul> |



table 3 - reporting on indicators cont.

| Category          | Indicator Number | Indicator     | P/S/R | 2008/09                               | 2009/10                               | Comment  |
|-------------------|------------------|---------------|-------|---------------------------------------|---------------------------------------|--|
| Bush regeneration |                  |               |       |                                       |                                       | <ul style="list-style-type: none"> <li>• 3ha John Kidd Reserve, and</li> <li>• 0.8ha Bunbury Curran Park.</li> </ul> <p>The total area of vegetation regenerated or subject to bush regeneration and weed control treatment increased significantly between the reporting periods. This is in part due to grant funded projects that aimed to regenerate native vegetation as well as an increase in the number of Campbelltown Probation and Parole working group participants.</p> |
|                   | 2.20             | Tree planting | R     | 13,000 trees were planted by Council. | 20,500 trees were planted by Council. | There has been an increase in plantings during the reporting period due to increased investment in biodiversity remediation by Council.  |

The following tables provide a further insight into the significance, extent and statutory protection measures for biodiversity within the Campbelltown area.

Table 4 - Endangered Ecological communities within the Campbelltown Local Government Area

| <b>Ecological Community</b>                                     | <b>TSC Act Status</b> | <b>EPBC Act Status</b>  |
|---|-----------------------|---|
| River-Flat Eucalypt Forest on Coastal Floodplains               | Endangered            | Not Listed  |
| Moist shale woodland in the Sydney Basin Bioregion              | Endangered            | Not Listed  |
| River-Flat Eucalypt Forest on Coastal Floodplains               | Endangered            | Not Listed  |
| Cumberland Plain Woodland                                       | Critically Endangered | Critically Endangered   |
| Shale Sandstone Transition Forest in the Sydney Basin Bioregion | Endangered            | Endangered  |
| Sydney Turpentine Iron Bark Forest                              | Endangered            | Critically Endangered - listed as Turpentine-Ironbark Forest in the Sydney Basin Bioregion. |
| Western Sydney Dry Rainforest in the Sydney Basin Bioregion     | Endangered            | Not Listed  |

Table 5 - Total number of threatened species recorded with the Campbelltown Local Government Area

| <b>Financial Year</b>                                   | <b>2003/04</b> | <b>2004/05</b> | <b>2005/06</b> | <b>2006/07</b> | <b>2007/08</b> | <b>2008/09</b> | <b>2009/10</b> |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Number of recorded threatened plants and animals</b> | 54             | 55             | 56             | 56             | 56             | 56             | 61             |

Note: Migratory birds listed under the *EPBC Act* which may utilise the LGA on occasion are not included in the above table.

Figures have been verified by reviewing all data for the Campbelltown LGA in the DECCW Wildlife Atlas and the outcomes reported in Stages 1 and 2 of the Campbelltown Biodiversity Study, cross referenced with the current conservation status of all species known or likely to occur within the Campbelltown LGA under the *TSC Act*, the *FM Act* and the *EPBC Act*.

Table 6 - Area of native vegetation per land use zone

| <b>Zone or other land use control</b>                         | <b>Area of native vegetation (ha)</b> |
|---|---------------------------------------|
| State Conservation Area                                       | 1,130                                 |
| Environmental Protection                                      | 1,180                                 |
| Open Space Zone (Local and Regional)                          | 1,970                                 |
| Special Uses - Military Reserve                               | 10,100                                |
| Biodiversity Overlay Control                                  | 0                                     |
| Private Conservation Agreement                                | 0                                     |
| Other Zone (eg. Rural, Commercial, industrial or residential) | 3,600                                 |
| <b>Total</b>  | <b>17,940</b>                         |

## Noxious Weed and Pest Animal Management Plan

In November 2009, Council adopted the Noxious Weed and Pest Animal Management strategy 2009-14. The strategy provides the framework for the management of both noxious weeds and pest animals within the LGA. It prioritises species into categories, with the highest priority given to those that pose a threat to the natural ecology of the area, and identifies methods for addressing and managing these threats.

Key work areas for pest animal (rabbit) and weed control activities include:

- John Kidd Reserve, Blair Athol (rabbits, woody weeds and blackberry)
- Milton Park, Botany Place, Spring Creek, Redfern Creek and Worrell Park (tube stock plantings, noxious and environmental weed control)
- arroville Reserve (Lantana and African olive)
- Bunbury Curran Reserve (Privet and Balloon Vine)
- Stage 1 Aquatic Weed Survey and Mapping Project that surveyed and mapped 78km of major and minor waterways within the LGA (aquatic weed control for Alligator weed and Ludwigia)
- Blackberry and African Boxthorn control (various locations)
- Private property inspections.

## Bushland restoration works

During the reporting period, Council continued on-ground bush restoration works at several key project sites including the Botany Place, Kentlyn under the auspice of the Upper Georges River Koala Habitat Restoration Program and at Redfern Creek, Ingleburn under the auspice of the Redfern Creek Riparian Zone Rehabilitation and Community Education Program. Both programs are based on funding from the Sydney Metropolitan Catchment Management Authority, with Council now acting as an environmental steward. Both sites had 1,000 endemic tubestock planted, with seed sourced locally. These works aim to restore the endangered ecological community (Cumberland Plain Woodland) that grows on site.

In 2010 Council, propagated and planted 3900 endemic tube stock seedlings across three strategic environmental restoration sites: Milton Park (Ingleburn); Botany Place (Kentlyn) and Redfern Creek (Macquarie Fields). The seedlings were the result of a Council program in partnership with Corrective Services whereby the seeds were sourced from the respective sites by a qualified seed collector and propagated by the Dawn de Laos Nursery at the Silverwater Detention Centre. The use of local provenance species helps to maintain local genetic diversity as well as preserving local biodiversity.

This restoration program aimed to improve the habitat for indigenous aquatic and riparian flora and fauna, increase the visual amenity of sites, and strengthen currently degraded and resilience depleted areas against future weed

colonisation and the establishment of related threats, by reconstructing a diverse range of native plant species.

This restoration program achieved the following key objectives:

- improvement of the habitat for indigenous aquatic and riparian flora and fauna
- An increase in the visual amenity of sites
- Strengthening of currently degraded, resilience depleted areas against future weed colonisation and the establishment of related threats, by reconstructing a diverse range of native plant species.

Council has used industry 'best practice' bush restoration techniques as well as seeking licensing approvals from the NSW Department of Environment, Climate Change and Water (National Parks & Wildlife Service), given the sensitive nature of the endangered ecological communities growing on site. The programmed works will aid in the longer term recovery of the endangered communities as well as providing immediate relief from the impact of aggressive weed invasion. Natural regeneration of native areas is promoted, with new infill tube stock plantings to be installed in areas of lower ecological resilience.

## Program of works at Noorumba reserve

Council has adopted a program of works for Noorumba Reserve based on its adopted Plan of Management for this Reserve, as well as its Local Neighbourhood Plan for the Rosemeadow district.

Major achievements related to this project within Noorumba Reserve (during the reporting period) included:

- commencement of a five year bush regeneration contract in a selected portion of the Reserve, based on the recommendations of a Vegetation Restoration Plan and Management Plan to protect the threatened species Cumberland Land Snail (*Meridolum corneovirens*) and its habitat, during the progression of the works
- preparation of a brief for the detailed design associated with the upgrading of existing tracks in the reserve, to form a track network suitable for a cross section of the community.

In addition, the installation of recreation facilities for the local community comprising of playground equipment, bicycle paths and seating in Reserve 4 (an area of open space located at the entrance to Noorumba Reserve) is scheduled to commence in late 2010 following authorised archaeological excavations in mid 2009.

During the reporting period, a total of 466 hours of bush regeneration work that achieved the restoration of approximately six hectares of bushland was undertaken within Noorumba Reserve.

# major achievements

## Community Services Orders (CSO) working groups

Council, in partnership with the Campbelltown Probation and Parole Office, has continued to utilise the services of the Community Services Order (CSO) working group.

The CSO working group is a valuable and cost-efficient resource, allowing Council to undertake rubbish removal, graffiti removal, and noxious weed control and bushland restoration activities on key environmental protection sites throughout the LGA. Each weekend, an average of 22 offenders participate in the CSO working group. The program provides for the participants to undertake the works as part of a community orders where the offenders give make a contribution to the community in which they have offended.

During 2009/10, the working group contributed more than 9,000 hours of labour through bush regeneration and weed control works at sites including John Kidd Reserve (Blair Athol), Milton Park (Macquarie Fields) and Varroville Reserve (Varroville). These works have helped to protect Cumberland Plain Woodland, an endangered ecological community common across all three sites, and will help to ensure that the environmental values of places like Milton Park are conserved into the future.

## Sustainable planting policy

In November 2009, Council endorsed its Sustainable Planting Policy. The policy aims to assist Council with the management of biodiversity on its own landholdings through providing guidance on appropriate planting arrangements.

The policy is applied to public land that is owned, managed and maintained by Council.

The policy utilises existing Council documents and guidelines to assist in the selection of appropriate species in the public domain. These documents include the Native Gardening Guide for the Campbelltown Area, The Campbelltown Tree Planting Guide, Removal of Fallen Trees and Branches Following Storm Events Fact Sheet, and a Neighbourhood Tree Disputes Fact Sheet.

Key aspects of the policy include:

- a commitment to use local endemic species when planting on public land, where appropriate
- a commitment to plant species, where possible, that are propagated from seedstock collected within the Campbelltown LGA
- guidelines to guide plant selection in this process
- an acknowledgement that Council may give consideration to using non endemic species when situations warrant such an approach.

The policy reflects Council's ongoing commitment to enhancing the conservation of local biodiversity.

## Scientific licence application for collection of protected flora and fauna

This licence, granted to Council from the National Parks and Wildlife Service NSW under Section 132C of the *National Parks and Wildlife Act 1974*, was applied for and obtained during the reporting period.

The licence permits the collection of protected flora and fauna listed under the Threatened Species and Conservation Act 1995 for scientific, educational or conservation purposes.

Specifically the licence covers all actions associated with bush regeneration works on selected Council owned and managed land throughout the Campbelltown LGA. The overarching objective of the works is to enhance and improve native vegetation throughout the Campbelltown LGA. This will be achieved through bush regeneration including removal of weeds and rubbish which encourages natural regrowth; collection of seed for propagation and planting of natives to rehabilitate degraded vegetation communities. Seed collection and propagation enabled by the licence will provide for the use of local provenance stock in planting on Council land throughout the LGA.





## our waste



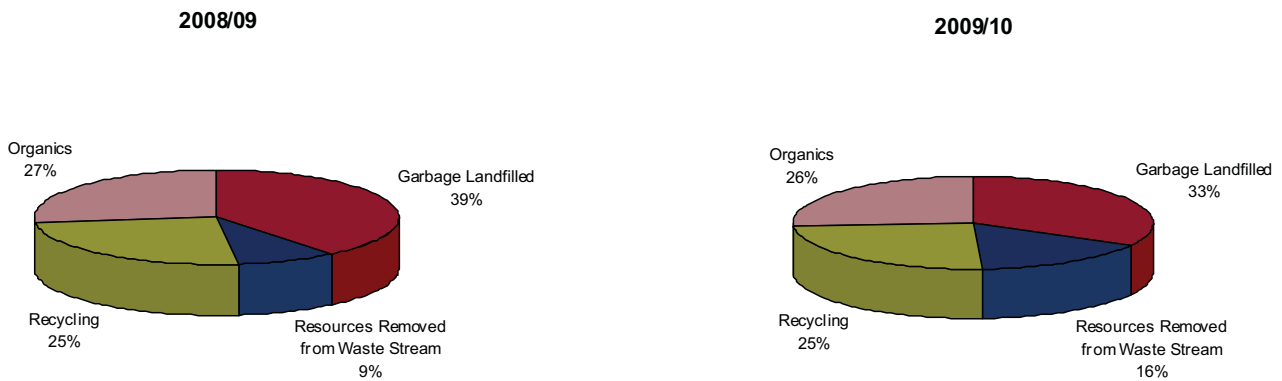
Council's domestic waste management strategy has three key objectives:

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

During the 2009/10 reporting period, the Campbelltown LGA had a 6% improvement in the ratio of recyclables-to-waste. Campbelltown also experienced a reduction in the overall waste generated and resources consumed with residents producing 407kg per capita when compared to 413 kg per capita in 2008/09.



Figures 1 & 2: Recyclables to waste ratios for the Campbelltown LGA



Performance data presented below shows that Campbelltown residents generated a total of 60,726 tonnes of waste during the 2009/10 reporting period of which 40,718 tonnes were recycled, reused and recovered. The tonnage of materials recycled, reused and recovered increased by 10% compared with 36,998 tonnes in 2008/09.

### Waste & Recycling Performance Data

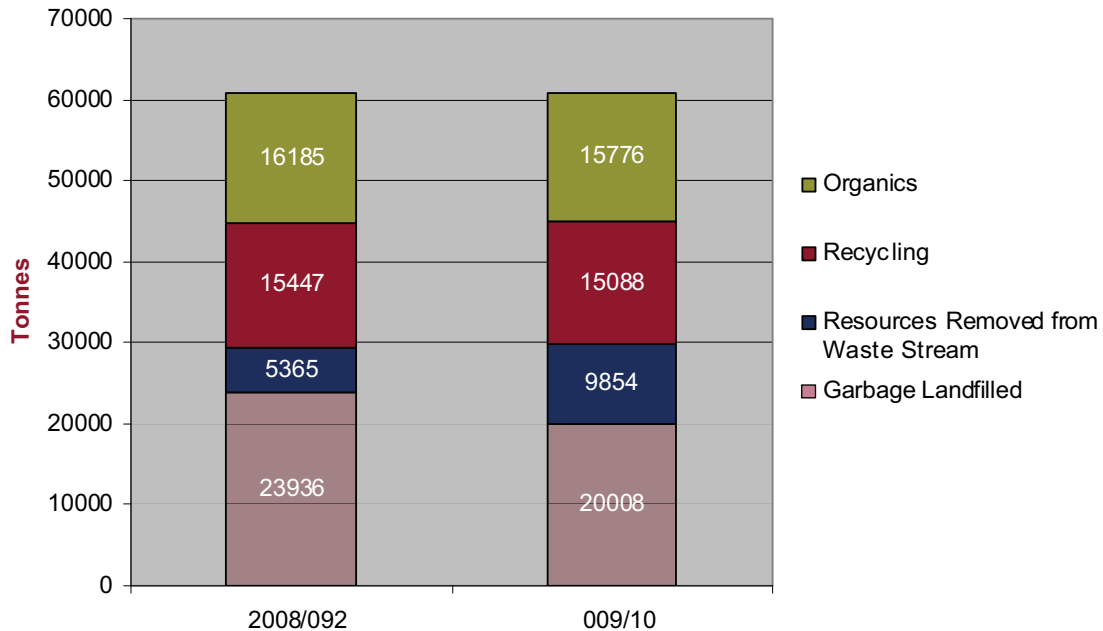


Figure 3: Waste and Recycling Performance Data for 2009/10 compared to 2008/09

The following table (table 7) provides an account against environmental indicators relating to Our Waste. Each indicator is classified under a category, and is either a measure of the pressure on the environment, state of the environment or response by government to the environmental issues. The table provides a commentary on any apparent change in the indicator for the last two years. A detailed description of the indicators for Our Waste can be found in Appendix 3.

A summary of the major achievements for Council during the reporting period follows.

**Table 7 Our Waste – Reporting on Indicators**

| Category | Indicator Number | Indicator   | P/S/R | 2008/09         | 2009/10         | Comment   |
|----------|------------------|---|-------|-----------------|-----------------|---|
| Waste    | 3.1              | Waste per person per year (tonnes)                    | P     | 0.413t          | 0.407t          | A decrease of 1.5% was observed between reporting periods.  |
|          | 3.2              | Number of reports of illegal dumping                  | P     | 2091 reports    | 2,150 reports   | An increase of 2.8% was observed between reporting periods. |
|          | 3.3              | Amount of illegally dumped rubbish collected (tonnes) | P     | 501t            | 548t            | An increase of 9.4% was observed between reporting periods. |
|          | 3.4              | Total waste to landfill (tonnes)                      | S     | 23,936t         | 20,008t         | A decrease of 19.6% was observed between reporting periods. |
|          | 3.5              | Total waste recovered (tonnes)                        | S     | 36,998t         | 40,718t         | An increase of 10% was observed between reporting periods.  |
|          | 3.6              | Resources recovered from waste stream (tonnes)        | S     | 5,365t          | 9,854t          | An increase of 83% was observed between reporting periods.  |
|          | 3.7              | Number of Council cleanups                            | S     | 37,793 cleanups | 38,861 cleanups | An increase of 2.8% was observed between reporting periods. |

Key:

- P/S/R
- P = Pressure
- S = State
- R = Response



# major achievements

## Recyclables Drop Off Day

The second Free Recyclables Drop-Off Day was held in January 2010 and provided an opportunity for residents to drop off any excess recyclable materials that can normally be disposed of in their yellow-lid recycling bin at home. For the first time, residents were also able to drop off polystyrene, which cannot be disposed of in domestic recycling bins, and is a material that is commonly accumulated during the festive season.

The event which was sponsored by WSN Environmental Solutions, SITA Environmental Solutions and the Colossal Box Company attracted 215 vehicles. Participants disposed of over four tonnes of recyclable materials, which is equivalent to filling around 350 domestic recycling bins. This total was made up of approximately 3.3 tonnes of paper and cardboard and just over one tonne of mixed recyclable containers such as plastic bottles and containers, glass bottles and containers and aluminium cans. A total of 35 cubic metres of polystyrene was collected on the day meaning that instead of going to landfill, it will now be recycled into new products such as timber-look blinds, decking and compact discs.

## Recyc-Olympics

Following an invitation from Housing NSW, Council staff attended the Macquarie Fields Community Fun Day in May 2010 which was organised by the Macquarie Fields Community Activities Group.

Based on past experiences at other events of this nature, it was agreed that the most effective way to involve the community would be to provide a waste-related interactive and educational activity for the children present on the day. From this foundation, the 'Recyc-Olympics' activity was developed and run for the first time at the Community Fun Day.

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 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.

The activity proved to be very popular with participants of all ages, and was successful in teaching the children about the correct disposal of household items, the importance of recycling, and the environmental benefits of keeping contaminants out of organics and recycling bins.

Due to the popularity of the activity, 'Recyc-Olympics' has been run again at other events, and is now provided to local primary schools as a supplement to the sustainability subjects included in the school curriculum.

## Light Globe and Fluorescent Tube Recycling Program

Council continued to provide a free fluorescent tube, compact fluorescent lamp (CFL) and incandescent globe recycling program during 2009/10. Residents of Campbelltown can safely dispose of CFLs and fluorescent tubes, which contain small amounts of mercury. Recycling these globes ensures valuable resources such as mercury, aluminium and other metals, glass and phosphor powder are 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, and five new collection points were created in the 2009/10 reporting period to make the program more accessible to residents. Residents can now drop off their old mobile phones, chargers and accessories at the following locations:

- HJ Daley Library
- Eagle Vale Central
- Glenquarie Branch Library
- Ingleburn Library
- Minto Library
- Council's Civic Centre.

Council collected over 130 mobile phones, chargers and accessories between April and June 2010. With over 90 percent of the material in mobile phones recyclable, the program will ensure these valuable resources are recovered for reuse in new products.



## Chemical CleanOut

The Household Chemical CleanOut event was held in August 2009 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.

The 2009/10 event saw a record number of residents participating, with more than 1,000 residents attending the event over the two days, which is a 30 percent increase on 2008/09 participation rates.

Residents dropped off approximately 36 tonnes of chemicals over the duration of the event and exceeded the 2008/09 event tonnage by approximately nine tonnes.

## Clean Up Australia Day

The 2010 event marked the 20th anniversary of Clean Up Australia Day.

There were 53 sites registered in the Campbelltown LGA in 2010, with Schools Clean Up Day accounting for 23 of these sites, and 30 sites registered for the main event on Sunday 7 March. This has been the highest number of registrations received by Council to date.

More than 8 tonnes of rubbish was collected from parks, bushland and waterways across the Campbelltown LGA.

## Domestic Waste Management Strategy

To assist in meeting its domestic waste management strategy objective to reduce the impacts associated with illegal dumping, Council provides residents with four kerbside clean-ups per year. Clean-ups are provided all year-round on an on-call basis, with residents able to book a clean-up at any time of the year. The number of clean ups booked in 2009/10 increased by 2.8% to 38,861 compared with 37,793 in 2008/09. Approximately 300 tonnes of metals were collected for recycling through the kerbside clean up service which further enhanced the recycling performance of Campbelltown's residents.

## Strategic Waste Action Plan

Council recently developed and adopted a Strategic Waste Action Plan (SWAP) during the 2009/10 reporting period. The SWAP contains system changes and actions that will assist Council in reaching the State Government nominated target to divert from landfill, at least 66 percent of the municipal waste stream and further improve Council's already impressive landfill diversion rates. Some of the strategies to be implemented under the SWAP include:

- a targeted inspection program for contaminated recycling and garden organics bins in geographical areas of concern
- continue to increase community awareness of how to use Council's domestic waste and recycling collection services correctly in residential areas where bin contamination is an issue
- continue to work with residents and caretakers at new and existing multi unit dwellings to educate residents on the correct usage of Council's domestic waste and recycling services. Council has already commenced sending information packs to residents moving into new multi unit dwellings to assist in reducing contamination rates and illegal dumping incidents
- continue to implement the Free Domestic Recyclables Drop Off Day and Light Globe and Fluorescent Tube Recycling Program.





## our water



## overview

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 Bowling / Bunbury Curran Creek system. The percentage of the Campbelltown LGA which lies within the Georges River catchment is approximately 86%. The remaining 14 percent of the LGA, feeds into the Hawkesbury / Nepean River.

Overall water quality in the LGA remains fair. However, 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 percent of the LGA's commercial, industrial areas and business centres are also located within this 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. Other impacts include pollution spills, illegal dumping, litter accumulation, aquatic noxious weeds, degraded riparian vegetation and altered flooding patterns.

The following table (Table 8) provides an account against environmental indicators relating to Our Water. Each indicator is classified under a category, and is either a measure of the pressure on the environment, state of the environment or response by government to the environmental issues. The table provides a commentary on any apparent change in the indicator for the last two years. A detailed description of the indicators for Our Water can be found in Appendix 4.

A summary of the major achievements for Council during the reporting period follows.



Table 8 Our Water – Reporting on Indicators

| Category                 | Indicator Number | Indicator  | P/S/R | 2008/09   | 2009/10   | Comment  |
|--------------------------|------------------|--|-------|---|---|--|
| Climate and Stream Flows | 4.1              | Monthly mean maximum and minimum temperature variation from average (°C) | S     | Temperatures were on average 0.17°C below monthly averages. | Temperatures were on average 0.84°C above monthly averages. | In keeping with the trend for higher average temperatures across Australia, the monthly mean temperatures at Campbelltown (recorded at Mt Annan) were higher for 2009-2010 with the exception of October 2009, which was slightly below average.   |
|                          | 4.2              | Yearly and Monthly Rainfall (mm/year)                                    | S     | 727mm / year  | 647mm / year  | Average annual rainfall was lower than that reported during 2008/09.<br><br>Monthly rainfall results show that the second half of 2009 was generally dryer than average, whilst 2010 was wetter than average. October 2009 and April 2010 were the exceptions, with October having higher than average rainfall and April 2010 being a particularly dry month. |
|                          | 4.3              | Water flows levels and volumes of  | S     | Maximum Height 1.5m   | Maximum Height 1.4m   | Rainfall Data was collected from five (5) Bureau of Meteorology sites at Glenfield, Ruse, Menangle Bridge, Kentlyn and Ingleburn.<br><br>The highest water level and flows monitored at O'Hares Creek,   |

Key:

P/S/R

P = Pressure

S = State

R = Response

table 8 - reporting on indicators cont.

| Category                 | Indicator Number | Indicator   | P/S/R | 2008/09   | 2009/10   | Comment  |
|--------------------------|------------------|---|-------|---|---|--|
| Climate and Stream Flows |                  | natural streams (ML/day)                                  |       | and maximum flows<br>1600ML/day<br><br>Minimum height 0.1m and 0 ML/day flows | and maximum flows<br>900ML/day<br><br>Minimum height 0.1m and 0 ML/day flows  | Weddeburn occurred during February 2010. These results correspond with the highest rainfall events recorded during the reporting period.<br><br>Stream heights and flows were on average lower than the 2008/09 reporting period.  |
|                          | 4.4              | Level of Floods experienced                               | P     | Localised flooding  | Localised flooding  | Some areas of Campbelltown experienced a 1% AEP flood during the 2009/10 reporting period, however these were quite localised.   |
| Water Quality            | 4.5              | Compliance with water quality objectives in the catchment | P     | Fair  | Fair<br><br>See Figure 4 for map summarising average % compliance results and Table 9 shows % compliance for each parameter | Overall, most sites monitored had 'Fair' to 'Good' ratings. Sites generally influenced by larger areas of natural bushland and rural land tended to have better water quality compliance when compared with the more urbanised and industrialised sites in the Bow Bowing/ Bunbury Curran Creek system.<br><br>Weddeburn Gorge on the Georges River had poorer compliance than similar sites further downstream and appears to be influenced by upstream inputs. |

table 8 - reporting on indicators cont.

| Category      | Indicator Number | Indicator   | P/S/R | 2008/09  | 2009/10  | Comment  |
|---------------|------------------|---|-------|--|--|--|
| Water Quality | 4.6              | Average Electrical conductivity results at water quality monitoring sites ( $\mu\text{s}/\text{cm}$ ) | P     | Average Range 174 – 1456 $\mu\text{s}/\text{cm}$ | Average range 176 $\mu\text{s}/\text{cm}$ – 1242 | <p>Two of the sites (Simmos Beach on the Georges River and Menangle Bridge on the Nepean River) are popular swimming spots. Whilst the overall rating for both sites was Fair, results show that on some occasions water quality was not considered to be suitable for swimming.</p> <p>The Woolwash at O'Hares Ck, continued to record the lowest EC readings in the LGA. The highest EC values reported during 2009/10 were from the Weddeburn Gorge site on the Georges River. Readings were also elevated at this site during 2008-09. Weddeburn Gorge is in a relatively natural catchment and is upstream of the influence of many of Campbelltowns main urban and industrial areas. A similar site nearby on O'Hares Creek in contrast, recorded average readings six (6) times lower at less than 200 <math>\mu\text{s}/\text{cm}</math>.</p> <p>It is suggested that these elevated readings at Weddeburn may potentially be attributed to upstream influences from Appin township,</p> |

table 8 - reporting on indicators cont.

| Category      | Indicator Number | Indicator   | P/S/R | 2008/09     | 2009/10  | Comment   |
|---------------|------------------|---|-------|-------------|--|---|
| Water Quality |                  |   |       |             |  | <p>Spring Creek and mine waste water discharges that occur further upstream in Brennans Creek. These effects are diluted by the time they reach sites further downstream in the Georges River until EC begins to increase again with urban influences from the Bow Bowling/ Bunbury Curran Creek system.</p> <p>Urban sites generally exhibited higher conductivity readings, which are thought to be due to a combination of the more naturally saline soil type in these areas, urban salinity influences, and additional pollutants from urban and industrial run-off.</p> |
|               | 4.7              | River Health Monitoring Report Card Rating for Upper Georges Catchment and Individual sites within the Campbelltown LGA | S     | Not sampled | B+ or Good<br>See Table 10 for Campbelltown site results | <p>The results for the Upper Georges River Report Card rated the overall river health within the LGA as B+ or Good during both sampling occasions. Upland sites within natural bushland catchments had the best ratings, with the worst site being located in Brennans Creek (located within Wollondilly LGA), which flows into the headwaters of the Georges River. Sites within the Georges River</p>   |



table 8 - reporting on indicators cont.

| Category      | Indicator Number | Indicator                                   | P/S/R | 2008/09          | 2009/10          | Comment   |
|---------------|------------------|---|-------|------------------|------------------|---|
| Water Quality |                  |   |       |                  |                  | <p>downstream of Brennans Creek show gradual health improvements until they begin to decline again where the highly urbanised Bunbury Curran and Bow Bowing tributaries meet the Georges River.</p> <p>Six sites were monitored within Campbelltown LGA under the program, with results showing that sites in the Georges River at the Woolwash and at Cambridge Avenue experience poorer water quality when compared to those at Stokes and O'Hare's Creeks and the Georges River at Ingleburn Weir.</p> |
| Volunteers    | 4.8              | Number of Streamcare volunteer hours worked | R     | 190 hours worked | 459 hours worked | <p>In 2009/10, volunteers worked more than 459 hours on the program (compared to 190 hours in 2008/09), with 250 bags of rubbish and 408 bags of noxious weeds removed from Noorumba Reserve, Botany Place, Redfern Creek (Milton Park), and Spring Creek.</p> <p>This increase in effort is primarily due to the establishment of three (3) new groups at Spring Creek, Redfern</p>  |

table 8 - reporting on indicators cont.

| Category                         | Indicator Number | Indicator                                     | P/S/R | 2008/09  | 2009/10  | Comment   |
|----------------------------------|------------------|---|-------|--|--|---|
| Volunteers                       |                  |   |       |  |  | Creek and Botany Place.   |
| Aquatic weeds                    | 4.9              | Density, location and extent of aquatic weeds | P     | 85 infestations of Alligator Weed with medium density coverage (>30%-<70%)<br>97 infestations of Ludwigia in 2005 with Medium density coverage (>30%-<70%) | 81 infestations of Alligator weed with scattered coverage (<5%)<br>84 infestations of Ludwigia in 2010 with scattered coverage (<5%) | The total number of infestations has decreased, and weed densities have also decreased between reporting periods primarily due to an increase of effort and resources associated with weed control.   |
| Point sources of water pollution | 4.10             | Number of licensed discharge points to water  | P     | 5 point sources.   | 5 point sources.   | Four premises have five (5) licensed discharge points to watercourses within Campbelltown LGA. There were no new licensed discharge points to registered watercourses within the reporting period.<br><br>These discharge points are: Glenfield STP which discharges to the Georges River during wet weather overflow conditions; two quarry operations which discharge stormwater overflow |

table 8 - reporting on indicators cont.

| Category                         | Indicator Number | Indicator        | P/S/R | 2008/09      | 2009/10                              | Comment   |
|----------------------------------|------------------|------------------|-------|--------------|--------------------------------------|---|
| Point sources of water pollution |                  |                  |       |              |                                      | <p>into the Nepean River and Glenfield Waste Disposals which have two (2) discharge points, one in Glenfield Creek and the other at the Georges River.</p> <p>None of these sites have reported non-compliance during the 2009/10 reporting period.</p> <p>Although not within Campbelltown LGA, the West Cliff Colliery at Appin has an Environment Protection Licence to discharge mine waste water into Brennans Creek which feeds into the Upper Georges River. This licence is subject to a Pollution Reduction Program (PRP) requiring the company to deal with elevated salinity levels being discharged at this point. They are required to derive a salinity discharge limit and investigate means by which they will be able to achieve this discharge limit by 2011.</p> |
|                                  | 4.11             | Sewage overflows | P     | Not reported | 3 wet weather overflows<br>Totalling | Sydney Water is due to complete the Glenfield Liverpool Effluent Diversion Scheme (GLEDS) during November 2010. This scheme will enable   |

table 8 - reporting on indicators cont.

| Category                         | Indicator Number | Indicator                                       | P/S/R | 2008/09                  | 2009/10                   | Comment  |
|----------------------------------|------------------|---|-------|--------------------------|---------------------------|--|
| Point sources of water pollution | 4.12             | Number and volume of Sewage Overflow incidences | P     | Not reported             | 101.11ML discharged       | Sydney Water to transfer treated wastewater from Glenfield and Liverpool Sewage Treatment Plants (STPs) along the Liverpool to Ashfield Pipeline for reuse by industrial customers. It will also reduce sewer flows and improve ability to maintain and operate the North Georges River sub main. This will reduce overflows into the Georges River during periods of wet weather in the future. |
|                                  |                  |   |       |                          | 17 incidences<br>249.35KL | Sydney Water is delivering a SewerFix program that aims to protect public health and the environment by significantly reducing overflows and leaks from the sewage system by 2012. This is being achieved by repairing leaks and blockages in pipes, the installation of new pipes and upgrading of sewage pumping stations.   |
|                                  | 4.13             | Number of Septic Systems                        |       | Over 900 septic systems. | Over 900 septic systems.  | Across the LGA there are approximately 900 septic systems on rural properties that are generally greater than 3 acres in size. These systems are mainly located in the suburbs of: Gilead, Wedderburn,   |

table 8 - reporting on indicators cont.

| Category                         | Indicator Number | Indicator                    | P/S/R | 2008/09        | 2009/10  | Comment   |
|----------------------------------|------------------|------------------------------|-------|----------------|--|---|
| Point sources of water pollution | 4.14             | Compliance of Septic Systems |       | 85% compliance | <p>105 properties inspected.</p> <p>67% complied during their initial inspection and 32% Failed.</p> <p>44% of these systems continued to fail upon re-inspection.</p> | <p>Menangle Park, Kentlyn, Varroville, Denham Court, Ingleburn Glenfield, Macquarie Fields, Long Point, Leumeah, Minto and Minto Heights.</p> <p>Two thirds of these are the 'older style' septic tanks with an absorption trench. The remaining third are aerated wastewater treatment systems.</p> <p>There was no change to the number of systems during the reporting period.</p> <p>Denham Court was the main target area for these inspections, with 105 properties inspected.</p> <p>The owners of the systems that failed the initial inspection were provided with guidance and notification to rectify these problems. These systems were then re-assessed later that the year. Of these re-inspections 56% then passed, whilst the remaining 44% continued to fail Compliance is generally pursued through the issue of Notices and Orders issued under the <i>Local Government Act 1993</i> and</p> |

table 8 - reporting on indicators cont.

| Category                          | Indicator Number | Indicator   | P/S/R | 2008/09                                  | 2009/10                                  | Comment   |
|-----------------------------------|------------------|---|-------|--|--|---|
| Point sources of water pollution  |                  |   |       |  |  | subsequent enforcement action.<br><br>Three separate septic related incidents in Kentlyn and Long Point were reported to Council as complaints by the community during the reporting period. These complaints were investigated and regulatory action taken to pursue upgrade and rectification of failing systems.                 |
| Water Quality Improvement Devices | 4.15             | Number of water quality improvement devices installed in Council's stormwater management system | R     |  | 20 new pyramid grates installed          | During the reporting period 20 new Pyramid grates were installed in the suburbs of Ambervale and Rosemeadow to prevent litter movement downstream. These Pyramid style traps are an improvement on the previously used pit style of trap, as their design prevents blockages and therefore improves the functioning of the systems. |
|                                   | 4.16             | Volume of Pollutants collected from Gross Pollutant Traps (GPTs)                                | R     | 593 m <sup>3</sup> of pollutants removed | 350 m <sup>3</sup> of pollutants removed | The decrease between the reporting years may be due to variations in rainfall and storm events which effect the carriage of pollutants through the stormwater system.   |
| Compliance associated             | 4.17             | Number of compliance actions  | R     | 7 incidents were reported                | 16 incidents were reported               | The number of incidences reported to Environment Line and Council have  |

table 8 - reporting on indicators cont.

| Category             | Indicator Number | Indicator                            | P/S/R | 2008/09   | 2009/10   | Comment  |
|----------------------|------------------|--------------------------------------|-------|---|---|--|
| with water pollution |                  | for water issues                     |       | to the Environment Line<br>Council received 31 direct enquiries | to the Environment Line<br>Council received 37 direct enquiries | both increased since last reporting period.  |
| Water Extraction     | 4.18             | Number of surface water licences     | P     | 30 Surface water licences                                       | 30 Surface water licences                                       | There are 30 active surface water licences within the LGA which represent annual entitlements of 3065.5ML. No additional licences were activated during the reporting period.<br><br>Council holds water licences for six (6) locations within the LGA. These are used to irrigate playing fields, service public toilets at Simmo's Beach, and as contingency watersources for pump sites for the Rural Fire Service during emergency events. |
|                      | 4.19             | Number of Licensed Groundwater Bores | P     | 26 Licensed Groundwater Bores                                   | 33 Licensed Groundwater Bores                                   | There are a total of 33 active groundwater bores within the LGA. Of these, 15 are monitoring bores, with the remaining 5 for domestic use, 11 for domestic and stock use, and 2 for industrial use.  |

## table 8 - reporting on indicators cont.

| Category          | Indicator Number | Indicator                              | P/S/R | 2008/09     | 2009/10     | Comment   |
|-------------------|------------------|--|-------|-------------|-------------|---|
| Water Extraction  |                  |  |       |             |             | Within the 2009/10 period additional bore licences have been granted for: monitoring (4), domestic(1) and industrial bores (1). |
| Water Consumption | 4.20             | Water consumption – Council properties | S     | 216,596 KL  | 276,528 KL  | There has been an increase in water consumed by Council.  |
|                   | 4.21             | Water consumption – Residential        | S     | 9,278,764KL | 9,416,288KL | Household water consumption has increased during the reporting period.  |



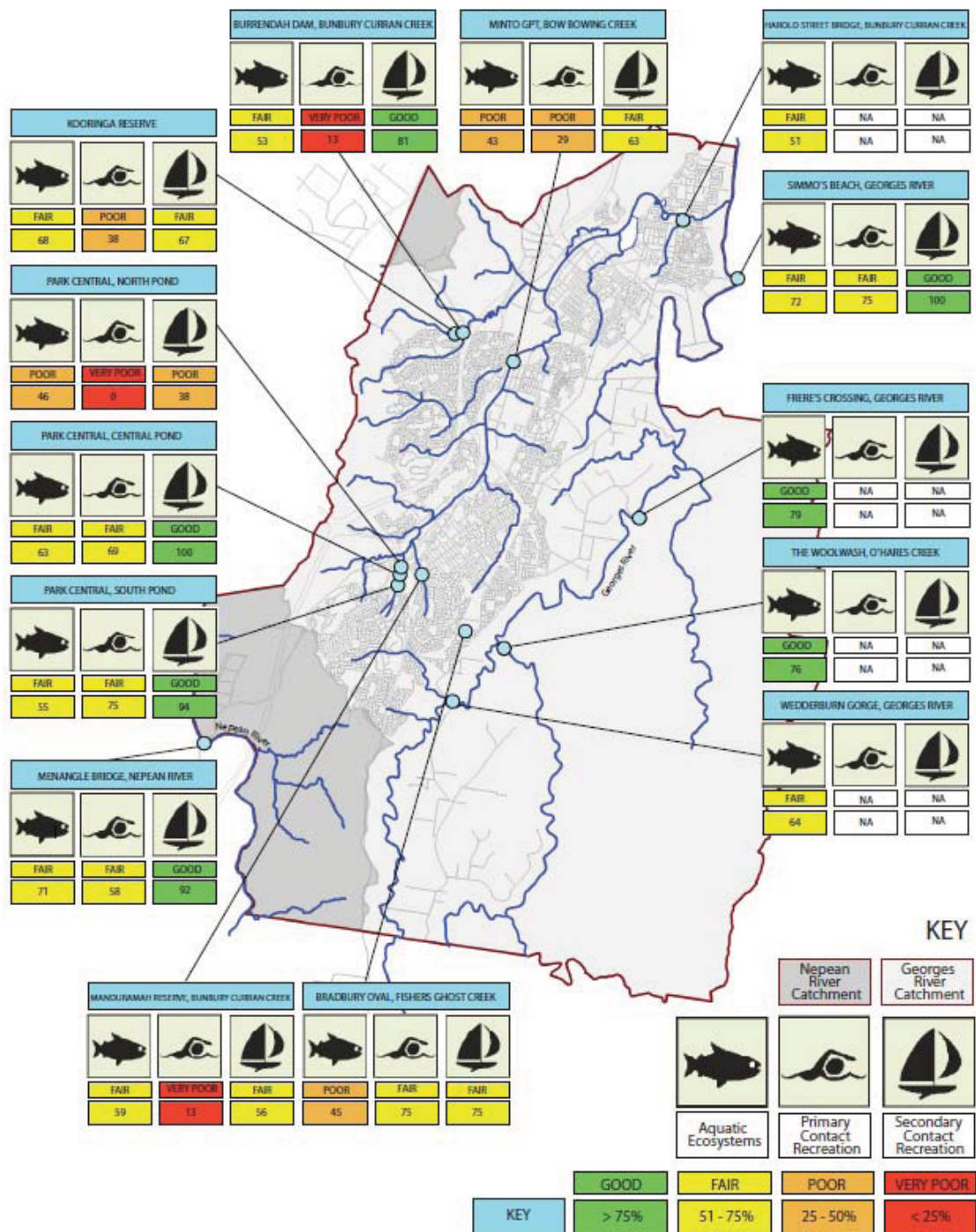





Figure 3: Average percentage compliance with ANZECC guidelines for water quality at Campbelltown City Council's water quality monitoring sites.

However please note that although each site compares compliance against the ANZECC primary and secondary contact recreation only two sites facilitate these activities, being Menangle Bridge and Simmos Beach. Compliance against these criteria is recorded for benchmarking and comparative analysis.

|  |                         | Bushland and Rural Landuses |                               |                                 |                                 |                              | Urbanised Landuse                   |                              |                                  |                          |                            |                          |                                       |                                  |                                 |
|--|-------------------------|-----------------------------|-------------------------------|---------------------------------|---------------------------------|------------------------------|-------------------------------------|------------------------------|----------------------------------|--------------------------|----------------------------|--------------------------|---------------------------------------|----------------------------------|---------------------------------|
|  |                         | The Woolwash, O'Hares Ck    | 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 Ck | Park Central, South Pond | Park Central, Central Pond | Park Central, North Pond | Manduramah Reserve, Bunbury Curran Ck | Burrendah Dam, Bunbury Curran Ck | Bradbury Oval, Fishers Ghost Ck |
|  <b>Aquatic Ecosystems</b>  | Dissolved Oxygen        | 63                          | 40                            | 10                              | 63                              | 37                           | 0                                   | 0                            | 50                               | 25                       | 75                         | 0                        | 0                                     | 14                               | 14                              |
|  | pH                      | 67                          | 81                            | 67                              | 67                              | 81                           | 92                                  | 75                           | 8                                | 100                      | 75                         | 100                      | 100                                   | 88                               | 50                              |
|  | Electrical Conductivity | 100                         | 100                           | 100                             | 100                             | 100                          | 100                                 | 83                           | 100                              | 100                      | 100                        | 100                      | 100                                   | 100                              | 100                             |
|  | Turbidity               | 92                          | 100                           | 92                              | 100                             | 100                          | 100                                 | 100                          | 75                               | 100                      | 100                        | 100                      | 100                                   | 100                              | 88                              |
|  | Total Nitrogen          | 75                          | 57                            | 8                               | 75                              | 67                           | 17                                  | 100                          | 8                                | 0                        | 25                         | 0                        | 0                                     | 0                                | 0                               |
|  | Total Phosphorus        | 67                          | 50                            | 58                              | 75                              | 67                           | 0                                   | 0                            | 17                               | 13                       | 13                         | 0                        | 50                                    | 50                               | 0                               |
|  | Chlorophyll A           | 67                          | 67                            | 58                              | 75                              | 50                           | 50                                  | 50                           | 50                               | 50                       | 50                         | 25                       | 63                                    | 25                               | 63                              |
|  <b>Primary Contact</b>    | Faecal Coliform         | n/a                         | 100                           | n/a                             | n/a                             | 100                          | n/a                                 | 50                           | 75                               | 88                       | 0                          | 25                       | 13                                    | 75                               |                                 |
|  | Enterococci             | n/a                         | 17                            | n/a                             | n/a                             | 50                           | n/a                                 | 25                           | 8                                | 75                       | 0                          | 0                        | 13                                    | 75                               |                                 |
|  <b>Secondary Contact</b> | Faecal Coliform         | n/a                         | 100                           | n/a                             | n/a                             | 100                          | n/a                                 | 83                           | 100                              | 100                      | 38                         | 63                       | 88                                    | 75                               |                                 |
|  | Enterococci             | n/a                         | 83                            | n/a                             | n/a                             | 100                          | n/a                                 | 42                           | 88                               | 100                      | 38                         | 50                       | 75                                    | 75                               |                                 |

|            |                                |                                  |                                  |                                     |
|------------|--------------------------------|----------------------------------|----------------------------------|-------------------------------------|
| <b>Key</b> | <b>Good</b><br>>75% compliance | <b>Fair</b><br>51-75% compliance | <b>Poor</b><br>25-50% compliance | <b>Very Poor</b><br><25% compliance |
|------------|--------------------------------|----------------------------------|----------------------------------|-------------------------------------|

Table 1: Percentage compliance with ANZECC water quality trigger values for aquatic ecosystems, primary contact recreation and secondary contact recreation criteria at sites across the Campbelltown LGA during the reporting period.

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

Table 10: River health report card grades for sites monitored within the Campbelltown LGA as part of the Georges River Combined Councils (GRCCC) River Health Monitoring Program.



## Water quality testing

Council is committed to the sustainable management of water resources and improved water quality within the LGA. Subsequently, over the past 35 years, Council has intermittently conducted a Water Quality Monitoring Program (WQMP), which has involved water quality testing at a number of strategically selected sites within the LGA. The program, which was first instigated in 1973, has undergone a number of significant changes, including changes to the locations targeted, the methods used to capture, analyse and interpret the samples, as well as the frequency at which the sites are sampled.

Council's current WQMP was initiated in 2005 and includes the sampling and monitoring of fourteen 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). Sampling sites were selected due to their accessibility (ease of access and adequate stream flow) as well as their recreational, ecosystem and strategic values. It is also considered that the sites are reflective of the land uses within both catchments. Results of the 2009/10 WQMP can be found in the indicators section of this document.

In 2009/10 Council commenced a review of its water quality monitoring program. The review aims to analyse the program's effectiveness and ensure that it meets Council's and the community's needs. Recommendations are anticipated to be available in the 2010/11 financial year and will provide future direction for Council in addressing low compliance readings.

## River health monitoring

The Georges River Combined Councils Committee (GRCCC), of which Campbelltown City Council is a member, began its River Health Monitoring Program of 42 sites across the Georges River Catchment during 2009.

This Program utilises community volunteers to undertake the monitoring of water quality, macroinvertebrates, and riparian vegetation in order to develop a snap-shot of river health. It reports these results in the form of a River Report Card, which rates each site on a scale of Excellent (A+) to Degraded (F-). It also provides an overall sub-catchment rating for each of the Upper, Middle and Lower Georges River sub-catchments.

Sites were sampled twice during the reporting period, once during spring 2009, and again during autumn 2010. The results for the Upper Georges River Report Card rated the overall river health for the sub-catchment as B+ or Good on both sampling occasions.

Six of the 13 sites sampled within the Upper Georges River Catchment are located within the Campbelltown LGA, and include sites in natural bushland settings, as well as those influenced by human activities. Results for these sites ranged from A+ for sites in bushland areas to C+ for sites in

the Georges River below the confluence with the urbanised Bow Bowling/ Bunbury Curran Creek system.

Results of the 2009/10 River Health Monitoring Program within the Campbelltown LGA can be found in the indicators section of this document. Further information about the River Health Monitoring Program can be obtained from the GRCCC website at [www.georgesriver.org.au](http://www.georgesriver.org.au)

## Aquatic Noxious Weeds Treatment Program

A combined Nepean River Aquatic Weed Treatment Program was conducted in collaboration with Campbelltown City Council, Wollondilly Shire Council and Camden Council, which targeted an estimated 60km length of Alligator weed infested river. All known aquatic weed sites within the Campbelltown LGA were treated repeatedly, in order to control and suppress their growth and limit potential invasion to new areas. Species targeted in the program included Alligator weed, Ludwigia, Salvinia and Water Hyacinth.

## Aquatic Noxious Weed Mapping Program

Campbelltown City Council undertook an extensive aquatic weed mapping and control project across waterways and drainage lines within the LGA in the 2009/10 financial year. The project aimed to: map 86km of waterways and drainage lines within the Campbelltown LGA; compare aquatic weed infestation (density and coverage) with baseline data collected from 2005; repeat weed control works for all known Alligator weed infestations with the LGA and weed control works for all known Ludwigia infestations within the LGA.

There have been significant decreases in aquatic weeds reported as part of these mapping and control projects.

In the 2010 mapping project, the majority of records occurred in densities of less than 5 percent, typically comprising small infestations or single specimens. Only 12 records of target species were recorded with densities of more than 70 percent and many drainage lines appear to remain weed-free compared with the 2005 survey results.

A significant and positive outcome arising from the 2010 Aquatic Weed Mapping Project is the great reduction in Ludwigia infestations along Leumeah Creek, from nine locations in 2005 to only one location in 2010. These results are further detailed in the indicators section of this document.

These results indicate that Council's aquatic weed control program is effective as is evidenced by the observed reduction in aquatic weeds. In reducing these infestations Council is contributing to the improvement of the health of local waterways and promoting improved water quality and biodiversity outcomes.

## Upper Georges River – Urban Sustainability Project

In 2008 Campbelltown and Liverpool City Council's, in association with Wollondilly Shire Council and the Georges River Combined Councils Committee, secured \$2 million in funding from the NSW Government (NSW Environmental Trust) for a project over three years. The funding will allow for the development of a Strategic Environmental Management Plan (SEMP) for the Upper Georges River to guide future projects, management and planning in regard to the catchment. The project will also see physical on-ground works to improve the quality of the river through a variety of water management, natural resource management and community education programs. Resources will also be spent on projects aimed at increasing the community's awareness and knowledge of the Georges River as a whole.

- In the 2009/10 financial year, a complete program of works across all three Council areas was determined. Each Council has now initiated the implementation of their respective works program
- The SEMP has been drafted and is currently being finalised by consultants, it is due to be completed by November 2010.

The project is due to be completed by June 2011.



## Golf Course Urban Sustainability Project

The Urban Sustainability Campbelltown Golf Course Project is a partnership between Council, Campbelltown Golf Course and the NSW Environmental Trust. The project aims to improve water quality within the headwaters of the Bow Bowling Creek, a tributary of the Georges River located within the Campbelltown Golf Course.

The three year project which began in January 2009 aims to implement a range of sustainability measures, including bush regeneration works, soil and water quality testing, weed control and improved irrigation water efficiency. The project will also involve the replanting of existing wetlands, seed collection and propagation. A site specific Sustainable Environmental Management Plan is being developed to coordinate sustainability initiatives across the golf course site, and through course operations.

The first phase of the project focused on project planning, the Project Business Plan and the establishment of a Project Steering Committee.

Phase 2 of the project involved the development of a Sustainable Environmental Management Plan (SEMP) and the implementation of the management actions identified in the SEMP.

As part of Phase 3 of the project on ground initiatives and SEMP implementation will continue prior to project completion and evaluation.

Key works that were undertaken during the reporting period included:

- formal approval by the funding body for the project business plan
- project Launch
- a SEMP initiation workshop and draft SEMP and Environmental Management System developed;
- media coverage
- wetland restoration works involving African Olive removal, Blackberry spraying and wetland species propagation commencement
- the collection of endemic seed, with 3,000 tubestock propagated
- the planting of 1,250 endemic tubestock in May 2010 by students from five local schools.



## Streamcare

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

The program not only engages these volunteers with their local environment, but aims to provide them with new skills and knowledge which can be utilised in the wider community.

Council has a Streamcare group operating at Noorumba Reserve, Rosemeadow which has been in operation since 2005. In early 2010, Council initiated the establishment of three new groups at Redfern Creek (Ingleburn), Botany Place (Rosemeadow) and Spring Creek (St Helens Park). Council has more than 30 volunteers registered under the Streamcare program, with more potential participants on a waiting list.

In 2009/10, volunteers have worked more than 459 hours on the program (compared to 190 hours in 2008/09), with 250 bags of rubbish and 408 bags of noxious weeds removed from these locations.

## Bring Back the Fish Project

Council completed the enhancement of fish passage at Ingleburn Weir as part of the NSW Department of Primary Industry (now incorporated in Industry and Investment NSW (IINSW)) 'Bring Back the Fish Project', during the reporting period. The weir was identified by this project as having a high priority for remediation due to its location on the Georges River and the significant increase in unrestricted fish passage that would occur as a consequence of the works. The completion of the works (carried out by a specialist consultant) was delayed until September 2009 due to high water levels within the Georges River.

The project involved the realignment of selected boulders in a breached section of the weir to remove the obstacles to fish passage during low and moderate flow events.

The photographs before and after conducting the works show that boulders removed to enhance fish passage were placed into gaps in the structure to enhance its long-term stability.

The works were designed in accordance with a Heritage Impact Statement to preserve the identified heritage value of the structure.

The works are considered to have satisfactorily achieved (the potentially conflicting) objectives of enhancing fish passage whilst maintaining the identified significance of the weir. A brochure outlining the details of the work undertaken and heritage significance of the weir can be viewed on Council's website.

## PoM for Marsden Park

Marsden Park forms the open space component of the Park Central development, located between Campbelltown Public Hospital and the Macarthur Square shopping complex. The park was constructed in stages by Landcom and has become a regional and public facility with a high level of recreation usage. The park is comprised of a series of created wetlands, park areas and remnant Cumberland Plain Woodland (a Critically Endangered Ecological Community).

In early 2009, Council was successful in obtaining a \$46,000 grant from the Sydney Metropolitan Catchment Management Authority (SMCMA) for the development of a Plan of Management for Marsden Park. The draft Plan of Management for Marsden Park was prepared in the second half of 2009 and, publicly exhibited between November 2009 and February 2010. During this period, the draft plan was available for viewing at local libraries, Council's website and the Civic Centre. The feedback received by Council welcomed the preparation of the draft plan and the associated consultation process. Feedback received on the draft Plan was also largely positive with most comments relating to traffic movement and parking availability within Park Central and recreation facilities. The plan was subsequently adopted by Council as a policy document for the management of the park in June 2010.

In accordance with the requirements of the funding program, a focus of the plan relates to the addressing of water quality, stormwater and flooding control issues associated with the substantial wetlands located within Marsden Park. However, the plan also recognises the recreation value of the wetland, bushland and parkland components of the park and its relationship to the Park Central development. In addition, the plan also addresses traffic movement and parking availability related issues within the Park Central complex that are of relevance to the management of the park. The plan can be viewed on Council's website and will be implemented over the next 10 years based on identified priorities and the availability of resources.

