

# CESSNOCK CITY COUNCIL

---

## Supplementary State of the Environment Report 2005 -2006



### ANNEXURE 1

**Cessnock City Council Annual Report**

# Acknowledgments

This report was prepared and written by Tricia Donnelly, with editing assistance from Alison Lawrence.

The following people gave generously their time and expertise in contributing information for inclusion into this report:

Steve Wilson – Hunter and Central Coast Regional Environmental Management Strategy  
Ken Gillespie – Department of Natural Resources  
Ingrid Berthold – Hunter-Central Rivers Catchment Management Authority  
Roger Lewis – Hunter Resource Recovery  
Roland Bow - Hunter Water Corporation  
Adam Fawcett – NSW State Forests  
Olive Wu - Roads and Traffic Authority  
Elizabeth Roberts – The Convict Trail Project  
Adrienne Farago - Environment Protection and Regulation Division, DEC

## COUNCIL STAFF

Michael Alexander	Jennifer Andrews
Nicole Benson	Greg Chapple
Maurice Kidd	Jenny Lange
Alison Lawrence	Glynis McClymont
Lisa McCord	Bo Moshage
Michael O'Connor	Sarah Roberts
Kavita Payall	Annette Stewart
Barry Shephard	Jacqui Tupper
Gerard Young	

PRINTED ON

**100% RECYCLED PAPER**

# ABBREVIATIONS

ANZECC	Australian and New Zealand Environment and Conservation Council
CCC	Cessnock City Council
CCRS	Cessnock Community Renewal Strategy
DCP/DCPs	Development Control Plan/s
DEC	Department of Environment and Conservation NSW
DIPNR	Department of Infrastructure, Planning and Natural Resources
DNR	Department of Natural Resources NSW (formerly DIPNR)
DO	Dissolved Oxygen
DoH	Department of Housing
EEC	Endangered Ecological Community
EPA	Environment Protection Authority (now the DEC)
EPBC Act	Environment Protection and Biodiversity Conservation Act
ESD	Ecologically Sustainable Development
Ha	Hectare
HCRCMA	Hunter – Central Rivers Catchment Management Authority
HEZ	Hunter Economic Zone
HRR	Hunter Resource Recovery
HWC	Hunter Water Corporation
ICAC	Independent Commission Against Corruption
kL	Kilolitres
kWh	Kilowatt hours
L	Litre
LEP/LEPs	Local Environmental Plan/s
LGA	Local Government Area
HCCREMS	Hunter and Central Coast Regional Environmental Management Strategy
ML	Megalitres
MWhrs	Megawatt hours
NO <sub>3</sub>	Nitrate Nitrogen
NPWS	National Parks and Wildlife Service NSW
NHMRC	National Health and Medical Research Council
NSW FB	New South Wales Fire Brigade
NTU	Nephelometric Turbidity Units
OP	Orthophosphate
RFS	Rural Fire Service
RTA	Roads and Traffic Authority
SoE	State of the Environment Report
TCM	Total Catchment Management
WWTP/WWTW	Wastewater Treatment Plant/Wastewater Treatment Works

# INDEX

- INTRODUCTION..... 1**
  
- HUMAN SETTLEMENTS ..... 3**
  - AT A GLANCE ..... 3
  - RESPONSES TO COMMUNITY, POPULATION AND SETTLEMENT PATTERNS ISSUES ..... 4
    - Social and Community Plan ..... 4
    - Community Facilities ..... 4
    - Access ..... 5
    - Youth Services ..... 5
    - Off Leash Dog Exercise Areas ..... 5
    - Tidy Towns Program ..... 5
    - Cessnock Community Renewal Strategy ..... 5
    - Community Environmental Education ..... 6
    - Economic Development ..... 7
    - Hunter Economic Zone ..... 8
  - RESPONSES TO DRINKING WATER ISSUES ..... 8
    - Refit Program ..... 8
  - RESPONSES TO TRANSPORT ISSUES ..... 9
    - Vehicle Registrations ..... 9
    - Cycleways ..... 10
    - Sustainable Transport Strategy ..... 10
    - Road Safety Programs ..... 10
  - RESPONSES TO WASTE MANAGEMENT ISSUES ..... 11
    - Solid Waste Management ..... 11
    - Liquid Waste Management ..... 13
  - RESPONSES TO TRANQUILITY AND NOISE ISSUES ..... 14
  
- LAND ..... 15**
  - AT A GLANCE ..... 15
  - RESPONSES TO LANDUSE ISSUES ..... 16
    - Landuse Planning ..... 16
    - Development Activities ..... 16
    - Development Control ..... 16
    - Open Space ..... 17
  - RESPONSES TO LAND DEGRADATION/INTERVENTION ISSUES ..... 17
    - Vegetation Clearing ..... 17
    - Acid Sulfate Soils ..... 17
    - Contaminated Land ..... 18
    - Land Management ..... 18
    - Landcare Activities ..... 18
    - Fire History and Management ..... 18
  
- AIR (ATMOSPHERE) ..... 19**
  - AT A GLANCE ..... 19
  - RESPONSES TO GREENHOUSE GAS EMISSIONS ISSUES ..... 20
    - Energy Consumption ..... 20
    - Cessnock Council Energy Improvement Program ..... 20
    - Refit Program ..... 20
    - HCCREMS - Climate Action Project ..... 21
    - Cycleways ..... 21
  - RESPONSES TO AIR QUALITY ISSUES ..... 21
    - Outdoor Air Quality ..... 21
    - National Pollution Inventory ..... 22
    - Indoor Air Quality ..... 22

<b>WATER .....</b>	<b>23</b>
<b>AT A GLANCE .....</b>	<b>23</b>
<b>RESPONSES TO WATER QUALITY ISSUES .....</b>	<b>24</b>
Water Quality.....	24
Waterwatch Activities.....	25
Water Pollution Complaints/Incidents .....	26
<b>RESPONSES TO WASTEWATER ISSUES .....</b>	<b>27</b>
<i>Protection of the Environment Operations Act, 1997</i> Scheduled Premises .....	27
Cessnock LGA Wastewater Treatment Plants.....	27
On-site Effluent Disposal.....	27
<b>RESPONSES TO WATER USAGE ISSUES.....</b>	<b>28</b>
Surface and Groundwater Extraction .....	28
HCCREMS - Regional Water Program.....	28
Community Water Grants .....	28
Hunter Water Corporation Rainwater Tank Rebate .....	28
Refit Program.....	28
<b>BIODIVERSITY .....</b>	<b>29</b>
<b>AT A GLANCE .....</b>	<b>29</b>
<b>RESPONSES TO BIODIVERSITY ISSUES .....</b>	<b>30</b>
Reforms to <i>Threatened Species Conservation Act</i> .....	30
Threatened Fauna Species.....	30
Threatened Flora Species .....	31
Threatened Ecological Communities .....	31
Draft Department of Environment and Conservation Threatened Species Priorities Action Statement .....	32
Habitat Fragmentation and Clearing .....	32
Introduced Species - Weeds .....	33
Fire and Fuel Reduction.....	35
Tree Giveaways and Plantings .....	35
NPWS Discovery Tours.....	36
Landcare Activities .....	36
Hunter-Central Rivers Catchment Management Authority Activities.....	37
HCCREMS - Roadside Environmental Management .....	37
HCCREMS – Regional Vegetation Mapping Project .....	38
<b>HERITAGE.....</b>	<b>39</b>
<b>AT A GLANCE .....</b>	<b>39</b>
<b>RESPONSES TO ABORIGINAL HERITAGE ISSUES .....</b>	<b>40</b>
<b>RESPONSES TO NON-ABORIGINAL HERITAGE ISSUES.....</b>	<b>40</b>
Cultural Community Development Dollar for Dollar Grants Program .....	40
The Convict Trail Project.....	40
Sawyers Gully World War 1 Memorial Gates.....	41
Headstones Conservation .....	41
Abermain Heritage Walk .....	41
<b>REFERENCES .....</b>	<b>42</b>
<b>APPENDIX 1 - ENVIRONMENTAL WEBSITES .....</b>	<b>43</b>
<b>APPENDIX 2 - WATER QUALITY GUIDELINES .....</b>	<b>44</b>
<b>APPENDIX 3 – THREATENED SPECIES LISTINGS FOR CESSNOCK LGA .....</b>	<b>45</b>
<b>APPENDIX 4 – NOXIOUS WEED DECLARATIONS FOR CESSNOCK LGA.....</b>	<b>47</b>
<b>NOW IT’S YOUR TURN .....</b>	<b>49</b>

# INTRODUCTION

The New South Wales (NSW) *Local Government Act 1993* (section 428 (2) (c)) requires all Local Government Councils to produce an annual report on the State of the Environment (SoE). This report covers the period from 1st July 2005 to 30th June 2006 and is a supplementary report to provide additional information to support the comprehensive report completed for the year 2003-04 and supplementary report of 2004-05. As outlined by the Department of Local Government, a supplementary SoE report must:

- Identify any new environmental impacts since the last comprehensive SoE report,
- And, update the trends in environmental impacts that are important to each environment sector.

For the greatest information about the environment in the Cessnock LGA it is necessary to read this report in conjunction with the 2003-04 and 2004-05 reports as not all background information and programs are included in this report (i.e. only those that have occurred during 2005-06 appear in this report).

SoE Reports contain information about the condition of the environment (state), pressures the environment is subject to (pressure) and measures taken to alleviate those pressures (response) during the reporting period. They outline what is and has been done to address adverse impacts and whether those actions are or have been successful in delivering results.

This report is structured into several environmental sectors in accordance with the *Local Government Act 1993*. These are:

- Human Settlements
- Land
- Air
- Water
- Biodiversity
- Heritage

“At a Glance” tables provided at the start of each section follow the usual State-Pressure-Response model (developed by the Department of Local Government), giving a brief summary of the key points and identifying any data gaps that need to be explored in the future.

This report also begins the process of the transition from environmental reporting to sustainability reporting with the inclusion of economic development information in the Human Settlements chapter. Future reports will continue this process which will include more details on social and economic factors affecting the LGA as well as environmental factors.

## **CESSNOCK LGA PHYSICAL PROFILE**

The Cessnock City Council (CCC) Local Government Area (LGA) encompasses 1,970 square kilometres of the lower Hunter Valley in eastern New South Wales (CCC, 1994). In 2005, the estimated residential population of the Cessnock LGA was 48,502. The City lies approximately 50km northwest of Newcastle and 120km north of Sydney and has boundaries “extending from the watershed between the Hawkesbury and Hunter Rivers in the south, through to Branxton and the New England Highway in the north” (Advitech, 1996).

## **CLIMATE**

The Cessnock LGA is subject to a temperate climate, characterised by mild winters and hot summers (Advitech, 1996). Records of temperature and rainfall for 2005-06 are shown in Figures 1 and 2. The maximum temperature recorded for the year at Cessnock was 44.9°C on 2<sup>nd</sup> February 2006 and the minimum temperature was -2.5°C on 12<sup>th</sup> August 2005. As an example of the current water crisis it is interesting to note that evaporation rates exceeded rainfall for every month during 2005-06.

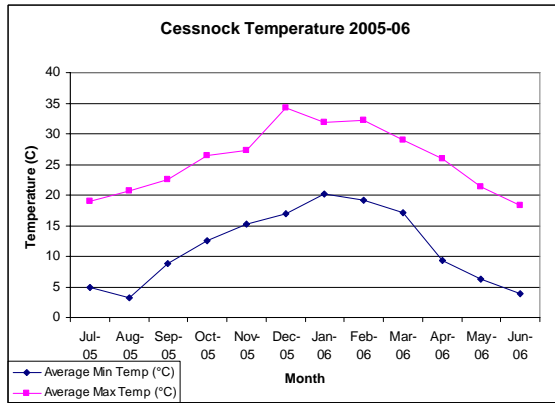


Figure 1: 2005-06 Cessnock Temperatures

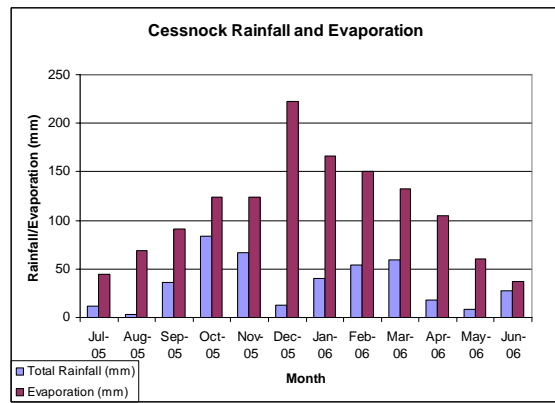


Figure 2: 2005-06 Cessnock rainfall and Evaporation

### CESSNOCK CITY COUNCIL – OUR VISION, OUR GOALS

The *Local Government Amendment (Ecologically Sustainable Development) Act 1997* took effect on January 1, 1998. The Act strengthens the environmental management role of Councils by incorporating the principles of Ecologically Sustainable Development (ESD) throughout all key aspects of the *Local Government Act, 1993*.

With this in mind, Cessnock City Council has adopted the following statement as its vision:

*“Cessnock City Council’s vision is for a safe, healthy environment where residents can enjoy a high quality of life.”*

Corporate objectives and measures to reach those objectives have been formulated and are reviewed and updated annually.

### LINKS TO CITY MANAGEMENT PLAN

It is important to note that it is not the role of this report to document what actions will be taken to respond to the issues identified, but simply to highlight those issues that need to be addressed. Some issues will require responses from different government departments or community organisations. Council encourages those departments/organisations to take steps to incorporate responses to these issues within their own planning processes.

The inclusion of the “Data Gaps” column in the “At-a-Glance” tables is intended to help facilitate the development of projects to source this information and assist the integration of this report into other Council management plans, by making the integration explicit throughout the report. This year’s “data gaps” will include:

- Suggestions for addressing major data gaps. It should be noted that suggestions in this year’s SoE have been limited due to the complexity and impacts of addressing the major data gaps.
- Projects to be considered for funding in the Council budget the following year.

# HUMAN SETTLEMENTS

## AT A GLANCE

<b>Community, Population and Settlement Patterns</b>			<b>Data Gaps:</b>
State	Increasing	Continued urban, rural and rural-residential expansion.	
Pressure	Increasing	Demand for land in LGA is placing pressure on undeveloped areas. Few local employment opportunities, isolation and lack of public transport adding to this issue.	
Response	Good	Implementing a <a href="#">Social and Community Plan</a> , <a href="#">Hunter Economic Zone</a> , <a href="#">Cessnock Community Renewal Strategy</a> and <a href="#">Tidy Towns</a> assisting with this issue.	
<b>Drinking Water</b>			
State	Increasing	5,314,094 kL of <a href="#">water consumed</a> in the LGA during 2005-06, an increase of 14% on last year's consumption.	
Pressure	Increasing	Demand continues to increase with population and development. Additionally, average household consumption continued to rise.	
Response	Limited	Hunter Water continues to undertake programs such as <a href="#">Refit</a> (with Energy Aust and Hunter Councils) and <a href="#">water tank rebates</a> .	
<b>Transport</b>			
State	Poor	<a href="#">40,635 vehicles</a> registered in the LGA. Private vehicles continue to be the main mode of transport in the area.	
Pressure	Increasing	Lack of public transport and isolation are increasing pressure on this issue.	
Response	Limited	No new <a href="#">cycleways</a> constructed in 2005-06. <a href="#">Road Safety program</a> and <a href="#">Sustainable Transport Strategy</a> being implemented.	
<b>Waste Management</b>			
State	Increasing	34,600 tonnes of <a href="#">waste</a> was landfilled; 3,647 tonnes of recyclables were collected from kerbsides and a further 6,351 tonnes was diverted from the landfill; and 3,516.3ML of <a href="#">waste water</a> was treated during 2005-06.	
Pressure	Increasing	The amount of solid and liquid waste is increasing with population growth.	
Response	Good	Numerous <a href="#">waste reduction and recycling programs</a> being undertaken in the LGA.	
<b>Tranquillity and Noise</b>			
State	Unknown	No noise quality monitoring has been undertaken in the LGA. 279 <a href="#">noise complaints</a> (73% about dogs) received by Council.	
Pressure	Increasing	Noise issues are increasing with population growth.	
Response	Limited	Issues of noise are considered in the development consent process and the EPA regulates noise generating premises.	

## **RESPONSES TO COMMUNITY, POPULATION AND SETTLEMENT PATTERNS ISSUES**

### **SOCIAL AND COMMUNITY PLAN**

During 2005-06 the following actions were undertaken from the Social and Community Plan, mainly focusing on the target groups of young people and children and families:

- The Department of Community Services allocated funds to Branxton Pre-School for its expansion. The expansion has resulted in increased childcare spaces and the ability to cater for 0-3 year olds.
- The Samaritans coordinate in-home care services for children and parents that do not fit in with traditional care initiatives, such as shift workers or children with disabilities.
- Arrangements were made to allow Kurri Kurri Community Centre to lease the Kurri Kurri Ambulance Hall from Council for Out of School Hours (OOSH) activities.
- Canterbury Community Drug Action Team (CDAT) funding has allowed 'Moving on' Strategies to be established in Early Intervention and Prevention Services for education about drugs and alcohol. Another program operating, called 'Smashed', has applied for funding to CDAT to buy beer goggles for use with young people.
- Every Friday Hunter Health is offering a local sexual health clinic/service in the Cessnock LGA.
- For youth there is currently a 'Rent Ready' course operating as well as the Job Placement, Employment and Training (JPET) program. Additionally, St Albans is continuing to offer living skills programs and the Youth Centre (that is supported by Kurri Kurri Community Centre) offers some ad hoc living skills and training.

(Note: this is not a complete list but just a number of highlights of actions undertaken from the Social and Community Plan. For further details contact Councils Community Services section.)

### **COMMUNITY FACILITIES**

Each year Council allocates funds towards related capital works and planned maintenance of its community facilities. In 2005-06, the following works to community facilities were undertaken:

- Maintenance of exit/emergency lights, floors, grounds and signage and a review of planning documents for all facilities.
- Construction of Greta Arts and Sports Community Hall, a multipurpose community facility.
- Roof replacement, external painting and landscaping at Kearsley Community Hall.
- Installation of a kitchen, internal and external painting and resurfacing of timber flooring at Pokolbin Community Hall.
- Extension to the building and installation of new carpet at Cessnock Basketball Centre.
- Stormwater improvements, sewer pipe investigations, the installation of a concrete pathway and the replacement of a power pole at Millfield Community Hall.

In addition to the above works, Council also provides additional funding through their Community Dollar for Dollar Grants program. In 2005-06 the following projects were funded through this program:

- Purchase of crockery and minor fit-out works at Laguna Community Hall.
- Installation of storage and shelving at Bellbird Community Hall.
- Installation of air conditioning, floor coverings and turf at Branxton Playgroup.
- Purchase of a fridge and ceramic fan heaters for Weston Civic Centre.
- Purchase of a freezer and gas BBQ for North End Hall.
- Purchase of a hot water urn for Wollombi Community Hall.
- Purchase of a waterproof cover for a shade structure at Bellbird Preschool.
- Purchase of shade structure for Cessnock Multipurpose Children's Centre.
- Purchase of shade shelters, a mower, seating, irrigation and a sprayer for Cessnock All Breeds and Obedience Kennel Club.
- Development of carpark design plans for Hunter Prelude Early Intervention Centre.

## **ACCESS**

Mobility maps of the Kurri Kurri and Cessnock Central Business Districts were updated during 2005-06. These are available on Council's website. The maps show locations of carparks, public toilets, kerb ramps, disabled parking spaces, audio cues at traffic signals and pedestrian crossings.

## **YOUTH SERVICES**

In the past twelve months Cessnock Youth Centre and Outreach Service (CYCOS) had just over 9,000 young people attending and participating in its structured programs and drop-in services.

## **OFF LEASH DOG EXERCISE AREAS**

During 2005-06 two new off leash dog walking areas at Hall Park, Cessnock and Miller Park Branxton were added to Council's existing off leash areas. In total Council now has 6 designated off leash dog walking areas.

## **TIDY TOWNS PROGRAM**

Council continues to support the Tidy Towns Program through a Dollar for Dollar Grant Program, payment of annual fees to the Keep Australia Beautiful Council (KABC), supply of plants, paint and materials for approved maintenance works on public land and the promotion of the program through a regular newsletter, and media.

Projects undertaken during 2005-06 include:

- The second stage of stormwater runoff improvements and the installation of a safety buffer garden at Snake Gully, Abermain.
- Construction of 65m of path in Centenary Park and erection of six heritage photo signs in Abermain and Neath.
- Construction of a picnic shelter and an information shelter with noticeboards in Poppet Head Heritage Park, Kitchener.
- Purchase of a BBQ shelter for High St, Greta and repairs to bus shelter seating.
- Erection of heritage signs for the Stanford Merthyr mining disaster at Kurri Kurri.
- Erection of historical signs in Rotary Park, Kurri Kurri.
- Purchase and installation of picnic tables and benches along Wollombi Rd, Millfield.
- Purchase of gardening and construction equipment for Weston Tidy Town Committee.
- Construction of a path to the Wollombi Millpond observation area.

During 2005-06, funding from the Community Environmental Care Initiative (CECI) was distributed to Cessnock, Weston and Wollombi Tidy Towns Committees for costs associated with the care and ongoing maintenance of past and present projects.

A number of Tidy Towns groups received awards/commendations at the 2005 KABC Awards for outstanding community and environmental projects:

- Kurri Kurri received Highly Commended in Category D of the overall judging; in the heritage section for their "Tidy Towns Nature Walkway; and, for works conducted by Landcare at their Neath site.
- Wollombi received a Highly Commended for their "What's at Wollombi" project.
- Cessnock Tidy Towns received Highly Commended in Category E of the overall judging; in the Wildlife section for the "Kitchener Poppet Head Park Walking Trail"; and, in the Most Friendliest Town section.
- Greta Public School was the winner in Category 4 of the Schools Environment Award with their "Learning together for a better environment" project.

## **CESSNOCK COMMUNITY RENEWAL STRATEGY**

The three year Cessnock Community Renewal Scheme was completed during 2005-06 with the following overall achievements acknowledged by the Minister for the Hunter Michael Costa during a visit in March 2006:

- Reduction of the Cessnock unemployment rate from 13.1% in December 2001 to 8% in December 2005.
- The creation of 2 new bus services in East Cessnock and Weston being used by 340 passengers per month.
- The development of several community programs for youth and early childhood including an Aboriginal mentoring program for young Aboriginals.
- The establishment of several community pride events including Movies in the Park and the Greta Moon Festival and continuation of the Kurri Kurri Small Town project.
- The rehabilitation of some unused mine sites.
- The installation of water and energy efficiency devices in 129 low income households.

In more detail during 2005-06 under the CCRS Council undertook the following projects:

- **Hebburn Colliery Rehabilitation** - the extension to Peace Park and Hebburn Dam is almost complete and include the installation of a board walk through to the Hebburn site and the installation of other pathways. Additionally, the site was revegetated along an area of Swamp Creek with native plants to stabilise the banks.
- **Stanford Merthyr Colliery Rehabilitation** - this project will be finalised by December 2006. To date the site has had 35 tonnes of rubbish removed, over 4,000 tubestock trees planted as a revegetation project at the unused quarry and fencing is being installed to reduce access to the site to assist in controlling illegal dumping.
- **Acid leaching removal trials** - this project is complete and results have been quite successful.
- **East Cessnock Rehabilitation** - this project was completed in August 2005. It included the planting of advanced Liquid Ambers in the playground area and erosion control works on the bank of Black Creek. The site has also had over 400 tubestock trees planted.
- **Community and Industry Information Seminars** - these are still to be delivered.
- **Refit Program** - 129 Refit kits were installed in Department of Housing homes in Weston and East Cessnock during December 2005 and February 2006. Water consumption data to gauge the results of this project is not yet available.
- **Tool Trailer** – the trailer is used by local Landcare and Tidy Towns volunteer groups on a regular basis. The trailer and equipment has also been utilised by Green Corps Teams throughout the year.

## COMMUNITY ENVIRONMENTAL EDUCATION

### Sustainability Snapshots

Sustainability Snapshots was a Hunter Waste Educators Group (HWEG) initiative that aimed:

- To demonstrate the simple actions individuals and families can take to save money as well as saving our environment.
- To provide people with practical ideas and advice on how to live more sustainably.
- To make it easier for people to understand what sustainability really means in terms of their everyday actions.

Snapshots appeared in the Cessnock LGA at Kurri Plaza (30<sup>th</sup> January – 5<sup>th</sup> February where it was launched), Cessnock Plaza (13<sup>th</sup> March – 19<sup>th</sup> March), and Cessnock City Centre (8<sup>th</sup> May – 14<sup>th</sup> May and 1<sup>st</sup> June). Weekdays featured a display and free, practical information on sustainable activities designed for “in the home”; “in the yard”; “at the shops” and “on the move”. Saturdays (and Thursday evening on 1<sup>st</sup> June) featured Ship-O’-Fools with William Doodrop, performing “magic acts of sustainability”. These performances highlighted the simple and practical actions everyone can take to become more sustainable whilst also saving money in the household budget.

### CMA Environmental Education Grants

On 13<sup>th</sup> March 2006 the Hunter Central Rivers Catchment Management announced grants for sustainable natural resource and environmental education projects. Cessnock Council partnered with three applications for these funds which were successful and will be implemented in 2006-07:

- A rural residential landowners sustainability kit with Hunter Councils
- Developing a teacher resource kit for Kurri Sand Swamp endangered ecological community with DEC.

- PACT (Platypus Action and Conservation Team) Resource Kit with Rumbalara Environmental Education Centre.

## ECONOMIC DEVELOPMENT

### Wine and Tourism Statistics

In 2005-06 it was estimated that 4,500 acres of land in the LGA was covered by vineyards. Direct tourism in the LGA generated \$300 million for the local economy, with average visitor expenditure of \$200 each. By the end of 2005 there were 3,668 rooms available in the vineyards area (an increase of 150% over a seven year period) with an occupancy rate of 55% at the end of June 2006. Figures 3 and 4 below show the accommodation/occupancy over the last six years and total visitor numbers over the last 3 years.

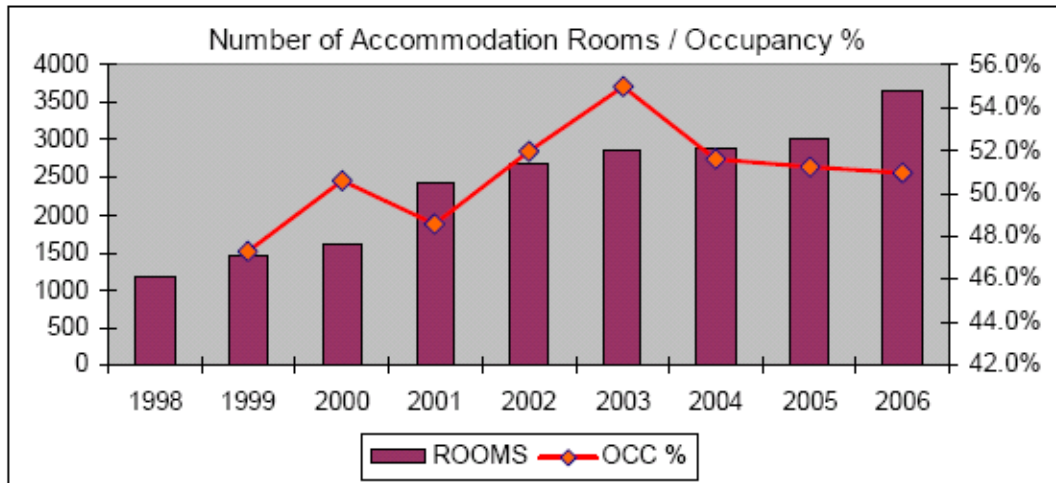


Figure 3: Accommodation versus occupancy percentage for last nine years.

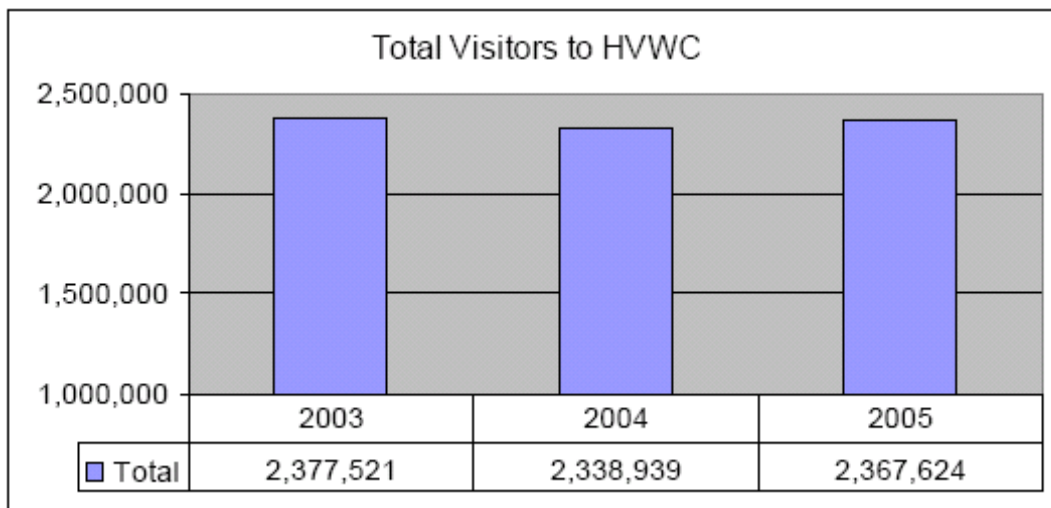


Figure 4: Total visitors to Hunter Valley Wine Country for last 3 years.

### Lower Hunter Business Excellence Awards

The winners of the 2005 Lower Hunter Business Excellence Awards included the Cessnock businesses of Candelabra (in arts, crafts and gifts category), Calais Estate (in vineyards/cellar door category), Cessnock Natural Balance Centre (in health category), Johanne's Hairtique (in hairdressers/beauticians category) Cronans Design (in constructions/home improvement category), Dream Time Weddings and Events (in entertainment category), Murphy Real Estate (in real estate category), Capers Guesthouse (in accommodation category), Lavender Gate Farm (in new start business category), Jdlani Jewellery and Giftware (in new start business category), and Country Farm Delights (in general retail category).

## HUNTER ECONOMIC ZONE

During 2005-06, development applications for the HEZ entry statement, electricity sub station, and Stage 2 of the Spine Road have been approved. Development applications have also been lodged for a wholesale nursery, an Optus tower, a concrete batching plant and a school/child care facility. Stages 1a, 1b and 1c of the road have been completed.

A flora and fauna assessment lodged by Energy Australia in conjunction with their DA describes undertaking clearing for the purposes of installing feeder works from Kurri Hospital through to the stage 2 section of HEZ. The proposal estimated approximately 1.8 hectares of clearing would be required for this purpose.

HEZ management also launched a new Community Support Program to provide co-funding for community led economic, social and ecological projects in the Kurri Kurri area. The inaugural round of funding closed on 13<sup>th</sup> April 2006. Kurri and Abermain Tidy Towns were both successful in receiving funds in this round for a path in Centennial Park, Abermain.

## RESPONSES TO DRINKING WATER ISSUES

Domestic water consumption for the Cessnock LGA was 3,589,408kL averaging out to 224kL per household and 120kL per flat/unit. Industrial, Commercial and Agricultural uses consumed another 1,544,686kL. This data was supplied by Hunter Water based on the water year which is 20 April 2005 to 19 April 2006. This represents an increase in water consumption in the LGA from 2004-05 as displayed in the Figure 5 below.

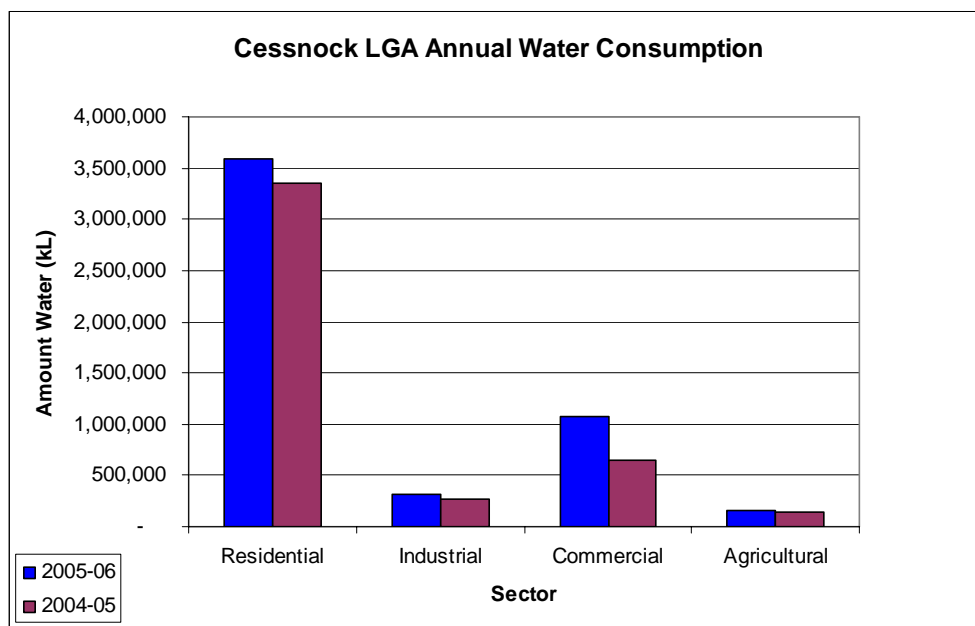


Figure 5: Annual Water Consumption in the Cessnock LGA

## REFIT PROGRAM

The Refit program is an initiative of Energy Australia, Hunter Water and the Lower Hunter Councils. The kit contains an AAA-rated water-saving showerhead, 2 compact fluorescent light bulbs, a garden-hose spray gun and an energy and water home audit which is all fully installed from \$39.

During 2005-06, 273 refit kits were installed (a decrease of 20% on 2004-05 installations) in homes in the Cessnock LGA equating to savings of 8,190kL of water (or more than 8 Olympic swimming pools).

## RESPONSES TO TRANSPORT ISSUES

### VEHICLE REGISTRATIONS

During 2005-06, there was an increase of 943 vehicles registered in the LGA from 2004-05. Figure 6 shows a breakdown of types of vehicles registered in the LGA as at 30<sup>th</sup> June 2006 and Figure 7 a comparison with the 2004-05 registrations. Additional data on fuel types of registered vehicles was also provided by the RTA for 2005-06, this is displayed in Figure 8. It is interesting to note that while 76% of vehicles run on unleaded fuel, 7% still require leaded petrol (indicating the age of vehicles in Cessnock LGA) and only 1.5% on LPG.

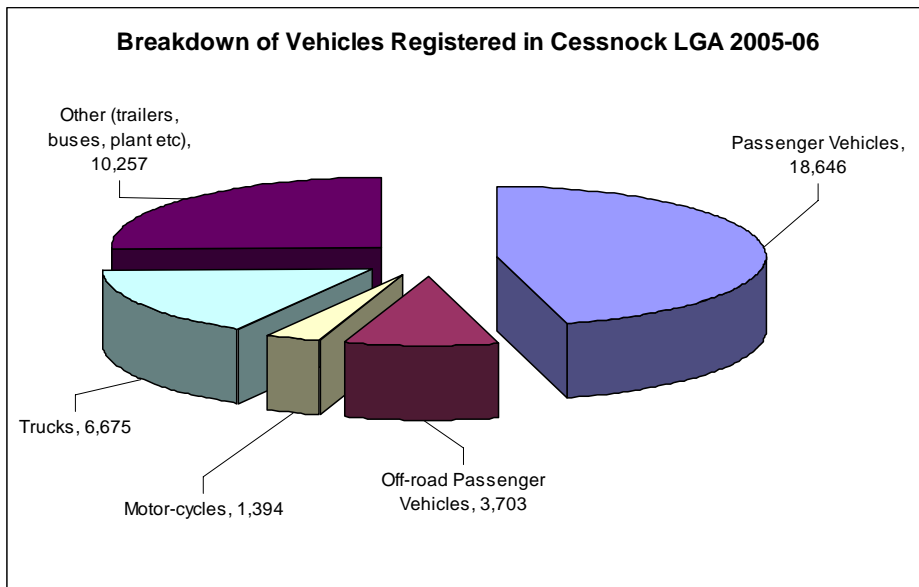


Figure6: Breakdown of types of vehicles registered in the Cessnock LGA.

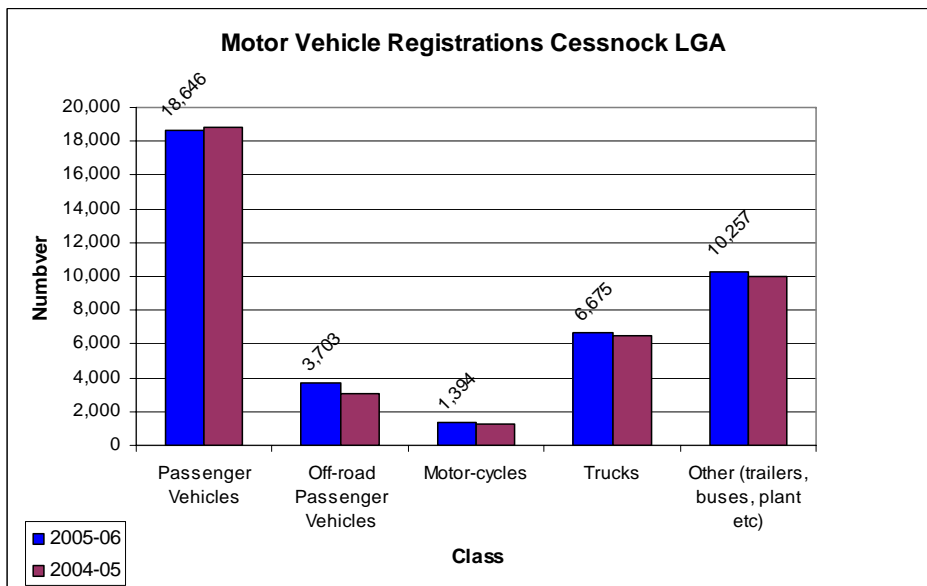


Figure 7: Comparison of vehicles registered in Cessnock LGA over time

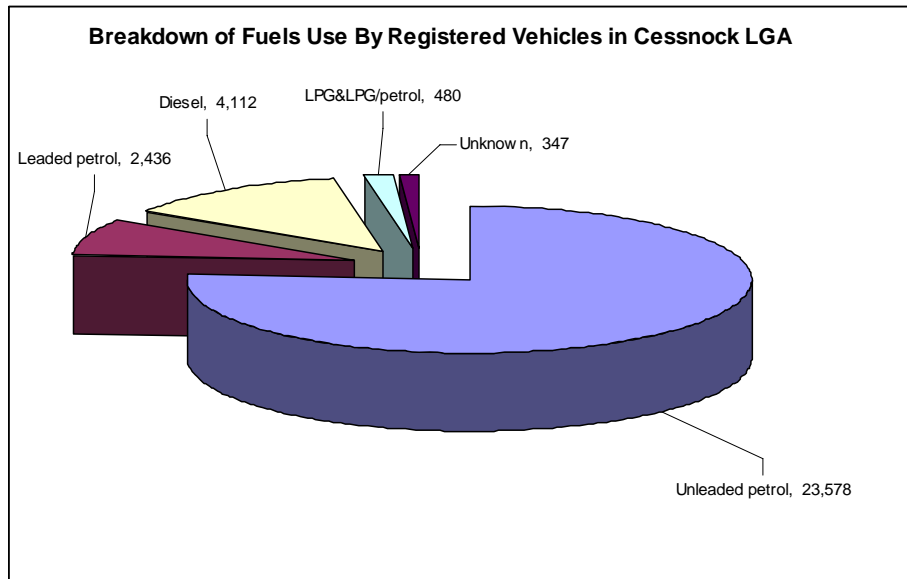


Figure 8: Breakdown of fuel types used by vehicles registered in the Cessnock LGA.

### CYCLEWAYS

During 2005-06 no new cycleways were constructed in the Cessnock LGA. The cycleway at Abermain was relocated off the road and into the park providing safer options for cyclists and pedestrians.

### SUSTAINABLE TRANSPORT STRATEGY

An Accessible Transport Forum was held in Cessnock in August 2005.

### ROAD SAFETY PROGRAMS

The Road Safety Strategic Plan has identified key areas of concern in our area. The major concerns identified relate to driver or road user behaviour i.e. Drink Driving, Speed, Fatigue, non-use of Seatbelts and Young Driver issues. 2005 was the first year in a number of years where no young people died on Cessnock roads. However, Drink Driving and Speed are still major areas of risk for the community.

Road Safety Programs run successfully during 2005-06 include:

- **Seniors as Pedestrians** - Council developed a presentation for senior pedestrians as a result of disturbing statistics identifying the over 64 age group as overrepresented in pedestrian fatalities in the area. The presentation assists seniors to recognise the risks associated with aging and identifies easy strategies to combat this increased risk.
- **Child Safety** - Council managed two programs focusing on child safety on the road. "Seatbelt Saturdays" offered two free child restraint checking days where parents had the opportunity to ensure vehicle child restraints were correctly fitted. "Orientation Days" were offered to all local schools and assists parents of new school starters develop road safety behaviours. Parents were also educated in the areas of parking, pedestrian issues and facilities, speeding and 'in-car' issues.
- **Courtesy Speed Check** - Council provided speed limit feedback to drivers via the use of the Courtesy Speed Check equipment. This facility is widely used throughout the LGA mainly around problem streets and schools.
- **Guide to 0.05 and wine tasting** - pocket sized cards inform patrons at Vineyard Cellar Doors of the differing alcohol contents of wines and the number of sample tastings that are permitted to remain under the legal Blood Alcohol Concentration limit.
- **RBT Education** - 6 nights during the year Council worked with Cessnock Police to inform drivers of the consequences of drink driving. Drivers under the limit were given information packs with a promotional gift by Council's Road Safety Officer as a reward for driving under the limit.
- **Young Driver Safety** - 'Youth on the Move' is an educational course for young drivers. This program offers an educational approach to reducing risk taking behaviour whilst improving hazard perception and increasing knowledge of road rules, regulations and legal

consequences. Two courses were offered in 2005-06 and both were very popular with young drivers.

- **Learner Driver Supervisor Presentations** - Four seminars were held during 2005-06 providing information to supervising drivers and parents of Learner Drivers about road safety with young and novice drivers. Parents were updated with the changes to the Driving Ability Road Test and discussed concerns about road rules and ways to manage road rage, intimidation and peer pressure.
- **Alcoliser Program** - Council continued to provide a free service to Clubs, Hotels and Cellar Doors in its Alcoliser Program. Three alcolisers are rostered to be moved on a fortnightly basis around hotels, clubs and Cellar Doors with the option to relocate when Special Public Events are held in the area.

## RESPONSES TO WASTE MANAGEMENT ISSUES

### SOLID WASTE MANAGEMENT

Negotiations are continuing on the proposed extension to the landfill facility with the Department of Lands and other stakeholders. Council also adopted a Waste Management Strategy to provide meaningful links between the various waste initiatives it is undertaking and to meet the expectations of the State Government towards waste.

#### Waste Disposal

During 2005-06, 34,600.67 tonnes of waste was landfilled at the Cessnock Waste and Reuse Centre. Breakdowns of the waste landfilled at the Cessnock Waste and Reuse Centre are shown in Figure 9.

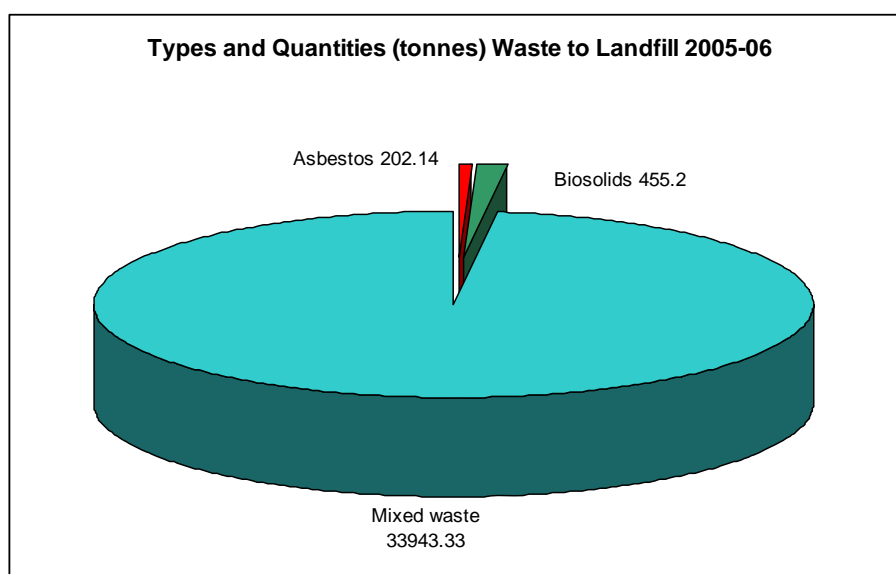


Figure 9: Breakdown of Waste to Landfill

Domestic waste expressed per person (2005 population estimate) is equivalent to 0.71 tonnes (a decrease of 0.06 tonnes on 2004-05) of waste produced during 2005-06. Note this does not include greenwaste, reprocessables or recyclables.

#### Waste Minimisation at the Cessnock Waste and Reuse Centre

During 2005-06, 176.6 tonnes of paper and cardboard, 600 tonnes of metals, 2,179.07 tonnes of greenwaste, and 3,394.92 tonnes of concrete waste was reprocessed and diverted from landfill. In addition, approximately 21,300L of used motor vehicle oil was collected – 41% of this coming from Council's Works Depot.

#### Kerbside Recycling

During 2005-06, 3,647 tonnes of recyclables (up 1.6% from 2004-05 with an additional 490 households commencing the service) were collected through the kerbside service. The breakdown of the types and amounts of recyclables collected from the Cessnock LGA are shown in Figure 10 (along with

a comparison to 2004-05 and 2003-04 collection amounts). The recycling of these materials equates approximately to saving enough electricity to power 2,830 homes, enough water to fill 24 olympic swimming pools; and, removing 440 cars worth of greenhouse gas emissions from the roads.

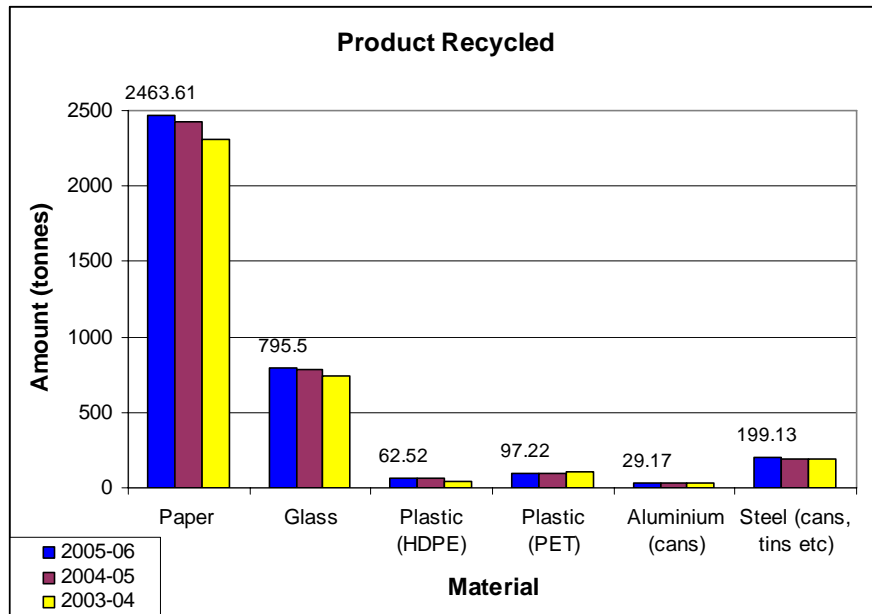


Figure 10: Cessnock LGA Recyclables Stream (amounts for 2005-06 displayed and compared to 2004-05 and 2003-04 collection)

### Hunter Resource Recovery Activities

Over the past 12 months, Hunter Resource Recovery (HRR) has carried out a number of programs and activities aimed at increasing recycling recovery rates including:

- **Schools Program** - 22 schools in the Cessnock LGA now participate in the free schools recycling service. This program will continue until July 2009.
- **Mobile Phone Recycling Program** - continues with post packs available at Council. A total of 353 mobiles and batteries have been diverted from landfill during a trial period from March to December 2005.
- **Advertising Program** - advertisements were placed in the Cessnock Advertiser with positive reinforcement messages being used to coincide with National Recycling Week and World Environment Day. In addition HRR purchased space on an adhesive phone book cover published by the Cessnock Advertiser detailing the types of product that can be recycled and the 1800 number.
- **Sponsorship** - of the Sustainability Snapshots Program by assisting in the purchase of shopping bags and providing display materials for Councils use with the Program.
- **Adopt-a-Road Program** - HRR continued to sponsor Ellalong roadways through this Council program. A total of 875 kilos was collected during the year.
- **Kerbside Audits** - undertaken within the LGA achieved the lowest non-conformance rate (of the three LGA's serviced by HRR) with an average of 97% of all presented bins conforming to the correct use of the recycling service.

For more information on Hunter Resource Recovery go to [www.hrr.com.au](http://www.hrr.com.au).

### Operation Litterbug

In November 2005 Council Rangers conducted a two day blitz targeting littering from cars which saw the issuing of 8 infringement notices and 9 cautions plus a further 23 vehicles were inspected for uncovered or unsecured loads.

### Clean Up Australia Day

This year community volunteers took part in Clean Up activities at 20 registered sites across the LGA. An impressive 9.65 tonnes of rubbish was collected from these sites. In addition, 21 schools registered for participation in the school Friday Clean Up activities. As in previous years, residents getting into the

Clean Up spirit were also able to take waste to the depot free of charge which contributed a further 82.24 tonnes, bringing the 2006 Clean Up total to 91.89 tonnes.

### **Hunter Region Waste Project**

The project is continuing with the following milestones reached:

- The adoption of a Members Agreement (between Councils).
- Development of a Heads of Agreement (between the contractor and HIR). An outcome from the HoA is expected late 2006.
- Identification of the preferred processing site, access, and residual and reject management.
- Appointment of legal and financial services to assist in further negotiations.

If adopted the Project will divert the regions kerbside domestic waste stream to the plant (approx 160,000 tonnes per annum) where a compost like material will be produced. Methane produced during the anaerobic process will be harvested and used as a fuel source to produce electricity to power the plant with excess being returned to the power grid.

### **drumMUSTER Program**

During the 2005-06, the drumMuster Program in Cessnock collected 1,405 containers (an increase of 700 drums from previous year).

For further information on the drumMUSTER program go onto [www.drummuster.com.au](http://www.drummuster.com.au).

### **Waste as Art**

This years Waste as Art Competition ran from March to June 2006. This event attracted 188 entries which were displayed at the Newcastle Museum from the 4<sup>th</sup> June 2006 till 16<sup>th</sup> July 2006 with over 12,614 people viewing the displays. In an extension of this year's competition Cessnock LGA entries were further exhibited at Cessnock and Kurri Kurri Libraries during July and August 2006.

### **Adopt-a-Road Program**

During 2005-06 Council adopted a Plan of Management for the Adopt-a-Road Program. In addition agreements were renewed with 13 existing sponsors covering 49.1kms of roadside for a further 3 years.

## **LIQUID WASTE MANAGEMENT**

### **Wastewater Treatment Plants (WWTP)**

Hunter Water operates five wastewater treatment plants within the Cessnock LGA and treated 3,516.3 ML of effluent during 2005-06. Of the wastewater treated in the Cessnock LGA 12.1% was reused for irrigation. This is an increase from 2004-05 when approximately 7% of wastewater treated in the Cessnock LGA was reused.

Refer to [Water Section](#) for further information on volumes of wastewater treated.

### **Cessnock Wastewater Treatment Works**

Hunter Water has commissioned works to undertake a major upgrade of Cessnock WWTW. The major works to upgrade the Cessnock WWTW and Cessnock No 1 Wastewater Pumping Station will protect the environment by improving effluent quality discharged to Black Creek; providing a more reliable treatment process in wet weather and during power outages; using reclaimed water in the treatment process; and by the protection of an on-site bird habitat. The upgrade will also significantly reduce the odour emissions from the plant.

The upgrade works will provide capacity to service growth for the next 20-30 years and involves a magnification of the entire treatment process. The works include a new tertiary treatment plant that will remove algae and provide UV disinfection prior to discharge to Black Creek. The total project value for the upgrade to Cessnock WWTW is \$30M and is expected to be completed in late 2006.

### **Extension to Sewerage Network**

During 2005-06 work commenced on the two sewage treatment pumping stations and pipe work for the extension of the sewerage network to Kitchener. It is anticipated that this work will be completed by August 2006.

## **RESPONSES TO TRANQUILITY AND NOISE ISSUES**

During the 2005-06, the number of complaints received by Council in relation to noise pollution totalled 279. Of these, approximately 73% were associated with barking dogs. Council also issued 40 Public Entertainment Licences to premises in the LGA.

An external noise monitoring survey conducted by Hydro Aluminium during 2005 concluded that measurements at all sites during the daytime and night-time were below NSW EPA recommended levels for industrial noise sources (McNaughton, 2005).

# LAND

## AT A GLANCE

Landuse Change			Data Gaps:
State	Increasing	Continued development with 1,371 <a href="#">development applications</a> , 1,005 construction certificates and 106 sub-division certificates approved/issued in 2005-06.	
Pressure	Increasing	Demand for land in LGA is placing increased pressure on undeveloped areas.	
Response	Improving	<a href="#">City Wide Settlement Strategy</a> stage 2 adopted and <a href="#">comprehensive DCP</a> on public exhibition.	
Open Space			
State	Decreasing	No change to the area of land under Council Management.	
Pressure	Increasing	Growing population continually demanding open space for year round recreational purposes.	
Response	Unchanged	Continuing to implement <a href="#">Draft Recreation and Open Space Plan</a> .	
Vegetation Removal			
State	Increasing	HCCREMS Regional Vegetation Mapping Project reports 76% of LGA covered in vegetation. Dept Natural Resources approved no <a href="#">clearing</a> and State Forests harvested 410 ha within the LGA during 2005-06. Other clearing (i.e. for 1(a) rural zone or development) is unknown but assumed to be increasing.	
Pressure	Increasing	Demand for land in LGA is placing increased pressure on clearing land for other purposes.	
Response	Limited	<a href="#">Landcare</a> groups are active in many areas and several strategies/plans have been developed and are being implemented.	
Soil Salinity			
State	Unknown	Salinity identified as an issue in Black Creek and Wollombi Brook Catchments.	
Pressure	Unknown	Little data available on salinity in the LGA.	
Response	Limited	CMA Salinity Monitoring program being developed	
Contaminated Land			
State	Unknown	Full extent of contaminated land unknown.	
Pressure	Unknown	Activities posing contamination risk regulated by <i>Protection of the Environment (Operations) Act 1997</i> .	
Response	Limited	Clean up of <a href="#">Hebburn No. 2 Colliery site</a> .	
Soil Erosion			
State	Increasing	Several sites identified as having steambank erosion.	
Pressure	Unknown	No data available on amount of soil lost to erosion in the LGA annually.	
Response	Improving	CMA and community groups implementing several strategies and plans to address this issue.	

## RESPONSES TO LANDUSE ISSUES

### LANDUSE PLANNING

#### **City Wide Settlement Strategy (CWSS) - Stages 2**

Stage 2 of Council's City Wide Settlement Strategy was adopted by council on 14<sup>th</sup> December 2005.

#### **Environmental Planning and Assessment Amendment Bill 2006**

On 28<sup>th</sup> February 2006 the *Environmental Planning and Assessment Amendment Bill 2006* was introduced by the NSW Parliament. The Amendment provides the following key changes to planning legislation:

- Planning Administrators and Planning Assessment Panels – circumstances for the Minister of Planning to appoint these has been widened to include Council failing to comply with planning legislation, Councils performance being unsatisfactory, recommendation by the ICAC, and with Council agreement.
- Special Infrastructure Contributions – the Minister or consent authorities being able to levy special infrastructure contributions in deemed special contribution areas.
- Contributions Plan – the Minister can direct Councils to make, amend or repeal contributions plans.
- Development Control Plans – the Minister can direct Councils to make, amend or revoke DCP's which are in conflict with (or prevents compliance with) Government policies.

#### **Draft Lower Hunter Regional Strategy**

The draft Lower Hunter Regional Strategy was released by the Minister for Planning on 4<sup>th</sup> November 2005. The draft strategy identifies a landuse plan for the region over the next 25 years which:

- To cater for 95,000 new homes to cater for a projected population growth of 125,000 people,
- Plans for up to 50,000 new jobs
- Promotes growth in major regional centres and designated growth areas.

The draft strategy was open for comment until 20<sup>th</sup> January 2006. No announcement on the finalisation of this Strategy has up till 30 June 2006. (Note: this report only covers the period 1<sup>st</sup> July 2005 till 30<sup>th</sup> June 2006. Following 30<sup>th</sup> June 2006 this Strategy was adopted by the NSW Government.)

#### **Draft Catchment Action Plan**

The Hunter Central Rivers Catchment Management Authority (HCRCMA) released its Draft Catchment Action Plan (CAP) for comment in January 2006. The CAP looks to address the combination of the three previous Catchment Management Boards (Central Coast, Hunter and Lower North Coast) Catchment Blueprints into a 10 year forward plan for the HCRCMA. Comments on the Draft CAP were received up till 25<sup>th</sup> February 2006. As yet adoption of the Draft CAP has not been confirmed by the NSW State Government.

### DEVELOPMENT ACTIVITIES

During 2005-06, Cessnock City Council received 1,371 Development Applications (an 18% decrease from 2004-05) with a total value of \$158,221,820. A further 1,005 applications were received for Construction Certificates (a 19% decrease from 2004-05), and 106 applications for Subdivision Certificates (the same as 2004-05).

### DEVELOPMENT CONTROL

During 2005-06, DCP 32 – Citywide Outdoor Signage Code was adopted by Council on 15<sup>th</sup> March 2006 and DCP 57 – Bow Wow Gorge Catchment and Habitat Corridors came into force on 1<sup>st</sup> May 2006.

From 1<sup>st</sup> July 2005, the BASIX (Building Sustainability Index) came into effect in the Cessnock LGA. All new residential dwellings now need to meet targets of 40% reduction in water consumption and 25% reduction in greenhouse gas emissions compared to the average home in NSW. This regulation was extended to alterations and additions (including pools) in excess of \$100,000 from 1<sup>st</sup> July 2006.

In November 2005 Council agreed to prepare a Comprehensive DCP in line with changes to the

*Environmental Planning and Assessment Act.* The Draft Cessnock Development Control Plan 2006 was presented to Council on 21st June 2006 and was agreed to be placed on public exhibition. The Draft Cessnock DCP 2006 condenses and replaces existing provisions of certain adopted DCP's that provide generic guidelines for development and allowed the repeal of DCP's no longer relevant.

## **OPEN SPACE**

### **Recreation**

Recreation works that were completed during 2005/2006:

- Peace Park - constructed a boardwalk which has enabled the expansion of Peace Park towards Hebburn Dam.
- Turner Park - construction of two practice cricket nets and a turf wicket upgrade, lift and turf.
- Baddeley Park (Evans Street) - replaced the synthetic hockey surface, placed aluminium bench seating on number 4 field and installed tiered concrete seating as well as drainage between amenities and cricket oval.
- Kitchener Poppethead - completed minor koppers log fencing.
- Cessnock Netball Courts - completed minor fencing works (replaced chainmesh with weldmesh).
- Abermain Centenary Park - completed koppers log fencing works further securing the site.
- East Cessnock Oval - demolished two cricket nets and was successful with Capital Assistance Grant Application to replaced two floodlighting poles.
- Branxton Pool - construction of new first aid room and staff rooms, as well as providing additional seating on concourse.
- Cessnock Pool - replaced playground rubber wetpour, completed stage 1 of amenity refurbishment, demolished the toilets located within Shakespeare Park, relocated the fence line and removed trees to incorporate Shakespeare Park into the pool grounds.
- Norman Brown Park - installed rubber wetpour within the playground.
- All playgrounds - had a number of repairs to equipment.
- Mt View Road - planted Crepe Myrtles along Mt View Road.

## **RESPONSES TO LAND DEGRADATION/INTERVENTION ISSUES**

### **VEGETATION CLEARING**

The area sustainably harvested by NSW State Forests in 2005-06 was 410 ha, which is only 1.4% of the total State Forests area in the Cessnock LGA.

In 2005-06, the Department of Natural Resources (DNR) received no applications for clearing in the Cessnock LGA under the *Native Vegetation Conservation Act, 1997*.

The Australian Greenhouse Office now has an on-line visual record of landscape and vegetation change in Australia since 1972 which is available at [www.greenhouse.gov.au/ncas/dataviewer/index.html](http://www.greenhouse.gov.au/ncas/dataviewer/index.html) and may be useful for student investigations.

### **Native Vegetation Regulation**

New Native Vegetation Regulations came into force in NSW on 1st December 2005. The Regulations provide the framework for a new model of regulating native vegetation and new processes for assessing clearing proposals. The Regulations have the effect of 'turning on' the *Native Vegetation Act 2003* controls on native vegetation clearing and the related Property Vegetation Plan (PVP) process.

During 2005-06, 2 PVP's were entered into by the Hunter Central Rivers CMA but neither of these were in the Cessnock LGA.

### **ACID SULFATE SOILS**

#### **National Acid Sulfate Soils Atlas**

Stage 1 of the National Acid Sulfate Soils Atlas can now be viewed at [www.asris.csiro.au](http://www.asris.csiro.au). All existing electronic information has been collated and presented as a single unified atlas of coastal acid sulphate soils. This presently provides data for coastal areas only but will continue to be extended.

## CONTAMINATED LAND

Under the Cessnock Community Renewal Strategy (CCRS), the extension to Peace Park and Hebburn Dam is almost complete. Works undertaken during 2005-06 include the installation of a board walk through to the Hebburn Site and the installation of pathways. Additionally, the site was revegetated along an area of Swamp Creek with endemic plants to stabilise the banks.

## LAND MANAGEMENT

### Land Conservation

During 2005-06, no new additional areas of public land in the Cessnock LGA were added to the National Estate (i.e. national parks, reserves, etc.). The number of conservation agreements for private land, and the area of land covered under these agreements, is listed in table 1 below.

Table 1: Conservation agreements in Cessnock LGA (Source: DEC's Conservation Partnership Programs)

Program	Number	Total Area (ha)
Voluntary Conservation Agreement	6	204.1
Wildlife Refuge	5	710.6
Land for Wildlife	-	-

### Wallis and Fishery Creeks Total Catchment Management (TCM) Strategy

Council staff continue to participate in the Wallis Fishery and Four Mile Creek Catchment Management Forum which is implementing this strategy. No further information from the CMA was available at the time of printing.

### HCCREMS – Rural Residential Landowners Education Program

Hunter Central Coast Regional Environmental Management Strategy (HCCREMS) has received \$45,725 from the Catchment Management Authority to implement an education campaign that aims to improve the environmental / sustainability management practices of Rural Residential landowners throughout the region. Specific objectives of the project include:

- Provide detailed, yet easily read and understood information and workshops, tailored specifically to rural residential land management issues;
- Increase knowledge of rural residential land owners of key regional environmental issues, and ways in which Councils and the community can practically contribute to addressing them;
- Increase the skills of rural residential land owners in the areas of waste management, water management and conservation, biodiversity and habitat improvement and understanding relevant legislation;
- Assist rural residential land owners to realise that they have the capacity to live in a more sustainable fashion by taking advantage of their land space;
- Instil in the owners of rural residential land the values of existing bushland areas and the benefits of adopting sustainable living practices.

The project to be undertaken during 2006-07 will include media awareness; a series of hands on workshops, presentations and seminars; field days at demonstration sites; development of a resources kit for landowners; and, encouraging landowners to establish their own network to provide support and momentum to continue the project.

## LANDCARE ACTIVITIES

Refer to [Biodiversity Section](#) for detailed information for Landcare Activities.

## FIRE HISTORY AND MANAGEMENT

No information was available at the time of printing.

# AIR (ATMOSPHERE)

## AT A GLANCE

Greenhouse Gas Emissions			Data Gaps:
State	Increasing	2,805,699 MWhrs <a href="#">electricity consumed</a> in the LGA during 2005-06. No additional <a href="#">cycleways</a> constructed.	
Pressure	Increasing	Electricity consumption is assumed to increase in line with population growth. Heavy reliance on motor vehicles for transportation.	
Response	Limited	<a href="#">Council Energy Improvement Program</a> , <a href="#">Refit</a> , and <a href="#">cycleways</a> programs being implemented to address this issue.	
Diffuse Air Pollution Sources			
State	Unknown	<a href="#">EPA regional pollution index</a> ranked air pollution as low for over 90% of time. 41 odour complaints (12% from sewage and 36% from Chicken sheds) reported to Council. <a href="#">National Pollutant Inventory</a> identified 45 substances from 49 sources.	
Pressure	Unknown	Difficult to identify sources of pollution and odour but assumed to be increasing with development growth.	
Response	Poor	No resources identified to undertake comprehensive monitoring or analysis of air pollution or odour issues.	
Point Source Air Pollution			
State	Unknown	Only 1 industry reporting on <a href="#">air pollution emissions</a> . State Forests reported post-harvest burning 120 ha and a bushfire covering 650 ha. 11 NSW EPA licensed premises for air discharge.	
Pressure	Unknown	Impacts of domestic heating and burning associated with agriculture or forestry unknown.	
Response	Limited	<a href="#">Woodsmoke</a> reduction program conducted over winter.	
Indoor Air Quality			
State	Unknown	58 <a href="#">regulated air-conditioning systems</a> in the LGA.	
Pressure	Unknown	Increased reliance on air conditioning systems expected as temperatures continue to rise from climate change.	
Response	Limited	Council maintains a register of regulated air cooling systems and conducts routine inspections of commercial facilities, tourist and wine production premises.	

## RESPONSES TO GREENHOUSE GAS EMISSIONS ISSUES

### ENERGY CONSUMPTION

Data received from Energy Australia for 2005-06 showed that there were 16,265 residential customers who consumed 133,907 MWhs of electricity and 1,206 non-residential customers who consumed 2,671,792 MWhrs of electricity in the Cessnock LGA. It is not possible to compare this data to previous years data due to a change in the data-set and it should be noted that Energy Australia advise that these numbers include some accrual estimates.

Based on the above electricity consumption data the Cessnock LGA contributed approximately 2,665,414 tonnes of greenhouse gases (including carbon dioxide) to the atmosphere.

### CESSNOCK COUNCIL ENERGY IMPROVEMENT PROGRAM

Following on from the success of the Energy Improvement Program implemented within the Administration Building, Council has initiated Building Management Audits of three other facilities - Cessnock Works Depot, Cessnock Library, and the Kurri Kurri Aquatic Centre.

- Council receives monthly updates of energy consumption at each of the four sites listed above. This data helps to identify any trends in electricity consumption which may relate to seasonal changes (use of heating, air conditioning etc).
- Analysis of the time-of-use data helps to identify percentage of electricity being consumed after hours, and can in turn help in identifying issues in relation to equipment operating when not needed (i.e. when building not occupied).
- Through the Building Management Audits equipment or work practices impacting on energy, waste and water consumption have been identified with recommendations for improvements being passed on to the responsible asset manager for consideration of inclusion in future maintenance and upgrade works.
- During 2005-06 electricity consumption at each of the four monitored sites is shown in Table 2 (along with 2004-05 figures for comparison).

Table: 2 – Electricity consumption data

Location	Total Use (kWh) 05-06	Total Use (kWh) 04-05	Average Daily Use (kWh) 05-06	Average Daily Use (kWh) 04-05
Kurri Kurri Aquatic Centre	579,425	656,069	1,587	1,796
Council Admin Building	500,451	454,105	1,371	1,247
Works Depot	189,829	185,344	520	508
Cessnock Library	177,398	150,194	520	412

At the Hunter Wine Interpretive Centre the program identified a number of simple changes to lighting and air-conditioning which could reduce the ongoing running costs for the centre. One of the outcomes of the audit was to replace some of the lamps in the public access area (keeping existing light fittings), with a variety of energy efficient lamps which have a similar appearance and provide the same lighting levels. A voltage reduction unit was installed to reduce the energy consumed by the standard fluoro lights. Fluorescent lights require a higher voltage to strike when first switched on, but after that, can operate on a reduced voltage supply.

Estimated Savings per Annum: \$1,820 and 15.7 tonnes CO<sub>2</sub>  
Simple Payback: 1.3 yrs

At Kurri Kurri Library the program identified a number of items requiring attention, and provided valuable input into the specification for the replacement air-conditioning system to ensure that ongoing energy costs were a consideration when choosing the new system.

### REFIT PROGRAM

During 2005-06, 273 refit kits were installed (a decrease of 20% on 2004-05 installations) in homes in the Cessnock LGA. This equates to savings of 161 tonnes of greenhouse gas emissions, 155,610 kWhrs of electricity and 8,190 kL of water (or more than 8 olympic swimming pools of water).

## **HCCREMS - CLIMATE ACTION PROJECT**

Grant funding has been received by HCCREMS from the NSW Greenhouse Office to undertake a project on "Understanding and Adapting to the effect of Climate Change across the Key Land uses in the Hunter, Lower North Coast and Central Coast". Key objectives of the project are to:

- Obtain regionally and locally specific information via research, data collation and modelling, of how climate change will impact on various industries including agriculture (dairy, viticulture, aquaculture, and poultry), tourism, water resources, human settlements and infrastructure.
- Raise awareness and understanding of the causes, impacts and inhibitors of climate change on the community, natural resources and various industry sectors on a regional scale.
- Raise awareness of the potential adaptive capacity of the region's community, government and industry sectors to adjust to climate change.
- Facilitate the linking of established regional industry, community and government groups into partner organisations so as to develop and implement effective climate change adaptation strategies to ensure that impacts are mitigated, negated or capitalised upon.

This project will be implemented over the next 3 years and updates reported as they are made available.

## **CYCLEWAYS**

Refer to [Human Settlements](#) Section for further detailed information.

## **RESPONSES TO AIR QUALITY ISSUES**

### **OUTDOOR AIR QUALITY**

#### **Diffuse Source Air Pollutants**

During 2005-06 Council received 8 reports of air pollution incidents and another 41 complaints in relation to odour (of these 12% were due to septic tanks and 36% due to chicken sheds).

The Environment Protection Authority's Regional Pollution Index at Beresfield indicates that during 2005-06 the regional pollution index was ranked as low for 90% and medium for 4.5% of the year (note: there were no high readings and no readings reported for 21 days (i.e. 5.5% of the year) during the year).

#### **Point Source Air Pollutants**

During 2005-06, State Forests undertook no hazard reduction burns, however post-harvest burns were undertaken over 120 ha in Olney/Watagan State Forest and a major class 2 wildfire occurred covering an area of 650 ha in Corrabare State Forest.

Air quality monitoring at Hydro Aluminium smelter during 2005-06 reports fluoride levels in the air at Kurri Kurri are below the prescribed ANZECC guideline. Total reported smelter emissions during 2005-06 were below EPA licence levels (Hydro, 2005a, 2005b, 2006).

Monitoring of vegetation in the Hydro Aluminium smelter buffer zone in June 2005 shows that fluoride effects extend further towards the north-west than other directions (attributed to the prevailing wind direction during the summer growing season). Visible injury to fluoride-sensitive flora was generally confined to the buffer zone except for some slight injury to trees along portions of Bishops Bridge Road and Bowditch Avenue. The report concluded that this was unlikely to cause any adverse effect on the plants function or ability to regenerate (Doyle, 2005).

In addition, Hydro Aluminium undertook a retrofit and upgrades of Potlines 1, 2 & 3 which was completed at the end of 2005 with a resulting 90 % reduction in the generation of perfluorocarbons (a strong greenhouse gas). Production increased by 10 % as a result of these upgrades with no change in the fluoride emissions.

#### **Changes to the Bushfire Environmental Assessment Code**

From September 2005 the following changes were made to the Bushfire Environmental Assessment Code, which is used by the NSW Rural Fire Service to help landowners streamline environmental regulations for hazard reduction:

- Extent of the area where the code can be used to include Land Management Zones (i.e. forests, farms, reserves, etc).
- Extent of the types of assets covered by the code to include structures such as schools, hospitals and nursing homes; plantations; boundary fences, and; increased distances from 10m to 20m for major buildings such as communication towers, farm sheds, industrial and commercial buildings.
- Improved measures to protect river corridors and reduce soil erosion.
- Improved measures to assess works for impacts on threatened species.

More information on these changes can be found at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au).

### **Woodsmoke Reduction Program**

During 2005-06 materials from the Woodsmoke program were placed on display in the Council foyer and libraries.

### **New Woodsmoke Offence**

The *Protection of the Environment Operations (POEO) Act 1997* has been amended to introduce an offence provision aimed specifically at 'excessive woodsmoke'.

The new provisions came into effect on 1 May 2006 and were needed as a deterrent to poor operation of a wood heater or fireplace. Smoke from wood heating is a major contributor to fine particle and air toxics pollution in regional NSW and also a significant contributor of these pollutants in metropolitan areas. Increased ambient levels of fine particle pollution are known to have health impacts and measures to reduce woodsmoke are, therefore, necessary.

The DEC's website at [www.environment.nsw.gov.au/woodsmoke/resources.htm](http://www.environment.nsw.gov.au/woodsmoke/resources.htm) has guidance on smoke observation techniques and information on relevant aspects of the legislation to help council officers make use of the new provisions. The website also has other useful material such as community education resources to facilitate local woodsmoke reduction programs.

### **NATIONAL POLLUTION INVENTORY**

Within the Cessnock LGA, 45 substances were identified from 49 sources. Eight (8) facilities reported to the NPI in 2004-05 (the most recent data available).

More information on the National Pollutant Inventory can be found at [www.npi.gov.au](http://www.npi.gov.au).

### **INDOOR AIR QUALITY**

There are currently 58 cooling towers registered in the Cessnock LGA, with no recorded outbreaks of Legionnaires Disease identified during 2005-06. Routine inspections of all regulated commercial facilities, tourist and wine production premises are undertaken to ensure the equipment is installed, and that plant maintenance schedules are in compliance with legislative requirements.

Hunter Regional Health Education Committee brochures detailing asbestos health effects, identification of asbestos in the home, working with asbestos and safe disposal of asbestos waste were placed on display/distributed in the Council foyer and at local hardware stores.

# WATER

## AT A GLANCE

Water Quality			Data Gaps:
State	Unknown	LGA water quality is assumed to vary within each catchment (affected by the level and type of development) though no data on this is available. 38 <a href="#">complaints</a> to Council on water quality (32 regarding wastewater/effluent discharges) were received.	
Pressure	Increasing	Increasing development for a variety of landuses in the LGA and continued land degradation affects water quality.	
Response	Limited	<a href="#">Hunter Water</a> and <a href="#">Community</a> water quality monitoring programs. Several strategies/plans are being implemented at selected sites.	
Wastewater			
State	Improving	<a href="#">WWTP's</a> monitor water quality above and below discharge points. Continued reliance on on-site effluent treatment.	
Pressure	Increasing	Much of the LGA is rural and as such is outside the reach of the reticulated sewerage system. As the demand for rural and rural-residential development continues to increase additional pressure will be placed on <a href="#">on-site effluent</a> treatment systems.	
Response	Fair	14 NSW EPA <a href="#">licensed premises</a> for water discharge. <a href="#">WWTP's</a> monitor water quality above and below discharge points.	
Ground and Surface Water			
State	Unknown	Little data exists on the current groundwater quality. Ground and surface water extractions are regulated by <a href="#">DNR through licensing</a> . Currently 224 surface water licences and 189 groundwater licences.	
Pressure	Increasing	Groundwater quality is under continual pressure from agricultural activities and on-site effluent disposal. Changing landuses from grazing to viticulture are increasing pressure on water resources.	
Response	Limited	<a href="#">Water tank rebate</a> , <a href="#">community water grants</a> and <a href="#">refit</a> programs are addressing some surface water issues.	
Stormwater			
State	Fair	All new developments must meet requirements in relation to stormwater management.	
Pressure	Increasing	In line with increasing development.	
Response	Improving	Council Stormwater Management Plan and <a href="#">HCCREMS Regional Water Program</a>	

## RESPONSES TO WATER QUALITY ISSUES

### WATER QUALITY

The Hunter Water Corporation (HWC) conducts a water quality monitoring program to assess the impact of point sources of wastewater pollution from their wastewater treatment works on the aquatic environment. This data has been used to assess the compliance of Cessnock's waterways to ANZECC and NHMRC water quality guidelines (see Appendix 2) for potable water supply, the maintenance of aquatic ecosystems and agricultural uses (see Table 3). The mean of the data set for each parameter has been used as the value to assess the water quality guidelines against.

Table 3: Water Quality Monitoring Data 2005-06 for upstream and downstream of HWC wastewater treatment plants.

Water Quality Sampling Site	Water Quality Parameter						
	pH	Turbidity	Conductivity	Nitrate Nitrogen	OP	Faecal Coliforms	Chlorophyll-a
<b>Anvil Creek – Upstream</b>							
Potable Water Supply	✓	-	X	✓	-	-	X
Agriculture	✓	-	X	✓	-	-	*
Maintenance of aquatic ecosystems	✓	-	✓	✓	-	*	✓
<b>Anvil Creek – Downstream</b>							
Potable Water Supply	✓	-	X	✓	-	-	X
Agriculture	✓	-	X	✓	-	-	*
Maintenance of aquatic ecosystems	✓	-	X	✓	-	*	X
<b>Congewai Creek – Upstream</b>							
Potable Water Supply	✓	-	X	-	-	X	-
Agriculture	✓	-	✓	-	-	✓	*
Maintenance of aquatic ecosystems	✓	-	✓	-	-	*	-
<b>Congewai Creek – Downstream</b>							
Potable Water Supply	✓	-	X	-	-	X	-
Agriculture	✓	-	✓	-	-	X	*
Maintenance of aquatic ecosystems	✓	-	✓	-	-	*	-
<b>Swamp Creek – Upstream</b>							
Potable Water Supply	✓	X	X	-	-	X	X
Agriculture	✓	✓	✓	-	-	X	*
Maintenance of aquatic ecosystems	✓	✓	✓	-	-	*	✓
<b>Swamp Creek – Downstream</b>							
Potable Water Supply	✓	✓	X	-	-	X	✓
Agriculture	✓	✓	✓	-	-	X	*
Maintenance of aquatic ecosystems	✓	✓	✓	-	-	*	✓
<b>Swamp Creek – VAW/Hydro</b>							
Potable Water Supply	✓	-	X	✓	X	X	✓
Agriculture	✓	-	✓	✓	X	X	*
Maintenance of aquatic ecosystems	✓	-	✓	✓	X	*	✓
<b>Black Creek – Upstream</b>							
Potable Water Supply	X	X	X	✓	X	X	X
Agriculture	✓	✓	X	✓	X	X	*
Maintenance of aquatic ecosystems	✓	✓	✓	✓	X	*	X
<b>Black Creek – Downstream</b>							
Potable Water Supply	✓	X	X	✓	X	X	✓
Agriculture	✓	✓	X	✓	X	X	*
Maintenance of aquatic ecosystems	✓	✓	✓	✓	X	*	✓

- ✓ denotes compliance with ANZECC and NHMRC guidelines
- x denotes non-compliance with ANZECC and NHMRC guidelines
- \* denotes no guideline available
- denotes information unavailable

## WATERWATCH ACTIVITIES

Cessnock LGA Waterwatch groups results for 2005-06 are summarised in Table 4.

Table 4: Waterwatch Water Quality Monitoring (assessed against ANZECC and NHMRC water quality guidelines as detailed in Appendix 2)

Water Quality Sampling Site	Water Quality Parameter			
	pH	Conductivity	Turbidity	Total Dissolved Solids
Congewai Landcare – Congewai Creek (at ford on Congewai Rd) Readings: 3				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Congewai Landcare – Dam at 'Glenbori' Readings: 3				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Congewai Landcare – Congewai Creek (along entrance to Reedy Creek) Readings: 3				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Congewai Public School – Congewai Creek (1km south of school) Readings: 3				
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
Congewai Landcare – Congewai Creek (Thursby Rd bridge) Readings: 3				
Potable Water Supply	✓	x	x	*
Agriculture	✓	x	✓	x
Maintenance of aquatic ecosystems	✓	✓	✓	x
Congewai Landcare – Ellalong Lagoon Readings: 3				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	✓	-
Maintenance of aquatic ecosystems	✓	✓	x	-
Millfield Public School & Congewai Landcare – Wollombi Brook North Arm at Millfield Readings: 3				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Wollombi Public School – Wollombi Brook (waterhole) at Wollombi Readings: 8				
Potable Water Supply	✓	-	x	*
Agriculture	✓	-	✓	✓
Maintenance of aquatic ecosystems	✓	-	✓	x
Hunter Community Salinity Monitoring Group – Wollombi Brook Big Arm, Broke Rd, Wollombi Readings: 12				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Hunter-Central Rivers Waterwatch – Wollombi Brook (Paynes Crossing) Readings: 1				
Potable Water Supply	✓	-	x	*
Agriculture	✓	-	✓	✓
Maintenance of aquatic ecosystems	✓	-	✓	x
Bellbird Public School – Bellbird Creek, cnr Kendall & Pittman Streets, Bellbird Readings: 2				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Hunter Community Salinity Monitoring Group, Nulkaba – Black Creek, Nulkaba Readings: 1				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Abermain Guides – Centenary Park Constructed Pond, Abermain Readings: 1				
Potable Water Supply	✓	-	x	*
Agriculture	✓	-	✓	✓
Maintenance of aquatic ecosystems	✓	-	✓	✓
Friends of Werakata, Tumblebee and Buttai & Abermain Guides – Peace Park, Weston Readings: 5				
Potable Water Supply	✓	x	x	*
Agriculture	✓	x	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
Friends of Werakata, Tumblebee and Buttai – Black Hollows Readings: 1				
Potable Water Supply	✓	✓	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Friends of Werakata, Tumblebee and Buttai – Wallis Creek, John Renshaw Drive Readings: 5				
Potable Water Supply	✓	x	x	x
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x

Water Quality Sampling Site	Water Quality Parameter			
	pH	Conductivity	Turbidity	Total Dissolved Solids
Friends of Werakata, Tumblebee and Buttai – Surveyors Creek at Twin Bridges, John Renshaw Drive	Readings: 5			
Potable Water Supply	✓	x	x	x
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
Greta Public School – Anvil Creek	Readings: 1			
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-

✓ denotes compliance with ANZECC and NHMRC guidelines \* denotes no guideline available  
x denotes non-compliance with ANZECC and NHMRC guidelines - denotes information unavailable

The results of Water Bug surveys carried out in the Cessnock LGA in 2005-06 are included in Table 5.

Table 5: Water Bug Survey Results for the Cessnock LGA

Group	Stream	Stream Pollution Index	
		Spring 2005	Autumn 2006
Ellalong Public School	Ellalong Lagoon	-	Fair
2 <sup>nd</sup> Abermain Brownies and Guides	Centenary Park, Abermain	Fair	Fair
Cessnock West Public School	Black Ck, Campbell St Reserve	-	Fair
TAFE Kurri kurri Campus	Peace Park, Chinaman's Hollow	-	Fair

Abermain Guides and Wollombi Public Schools participated in Phosphorus Day 2005 held from 13th to 19th November. Results at Peace Park were in the medium category and Wollombi Brook were in the low category which is between the lowland stream trigger value and the estuarine system trigger value.

For further information on NSW Waterwatch visit [www.waterwatch.nsw.gov.au](http://www.waterwatch.nsw.gov.au) and Water Bug Surveys visit [www.bugsurvey.nsw.gov.au](http://www.bugsurvey.nsw.gov.au).

### WATER POLLUTION COMPLAINTS/INCIDENTS

Council received 38 water pollution incident reports, of which 32 were related to wastewater, effluent or sullage discharge, in 2005-06.

In October 2005 there was a diesel fuel spill on Leggett's Drive. It is unknown what impact this incident may have had on local waterways.

In addition, an algal bloom in Black Creek occurred in January 2006 in conjunction with discharges from Cessnock Waste Water Treatment Plant. Warning signs were erected during the time of the bloom and users of the treated effluent were instructed to discontinue use until advised that the bloom had finished.

## RESPONSES TO WASTEWATER ISSUES

### PROTECTION OF THE ENVIRONMENT OPERATIONS ACT, 1997 SCHEDULED PREMISES

In relation to the Protection of the Environment Operations Act 1997 there are currently 14 scheduled premises (for water) within the Cessnock LGA (these are listed in table 6 below).

Table 6: EPA licensed premises (in relation to water pollution) under the Protection of the Environment Operations Act in Cessnock LGA during 2005-06.

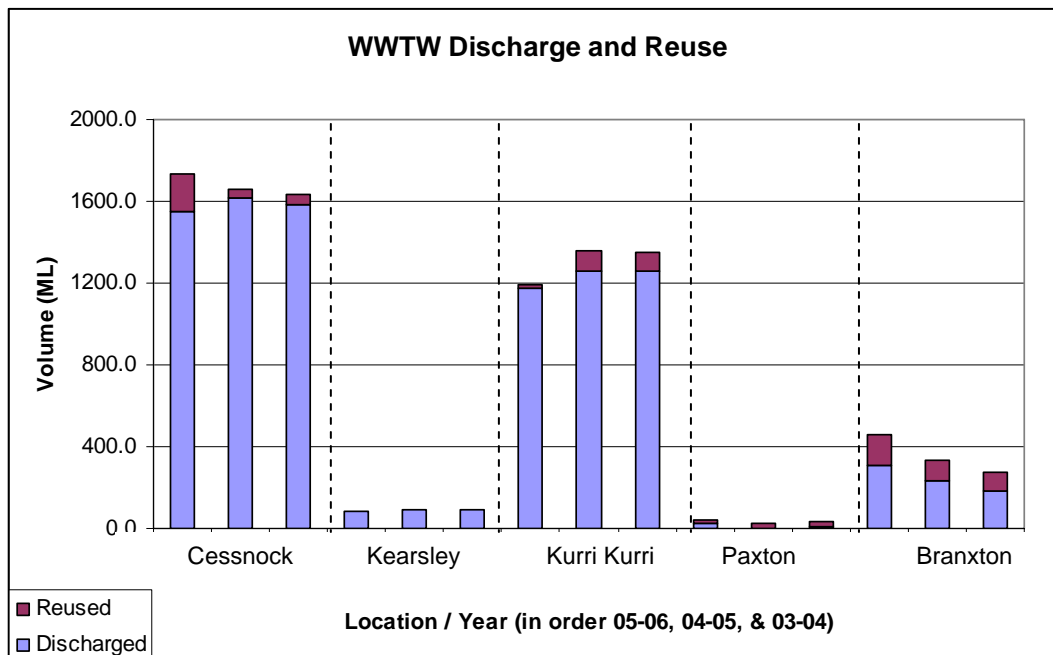
Business Name	Activity
Austar Coal Mine P/P	Coal Mining
Bloomfield Collieries	Coal Mining
Cessnock City Council	Landfilling
Cessnock City Council	Herbicide Application
HWC – Branxton WWTW	Sewerage Treatment
HWC – Kurri WWTW	Sewerage Treatment
HWC – Cessnock WWTW	Sewerage Treatment
HWC – Kearsley WWTW	Sewerage Treatment
HWC – Paxton WWTW	Sewerage Treatment
Hydro Aluminium Kurri P/L	Aluminium Production
J R Burnett P/L	Animal Slaughter
Leaway P/L	Waste Landfilling
Nationwide Oil P/L	Waste Generation/Storage
Orica Australia P/L	Explosives

Details of trade waste permits issued by Hunter Water were not available at time of publication.

### CESSNOCK LGA WASTEWATER TREATMENT PLANTS

The effluent discharge for 2005-06 (with comparison to 2004-05 and 2003-04) of each of the wastewater treatment plants in the Cessnock LGA is summarised in Figure 11.

Figure 11: Effluent treated and disposed of at HWC wastewater treatment plants during 2005-06, 2004-05 and 2003-2004 in the Cessnock LGA.



### ON-SITE EFFLUENT DISPOSAL

During 2005-06, an additional 167 on-site effluent disposal systems were approved in the Cessnock LGA (representing a 22% decrease from the 2004-05 reporting period).

## **RESPONSES TO WATER USAGE ISSUES**

### **SURFACE AND GROUNDWATER EXTRACTION**

DNR records indicate that there are currently 224 surface water extraction licenses and 198 groundwater extraction licenses in the Cessnock LGA. The most common use for this water is for irrigation, stock and grape vines.

### **HCCREMS - REGIONAL WATER PROGRAM**

During 2005-06 a new project officer was appointed to this project and the project was expanded beyond Water Sensitive Urban Design (WSUD) to include Integrated Water Cycle Management (IWCM). Key activities being implemented by HCCREMS under the Regional Water Program include:

- Promoting Water Sensitive Urban Design (WSUD) adoption in Local government planning instruments.
- Developing a register of and promoting demonstration sites around the region to demonstrate WSUD and urban IWCM.
- Providing linkages between key stakeholders, including local and State government, CMA and industry.
- Researching investment opportunities and assisting stakeholder with preparing applications for assistance in the meeting the project's objectives.
- Promoting the [www.urbanwater.info](http://www.urbanwater.info) website as tailored support package for councils and others working with urban IWCM.
- Incorporating WSUD/IWCM into Development Control Plans (DCPs) and other relevant planning instruments.
- Increasing the capacity of council staff to design, implement, monitor and maintain urban IWCM policies and practices in their Local Government Areas (LGAs).
- Improving the capacity of developers and consultants to implement WSUD/IWCM in their proposals.
- Increasing the extent of more sustainable urban design form in the region.
- Reducing equivalent stormwater discharge volumes and pollutants from new urban developments and reducing downstream impacts.

### **COMMUNITY WATER GRANTS**

In the first round of Community Water Grants initiated by the Commonwealth Government to better manage scarce water resources, Laguna Bushfire Brigade in conjunction with Wollombi Progress Association were successful in receiving \$38,310 to install rainwater tanks and water saving devices at Laguna Fire Shed and Laguna Community Hall. The works funded through this grant will be completed during 2006-07.

### **HUNTER WATER CORPORATION RAINWATER TANK REBATE**

During 2005-06, Hunter Water provided rainwater tank rebates to 1 home in the Cessnock LGA (this represents 1.5% of the total water tank rebates issued by HWC in 2005-06). The rebates apply to existing homes only not new homes. For details of eligibility and amounts of water tank rebates see the Hunter Water website at [www.hunterwater.com.au/WaterSavingScheme.asp](http://www.hunterwater.com.au/WaterSavingScheme.asp).

### **REFIT PROGRAM**

Refer to [Atmosphere Section](#) for detailed information.

# BIODIVERSITY

## AT A GLANCE

Terrestrial Biodiversity			Data Gaps:
State	Declining	Various developments pose threats to terrestrial biodiversity in the LGA. Currently listed under the <i>Threatened Species Conservation Act 1995</i> for the LGA are 57 <a href="#">fauna</a> species, 16 <a href="#">flora</a> species and 7 <a href="#">endangered ecological communities</a> . DNR approved no <a href="#">clearing</a> and State Forests sustainably harvested 410 ha within the LGA during 2005-06. <a href="#">REMS Regional Vegetation Mapping Project</a> records 76% of the LGA as vegetated.	
Pressure	Increasing	Demand for rural, rural residential, industrial and urban expansion as a result of population growth increasingly affects biodiversity.	
Response	Limited	<a href="#">Landcare</a> programs, <a href="#">Kurri Sand Swamp Woodland Recovery Plan</a> , <a href="#">Tree plantings and giveaways</a> and <a href="#">REMS Roadside Environmental Management</a> programs are having effects.	
Aquatic Biodiversity			
State	Unknown	Little is known of the aquatic biodiversity in the LGA.	
Pressure	Increasing	Increasing development is placing pressure on aquatic ecosystems through disturbance, pollution and changes in water quality and quantity.	
Response	Limited	<a href="#">Salvinia</a> removal programs are continuing to address this menace but are limited by resources.	
Introduced Flora and Fauna			
State	Unknown	New weeds classes were implemented in the State during the year. Complete numbers of introduced species are unknown.	
Pressure	Increasing	Development in the LGA is increasing the incidence of weed infestation and introduction of feral animals into natural bushland.	
Response	Fair	Council employs 2 Weeds Officers and participates in many <a href="#">regional weed programs</a> as well as receiving grant funding to initiate programs. State Forests are participating in <a href="#">pest</a> management programs.	

## RESPONSES TO BIODIVERSITY ISSUES

### REFORMS TO THREATENED SPECIES CONSERVATION ACT

The *Threatened Species Legislation Amendment Act 2004* (which came into effect in October 2005) sets in place a number of reforms which provide more powerful tools for conserving our biodiversity and protecting threatened species, populations, communities and their habitats at the landscape scale.

Key reform areas are:

- in urban and coastal areas - the integration of biodiversity into strategic land-use planning and improvements to the development assessment process.
- the accreditation of flora and fauna consultants.
- in rural areas - threatened species conservation embedded within native vegetation protection and incentives for landholders.
- transparent prioritisation of recovery and threat abatement actions.
- upgraded enforcement and compliance provisions.
- the listing of threatened species maintained as a scientific process and based on defined criteria.
- expert advisory councils to advise the Minister for the Environment on social, economic and biodiversity implications.

The *Threatened Species Conservation Amendment (Biodiversity Banking) Bill 2006* was introduced into parliament in June 2006 and inserts a new Part 7A in the *Threatened Species Conservation Act 1995* to enable the establishment of biodiversity banking and offsets scheme (BioBanking Scheme).

The four main components of the BioBanking Scheme are:

- Establishing biobank sites on land through a biobanking agreement between the Minister for the Environment and the landowners.
- Creating biodiversity credits for management actions that are carried out, or proposed to be carried out, to improve or maintain biodiversity values on biobank sites. The biobanking assessment methodology will be the tool used to determine the number of biodiversity credits that may be created for these management actions.
- The trading of credits, once they are created and registered.
- Enabling the credits to be used to offset the impact of development on biodiversity values. The biobanking assessment methodology will be the tool that is used to determine the number and class of credits that must be retired to offset the impact of a development and ensure that the development improves or maintains biodiversity values.

### THREATENED FAUNA SPECIES

There was 1 new fauna species listed as “vulnerable” under the provisions of the *Threatened Species Conservation Act, 1995* recorded in the Cessnock LGA (see Table 7) during 2005-06.

Table 7: New Schedule 1 and Schedule 2 fauna species listed in the NSW NPWS Wildlife Atlas for the Cessnock LGA during 2004-05.

Scientific Name	Common Name
<i>Mammals</i>	
<i>Miniopterus schreibesii oceanensis</i>	Eastern Bent Wing Bat

A complete listing of threatened fauna species in the Cessnock LGA can be found in appendix 3. The local status of these species is not known however reports on the NSW NPWS Wildlife Atlas show that the following threatened or endangered species have been recorded in the LGA during 2005-06:

- Yellow-bellied Glider (2 sightings)
- Eastern Freetail Bat (2 sightings)
- Squirrel Glider (3 sightings)
- Eastern Bent Wing Bat (3 sightings)

Furthermore, State Forests report having detected the threatened species listed in Table 8 below.

Table 8: State Forest threatened species sightings during 2005-06 in Cessnock LGA.

Species	Common Name	No. Observations
<i>Petrogale penicillata</i>	Brush-tailed Rock Wallaby	22
<i>Petaurus australis</i>	Yellow-bellied Glider	11
<i>Phascolarctos cinereus</i>	Koala	4
<i>Calyptorhynchus lathami</i>	Glossy Black Cockatoo	2
<i>Tyto tenebricosa</i>	Sooty Owl	4
<i>Senna acclinis</i>	Rainforest Cassia (plant)	4
<i>Thylogale stigmatica</i>	Red-legged pademelon	1
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	3
<i>Pomatostomus temporalis</i>	Grey-crowned Babbler	1

### Fox Baiting

During 2005-06, Hunter Economic Zone management participated in a program of fox baiting with NSW NPWS to protect the native fauna in Werakata National Park and surrounds. NSW NPWS also conducted fox baiting in the Watagans National Park and on private property in the Congewai Valley.

### Forests NSW Pest Control

Forests NSW are continuing its involvement in the Fox Threat Abatement Plan (Fox TAP) in conjunction with NPWS.

### THREATENED FLORA SPECIES

There was 1 new flora species, *Persicaria elator* (Tall knotweed), was listed in the Cessnock LGA as “vulnerable” under the *Threatened Species Conservation Act, 1995* during 2005-06.

A complete listing of threatened flora species in the Cessnock LGA can be found in appendix 3. The NSW Wildlife Atlas is online at [www.wildlifeatlas.npws.nsw.gov.au](http://www.wildlifeatlas.npws.nsw.gov.au).

The unauthorised removal of nearly 300 *Persoonia pauciflora* plants, representing more than half of the known population of this threatened species, in North Rothbury in May 2006 was investigated by the Department of Environment and Conservation.

### THREATENED ECOLOGICAL COMMUNITIES

During 2005-06 no additional Endangered Ecological Communities (EEC) in the Cessnock LGA have been listed by the NSW Scientific Committee. Currently the following 7 EEC's are listed to occur in the Cessnock LGA and more information on these is available at [www.nationalparks.nsw.gov.au](http://www.nationalparks.nsw.gov.au) :

- Kurri Sand Swamp Woodland
- Quorrobolong Scribbly Gum Woodland
- Hunter Lowlands Redgum Forest
- Lower Hunter Spotted Gum – Ironbark Forest
- Freshwater Wetlands on Coastal Floodplains
- River Flat Eucalypt Forest
- Swamp Oak Floodplain Forest

### Kurri Sand Swamp Woodland (KSSW) Recovery Program

During 2005-06, the KSSW Recovery Program evolved into the Threatened Flora of the Lower Hunter Recovery Program and developed 4 new projects:

- KSSW Recovery Plan – comprising 9 strategies to help recover this endangered ecological community.
- KSSW Vegetation Mapping Project – commenced with funding from the Wallis, Fishery and Four Mile Creek Catchment Management Forum, Hunter Central Rivers Catchment Management Authority, NSW Premiers Department and Cessnock City Council.
- KSSW Community Awareness and Education project – designing interpretative material to be installed along the Stanford Merthyr Historic Railway Walk and at Astills Picnic Area in

Werakata National Park.

- New Recovery Projects – funding from Department of Environment and Heritage to prepare recovery plans for *Acacia bynoeana*, *Eucalyptus parramattensis* subsp. *decadens*, *Persoonia pauciflora* and the Hunter Valley Weeping Myall Woodland EEC.

National Parks Discovery Guides conducted a walk through the Kurri Sand Swamp Woodland in August 2005 to show off the spring flowering in the area.

## **KEY THREATENING PROCESSES**

Key threatening processes are the things that threaten - or could threaten - the survival or evolutionary development of species, populations or ecological communities. They are listed in Schedule 3 of the *Threatened Species Conservation Act*, and include:

- Pest animals - introduced animal species can compete with, and prey upon, native animals. They can also damage native plants and degrade natural habitats.
- Weeds - compete with native plants for resources such as light and nutrients. They can aggressively invade areas, displacing native plants and animals.
- Diseases - exotic fungal infections, viruses and other pathogens can weaken and kill native species.
- Habitat loss/change - from large-scale land clearing to the gathering of bushrock for suburban gardens, humans have degraded many native environments across the state.

Some of the Key Threatening Processes listed in Schedule 3 of the Act that may threaten endangered, or vulnerable, species and/or ecological communities in the Cessnock LGA include:

- Competition and grazing by the feral European rabbit
- Competition from feral honeybees
- Predation by the European Red Fox
- Predation by the Plague Minnow (*Gambusia holbrooki*)
- Bushrock Removal
- Clearing of native vegetation
- Alteration of habitat following subsidence due to longwall mining
- Ecological consequences of high frequency fires
- Human-caused Climate Change
- Invasion, establishment and spread of Lantana (preliminary determination)

## **DRAFT DEPARTMENT OF ENVIRONMENT AND CONSERVATION THREATENED SPECIES PRIORITIES ACTION STATEMENT**

The Threatened Species Priorities Action Statement (PAS) outlines the broad strategies and detailed priority actions in NSW to:

- Promote the recovery of threatened species, population and ecological communities
- Manage key threatening processes.

This first draft PAS was available for public consultation between 12 May and 18 August 2006. Once the final PAS has been completed, it will be reviewed every three years with input from the Natural Resources Commission, the Scientific Committee, the Social and Economic Advisory Council, the Biological Diversity Advisory Council, state and federal government agencies and the public.

## **HABITAT FRAGMENTATION AND CLEARING**

In 2005-06, the Department of Natural Resources received no applications for clearing in the Cessnock LGA under the *Native Vegetation Conservation Act, 1997*.

The NSW National Parks and Wildlife Service is developing a Plan of Management for the Werakata National Park. A call for interested individuals and organisations to participate in the development process was closed on 13th January 2006.

## **INTRODUCED SPECIES - WEEDS**

During 2005-06, new weed classifications were introduced through an Amendment Bill to the *Noxious Weeds Act 1993* (see below). A complete list of noxious weed declarations for Cessnock LGA utilising the new classification system is contained in Appendix 4. Council received 10 complaints regarding noxious weeds and Councils Weeds Officers conducted 1,680 property inspections for a variety of noxious weeds, issued 13 Weed Control Notices and 3 Section 20 Notices (for Weed Control Notices not complied with, where Weeds Officers undertake the required actions and charge the landholder).

An additional \$5,500 was received from the State Government through the Lower Hunter and Central Coast Noxious Weeds Advisory Committee (LHCCNWAC) for regional management plans for the control of the following nominated weeds – Alligator Weed, Mother of Millions, Water Hyacinth, Giant Parramatta Grass and Salvinia.

The following weed reduction/removal programs were conducted in 2005-06:

- Blackberry and Mother of Millions were targeted heavily with good results.
- Paterson's Curse and Spiny Emex were also treated with success.
- Green Cestrum, Lantana and African Boxthorn were targeted if it was considered that treatments would be successful.
- Infestations of St Johns Wort, Crofton Weed, Pampas Grass, Burrs, Tiger Pear and Smooth Tree Pear were treated when sighted.
- Treated approximately two kilometres of Black Creek at Greta which was infested with Green Cestrum and Mother of Millions on a contract basis for the RTA.

It should be noted that low rainfall prevented treatments for Giant Parramatta Grass though treatments from previous years are still providing some level of control. This weed is still an issue along roadsides as it is easily moved by vehicles and plant, especially when moist.

As well as these activities, Council's Weeds Officers also:-

- Undertook a program of community education on weeds through monthly newspaper ads highlighting a particular weed, developed a poster on major weeds of the area and printed factsheets that are available at Councils administration building and libraries.
- Plotted weed infestations, both treated and untreated on Councils mapping system (Mapinfo).
- Worked with Hunter and Central Coast Regional Environment Management Strategy and the Hunter and Central Rivers-Catchment Management Authority to provide effective control of the Salvinia along the Wollombi Brook system
- Participated in the Hunter and Central Coast Regional Weeds Committee and the Alligator Weed Task Force

### **Salvinia Control**

The Hunter Central Rivers Catchment Management Authority allocated \$90,000 to research and implement effective control measures in high priority areas. One of these priorities was at Wollombi Brook with a combined program of floating booms, mechanical harvesting and releasing Salvinia weevils.

A Regional Management Strategy for Salvinia in the Wollombi Brook has been developed to provide a strategic framework for working with the community and other stakeholders towards addressing this problem. The Strategy was launched at "The Dairy" in February 2006.

Biological control of Salvinia is being trialled in conjunction with the Department of Primary Industries. The Salvinia weevil was released over the summer months on Wollombi Brook, Payne's Crossing and Murray's Run.

### **Noxious Weed Act 1993 Amendment Bill 2005**

The *Amendment Bill* to the Act commenced on 1 March 2006 and makes the following changes to the *Noxious Weeds Act 1993*:

- Replaces the existing weed control orders made by the Minister of Primary Industries and control categories for noxious weeds with orders made by the Minister that permit a broader range of control measures to be used, together with a new classification system for noxious

weeds.

- Requires greater public consultation prior to the issuing of a weed control order.
- Provides for emergency weed control notices for a new and virulent weed, this order only being valid for a 3 month period.
- Changing of the weed classification from 10 categories to 5 classes with all existing declared noxious weeds to be categorised into these classes.
  - Class 1 – State prohibited weeds
  - Class 2 – Regionally prohibited weeds
  - Class 3 – Regionally controlled weeds
  - Class 4 – Locally controlled weeds
  - Class 5 – Restricted plants for sale or distribution
- If a noxious weed is declared in another State, NSW can also declare that weed noxious to prohibit transport and propagation in NSW.

In addition there were major changes to weed control orders:

- Weed control obligations will now be the occupier or owner.
- Orders will only be for a period of 5 years and then will be reviewed.
- All declared noxious weeds will be reviewed every 5 years.
- Orders specify the control measure not the weed classes.
- Orders are more flexible with outcome based objectives such as reducing the negative impacts of weeds, reducing the spread and are noxious weeds cover and providing effective and more frequent reporting of an emergency weed notice.
- Enforcement on other government authorities requires them to stop and prevent the spread of noxious weeds to adjoining land.
- The new weed classes remove classifications such as environmental, agricultural, aquatic weeds, with all now being either declared or non-declared weeds.
- All local declared weeds to be included into regional weed management plans to assist funding for future controls.

### **National Weeds Strategy Review**

The National Weeds Strategy is currently being reviewed and revised and is to be renamed the Australian Weed Strategy.

### **Regional Weeds Program**

Activities for this year undertaken by the HCCREMS Weeds Officer included:

- **Wollombi Salvinia Project** - HCCREMS have received funds from the Hunter Central Rivers Catchment Management Authority (CMA) to be paid as incentives to landholders who enter into agreements to manage Salvinia on their properties in line with the regional Salvinia Weed Management Strategy. This management approach is designed to ensure that infestations are strategically cleared from the top of the catchment down, in a fixed period of time, without any being left behind to reinfest controlled areas.

Greencorp and Conservation Volunteers Australia have been engaged on the project to assist landholder's undertake the management of Salvinia on their properties. This includes the construction and installation of containment booms and the manual removal of Salvinia from small, isolated infestations. Monitoring of the Biocontrol release sites also continued through the year, with the population remaining active.

- **Data Collation & Mapping** - Considerable local weed infestation data has been provided to HCCREMS for incorporation into the regional weeds database. The database now holds records of around 9000 weeds occurrences across the region and has been designed to receive data from councils on a regular basis. The regional distribution of many of the most important weed species can now be mapped and knowledge gaps more readily identified. This data will allow a more strategic approach to weeds management including:
  - Informing weed risk assessments;
  - Identifying areas at particular risk of invasion by weed species;
  - Identifying outlying infestations on which to focus control efforts; and

- Providing more detailed analysis of the paths and vectors of spread for many weed species.

Training programs have also increased the capacity of Weeds Officers throughout the region to collect, analyse and manage weeds data in a standardised way. This will improve the quality and consistency of weeds data being collected across the region and improve the ability of Weeds Officers to use this data for strategic weed management planning.

- **Planning and Policy** - A review of the Regional Alligator Weed Management Plan and Protocols for Alligator was commenced during the year by a working group of the Alligator Weed Taskforce.
- In addition a Regional Weeds Forum was conducted on 15<sup>th</sup> July 2005 at Newcastle University.

### **Commonwealth Research Centre (CRC) Introductory Weed Management Manual**

The CRC for Australian Weed Management and the Department of Environment and Heritage have produced a training resource for individuals or groups involved in weed management. The manual can be viewed at [www.weeds.crc.org.au/documents/manual.pdf](http://www.weeds.crc.org.au/documents/manual.pdf).

The "Introductory Weed Management Manual" was developed as a training aid for the use of private landholders, conservation groups, catchment management groups, industry, and local, state and territory governments. The Manual is an introductory guide and will be of use to those who wish to develop their own weed management knowledge and skills or as a training resource for those who need to train staff or volunteers in weed management techniques.

The manual is presented in four training modules:

- Module 1: Developing and implementing a weed management plan
- Module 2: Weed control methods for community groups
- Module 3: Collecting and preparing plant specimens for identification
- Module 4: Presentation of information sessions to small groups

The Manual encourages the reader to use the knowledge and guidance available at local, regional and state levels from natural resource management agencies to adapt weed management activities for local situations.

### **FIRE AND FUEL REDUCTION**

No information has been received on this area.

### **TREE GIVEAWAYS AND PLANTINGS**

Council continues to operate a tree give-away scheme that sees six trees (tubestock) being given to residents of the LGA that purchase or build a new home. During 2005-06 approximately 500 tubestock were distributed to residents under this program. Council also funds the planting of trees in public places where appropriate.

### **National Tree Day 2005**

For National Tree Day 2005 Council, in partnership with Hunter Resource Recovery, gave away trees to the local community.

### **City Entry Streetscapes Project**

Due to the drought tree plantings in 2005-06 have been reduced dramatically with only approximately 300 advanced trees being planted. The city streetscapes project has continued on a reduced scale with a large proportion of 2005-06 funds being directed to watering existing young trees.

### **Planting Projects with School groups**

A number of small scale planting projects have been undertaken with local school groups. These have been either in conjunction with specialised environmental days (i.e. Clean up Australia Day, National Tree Day) or if requested by Schools.

Schools that have undertaken plantings during 2005-06 include Abermain Public School, Congewai Public School, Ellalong Public School, Wollombi Public School, Bellbird Public School and Kitchener

Public School.

### **Green Corps Project 2006**

A number of activities have been carried out in partnership with Northumberland Network on a Green Corps Project. The Green Corp Team is comprised of young adults aged from 17 -22 working on Natural Resource Projects whilst undertaking workplace training. With Cessnock Council the Group has worked on revegetation works at Peace Park, a drainage reserve at Kurri Kurri, planting buffers at the Airport and a large scale revegetation project at Stanford Merthyr.

### **Extension of Vegetation Corridors in the Anvil/Black Creek Catchments**

This project was completed in June 2006 with approximately 21,500 trees being planted.

### **NPWS DISCOVERY TOURS**

National Parks and Wildlife Service Discovery Rangers conducted a night walk in Werakata National Park in November 2005.

### **LANDCARE ACTIVITIES**

#### **Abermain Landcare**

Abermain Landcare have continued to undertake rehabilitation works on Swamp Creek including the removal of Bamboo, Privet and Camphor Laurel. These works have been identified as part of the Wallis/Fishery Rivercare Plan and TCM Strategy.

#### **Burralong Valley Landcare**

During 2005-06, Burralong Valley Landcare focused on ongoing weed eradication programs in the riparian zone, including the removal of salvinia utilising mechanical removal methods. Burralong has worked with the Catchment Management Authority and Conservation Volunteers Australia teams to remove salvinia at Murray's Run.

#### **Buttai Valley Landcare**

Buttai Valley Landcare are active members on the Wallis/Fishery Catchment Management Forum. This forum focuses on Natural Resource Management issues along the Wallis Creek and One Mile Creek. The Group regularly takes part in Clean up Australia Day and conducts roadside clean ups throughout the year.

#### **Cessnock Landcare**

Cessnock Landcare has been working on Bellbird Creek which is part of the Black Creek Catchment. The site is located on Hetton Street in Bellbird. Local Landholders have been working with the Group on this site. The Group undertakes a working bee every Tuesday morning at the site to remove garden escapes, exotic plants and noxious/environmental weeds. It is estimated that to date approximately 75 tonnes of weeds have been removed from the site. The Group has received a small grant from Envirofund and are aiming to continue the work upstream towards Bellbird School and downstream towards Cessnock. A planting day for the Hetton Street Site was held in April 2006 to plant 300 tubestock trees with Bellbird Public School.

#### **Congewai Landcare**

Congewai Landcare has been working with Congewai School to collect Waterwatch information and undertake revegetation works in line with the Rivercare Plan for Congewai Creek. The local group have also conducted field days to teach residents to drought proof their farm.

#### **Greta-Branxton Landcare**

During 2005- 06 Greta Landcare continued work with the Lime Dosing plant on Anvil Creek, Branxton to neutralise acid mine water leaching into the creek from nearby mine sites, and seeking sponsorship for the continual operation of the plant from local mines, mine support industries and businesses.

#### **Kurri Kurri Landcare**

Kurri Kurri Landcare is continuing their work neutralising acid mine water which is leaching from coal spoil at the old Neath pit site through lime dosing, has begun work with the newly established Kurri Weston Greening Group and are working on a project on Swamp Creek. This project includes

revegetation of the site up to Government Road. The group have put in for an Environmental Trust Grant for this work to be undertaken. They are also focusing on reducing salt intrusion in the Kurri Kurri area. The main trial site is Deakin Street with grass clippings being placed on the salt scald.

### **Mt Vincent Landcare**

Mt Vincent Landcare has continued ongoing revegetation and rehabilitation works along Wallis Creek. These works have been identified as part of the Wallis/Fishery Rivercare Plan and are funded by the Natural Heritage Trust.

### **Wollombi Valley Landcare**

During 2005-06, Wollombi Valley Landcare have:

- Produced regular newsletters which are circulated to all members and additional Landcare articles are included in the community newsletter.
- Continued their efforts to assist and help educate local landholders and fellow members of the group on subjects as diverse as Holistic Management to collecting local seed and bushfire management. This included a presentation on Sustainable Housing conducted in October 2005.
- Have been working on a project called "Wollombi Walkways" which is aimed at establishing a walkway from Negro Street down to Wollombi Brook.
- Been actively involved with the Salvinia removal along Wollombi Brook, with field days held during 2005-06.

### **HUNTER-CENTRAL RIVERS CATCHMENT MANAGEMENT AUTHORITY ACTIVITIES**

No information was not available on HCRCMA activities at time of publication.

### **Wallis and Fishery Creeks Total Catchment Management (TCM) Strategy**

Council staff continue to participate in the Wallis Fishery and Four Mile Creek Catchment Management Forum which is implementing this strategy. No further information from the CMA was available at the time of printing.

### **HCCREMS - ROADSIDE ENVIRONMENTAL MANAGEMENT**

In collaboration with its member councils, the Roadside Environment Committee and Hunter Central Rivers Catchment Management Authority, HCCREMS is developing a Regional Roadside Environmental Management Strategy. The objectives of the project are to:

- Map the region's roads and categorise them in relation to tenure, management responsibility, type and status (sealed, unsealed).
- Audit, collect, record and map all existing information to assist in the identification of roadside environment values (e.g. biodiversity, heritage, cultural values).
- Survey, assess and map high quality/priority areas for biodiversity conservation and improved management. Special areas of interest include highly erodible soils (HES) and gravel roads near drainage lines.
- Design and develop management guidelines for each conservation category.
- Design and develop training programs for outdoor staff and managers responsible for roadside maintenance. These programs will include key result areas for staff as part of their regular training updates.
- Design and develop a regional monitoring and reporting program centrally managed and annually reported on by Hunter Councils.

Roadside environments have a range of ecological, economic, social and heritage values. Roadsides make up about 5% of the total land in NSW, which, when combined with travelling stock routes and reserves, is almost equivalent to the total area of National Parks in New South Wales (7%). Roadsides are defined as "that area adjacent to the road and extending to a maximum distance of 20m from the edge of the road surface but specifically excluding areas of private landholders within this proximity".

## **HCCREMS – REGIONAL VEGETATION MAPPING PROJECT**

Three new reports have been completed on behalf of the Hunter-Central Rivers Catchment Management Authority (CMA). These studies include:

- The Satellite Image (SPOT5) Pilot Study, which tests the utility of SPOT5 satellite data for vegetation mapping in the region.
- Regionally Significant Vegetation (RSV) in the Central Coast, including the identification of vegetation that meet a range of conservation criteria and a sub-regional scale vegetation classification that identifies 58 vegetation communities within Gosford, Wyong and Lake Macquarie local government areas.
- Vegetation Survey and Mapping within the Hunter, Central and Lower North Coast Region of NSW. This work included detailed surveys at 314 sites that represent poorly sampled environments, rapid surveys at 922 sites distributed broadly throughout the region, and maps of extant vegetation and broad vegetation descriptions for 3.9 million hectares.

Project outputs include:

- Vegetation community mapping for the Central Coast (pre-clearing and extant coverages).
- GIS layers for regionally significant vegetation in the Central Coast.
- Mosaic of satellite imagery for the Hunter Central Rivers Catchment Area.
- Vegetation cover mapping for the Hunter and Central Coast Vegetation formation mapping for the Hunter and Central Coast. This calculates that 76% of the Cessnock LGA is vegetated.
- Systematic vegetation survey data for 314 sites located within priority areas of the Hunter and Central Coast region.
- Rapid vegetation survey data for 922 sites in the Hunter and Central Coast region.
- Digital photo library comprising over 2,000 individual photos taken at each survey site (both rapid and systematic surveys).
- Project reports for the Satellite Imagery Pilot Study, Vegetation of Regional Significance on the NSW Central Coast, and Vegetation Survey and Mapping of the Hunter Central Rivers Catchment.

These information products form the baseline data needed to progress to the next stage of vegetation mapping in the HCRCMA area, namely catchment-wide vegetation community surveys and mapping.

# HERITAGE

## AT A GLANCE

Aboriginal Heritage			Data Gaps:
State	Unknown	645 sites are recorded on the <a href="#">NPWS Aboriginal Sites register</a> with 1 licence to conduct works on a site issued. The location of sites within the LGA is generally unknown.	
Pressure	Increasing	Many identified areas are on land not in Aboriginal control and may be subject to disturbance through various activities including agriculture, forestry, mining and urban development.	
Response	Limited	NPWS are the lead agency for protection of aboriginal artefacts.	
Non-Aboriginal Heritage			
State	Stable	Over 600 recognised sites, 4 items of State Environmental Heritage, 41 items of Regional Environmental Heritage and 24 items of Local Environmental Heritage.	
Pressure	Increasing	Increased development activity places increased pressure on both identified and unidentified sites.	
Response	Increasing	<a href="#">Convict Trail Project</a> and local heritage groups actively working on <a href="#">restoration</a> , education and protection of some sites.	

## **RESPONSES TO ABORIGINAL HERITAGE ISSUES**

As at August 2006, 645 sites (an increase of 42 sites from September 2005) were recorded on the National Parks and Wildlife Service's Aboriginal Sites Register for the Cessnock LGA. More than half these sites are shelter sites that contain art and/or archaeological deposits.

During 2005-06, one licence was issued for works on an aboriginal heritage site in the Cessnock LGA. (Note: this impact may be either positive (e.g. conservation works) or negative (e.g. damage to site) and is not specified in the information received).

## **RESPONSES TO NON-ABORIGINAL HERITAGE ISSUES**

### **CULTURAL COMMUNITY DEVELOPMENT DOLLAR FOR DOLLAR GRANTS PROGRAM**

Each year Council provides funding for the Cultural Community Development Projects Dollar for Dollar Grant Program. Projects funded through the scheme during 2005-06 include:

- Abermain Heritage Preservation Society – construction of pergola and permanent photographic display adjacent to Sawyers Gully Memorial Gates.
- Cessnock District Historical and Family History Society Inc. – signs for a new wall display at the Wollombi Endeavour Museum about the Convict Trail.
- Coalfield Heritage Group and Edgeworth David Museum, Library and Archives – to continue research work to upgrade the local history library and archives in the David Edgeworth Museum.
- Weston Heritage and Tidy Towns – complete stone masonry work for Chinese water wheel in Peace Park.

### **THE CONVICT TRAIL PROJECT**

In 2005-06 the Convict Trail Project produced the first three of a series of eleven area specific brochures to enhance the tourist experience when driving on sections of the Great North Road. The first of these brochures was launched by John Clarence the Mayor of Cessnock on 3 April 2006 at Murray's Run Wollombi Valley. This brochure is designed to enhance the experience of tourists when driving to the Hunter vineyards via Tourist Route 33 which leaves the expressway at Calga and travels via Peat's Ridge, Mangrove Mountain and Bucketty to the Wollombi Valley onto Wollombi where tourists make a choice to travel to Pokolbin via Cessnock or Broke either way passing some boutique vineyards with cellars. The brochures were designed by Newcastle University Visual Communications Honours students.

Other Convict Trail Project work in the Cessnock LGA during 2005-06 included the publication of "The Pick Vol 3", including a number of articles based on original research pertinent to the area such as articles about:

- Alice Betteridge of Sawyers Gully - after whom a special School for Multi-handicapped Blind Children is named.
- Keevers - the builder of Cuneens bridge.
- Cuneen of Wollombi.
- John McDougall of Wollombi.
- Thomas Budd.
- Andrew Murray of Murray's Run.
- The Blaxlands and Wollombi.
- Life at Sawyers Gully.
- William Grey of Murray's Run.
- Maintenance of the telephone line.
- The large footed Myotis - a bat that lives under Millfield Bridge.

This journal is supplied free of charge to Cessnock Library and Cessnock Historical and Family History society.

### **SAWYERS GULLY WORLD WAR 1 MEMORIAL GATES**

The restoration of the memorial gates at Sawyers Gully was unveiled at an event attracting a large crowd in February 2006. The restoration was a joint project of the Kurri Kurri RSL, the Abermain Heritage Preservation Society and the landowners.

### **HEADSTONES CONSERVATION**

Council has received \$5,000 from the State Government to undertake heritage conservation work on 100 headstones in Cessnock, Greta, Wollombi and Branxton cemeteries.

### **ABERMAIN HERITAGE WALK**

Abermain Heritage Preservation Society conducted a guided tour for Heritage Month on 9<sup>th</sup> April 2006. The tour included the Abermain Heritage Walk, heritage photographic presentation and displays at the School of Arts.

## REFERENCES

- Advitech, 1996, *Cessnock City Council State of the Environment Report - 1996*, Advitech, Tighes Hill.
- Australian Bureau of Statistics, 2001, *2001 Census*, Australian Bureau of Statistics.
- Australian and New Zealand Environment and Conservation Council, 1992, *Australian Water Quality Guidelines for Fresh and Marine Waters*, ANZECC.
- Bureau of Meteorology, 2005-06, - *Rainfall, Temperature and Wind Statistics*.
- Cessnock City Council, 1994, *Community Profile*, Cessnock City Council.
- Cessnock City Council, 2004, *Cessnock City Council State of the Environment Report 2003-04*, Cessnock City Council.
- Cessnock City Council, 2005, *Cessnock City Council State of the Environment Report 2004-05*, Cessnock City Council.
- Doyle, D., 2005, *Vegetation Health Survey of Hydro Aluminium Kurri Kurri Ltd Smelter Buffer Zone*, Indooroopilly, Qld
- Hydro Primary Metal Kurri Kurri, 2006a, *Quarterly Environment Report Quarter 1 – 2006 Kurri Kurri Smelter*, Hydro Primary Metal Kurri Kurri.
- Hydro Primary Metal Kurri Kurri, 2005a, *Quarterly Environment Report Quarter 3 – 2005 Kurri Kurri Smelter*, Hydro Primary Metal Kurri Kurri.
- Hydro Primary Metal Kurri Kurri, 2005b, *Quarterly Environment Report Quarter 4 – 2005 Kurri Kurri Smelter*, Hydro Primary Metal Kurri Kurri.
- Hydro Primary Metal Kurri Kurri, 2005c, *2005 Annual Environment Report for Kurri Kurri Smelter*, Hydro Primary Metal Kurri Kurri.
- McNaughton, K., 2005, *2005 External Noise Monitoring Survey*, Hydro Primary Metal Kurri Kurri.
- National Health and Medical Research Council and the Australian Water Resources Commission, 1987, *Guidelines for Drinking Water Quality in Australia – 1987*, Australian Government Publishing Service.

## APPENDIX 1 - ENVIRONMENTAL WEBSITES

ABARE Homepage	<a href="http://www.abare.gov.au/">http://www.abare.gov.au/</a>
Australian Association for Environment Education	<a href="http://www.aeee.org.au">www.aeee.org.au</a>
Australian Network for Plant Conservation	<a href="http://www.anbg.gov.au/anpc/">http://www.anbg.gov.au/anpc/</a>
Australian Greenhouse Office	<a href="http://www.greenhouse.gov.au">http://www.greenhouse.gov.au</a>
Australian Law Databases	<a href="http://www.austlii.edu.au">http://www.austlii.edu.au</a>
Aust. Nat. Botanic Gardens/Centre for Plant Biodiversity	<a href="http://www.anbg.gov.au">http://www.anbg.gov.au</a>
Australian Water Association Homepage	<a href="http://www.awa.asn.au">http://www.awa.asn.au</a>
Biodiversity/ Endangered Species Programs	<a href="http://www.deh.gov.au/biodiversity/index.html">http://www.deh.gov.au/biodiversity/index.html</a>
Birds Australia	<a href="http://www.birdsaustralia.com.au">http://www.birdsaustralia.com.au</a>
Bureau of Meteorology	<a href="http://www.bom.gov.au">http://www.bom.gov.au</a>
Clean Up Australia	<a href="http://www.cleanup.com.au/">http://www.cleanup.com.au/</a>
Community Access to Natural Resources Information	<a href="http://www.canri.nsw.gov.au">http://www.canri.nsw.gov.au</a>
Convict Trail Project-Great North Road	<a href="http://www.convicttrail.org">http://www.convicttrail.org</a>
CSIRO Australia	<a href="http://www.csiro.au/">http://www.csiro.au/</a>
Department of Planning	<a href="http://www.planning.nsw.gov.au">http://www.planning.nsw.gov.au</a>
Dept. of Energy, Utilities and Sustainability	<a href="http://www.deus.nsw.gov.au">www.deus.nsw.gov.au</a>
Dept. of Agriculture, Fisheries and Forestry Australia	<a href="http://www.affa.gov.au">http://www.affa.gov.au</a>
Dept. of Transport	<a href="http://www.transport.nsw.gov.au">http://www.transport.nsw.gov.au</a>
Energy Ratings Website	<a href="http://www.energyrating.gov.au">http://www.energyrating.gov.au</a>
Environment Australia Online	<a href="http://www.environment.gov.au">http://www.environment.gov.au</a>
Environmental Defenders Office	<a href="http://www.edo.org.au">http://www.edo.org.au</a>
Environmental Initiatives - DEC	<a href="http://www.epa.nsw.gov.au">http://www.epa.nsw.gov.au</a>
Fisheries R and D Corporation-Homepage	<a href="http://www.frdc.com.au">http://www.frdc.com.au</a>
Flora Bank	<a href="http://www.florabank.org.au">http://www.florabank.org.au</a>
Greenhouse Challenge	<a href="http://www.greenhouse.gov.au/challenge">http://www.greenhouse.gov.au/challenge</a>
Greening Australia	<a href="http://www.greeningaustralia.org.au/">http://www.greeningaustralia.org.au/</a>
Greenpeace	<a href="http://www.greenpeace.org.au">http://www.greenpeace.org.au</a>
Hunter/Central Coast Catchment Mgt Auth.	<a href="http://www.hcr.cma.nsw.gov.au">http://www.hcr.cma.nsw.gov.au</a>
Hunter Resource Recovery	<a href="http://www.hrr.com.au">http://www.hrr.com.au</a>
Hunter Water	<a href="http://www.hunterwater.com.au">http://www.hunterwater.com.au</a>
Keep Australia Beautiful	<a href="http://www.keeppaustraliabeautiful.org.au">http://www.keeppaustraliabeautiful.org.au</a>
Land and Water Australia	<a href="http://www.lwrrdc.gov.au">http://www.lwrrdc.gov.au</a>
HCCREMS	<a href="http://www.hccrems.nsw.gov.au">http://www.hccrems.nsw.gov.au</a>
Environment Protection and Heritage Council	<a href="http://www.ephc.gov.au">http://www.ephc.gov.au</a>
National Geographic	<a href="http://www.nationalgeographic.com">http://www.nationalgeographic.com</a>
National Landcare Program Homepage	<a href="http://www.landcare.gov.au">http://www.landcare.gov.au</a>
National Native Title Tribunal	<a href="http://www.nntt.gov.au">http://www.nntt.gov.au</a>

NSW National Parks and Wildlife Service	<a href="http://www.npws.nsw.gov.au">http://www.npws.nsw.gov.au</a>
Natural Heritage Trust	<a href="http://www.nht.gov.au">http://www.nht.gov.au</a>
Nature Conservation Council NSW	<a href="http://www.nccnsw.org.au/">http://www.nccnsw.org.au/</a>
NSW Agriculture	<a href="http://www.dpi.nsw.gov.au/agriculture">http://www.dpi.nsw.gov.au/agriculture</a>
NSW Department of Local Government	<a href="http://www.dlg.nsw.gov.au">http://www.dlg.nsw.gov.au</a>
NSW State Forests	<a href="http://www.forest.nsw.gov.au">http://www.forest.nsw.gov.au</a>
NSW State Parliament	<a href="http://www.parliament.nsw.gov.au">http://www.parliament.nsw.gov.au</a>
NSW Wildlife Atlas	<a href="http://www.wildlifeatlas.npws.nsw.gov.au">http://www.wildlifeatlas.npws.nsw.gov.au</a>
Planet Ark	<a href="http://www.planetark.com">www.planetark.com</a>
Regional Forest Agreements	<a href="http://www.rfa.gov.au">http://www.rfa.gov.au</a>
Rivers – Land and Water Australia	<a href="http://www.rivers.gov.au">http://www.rivers.gov.au</a>
Sustainable Building Guide	<a href="http://www.yourhome.gov.au">http://www.yourhome.gov.au</a>
Waterwatch	<a href="http://www.waterwatch.nsw.gov.au/">http://www.waterwatch.nsw.gov.au/</a>
Total Environment Centre Index	<a href="http://tec.org.au">http://tec.org.au</a>
World Wide Fund for Nature	<a href="http://www.panda.org">http://www.panda.org</a>

## APPENDIX 2 - WATER QUALITY GUIDELINES

	Potable Water Supply	Maintenance of Aquatic Ecosystems	Agricultural Purposes – Irrigation and Stock Watering
pH	6.5 – 8.5	6.5 – 9	4.5 – 9
Turbidity (NTU)	<5	>50	>100
Electrical Conductivity (uS/cm at 25°C)	<280	<1500	280 – 800 (up to 5500 for salt tolerant crops)
Total Dissolved Solids (mg/L)	*	0 – 175	175 – 500
Orthophosphate (mg/L)	<0.05	<0.05	<0.05
Nitrate Nitrogen (mg/L)	<10	<10	<10
Chlorophyll-a (g/L)	<5	<20	*
Faecal Coliforms (count/100mL)	<10	*	1000

\* No Guideline Available  
Adapted From ANZECC (1992), NHMRC (1987)

## APPENDIX 3 – THREATENED SPECIES LISTINGS FOR CESSNOCK LGA

Flora listed under Schedule 1 and Schedule 2 *Threatened Species Conservation Act 1995* as at 1 July 2006 occurring or predicted to occur in Cessnock LGA

Scientific Name	Common Name	Classification TSC	Classification EPBC
<i>Acacia bynoeana</i>	Bynoe's Wattle	E1	V
<i>Persoonia hirsuta</i> subsp. nov.? Yengo National Park	Hairy Geebung	E1	E
<i>Persoonia pauciflora</i>	North Rothbury Persoonia	E1	CE
<i>Zannichellia palustris</i>	Aquatic plant – Black Ck	E1	-
<i>Callistemon linearifolius</i>	Nettled Bottlebrush	V	-
<i>Eucalyptus glauca</i>	Slatey Red Gum	V	V
<i>Eucalyptus parramattensis</i> subsp. <i>decadens</i>		V	V
<i>Eucalyptus pumila</i>	Pokolbin mallee	V	V
<i>Grevillea parviflora</i> subsp. <i>parviflora</i>	Small-flowered Grevillia	V	V
<i>Melaleuca groveana</i>	Grove's Paperbark	V	-
<i>Olearia cordata</i>		V	V
<i>Persicaria elatior</i>	Tall Knotweed	V	V
<i>Prostanthera cineolifera</i>	Singleton Mint Bush	V	V
<i>Rutidosis heterogama</i>	Heath winklewort	V	V
<i>Tetradlea juncea</i>	Black-eyed Susan	V	V
<i>Velleia perfoliata</i>		V	V

Flora listed as a “protected native plant” under Schedule 13 of the *National Parks and Wildlife Act, 1974*.

Scientific Name	Common Name	Classification
<i>Actinotus helianthi</i>	Flannel Flower	P13
<i>Adiantum aethiopicum</i>	Common Maidenhair	P13
<i>Adiantum formosum</i>	Giata Maidenhair	P13
<i>Adiantum hispidulum</i>	Rough Maidenhair	P13
<i>Boronia ledifolia</i>	Sydney Boronia	P13
<i>Bulbophyllum exiguum</i>		P13
<i>Bulbophyllum shephardii</i>	Wheat-leaved Orchid	P13
<i>Caustis flexuosa</i>	Curly Wig	P13
<i>Ceratopetalum gummiferum</i>	Christmas Bush	P13
<i>Cymbidium suave</i>	Snake Orchid	P13
<i>Dipodium punctatum</i>		P13
<i>Livistona australis</i>	Cabbage Palm	P13
<i>Lomatia silaifolia</i>	Crinkle Bush	P13
<i>Philotheca hispidula</i>	waxflower	P13
<i>Platyterium bifurcatum</i>	Elkhorn	P13
<i>Plectorrhiza tridentata</i>	Tangle Orchid	P13
<i>Xylomelum pyriforme</i>	Woody Pear	P13

Fauna listed under Schedule 1 and Schedule 2 *Threatened Species Conservation Act 1995* as at 1 July 2006 occurring or predicted to occur in Cessnock LGA

Scientific Name	Common Name	Classification TSC	Classification EPBC
<b>Amphibians</b>			
<i>Crinia tinnula</i>	Wallum Froglet	V	-
<i>Heleioporus australiacus</i>	Giant Burrowing Frog	V	V
<i>Litoria aurea</i>	Green and Golden Bell Frog	E1	V
<i>Litoria brevipalmota</i>	Green-thighed Frog	V	-
<i>Litoria littlejohni</i>	Littlejohns Tree Frog	V	V
<i>Mixophyes balbus</i>	Stuttering Barred Frog	E1	-
<i>Mixophyes iterates</i>	Giant Barred Frog	E1	E
<i>Pseudophryne australis</i>	Red-crowned Toadlet	V	-
<b>Reptiles</b>			
<i>Varanus rosenbergi</i>	Rosenberg's Goanna	V	-
<i>Hoplocephalus bitorquatus</i>	Pale-headed Snake	V	-
<i>Hoplocephalus stephensii</i>	Stephen's Banded Snake	V	-
<b>Birds</b>			
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	V	-
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	V	E
<i>Climacteris picumnus</i>	Brown Treecreeper	V	-
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E1	-
<i>Erythrotriorchis radiatus</i>	Red Goshawk	E1	V
<i>Grantiella picta</i>	Painted Honeyeater	V	-
<i>Haematopus longirostris</i>	Pied Oystercatcher	V	-
<i>Hamirostra melanosternon</i>	Black-breasted Buzzard	V	-
<i>Irediparra gallinacea</i>	Comb-crested Jacana	V	-
<i>Lathamus discolor</i>	Swift Parrot	E1	E
<i>Melanodryas cucullata</i>	Hooded Robin	V	-
<i>Melithreptus gularis gularis</i>	Black-chinned Honeyeater (eastern subsp.)	V	-
<i>Neophema pulchella</i>	Turquoise Parrot	V	-
<i>Ninox connivens</i>	Barking Owl	V	-
<i>Ninox strenua</i>	Powerful Owl	V	-
<i>Pachycephala olivacea</i>	Olive Whistler	V	-
<i>Pomatostomus temporalis temporalis</i>	Grey-crowned Babbler (eastern subsp.)	V	-
<i>Ptilinopus magnificus</i>	Wompoo Fruit-Dove	V	-
<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V	-
<i>Pyrrholaemus sagittatus</i>	Speckled Warbler	V	-
<i>Stagonopleura guttata</i>	Diamond Firetail	V	-
<i>Stictonetta naevosa</i>	Freckled Duck	V	-
<i>Tyto novaehollandiae</i>	Masked Owl	V	-
<i>Tyto tenebricosa</i>	Sooty Owl	V	-
<i>Xanthomyza phrygia</i>	Regent Honeyeater	E1	E
<b>Mammals</b>			
<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	V	V
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	-
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipistrelle	V	-
<i>Kerivoula papuensis</i>	Golden-tipped Bat	V	-
<i>Macropus parma</i>	Parma Wallaby	V	-
<i>Miniopterus australis</i>	Little Bentwing Bat	V	-
<i>Miniopterus schreibesii oceanensis</i>	Eastern Bentwing Bat	V	-
<i>Mormopterus norfolkensis</i>	Eastern Freetail Bat	V	-
<i>Myotis adversus</i>	Large-footed Myotis	V	-
<i>Nyctophilus timoriensis</i>	Greater Long-eared Bat (south eastern form)	V	V
<i>Petaurus australis</i>	Yellow-bellied Glider	V	V
<i>Petaurus norfolcensis</i>	Squirrel Glider	V	-
<i>Petrogale penicillata</i>	Brush-tailed Rock-wallaby	E1	V
<i>Phascogale cinereus</i>	Koala	V	-
<i>Planigale maculata</i>	Common Planigale	V	-
<i>Potorous tridactylus</i>	Long-nosed Potoroo	V	V
<i>Pteropus palioccephalus</i>	Grey-headed Flying-fox	V	V
<i>Saccolainus flaviventris</i>	Yellow-bellied Sheath-tail Bat	V	-
<i>Scoteanoax ruepellii</i>	Greater Broad-nosed Bat	V	-
<i>Thylogale stigmatica</i>	Red-legged Pademelon	V	-
<b>Other</b>			
<i>Petalura gigantea</i>	Giant Dragonfly	E1	-

## APPENDIX 4 – NOXIOUS WEED DECLARATIONS FOR CESSNOCK LGA

Class	Legal Requirements	All NSW Declaration	Cessnock LGA Declaration
1	<p><b>State prohibited weeds</b> The plant must be eradicated from the land and the land must be kept free of the plant.</p>	<p>Anchored water hyacinth Black knapweed Chinese violet East Indian hygrophila Eurasian water milfoil Hawkweed Horsetail Hymenachne Karoo thorn Kochia] Lagarosiphon Mexican feather grass Miconia Mimosa Parthenium weed Pond apple Prickly acacia Rubbervine Senegal tea plant Siam weed Spotted knapweed Water caltrop Water lettuce Water soldier Witchweed Yellow burrhead</p>	
2	<p><b>Regionally prohibited weeds</b> The plant must be eradicated from the land and the land must be kept free of the plant.</p>		Hygrophila
3	<p><b>Regionally controlled weeds</b> The plant must be fully and continuously suppressed and destroyed.</p>		<p>Alligator weed Columbus grass Giant Parramatta grass Green cestrum Mother-of-millions Salvinia]</p>
4	<p><b>Locally controlled weeds</b> The growth and spread of the plant must be controlled according to the measures in a management plan published by the local control authority.</p>	<p>Blackberry Harrisia cactus Lantana Prickly pear Prickly pear Rhus</p>	<p>African boxthorn Bathurst/Noogoora/Californian/ cockle burrs Cape tulip Chilean needle grass Crofton weed Johnson grass Long-leaf willow primrose Pampas grass Paterson's curse, Vipers bugloss, Italian bugloss Serrated tussock Spiny burrgrass Spiny emex St. John's wort Water hyacinth</p>

Class	Legal Requirements	All NSW Declaration	Cessnock LGA Declaration
5	<p><b>Restricted plants for sale or distribution</b>  The requirements of the Noxious Weeds Act 1993 for a notifiable weed must be complied with.</p>	African feathergrass African turnipweed Annual ragweed Arrowhead Artichoke thistle Athel tree Bridal creeper Burr ragweed Cabomba Cayenne snakeweed Clockweed Corn sowthistle Dodder Espartillo Fountain grass Gallon's curse Glaucous starthistle Golden thistle Lantana Long-leaf willow primrose Mexican poppy Mossman River grass Onion grass Oxalis Red rice Sagittaria Sand oat Smooth-stemmed turnip Soldier thistle Texas blueweed Willows Yellow nutgrass	

# NOW IT'S YOUR TURN

State of the Environment reports are produced for the local community and your views are important to Council. We hope you will take the time to complete this response sheet so that we can incorporate your ideas and opinions into subsequent reports. Your response will be greatly appreciated, and will assist Council in planning future environmental management activities.

1. Are you aware of any important environmental issues affecting the Cessnock area which have been omitted from this report?

---

2. Are the main issues given adequate coverage in the report? In which areas is information lacking? Please give details.

Human Settlements 

---

Land 

---

Atmosphere (Air) 

---

Water 

---

Biodiversity 

---

Heritage 

---

3. Did you find the structure and presentation of the report user-friendly, that is, easy to read and understand?

YES / NO

If not, have you any suggestions for improving this aspect of future State of the Environmental reports?

---

4. Are you aware of any environmental information in the form of documents, reports, plans, or programs which should be included in Cessnock's Environmental Database? Please give full details.

---

5. Do you have any other suggestions for improving the report?

---

6. In the interests of Community consultation, what are your top 3 environmental concerns in Cessnock LGA?

---

---

---

<p>Please Return to:</p> <p style="text-align: center;">Cessnock City Council, Strategic and Community Services Department, P.O. Box 152, CESSNOCK. NSW. 2325</p>
---