

CESSNOCK CITY COUNCIL

Supplementary State of the Environment Report 2004 -2005



ANNEXURE 1

Cessnock City Annual Report

Acknowledgments

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ABBREVIATIONS

ANZECC	Australian and New Zealand Environment and Conservation Council
CCC	Cessnock City Council
CCRS	Cessnock Community Renewal Strategy
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCP/DCPs	Development Control Plan
DEC	Department of Environment and Conservation NSW
DIPNR	Department of Infrastructure, Planning and Natural Resources
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
HRR	Hunter Resource Recovery
HWC	Hunter Water Corporation
kWh	Kilowatt hours
L	Litre
LEP/LEPs	Local Environmental Plan
LGA	Local Government Area
HCCREMS	Hunter and Central Coast Regional Environmental Management Strategy
m	Metre
ML	MegaLitres
NO ₃	Nitrate Nitrogen
NPWS	National Parks and Wildlife Service
NSW	New South Wales
NSW FB	New South Wales Fire Brigade
NTU	Nephelometric Turbidity Units
OP	Orthophosphate
RFS	Rural Fire Service
RTA	Roads and Traffic Authority
SEDA	Sustainable Energy Development Authority
SF	State Forests
SoE	State of the Environment Report
TCM	Total Catchment Management
WSUD	Water Sensitive Urban Design
WWTP/WWTW	Wastewater Treatment Plant/Wastewater Treatment Works

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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 2004 to 30th June 2005 and is a supplementary report to provide additional information to support the comprehensive report completed for the year 2003-04. 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 report as not all background information and programs are included in this report (i.e. only those that have occurred during 2004-05 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. 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 identify 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. 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 2004, the estimated residential population of the Cessnock LGA was 47,143. 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 2004-05 are shown in Figures 1 and 2. The maximum temperature recorded for the year at Cessnock was 43.4°C on 14th January 2005 and the minimum temperature was -0.4°C on 2nd August 2004. As an example of the current water crisis it is interesting to note that evaporation rates exceeded rainfall for every month except June 2005.

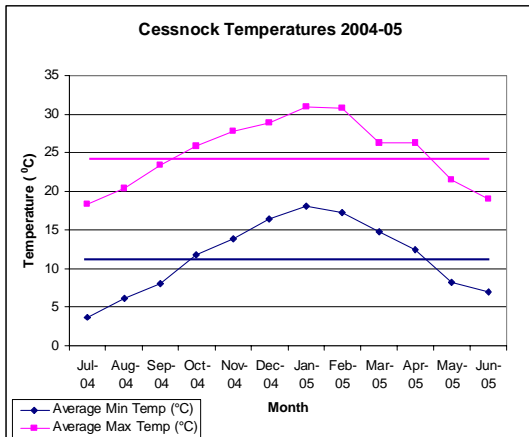


Figure 1: 2004-05 Cessnock Temperatures

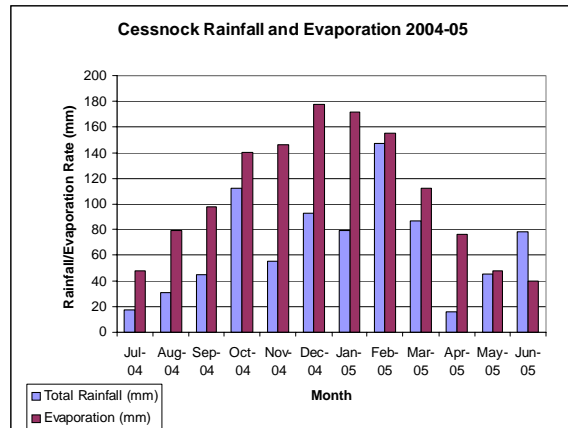


Figure 2: 2004-05 Cessnock rainfall and Evaporation

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.

These objectives and measures are consistent with the following principles of ESD under the definition of the Local Government Act, 1993:

- **The Precautionary Principle** - that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation;
- **Intergenerational Equity** - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;
- **Conservation of biological diversity and ecological integrity** - that conservation of biological diversity and ecological integrity should be a fundamental consideration; and
- **Improved valuation, pricing and incentive mechanisms** - that environmental factors should be included in the valuation of assets and services.

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 integration of the State of the Environment Report into a Sustainability Report and 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.

RESPONSES TO COMMUNITY ISSUES

SOCIAL AND COMMUNITY PLAN

Council adopted the Cessnock Social and Community Plan November 2004 – November 2009 on 16th March 2005.

Community Facilities

Each year Council allocates funds towards related capital works and planned maintenance. In 2004-05 the following works to community facilities were undertaken:

- Kurri Kurri Community Centre – undertake stage 1 of upgrading main auditorium and roof.
- Marthaville Cultural Centre – roof replacement.
- North End Hall, Cessnock - roof replacement.
- Branxton Community Hall – upgrades to weatherboards, doors and piers.
- Kurri Kurri Ambulance Hall – upgrade windows and sub-floors.
- Bellbird Community Hall – Installation of awnings and repairs to amenities and verandah.
- Ellalong Community Hall – Installation of ramp and awnings, repairs to gutters and ceiling.
- Kurri Kurri Senior Citizens Hall – path installation and lock changes.
- Wollombi Community Hall – repairs to guttering and downpipes.

In addition to the above works, Council also provides additional funding through their Community Dollar for Dollar Grants program. In 2004-05 the following projects were funded through this program:

- Laguna Community Hall – purchase of whitegoods, water tank and replacement of front steps.
- Bellbird Community Hall – purchase and installation of air-conditioning.
- Ellalong Community Hall/Lower Hunter Activity Van - purchase and installation of air-conditioning.
- Wollombi Community Hall – purchase of chairs and urn.
- Pokolbin Community Hall/Playgroup – purchase of first aid kit.
- Branxton Community Hall – purchase PA system.
- Weston Civic Centre – purchase ceramic fan heaters.
- North End Hall – construction concrete driveway to side door and purchase of vacuum cleaner.
- Abermain Plaza Hall - purchase and installation of air-conditioning, replacement of worn carpet and construction of benches.
- Kurri Kurri Playgroup Hall - purchase and installation of air-conditioning.
- Kurri Kurri Community Centre – completion of first aid room and installation of ceiling fans.

Child Care Centres

The construction of extensions to Kurri Kurri Early Childhood Centre has been completed.

Aged and Disabled Services

Home and Community Care (HACC) Services currently located in Council owned and maintained buildings include:-

- Greta Branxton Meals on Wheels
- Domestic Assistance Service
- Social Support Service
- Home Maintenance and Modification
- Coalfields Community Options
- Transport services
- Dementia Support Service

Access

Mobility Maps of the Kurri Kurri and Cessnock Central Business Districts were prepared in a project jointly funded by Council and Department of Ageing, Disability and Homecare. 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, pedestrian crossings etc.

Youth Services

In the past twelve months the Youth Centre had over 8,000 attendances by young people participating in its structured and drop-in services.

BADDELEY PARK SPORTSGROUND

The redevelopment of Baddeley Park incorporated the following environmental initiatives:

- **Water saving** - Rainwater tanks on each building are connected to the toilets for flushing (with backup from water mains); an 80,000L irrigation tank stores rainwater for field irrigation (topped up by water from mains); and on-site stormwater detention has been installed.
- **Energy Saving** - Security lighting on-site uses High Pressure Sodium lamps which use less power than mercury vapour or metal halide lamps for equivalent lux coverage; internal sensor lighting has been installed so that lights are not left on in areas when they are no longer required.

In addition, during the construction phase the Contractor was required to work to an Environmental Management Plan for the site including sediment and erosion control; facilities and viewing mounds were situated to minimise clearing riparian vegetation on adjacent Creek; native tree plantings were included in the final landscaping plan; topsoil was reused on site; and, an adjacent spoil stockpile was used for fill.

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 2004-05 include:

- Stormwater runoff improvement and safety buffer garden installation at Snake Gully, Abermain.
- Construction of 65m of path in Centenary Park and six heritage photo signs in Abermain/Neath.
- Finish the retaining wall in the garden at corner Cessnock Rd and New England Hwy, Branxton.
- Construction of a picnic shelter and an information shelter with noticeboards in Poppet Head Heritage Park, Kitchener.
- Purchase of a BBQ shelter in High St, Greta and repairs to bus shelter seating.
- Heritage signage for the Stanford Merthyr mining disaster, Kurri Kurri.
- Purchase and installation of picnic tables and benches along Wollombi Rd, Millfield.
- Purchase of gardening and construction equipment, Weston.
- Construction of path to, and decking for Wollombi Millpond observation deck.

In addition to the above Kurri Kurri Tidy Towns Team hosted a nature walk on Saturday 4th June to raise funds for the Westpac Rescue Helicopter Service. The walk started and finished in Rotary Park and took in the 5 covered noticeboards detailing the history of the area.

A number of Tidy Towns groups received awards/commendations at the 2004 KABC awards for outstanding community and environmental projects:

- Greta Workers Sports and Recreation Club – Highly Commended in Category C Club Partnership Award
- Abermain Neath: Creating a Frog and Water Bird Sanctuary at Snake Gully – Highly Commended in Category C Wildlife Corridors and Conservation Award.
- Kurri Kurri Workers Club - Highly Commended in Category D Club Partnership Award
- Cessnock – Category E Friendly Tidy Town Winner and overall Highly Commended

CESSNOCK COMMUNITY RENEWAL STRATEGY

Some recent developments and projects under Cessnock Community Renewal Scheme have been:

- The development and launch of the Cessnock Transport Guide.
- The implementation of a new bus route through East and West Cessnock, at a subsidised rate to provide affordable and accessible transport to the transport disadvantaged.
- The implementation of a taxi subsidy scheme, aimed at supporting people who are transport disadvantaged who do not receive Home and Community Care services.
- A consultation day with the community at East Cessnock.
- Completion of the Family Violence Project.
- Partnership with the Department of Housing to implement a Community Development Worker in the East Cessnock and Weston housing estates.

Cultural Programs Facilitator

A Cultural Programs Facilitator was appointed for twelve months to assist with the planning and development of community cultural programs for the LGA. The position contributed to:

- the planning and delivery of a Main Street event in Cessnock to celebrate the new streetscape in Vincent Street
- the planning and delivery of a community pride event in East Cessnock
- the development and submission of a NSW City of the Arts 2005 – 2007 application from Cessnock City Council (which required the development of concepts for a number of potential community arts projects for the LGA)
- the development of a number of links with other arts/cultural agencies and service providers in the LGA and in the Hunter Region, particularly Newcastle
- raising the profile of the arts and community cultural development within Council
- community consultation processes on arts/cultural issues
- the planning for the establishment of an LGA artists' database

Under the CCRS the following projects are planned for 2005-06:

Hebburn Colliery Rehabilitation

Rehabilitation, revegetation and linking of lands between Peace Park and Hebburn Dam at Weston via the installation of pathways and boardwalks. Additional to this will be installation of play equipment as well as new fencing.

Stanford Merthyr Colliery Rehabilitation

Rehabilitation and revegetation of the former colliery site at Stanford Merthyr. This includes the cleaning up and revegetation of a quarry that is currently used for illegal dumping. The entire 23 hectare site will be secured by fencing with the aim to reduce access to the site and thus a reduction in illegal dumping. These works will build on the establishment of the Kurri Kurri Heritage Walk undertaken by Council and the Kurri Kurri Tidy Town Committee.

Acid leaching removal trials

Trials of acid leaching removal from former colliery sites at Greta, Neath and Glen Ayr through the use of a lime dosing plant by Kurri Landcare have been undertaken. Biological monitoring of the sites has commenced to establish the effectiveness of the lime dosing plant. It is anticipated that results will be available mid 2006.

East Cessnock Rehabilitation

The rehabilitation and revegetation of (Crown and Council) public open spaces in East Cessnock has included the revegetation of a small section of Black Creek and beautification of the adjacent park in Alkira Avenue. Erosion control works along the creek have also taken place as part of this project.

Community and Industry information seminars

Targeted seminar series are planned to address identified local issues – salinity, water use, biodiversity and environmental management in the viticulture industry. A successful Indigenous awareness seminar was conducted in April and another is planned for early 2006.

Refit Program

Funding has been secured to undertake a energy and water efficiency program with 140 Department of Housing households in East Cessnock and Weston.

Tool Trailer

Establishment of a tool trailer for use by local natural resource groups and their partners (eg Green Corp, Landcare) A purpose built trailer has been purchased and fitted out with tools including rakes, shovels, post hole diggers, pruners and loppers, watering cans, buckets, gloves etc to assist groups undertaking on-ground environmental works.

RESPONSES TO POPULATION AND SETTLEMENT PATTERNS ISSUES

HUNTER ECONOMIC ZONE

Up until 30 June 2005, Stages 1(a), 1(b), and 1(c) of the HEZ spine road have been approved and constructed. There has been no development approvals issued for the site.

RESPONSES TO DRINKING WATER ISSUES

Domestic water consumption for the Cessnock LGA was 3,344,918kL averaging out to 211kL per household and 113kL per flat/unit. Industrial, Commercial and Agricultural uses consumed another 1,059,964kL. This data was supplied by HWC based on the water year which is 20 April 2004 to 19 April 2005.

Due to changes in the data received it is not possible to compare this data to previous years data.

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 2004-05, 341 refit kits were installed in homes in the Cessnock LGA equating to savings of approximately 10,230 kL of water (or more than 10 Olympic swimming pools of water).

RESPONSES TO TRANSPORT ISSUES

VEHICLE REGISTRATIONS

Private motor vehicles are the main form of transport in the Cessnock LGA. Figure 3 shows a breakdown of types of vehicles registered in the LGA as at 30th June 2005. Method of travel to work of Cessnock LGA residents is displayed in Figure 4. In the Cessnock LGA the dominant mode for travelling to work was driving cars. Only about 1% of people used public transport to get to their place of employment. This is due to many factors including lack of public transport and many residents working outside the LGA.

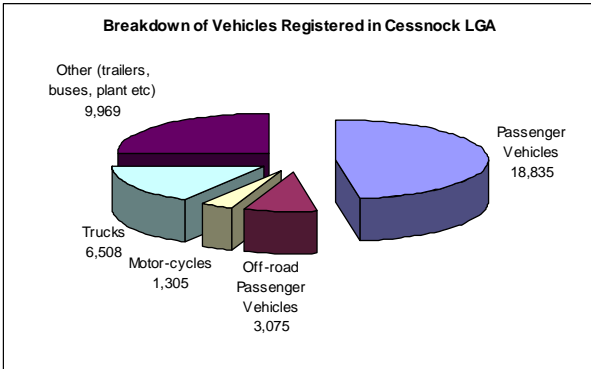


Figure3: Breakdown of types of vehicles registered in the Cessnock LGA.

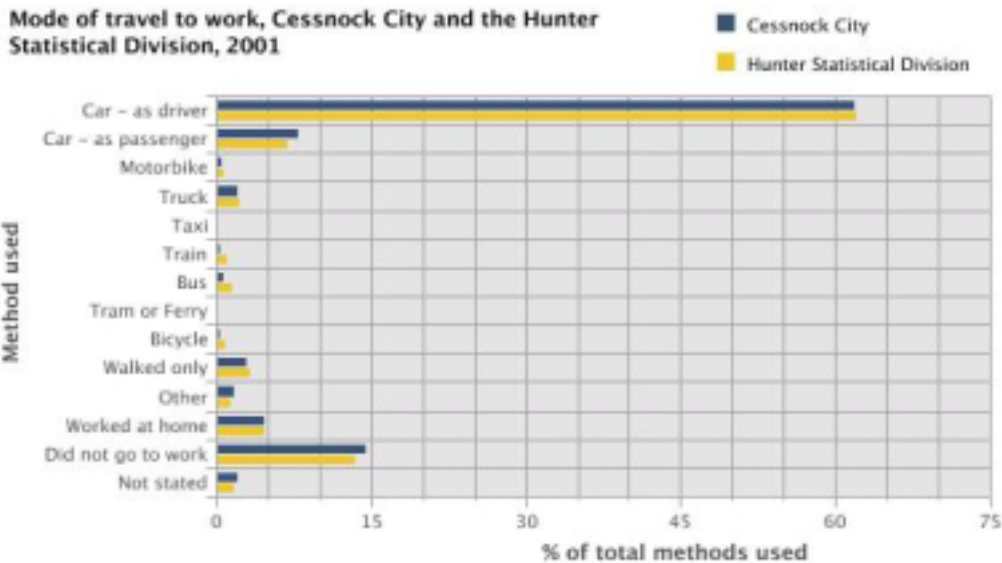


Figure 4: Mode of travel to Work for Cessnock residents

CYCLEWAYS

During 2004-05 no new cycleways were constructed in the Cessnock LGA. However, Council has adopted a 5-year program for the construction of cycleways throughout the LGA in partnership with the NSW RTA.

SUSTAINABLE TRANSPORT STRATEGY

Cessnock Council is implementing its Transport Mobility Plan with a Community Transport Development Project (CTDP) Worker. The goal of the Plan is "to establish a sustainable, integrated and affordable transport system for Cessnock". The Plan has 3 strategy areas:

- Flexible Transport Options – currently trialling a discount taxi scheme for 6 months for seniors and the disadvantaged from May till November.
- Employment related transport brokerage – to assist job seekers getting to employment interviews.
- Cessnock communities well informed of transport mobility options – which have produced a Cessnock Transport brochure in conjunction with the Samaritans. The brochure gives an overview of the options for transport in the LGA other than by motor vehicle and includes contact details for the separate organisations listed.

ROAD SAFETY PROGRAMS

The Road Safety Strategic Plan has identified key areas of concern in our area. The major concerns identified all relate to driver or road user behaviour i.e. Drink Driving, Speed, Fatigue, Non-use of Seatbelts and Young Driver issues. Drink Driving is still the area of most concern. Sadly, though Random Breath testing was introduced in NSW in 1982, 23 years later Cessnock is still regarded as one of the worst areas in the state for drink driving offences. The culture of driving while alcohol effected is ever present in our community.

Programs run during 2004-05 include:

Courtesy Speed Check

Council provides speed limit feedback to drivers via the use of the Courtesy Speed Check equipment. This facility is widely used throughout our areas mainly around problem streets and schools.

Guide to 0.05 and wine tasting

These pocket sized cards are still in high demand in our vineyard areas and inform patrons at Vineyard Cellar Doors of the differing alcohol contents of wines and the number of sample tests that are permitted to remain under the legal Blood Alcohol Concentration limit if driving.

Education with Police Random Breath Testing

6 nights per year, enforcement and education work together as drivers are given information and gift packs by council's Road Safety Officer as a reward for driving under the limit while in our community.

Youth on the Move

An educational course for young drivers that is highly regarded by the youth in the community who promote the coming courses to their peers. This program offers an educational approach to reducing risk taking behaviour whilst improving hazard perception.

Helping Learner Drivers Seminars

Four of these seminars were held during 2004-05 providing information to supervising drivers and parents of Learner Drivers in regard to safety among young and novice drivers. Parents are keen to discuss concerns in regard to 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 and clubs and Cellar Doors with the option to relocate when Special Public Events are held in the area. The Alcolisers are used as an educational tool to assist in providing patrons with an indication of their Blood Alcohol Level with more and more Licensees willing to participate in the program.

RESPONSES TO WASTE MANAGEMENT ISSUES

SOLID WASTE MANAGEMENT

Waste Disposal

During 2004-05 approximately 36,431.17 tonnes of waste was landfilled at the Cessnock Waste and Reuse Centre. Breakdowns of the waste stream deposited at the Cessnock Waste and Reuse Centre are shown in Figure 5.

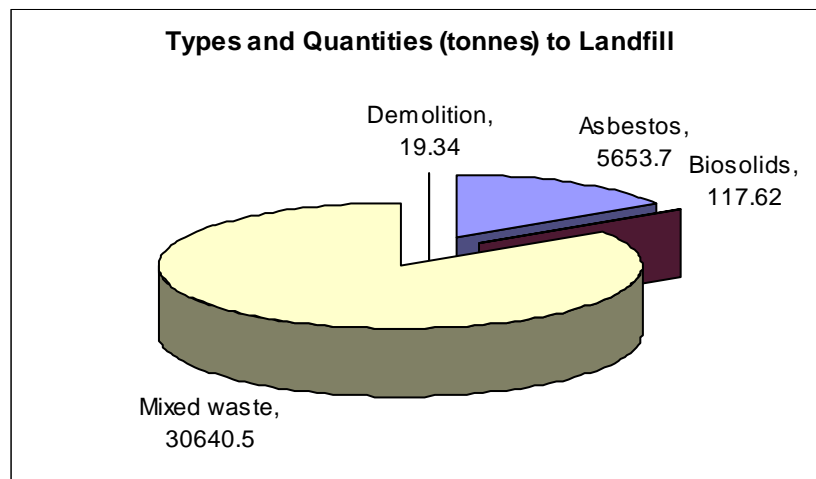


Figure 5: Breakdown of Waste to Landfill

Domestic waste expressed per person (2004 population estimate) is equivalent to 0.77 tonnes of waste produced between 2004-05. Note this does not include greenwaste, reprocessables or recyclables.

Waste Minimisation at the Cessnock Waste and Reuse Centre

During 2004-05 approximately 2,571m³ of paper and cardboard, 800 tonnes of metals, 2,868 tonnes of greenwaste, and 2,830 tonnes of concrete waste was reprocessed and diverted from landfill. In addition, approximately 12,200L of used motor vehicle oil was collected - 29.5% of this came from Council's Works Depot.

Kerbside Recycling

During 2004-05 an additional 250 households started to use the kerbside recycling service. Through the kerbside service 3,587 tonnes of recyclables (up 5% from 2003-04) were collected during 2004-05 from the Cessnock LGA. The breakdown of the types and amounts of recyclables collected from the Cessnock LGA are shown in Figure 6 (along with a comparison to 2003-04 collection amounts). The recycling of these materials equates saving enough electricity to power 3,040 homes, filling 26 olympic swimming pools with water and removing 484 cars worth of greenhouse gas emissions from the roads.

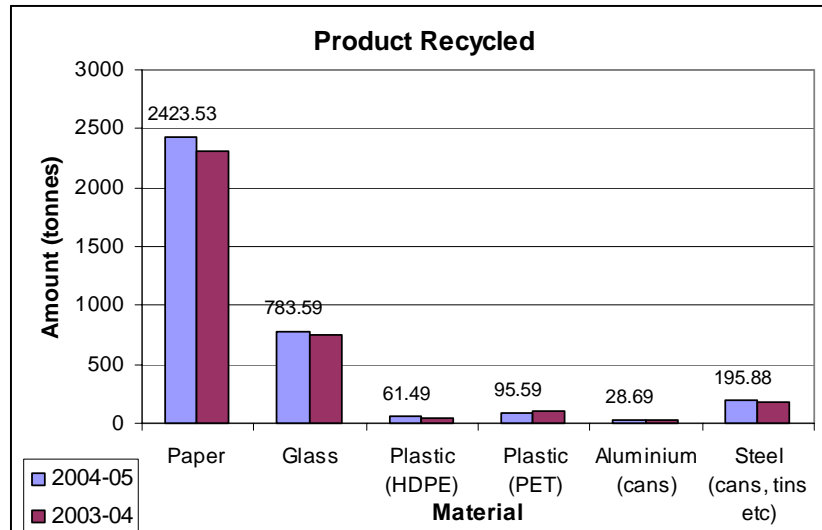


Figure 6: Cessnock LGA Recyclables Stream (amounts for 2004-05 displayed and compared to 2003-04 collection)

Hunter Resource Recovery Activities

Over the past 12 months, Hunter Resource Recovery (HRR) has carried out a number of programs and activities as listed below:

Biodiesel Fuel Usage - Solo Waste commenced using biodiesel fuel in its trucks collecting recycling from households. This fuel is a blend of petro-diesel and vegetable oil and is being produced in Rutherford.

Advertising Programs - A major advertising initiative was undertaken in February 2005 to coincide with the milestones of 150,000 tonnes of materials sold, 20 millionth collection and 50,000th truckload. In addition a community service announcement on plastics recycling and the improved range of recyclables was also developed and aired.

Clean Up Australia Day/Adopt-a-Road - HRR participated in Clean up Australia day collecting 1.2 tonnes of waste from roadsides Ellalong and contined their long association with the adopt-a-road program in this area.

Schools Recycling Program - The Schools Recycling Program continued in 2004-05. All schools have received a HRR Corporate video, Visy Recycling Video, invitation to participate in Visy Recycling Olympics; an Environmental Detective CD, and the HRR Resource Recoverers Pack.

Mobile Phone Recycling - Councils are acting as collection points for old mobile phones. Mobile phones contain many toxic elements that do not belong in landfill. All phones collected were sent to the Spastic Centre where they provided income of between \$3-5 per phone when recycled.

Website - For further information on Hunter Resource Recovery log onto www.hrr.com.au.

Illegal Rubbish Dumping

Council Rangers conducted "Operation Litter Bug" in October 2004 targeting offences such as uncovered loads, littering in public places, littering from motor vehicles and illegal dumping of rubbish and demolition waste in bushland. 29 fines were handed out during the program.

Clean Up Australia Day

This year community volunteers took part in Clean Up activities at 21 registered sites across the LGA. In addition, 21 schools across the LGA registered for participation in the school Friday Clean Up activities.

Several of the registered sites again made a concerted effort to rid their areas of rubbish and roadside litter removing an impressive 16.5 tonnes of rubbish. 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 62 tonnes, bringing the 2005 Clean Up total to 78.5 tonnes.

Hunter Region Waste Project

The project is continuing with the following milestones reached:

- The adoption of Members Agreement (between Councils)
- Development of Heads of Agreement (between the contractor and HIR)
- Identification of the preferred processing site, access, and residual and reject management
- Appointment of legal services to assist in further negotiations

Detailed negotiation between HIR and the contractor is expected to commence before the end of 2005, with a report to Councils mid 2006 recommending location, scope of the service and cost estimate.

It is proposed to 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 2004-05, the drumMuster program in Cessnock collected 704 containers (a decrease of 1,700 drums from previous year).

For further information on the drumMUSTER program log onto www.drummuster.com.au.

Household Chemical Collections

The Department of Environment and Conservation (DEC) sponsored another one-day household chemical collection, which was held in Cessnock on Sunday May 22nd. Though the number of participants was about 20% less than last year 2.3 tonnes of unwanted chemicals was still collected. The most common type of waste surrendered was lead-acid batteries (43.13%), paint (22.5%), oil (11.37%) and gas cylinders (9.3%).

Waste as Art

This years Waste as Art Competition was commenced in March 2005 and was finalised in June 2005. This year the event attracted 220 entries and these were displayed at the Newcastle Museum from 5th June 2005 till 17th July 2005 with over 14,000 people viewing the displays.

Demolition of Former Cessnock Workers Club Buildings

During the process of demolishing the former Cessnock Workers Club buildings in Vincent St, the following materials were able to be removed for re-use or recycling :

- Structural steelwork - mainly roof trusses
- Timber
- Some of the newer vanities, toilets and cisterns (1 or 2)
- Plumbing pipe work
- Some carpets
- Fire hose reels and cabinets (1 or 2)

LIQUID WASTE MANAGEMENT

Hunter Water recorded 2,998 sewer surcharges over its entire system for 2004-05. No breakdown for the Cessnock LGA was available for this reporting period.

Wastewater Treatment Plants (WWTP)

Currently, Hunter Water operates five wastewater treatment plants within the Cessnock LGA. These are located at Branxton, Cessnock, Kearsley, Kurri Kurri and Paxton and treated 3,462.6 ML of effluent during 2004-05. Of the wastewater treated in the Cessnock LGA 7.6% was reused for irrigation. This is a decrease from 2003-04 when approximately 7.9% 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

Cessnock WWTW upgrade detailed design was completed in late 2004. The DEC licence requires the air floatation plant to be operational by June 2006 and upgrade works to be operational by June 2007.

Extension to Sewerage Network

The villages of Kitchener, Ellalong and Millfield have been approved to be included on the State Government's Priority Sewerage Program, which will see the installation of a reticulated sewerage system to 1,020 properties in these areas. Hunter Water has revised the timeframe for completion of the works and expects the Kitchener scheme to be commissioned in December 2006, with Millfield and Ellalong completed by mid 2009. The extension in the Millfield/Ellalong area is partly due to an investigation that may include upgrade to the Paxton Waste Water Treatment Works.

RESPONSES TO TRANQUILITY AND NOISE ISSUES

During the 2004-05 financial year the number of complaints received by Council in relation to noise pollution totalled 262. Of these, approximately 65% were about barking dogs.

REVIEW OF PROTECTION OF THE ENVIRONMENT (NOISE CONTROL) REGULATION 2000

The Department of Environment and Conservation (DEC) is currently reviewing the Protection of the Environment (Noise Control) Regulation 2000. The Regulation aims to determine a balance between allowing legitimate but noisy activities and providing an adequate level of protection for the community. The review aims to find ways of streamlining the regulatory procedures for Local Government to manage noise matters as efficiently as possible.

LAND

AT A GLANCE

Landuse Change State	Increasing	Continued development with 1,685 development applications , 1,251 construction certificates and 106 sub-division certificates approved/issued in 2004-05.	Data Gaps: Rate of landuse change over the LGA unknown. Full extent of vegetation clearing in the LGA unknown. Amount and rate of soil erosion in the LGA unknown. Review of the current state and extent of river/stream banks required.
Pressure	Increasing	Demand for land in LGA is placing increased pressure on undeveloped areas.	
Response	Improving	City Wide Settlement Strategy stage 1 adopted and continuing to develop DCP's to address pressures.	
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	Improving	Continuing to implement Draft Recreation and Open Space Plan .	
Vegetation Removal State	Increasing	DIPNR approved clearing of 23.54 ha and State Forests harvested 293 ha within the LGA during 2004-05. 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	Landcare 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 and Local Government Salinity Resource Kit .	
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 Hebburn No. 2 Colliery site .	
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 1 and 2

Stage 1 of Council's City Wide Settlement Strategy was endorsed by the Department of Planning on 30th June 2004. This Strategy is Council's guiding document for future urban development and identifies large-scale residential investigation areas on a number of fronts throughout the City as well as numerous conservation initiatives including the rezoning of areas of National Park from 1(a) Rural and 1(f) Rural (Forestry) to 8(a) National Parks and Nature Reserves.

Council has commissioned consultants to undertake the draft Stage 2 City Wide Settlement Strategy focusing on commercial and industrial development in the LGA.

DEVELOPMENT ACTIVITIES

During 2004-05, Cessnock City Council received 1,685 Development Applications (a 5% increase from 2003-04) with a total value of \$185,187,028. A further 1,251 applications were received for Construction Certificates (a 3% decrease from 2003-04), and 106 applications for Subdivision Certificates (a 17% decrease from 2003-04).

DEVELOPMENT CONTROL

During 2004-05 a number of new DCPs were completed for review and adoption. These included Citywide Outdoor Advertising Code, Citywide Outdoor Lighting Code, Kearsley, Hunter Employment Zone, A-frame and Sandwich Board Signs, Vineyards District amendment and Airport.

OPEN SPACE

Recreation

Some of the major works completed over the past year include:

- Installation of rubber safety surfacing on children's playgrounds at Birralea Oval at Kurri Kurri.
- Garden renovations, pathway improvements and fencing at Margaret Street Park in Cessnock.
- Installation of additional picnic facilities and public toilets at Peace Park (Weston).
- Master-planning for the redevelopment of Miller Park, Branxton incorporating the following works: relocation of the Branxton Tennis Club to the site, the construction of two synthetic tennis courts, construction of a small amenity block, upgrading of the children's playground, upgrading of the floodlighting system, advance stock tree planting and roadway and car parking improvements.

RESPONSES TO LAND DEGRADATION/INTERVENTION ISSUES

VEGETATION CLEARING

The area harvested by NSW State Forests in 2004-05 was 293 ha, which is only 1% of the total State Forests area in the Cessnock LGA.

In 2004-05, DIPNR received 2 applications for clearing in the Cessnock LGA under the Native Vegetation Conservation Act, 1997. These equated to approval being given for an area of 23.54 hectares to be cleared.

SOIL SALINITY

The Local Government Salinity Resource Kit

Another four new resources booklets have been produced to add to DIPNR's Local Government Salinity Kit:

- Waterwise Parks and Gardens - contains information on creating and maintaining sustainable, water efficient landscapes.
- Salinity Indicator Plants - provides a statewide overview of salinity indicator plants.
- Groundwater Basics for Understanding Urban Salinity - presents some basic groundwater concepts necessary to understand urban salinity processes.

- Costs of urban salinity - provides a literature review and analysis of existing information related to the economics of urban salinity.

CONTAMINATED LAND

Under the CCRS it is planned to undertake rehabilitation, revegetation and linking of lands (formerly Hebburn Colliery) between Peace Park and Hebburn Dam at Weston via the installation of pathways and boardwalks. Additional to this will be installation of play equipment as well as new fencing.

LAND MANAGEMENT

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 this time of printing.

State Forests NSW

State Forests NSW control an area of 29,237 ha in the Cessnock LGA (located as displayed in Table 1 below). Of this, a total of 13,056.9 ha is reserved.

Table 1: State Forest areas in Cessnock LGA

State Forest	Area (ha)
Aberdare	2256
Awaba	656
Cessnock	43
Corrabare	4911
Heaton	3018
Olney	4939
Pokolbin	8479
Watagan	4250
Yango	685
Total	29237

CESSNOCK COMMUNITY SUPPORT OFFICER (LANDCARE)

Approximately 2 years ago Council entered into an agreement with the former Hunter Catchment Management Trust, now the Hunter-Central Rivers Catchment Management Authority (HCRCMA), whereby Council would host the position of Cessnock Community Support Officer (Landcare). This position has since been appointed.

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			<p>Data Gaps:</p> <p>No information is available on the amount of greenpower consumed in the LGA.</p> <p>Further information on travel to work is required.</p> <p>More air quality monitoring programs are required.</p> <p>Further information on volume of pollutants produced in bushfires or wood fires is required.</p> <p>Impact of Upper Hunter coal burning power stations on Cessnock LGA air quality unknown.</p> <p>More data required on impact of indoor air quality.</p> <p>Recommendation:</p> <p>See Human Settlements At a Glance Table.</p>
State	Increasing	2,804,421 MWhrs electricity consumed in the LGA during 2004-05. No additional cycleways constructed. 70% residents travel to work by private motor vehicle.	
Pressure	Increasing	Electricity consumption is assumed to increase in line with population growth. Heavy reliance on motor vehicles for transportation.	
Response	Limited	CCP , Council Energy Improvement Program , Refit , cycleways and Sustainable Transport programs being implemented to address this issue.	
Diffuse Air Pollution Sources			
State	Unknown	EPA regional pollution index ranked air pollution as low for over 94% of time. 48 odour complaints (23% from sewage and 19% from Chicken sheds) reported to Council. NPA identified 42 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 air pollution emissions . State Forests undertook hazard reduction burning over 2,075ha.	
Pressure	Unknown	Impacts of domestic heating and burning associated with agriculture or forestry unknown.	
Response	Limited	Woodsmoke reduction program conducted over winter. DCP 11 review currently on hold.	
Indoor Air Quality			
State	Unknown	54 regulated systems 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 2004-05 showed that there were 16,509 residential customers who consumed 131,919,525 kWhs of electricity and 1,324 non-residential customers who consumed 2,672,501,552 kWhs 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 report these numbers include some accrual estimates (approximately 13% of consumption).

Based on the above electricity consumption data the Cessnock LGA contributed approximately 2,488,066 tonnes of greenhouse gases (carbon dioxide) to the atmosphere.

CITIES FOR CLIMATE PROTECTION PROGRAM

During 2004-05 Council completed Milestone 2 of the Cities for Climate Protection program which involved setting greenhouse gas emission reduction targets for Council and the Community. The Council target set on the 7th July 2004 was for Council to stabilise its greenhouse gas emissions at 2000/01 levels by 2010. The Community target set on 8th December 2004 was for "overall stabilisation of emissions from the residential, commercial, transport and waste sectors for the base year".

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 (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 2004-05 electricity consumption at each of these four sites is shown in Table 2.

Table: 2 – Electricity consumption data

Location	Total Use (kWh)	Average Daily Use (kWh)
Kurri Kurri Aquatic Centre	656,069	1,796
Council Admin Building	454,105	1,247
Works Depot	185,344	508
Cessnock Library	150,194	412

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 starting from \$39.

During 2004-05, 341 refit kits were installed in homes in the Cessnock LGA. This equates to savings of 204 tonnes of greenhouse gas emissions, 194,370 kWhs of electricity and 10,230 kL of water (or more than 10 Olympic swimming pools of water).

CYCLEWAYS

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

SUSTAINABLE TRANSPORT STRATEGY IN THE LOWER HUNTER REGION

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

RESPONSES TO AIR QUALITY ISSUES

OUTDOOR AIR QUALITY

Diffuse Source Air Pollutants

During 2004-05 Council received 12 reports of air pollution incidents and another 48 complaints in relation to odour (of these 23% were due to septic tanks and 19% due to chicken sheds). Data from the EPA in relation to air pollution matters was not available at the time of printing.

The Environment Protection Authority's Regional Pollution Index at Beresfield indicates that during 2004-05 the regional pollution index was ranked as Low for 94% of the time.

Point Source Air Pollutants

During 2004-05, State Forests undertook 2 hazard reduction fires covering a total area of 2,075 ha.

Air quality monitoring at Hydro Aluminium smelter (formerly VAW Kurri Kurri Pty Ltd) during 2004-05 records fluoride levels in air at Kurri Kurri below the prescribed ANZECC guideline. Total reported smelter emissions during 2004-05 were below EPA licence levels (Hydro, 2004, 2005a, 2005b).

Monitoring of livestock in the area of the Hydro aluminium smelter at Kurri Kurri for March 2005 revealed that the levels of fluoride exposure was low using the Suttie dental scoring method and below toxic thresholds using chemical analysis of bone samples (McNaughton, 2005).

Woodsmoke Reduction Program

Hunter and Central Coast Regional Environmental Management Strategy (HCCREMS) is supporting councils in the Hunter and Central Coast to implement a woodsmoke reduction program in their area.

The cool to cold winter climate of the Hunter and Central Coast makes wood fires a popular form of heating in the area. While they can create a cosy atmosphere, the smoke from wood heaters is a major cause of local air pollution. The climate and topography of many of the townships mean smoke does not disperse, but sits in the air around us.

As well as harming the environment, the particles and gases in woodsmoke have been linked to respiratory problems, heart disease, cancer and increased mortality - in a recent study by the CSIRO, it was found that air pollution was responsible for more deaths in Australia than road accidents.

The aim of the Woodsmoke Reduction Program is to help residents get the most out of their heating, while improving and protecting the environment and health of the community. To fulfil this aim a display of materials on woodsmoke was conducted over the winter months at the Council administration building and Cessnock and Kurri Kurri Libraries.

NATIONAL POLLUTION INVENTORY

Within the Cessnock LGA, 42 substances were identified from 49 sources. Seven (7) facilities reported to the NPI in 2003-04 (the most recent data available).

For further details log onto the National Pollutant Inventory at www.npi.gov.au.

INDOOR AIR QUALITY

Currently there are 54 cooling towers registered in the Cessnock LGA. There were no recorded outbreaks of Legionnaires Disease identified in the Cessnock LGA during 2004-05. 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.

WATER

AT A GLANCE

<i>Water Quality</i> 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. 42 complaints to Council on water quality (35 regarding wastewater/effluent discharge).	<p>Data Gaps:</p> <p>Comprehensive water quality data is required in the LGA to accurately assess state.</p> <p>Information on the impact of on-site sewage systems on groundwater is required.</p> <p>More information on environmental flows of LGA waterways is required - including impacts of landuse change and management of runoff.</p> <p>More information on unlicensed water extractions and farm dams and their impacts is required.</p> <p>Wastewater outputs from licensed premises other than WWTP's is required.</p>
Pressure	Increasing	Increasing development for a variety of landuses in the LGA and continued land degradation affects water quality.	
Response	Limited	Hunter Water and Community water quality monitoring programs. Several strategies/plans being implemented at selected sites	
<i>Wastewater</i> State	Improving	WWTP's 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 on-site effluent treatment systems.	
Response	Fair	11 NSW EPA licensed premises for water discharge. WWTP's monitor water quality above and below discharge points.	
<i>Ground and Surface Water</i> State	Unknown	Little data exists on the current groundwater quality. Ground and surface water extractions are regulated by DIPNR through licensing . Currently 209 surface water licences and 173 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	Water tank rebate and refit programs are addressing some surface water issues.	
<i>Stormwater</i> 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 HCCREMS Regional Water Sensitive Urban Design Project .	

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 4). The mean of the data set for each parameter has been used as the value to assess the water quality guidelines against.

Table 4: Water Quality Monitoring Data 2004-05 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
Anvil Creek – Upstream							
Potable Water Supply	✓	X	X	✓	-	-	X
Agriculture	✓	✓	X	✓	-	-	*
Maintenance of aquatic ecosystems	✓	✓	✓	✓	-	*	✓
Anvil Creek – Downstream							
Potable Water Supply	✓	X	X	✓	-	-	X
Agriculture	✓	✓	X	✓	-	-	*
Maintenance of aquatic ecosystems	✓	✓	✓	✓	-	*	X
Congewai Creek – Upstream							
Potable Water Supply	✓	-	X	-	-	X	-
Agriculture	✓	-	✓	-	-	✓	*
Maintenance of aquatic ecosystems	✓	-	✓	-	-	*	-
Congewai Creek – Downstream							
Potable Water Supply	✓	-	X	-	-	X	-
Agriculture	✓	-	✓	-	-	✓	*
Maintenance of aquatic ecosystems	✓	-	✓	-	-	*	-
Swamp Creek – Upstream							
Potable Water Supply	✓	X	X	-	-	X	X
Agriculture	✓	✓	✓	-	-	✓	*
Maintenance of aquatic ecosystems	✓	✓	✓	-	-	*	✓
Swamp Creek – Downstream							
Potable Water Supply	✓	X	X	-	-	X	✓
Agriculture	✓	✓	✓	-	-	✓	*
Maintenance of aquatic ecosystems	✓	✓	✓	-	-	*	✓
Swamp Creek – VAW/Hydro							
Potable Water Supply	✓	-	X	✓	X	X	✓
Agriculture	✓	-	✓	✓	X	✓	*
Maintenance of aquatic ecosystems	✓	-	✓	✓	X	*	✓
Black Creek – Upstream							
Potable Water Supply	✓	X	X	✓	X	X	X
Agriculture	✓	✓	X	✓	X	✓	*
Maintenance of aquatic ecosystems	✓	x	✓	✓	x	*	X
Black Creek – Downstream							
Potable Water Supply	✓	X	X	✓	X	X	X
Agriculture	✓	✓	✓	✓	X	✓	*
Maintenance of aquatic ecosystems	✓	✓	✓	✓	X	*	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 2004-05 are summarised in Table 5.

Table 5: Streamwatch 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
Bellbird Public School – Bellbird Creek				
Potable Water Supply	✓	-	X	*
Agriculture	✓	-	✓	X
Maintenance of aquatic ecosystems	✓	-	✓	X
Hunter Community Salinity Monitoring Group – Wollombi Brook Big Arm				
Potable Water Supply	✓	X	X	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Wollombi Public School – Wollombi Brook				
Potable Water Supply	✓	-	X	*
Agriculture	✓	-	✓	✓
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

The results of Water Bug surveys carried out in the Cessnock LGA in 2004-05 are included in Table 6.

Table 6: Water Bug Survey Results for the Cessnock LGA

Group	Stream	Stream Pollution Index	
		Spring 2004	Autumn 2005
Bellbird Public School	Bellbird Creek	POOR	-
2 nd Abermain Brownies and Guides	Centenary Park, Abermain	FAIR	FAIR
Milbrodale Public School	Tulloch's Waterhole	EXCELLENT	-

Bellbird and Wollombi Public Schools participated in Phosphorus Day 2004 held from 17th to 24th November. Results at both Bellbird Creek (cnr Kendall and Pitman Sts) and Wollombi Brook (waterhole at bottom of steps) were in the medium category which flows between the lowland stream trigger value and the estuarine system trigger value.

For further information on NSW Waterwatch visit www.waterwatch.nsw.gov.au and Water Bug Surveys visit www.bugsurvey.nsw.gov.au.

WATER POLLUTION COMPLAINTS

Council received 42 water pollution incident reports, of which 35 were related to wastewater/effluent sullage discharge, in 2004-05.

RESPONSES TO WASTEWATER ISSUES

PROTECTION OF THE ENVIRONMENT OPERATIONS ACT, 1997 SCHEDULED PREMISES

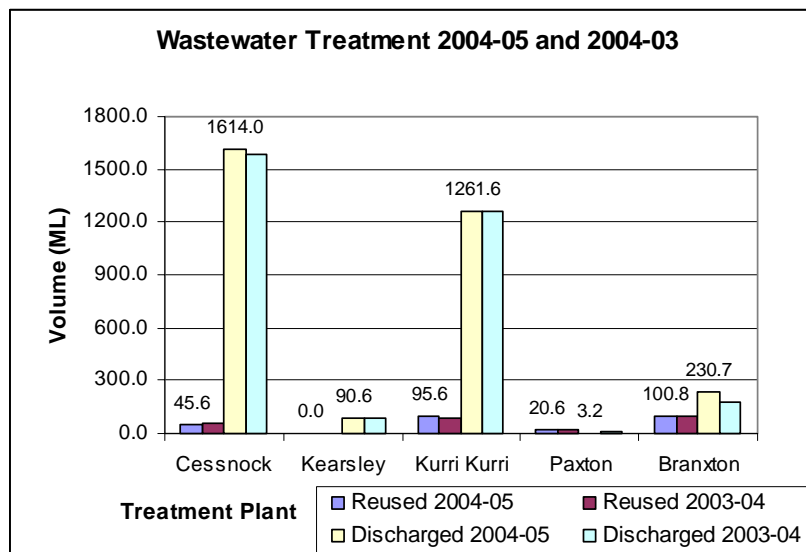
In relation to the Protection of the Environment Operations Act there are currently 11 scheduled premises (for water) within the Cessnock LGA (which is unchanged from the 2003-04 report).

Details of trade waste permits issued by Hunter Water was not available at time of printing.

CESSNOCK LGA WASTEWATER TREATMENT PLANTS

The effluent discharge for 2004-05 (with comparison to 2003-04) of each of the wastewater treatment plants in the Cessnock LGA is summarised in Figure 7.

Figure 7: Effluent treated and disposed of at HWC wastewater treatment plants during 2004-005 and 2003-2004 in the Cessnock LGA.



ON-SITE EFFLUENT DISPOSAL

During 2004-05, an additional 215 on-site effluent disposal systems were approved in the Cessnock LGA (representing a 26% decrease from the 2003-04 reporting period).

RESPONSES TO WATER USAGE ISSUES

SURFACE AND GROUNDWATER EXTRACTION

DIPNR records indicate that there are currently 209 surface water extraction licenses and 173 groundwater extraction licenses in the Cessnock LGA. The most common use for this water is for irrigation, stock and grape vines.

HCCREMS - WATER SENSITIVE URBAN DESIGN (WSUD) PROJECT

During 2004-05 the following water projects were delivered in the Hunter/Central Coast region as part of HCCREMS long term commitment to promoting sustainable urban water cycle management.

Urban Water Cycle Management Toolkit

This project designed and developed a comprehensive and innovative toolkit of resources (in CD and web-based access format) to build the capacity of NSW Councils to embrace and pursue innovation in sustainable stormwater management and urban water cycle practises. The toolkit is available at www.urbanwater.info. The web-site provides an excellent resource for a wide range of disciplines in Councils. A capacity building DVD and video can be ordered via the website and is designed to assist staff in introducing innovation and sustainable solutions to water management issues in their LGAs.

Applied Urban Water Cycle Management

This four year research program with the Australian Research Council is now in its final stage. The purpose of the initiative is to support further development of local and regional knowledge, policies and standards that will allow development of optimal water cycle management solutions, and the associated economic benefits of reduced water demand and infrastructure investment and maintenance costs.

Water Sensitive Urban Design In Catchments Above Wetlands

Development control plans and water sensitive retrofit strategies for areas upstream of natural wetlands need to be tuned to the wetlands' needs. This is important both for the conservation of the wetlands themselves and for the conservation of aquatic ecosystems downstream. Simply from the perspective of cost-effective drainage asset management alone, the functioning of natural wetlands needs to be protected (e.g. constructing water treatment wetlands whilst allowing the treatment function of natural wetlands to decline does not make financial sense).

Accordingly, this project sought to conduct research and produce planning guidelines for use in urban areas above wetlands and small lagoons that take into account a larger set of catchment dynamics than the currently available generic WSUD Development Control Plans. Supporting this, a documented methodology for tailoring or applying these guidelines needed to be developed to suit particular sites (both green fields and retrofit).

The Project was completed in early 2005 and provided Councils with important tools for designing urban development in ways that protect downstream wetland ecosystems. However, the project also highlighted the complexity of the issue, and raised many questions which will be addressed in the next phase of research.

HUNTER WATER CORPORATION RAINWATER TANK REBATE

During 2004-05, Hunter Water provided rainwater tank rebates to 5 homes in the Cessnock LGA (this represents 16% of the total water tank rebates issued by HWC in 2004-05). 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.

REFIT PROGRAM

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

BIODIVERSITY

AT A GLANCE

Terrestrial Biodiversity State	Declining	Various developments pose threats to terrestrial biodiversity in the LGA. Currently listed under the TSC Act 1995 for the LGA are 50 fauna species, 30 flora species and 7 endangered ecological communities . DIPNR approved clearing of 23.54 ha and State Forests harvested 293 ha within the LGA during 2004-05.	Data Gaps: More information required on impacts of habitat fragmentation (i.e. fauna corridors, core koala habitat) and rate of vegetation clearing. Long-term monitoring of riparian vegetation required to develop management strategies.
Pressure	Increasing	Demand for rural, rural residential, industrial and urban expansion as a result of population growth increasingly affects biodiversity.	Data on aquatic species composition and distribution required.
Response	Fair	TCM is being implemented in line with their recommendations. Landcare programs Kurri Sand Swamp Woodland Recovery Plan , Tree plantings and giveaways and REMS Roadside Environmental Management programs are also having positive effects.	Wetlands mapping in the LGA, condition of flora and fauna and associated impacts/threats (i.e. aquatic noxious weeds, stormwater, effluent, industrial processes, cattle grazing) required.
Aquatic Biodiversity State	Unknown	Little is known of the aquatic biodiversity in the LGA.	Information on the impact of feral animals on local fauna populations required.
Pressure	Increasing	Increasing development is placing pressure on aquatic ecosystems through disturbance, pollution and changes in water quality and quantity.	Data on the full distribution of weed species and their extent of competition with native species required.
Response	Limited	Salvinia removal programs are continuing to address this menace but are limited by resources.	
Introduced Flora and Fauna State	Unknown	24 noxious weeds and 8 weeds of national significance have been identified in the LGA. 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	Good	Council employs 2 Weeds Officers and participates in many regional weed programs as well as receiving grant funding to initiate programs. State Forests are participating in pest management programs.	

RESPONSES TO BIODIVERSITY ISSUES

THREATENED FAUNA SPECIES

There were 6 new fauna species listed as “threatened” or “vulnerable” under the provisions of Schedule 1 and Schedule 2 of the Threatened Species Conservation Act, 1995 recorded in the Cessnock LGA (see Table 6) during 2004-05. These are:

Table 6: 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
Amphibians	
<i>Litoria brevipalmota</i>	Green-thighed Frog
Birds	
<i>Haematopus longirostris</i>	Pied Oystercatcher
<i>Hamirostra melanosternon</i>	Black-breasted Buzzard
<i>Stagonopleura guttata</i>	Diamond Firetail
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo
Mammals	
<i>Saccolainus flaviventris</i>	Yellow-bellied Sheath-tail Bat

The local status of these species is not known however State Forests report having detected the threatened species listed in Table 7 below.

Table 7: State Forest threatened species sightings during 2004-05 in Cessnock LGA.

Species	Common Name	Number Observations
<i>Petrogale penicillata</i>	Brush-tailed Rock Wallaby	12
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	1
<i>Petaurus australis</i>	Yellow-bellied Glider	6
<i>Phascolarctos cinereus</i>	Koala	3
<i>Calyptorhynchus lathami</i>	Glossy Black Cockatoo	6
<i>Ninox strenua</i>	Powerful Owl	1
<i>Tyto tenebricosa</i>	Sooty Owl	4
<i>Mixophyes balbus</i>	Stuttering Frog	1
<i>Falsistrellus tasmaniensis</i>	Eastern False Pipe-strelle	1
<i>Pteropus poliocephalus</i>	Grey Headed Flying Fox	3

Revised data on fauna habitat modelling was received in June 2005. Habitat models are used when undertaking conservation planning by Council staff on public lands. Habitat maps were developed for koala, tiger quoll, squirrel glider, yellow-bellied glider, masked owl, powerful owl and sooty owl.

Forests NSW Pest Control

Forests NSW is continuing its involvement in the Fox Threat Abatement Plan (Fox TAP) in conjunction with NPWS and has undertaken fox monitoring and Brush-tailed Rock Wallaby monitoring as required under the TAP within Watagan State Forest.

THREATENED FLORA SPECIES

There was 1 new flora species, *Melaleuca groveana*, listed in the Cessnock LGA as “threatened” or “vulnerable” under the provisions of Schedule 1 and Schedule 2 of the Threatened Species Conservation Act, 1995 or listed as a “protected native plant” under Schedule 13 of the National Parks and Wildlife Act, 1974 during 2004-05. This list has been compiled using the NSW National Parks and Wildlife Atlas (2005) and may contain some omissions.

The NSW Wildlife Atlas is online at www.wildlifeatlas.npws.nsw.gov.au

In addition, in June 2005, the Department of Environment and Heritage advised Council of its decision to list *Persoonia pauciflora* (North Rothbury Persoonia) as critically endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

THREATENED ECOLOGICAL COMMUNITIES

During 2004-05 the following additional Endangered Ecological Communities have been listed by the NSW Scientific Committee:

- **Freshwater Wetlands on Coastal Floodplain**

The Scientific Committee has made a Final Determination to list Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions, as an Endangered Ecological Community under Schedule 1 of the Threatened Species Conservation Act. This community is associated with periodic or semi-permanent inundation by freshwater and generally occurs below 20m elevation. The structure of the community may vary from sedgeland and reedlands to herbfields, but woody species of plants are generally scarce. This community has been extensively cleared and modified for use as pasture for cattle, market gardens and other crops. In the lower Hunter – Central Coast about two-thirds is estimated to have remained in the 1990's. Locally the only example occurring in an existing conservation reserve is at Hexham Swamp.

- **River-Flat Eucalypt Forest**

The Scientific Committee has made a Final Determination to list River-Flat Eucalypt Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions, as an Endangered Ecological Community under Schedule 1 of the Threatened Species Conservation Act. This community occurs on periodically inundated alluvial flats, drainage lines and river terraces associated with coastal floodplains. It generally occurs below 50m elevation and may vary from tall open forests to woodland, although partial clearing may have reduced the canopy to scattered trees. It provides habitat for a broad range of animals, including many that are dependent on trees for food, nesting and roosting. Land clearing is the main threat to this community as most occurs on productive agricultural land or in close proximity to rural centres.

- **Swamp Oak Floodplain Forest**

The Scientific Committee has made a Final Determination to list Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South East Corner bioregions, as an Endangered Ecological Community under Schedule 1 of the Threatened Species Conservation Act. There is an insignificant amount of this community in the Cessnock LGA and there is considered to be no impact of this listing on future development. Swamp Oak Floodplain Forest generally occurs below 20 m (rarely above 10 m) elevation and the structure of the community may vary from open forests to low woodlands, scrubs or reedlands with scattered trees. Land clearing is the main threat to this community as most occurs on productive agricultural land or in close proximity to rural centres.

- **Lower Hunter Spotted Gum – Ironbark Forest**

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list the Lower Hunter Spotted Gum – Ironbark Forest in the Sydney Basin Bioregion, as an Endangered Ecological Community under Schedule 1 of the Threatened Species Conservation Act. This community was once widespread in the Lower Hunter but is now restricted to a fragmented area centred around Cessnock-Branxton. The overstorey is dominated by spotted gum and broad-leaved ironbark and clearing and other disturbances have modified and fragmented the community into more than 4,800 sections (of which over 4,500 are less than 10 hectares), with only 1,600 hectares protected in the Werakata National Park.

Further information may be found at www.npws.nsw.gov.au

Kurri Sand Swamp Woodland Recovery Program

The NSW Department of Environment and Conservation (DEC) commenced a recovery program for the endangered ecological community Kurri Sand Swamp Woodland (KSSW) in early 2005. This unique woodland is restricted to the Kurri Kurri - Cessnock area within the Lower Hunter Valley and is threatened by habitat loss due to clearing for urban and industrial development; frequent fire; and habitat degradation. Given the small area of KSSW remaining and the continued threats to the community - KSSW has been listed as an endangered ecological community under the *Threatened Species Conservation Act 1995* since 2001.

To help prevent extinction of this community, the NSW Department of Environment and Conservation, in

consultation with the Kurri Sand Swamp Woodland Recovery Team, is currently preparing a Recovery Plan that will outline what needs to be done and by whom to conserve the woodland. The plan is being prepared in consultation with Cessnock City Council, various state government departments, and most importantly the local community. To commence this consultation the DEC hosted a stakeholder forum in March 2005 that was attended by over 50 people interested in helping conserve Kurri Sand Swamp Woodland. It is anticipated a draft Recovery Plan will be released for public comment in late 2005.

Kurri Sand Swamp Woodland Stakeholder Forum

A stakeholder forum was held for the KSSW recovery program in March 2005. The objectives of the forum were to:

- increase awareness among stakeholders that the KSSW recovery program has commenced;
- ensure all stakeholders are identified early in the program;
- ensure DEC is aware of all relevant programs and resources; and
- gain insight into likely interest, support, and involvement of various stakeholders in the recovery program.

The forum was attended by approximately 50 representatives from a range of organisations including local community groups, Cessnock City Council, various state government departments, industry, and various local experts and environmental consultants. The forum commenced with a presentation by Andrew McIntyre (Manager Biodiversity Conservation, North East Branch, DEC) on approaches to conserving threatened species and endangered ecological communities in the Lower Hunter. Tricia Hogbin, (Senior Threatened Species Officer, DEC) then provided an introduction to the KSSW Recovery Project. The presentations were followed by a facilitated discussion designed to assist in the development of the KSSW Recovery Program. Ongoing liaison with stakeholders has occurred through a brief electronic newsletter providing information on the activities of the KSSW recovery program.

HABITAT FRAGMENTATION AND CLEARING

In 2004-05, DIPNR received 2 applications for clearing in the Cessnock LGA under the Native Vegetation Conservation Act, 1997. These equated to an area of 23.54 hectares cleared. In addition, State Forests harvested 293 ha.

State Forests are conducting a study into the use of fire dams by frogs in the Watagan State Forest. While the dams main purpose is to provide water for bushfire fighting, frogs also use these as a vital habitat in the forest. The study has set up 30 dams with different shapes, sizes and depths and these will be monitored for 5 years to see which are preferred by different types of frogs. For more information see <http://www.forest.nsw.gov.au/bush/spring04/stories/11.asp>.

INTRODUCED SPECIES - WEEDS

During 2004-05 Siam weed was added to Cessnock's list of declared noxious weeds and Cabomba as a weed of national significance. 13 complaints were received by Council regarding noxious weeds. Council's Weeds Officers conducted 1,639 property inspections for a variety of noxious weeds and undertook 387 noxious weed treatments on Council, Crown and private lands including treating 110km of roadsides for Giant Parramatta Grass.

Council also received \$17,000 funding from the State Government Department of Lands and Primary Industry to assist in the control of Salvinia along Wollombi Brook and Lantana, Water Hyacinth, camphor laurel, privet and other weeds on Crown land. An additional \$5,500 was received from Department of Primary Industries, administered by HCCREMS, to implement the Regional Weeds Management Plan 2004-05.

The following weed reduction/removal programs were conducted in 2004-05:

- Wentworth Swamps aerial spraying for Salvinia - undertaken by Hydro Aluminium in early 2005 using a helicopter to access all areas of the Swamp in an effort to eradicate the majority of this weed in this area.
- Boom installed along Wollombi Brook – undertaken as a joint project with the CMA and private landholders the booms help to stop Salvinia spreading downstream.
- Mechanical harvester used to remove Salvinia in Quorrobolong Creek – over 250 tonnes of weed were removed by the harvester which was paid for by a private landholder.

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

- treated vegetation around signposts, guideposts, guardrails, kerb and gutter, etc, along all main roads.
- treated the aerodrome for excess vegetation 2-4 times.
- treated the majority of playing fields and parks for bindii, clover and other flatweeds.
- treated Council's Waste and Reuse Centre and Works Depot as required.
- in house developed weed fact sheets now displayed on Council's web page for ease of access by the general community.
- assisting Cessnock LGA Landcare Inc in improving the quality of the environment of Bellbird.

Regional Weeds Program

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

- Continuing employment of Regional Weeds Coordinator to provide resources, assistance and technical advice to Councils and the community, as well as coordinate implementation of the Regional Weeds Strategy.
- Regional weeds management plans developed for Alligator Weed, Green Cestrum, Water Hyacinth, Giant Parramatta Grass and Salvinia continued to be implemented by Councils throughout 2004-05.
- A range of public education initiatives were collaboratively implemented including:
 - The continued updating and distribution of the Hunter Central Coast Regional Weeds Identification CD
 - Mounting of displays and provision of advice at Field Days throughout the region
 - Upgrading of mobile regional weeds display kit
 - Maintenance of regional weeds webpage
- Further development of regional weeds mapping program
- Initiation of Bitou Bush Eradication Campaign in partnership with Coastcare
- Organisation of Regional Weeds Forum

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. Council also funds the planting of trees in public places where appropriate.

Approximately 1,000 trees were replanted in Broke Rd to replace trees cleared due to hazard issues from road sides on Oakey Creek Rd, McDonalds Rd and Mt View Rd.

National Tree Day 2004

For National Tree Day 2004 Council, in partnership with Hunter Resource Recovery, gave away trees to the local community. Cessnock and Kurri Libraries also had hundreds of tubestock trees, which were given out in the week leading up to National Tree Day. The Libraries combined this activity with a display of gardening media to assist residents learn about gardening and growing native plants.

City Entry Streetscapes Project

Tree planting as part of the City Entry Streetscapes Project commenced in January 2004 with stage 1 of the project along Aberdare Road being planted with 250 advanced trees.

The City Entry Streetscapes Project is about beautifying the entries into Cessnock City and linking with existing beautification projects, such as the upgrade of Vincent Street. The project will not only beautify the area, but it will also formalise the main entries, using a visual corridor of trees.

Works have commenced on Stage 2, covering Maitland Road, East Cessnock through to Abermain with the removal of existing unsuitable trees and the planting of over 100 new advanced 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 2004–05 include Abermain Public School, Congewai Public School, Wollombi Public School, Bellbird Public School and Kitchener Public School.

The Wallis and Fishery Creek Corridors Project

With the completion in March 2005 of this project, approximately 24,000 trees have been planted.

Extension of Vegetation Corridors in the Anvil/Black Creek Catchments

Work has commenced on this project with 6,500 trees planted to date.

NPWS DISCOVERY TOURS

National Parks and Wildlife Service Discovery Rangers conducted a walk exploring the endangered Kurri Sand Swamp Woodland on Sunday 31st October 2004. On 7th November 2004 a walk up Mt Tumblebee was also conducted.

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 and were funded by the Natural Heritage Trust via the Envirofund grants.

Burralong Valley Landcare

During 2004-05, Burralong Valley Landcare have focused on ongoing weed eradication programs in the riparian zone, including the removal of thistles and blackberries and the physical removal of salvinia utilising the newly purchased sludge pump.

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. 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 35 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.

Congewai Landcare

Congewai Landcare (a new group) have been working with Congewai School to collect Waterwatch information and undertake revegetation works in line with the Rivercare Plan for Congewai Creek. Presently they have applied for funding to implement the Rivercare plan along individual properties on Congewai Creek and are working with local landholders to provide information to the community on Natural Resource Management.

Greta-Branxton Landcare

During 2004-05, Greta-Branxton Landcare has continued to undertake rehabilitation works along Anvil Creek in partnership with Singleton Landcare Network and the local landholders. Over 5 kms of fencing has been installed along both Anvil and Black Creeks and off stream watering installed on two

properties.

The group is also continuing work with the Lime Dosing plant on Anvil Creek, Branxton to neutralise acid water leaching into the creek from nearby mine sites, by 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 water which is leaching from coal spoil at the old Neath pit site through lime dosing. They have also worked in conjunction with Greta-Branxton Landcare to establish a Lime dosing plant on Anvil Creek. The Group has ceased treating acid leachate at the Glen Ayr site.

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.

The Kurri group also received a Newcastle Council Environmental Achievement Award for undertaking Acid Mine Drainage Treatment at Neath and Greta and Col Maybury received a highly commended in the Environmental Champion section.

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 were funded by the Natural Heritage Trust.

Mulbring Valley Landcare

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

Wollombi Valley Landcare

During 2004-05, Wollombi Valley Landcare have:

- Produced regular newsletters which are circulated to all members and additional Landcare articles are included in each issue of OON, 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.
- Secured funding of \$69,900 from the National Heritage Trust to implement priority recommendations made in the Plan of Management for the Wollombi Brook. These works include channel erosion remedial works, bed control structures, riparian revegetation and stock management via fencing.
- Been actively involved with the Salvinia removal along Wollombi Brook, with field days held during 2004-05.

HUNTER-CENTRAL RIVERS CATCHMENT MANAGEMENT AUTHORITY ACTIVITIES

No information was not available at time of printing.

Wallis and Fishery Creeks Total Catchment Management (TCM) Strategy

No information was not available at time of printing.

HCCREMS - ROADSIDE ENVIRONMENTAL MANAGEMENT

A Regional Roadside Environment Management Strategy has been developed by the HCCREMS team throughout 2004-05. The sound management of roadside environments offers a range of potential natural resource management benefits (biodiversity conservation, buffer zones for high conservation ecosystems, water quality management, erosion and sedimentation control etc). The strategy seeks to provide a framework for assessing, prioritising and directing roadside environment management initiatives across the region. It includes:

- the surveying and assessment of key roadside environments throughout the region

- identification and protection of high conservation habitat values
- development of roadside maintenance strategies and guidelines for maximising natural resource management outcomes
- design and development of model policies and codes of practise
- design, development and delivery of training packages for council staff
- implementation of roadside signage and regional education initiatives

Funding for the implementation of a roadside environmental management plan has been allocated to HCCREMS by both the Hunter Central Rivers Catchment Management Authority and the NSW Roadside Environment Committee. Implementation of the roadside program will commence in late 2005.

HERITAGE

AT A GLANCE

<i>Aboriginal Heritage State</i>	Unknown	603 sites are recorded on the NPWS Aboriginal Sites register with 1 gazetted aboriginal area. The location of sites within the LGA is generally unknown.	Data Gaps:
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 and have developed interim guidelines for community consultation.	
<i>Non-Aboriginal Heritage State</i>	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	Convict Trail Project and local heritage groups actively working on restoration and protection of some sites.	

RESPONSES TO ABORIGINAL HERITAGE ISSUES

As at September 2005, 603 sites 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.

INTERIM COMMUNITY CONSULTATION REQUIREMENTS FOR APPLICANTS

The Department of Environment and Conservation has developed guidelines for people seeking approval under Part 6 of the National Parks and Wildlife Act. These interim guidelines aim to clarify and reaffirm the intent of the DEC's policies regarding the requirements for consultation by proponents with members and representatives of Aboriginal communities. More detailed guidelines will be developed with consultation with the Aboriginal community and other stakeholders in 2005.

For further information or to download a copy of the guidelines visit <http://www.npws.nsw.gov.au>.

NSW INDIGENOUS FISHERIES STRATEGY

An Implementation Plan which lists specific initiatives to be accomplished during the next 18 months is currently being developed by NSW Fisheries.

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 2004-05 include:

- Cessnock District Historical and Family History Society Inc – purchase of microfilm reels of Australian History from NSW State Archives.
- Cessnock Pensioners Senior Citizens Association – purchase of cordless microphone sound system.
- Cessnock Woodturners – construction of club workshop.
- Coalfields Heritage Group Inc – stationery supplies to allow the continuation of history/heritage work for the Comerford Library and Archives located in the Edgeworth David Museum, Kurri Kurri.
- Kitchener Poppet Head Restoration Committee – purchase four walking trail signs.
- Lovedale Chamber of Commerce – support for Fine Craft Expo to be held at the Ogishi Craft Centre October 2005.
- Weston Heritage and Tidy Towns – funding for a Chinese water wheel to be constructed at Chinaman's Hollow.

THE CONVICT TRAIL PROJECT

In 2004-05 the Convict Trail Project with Heritage Office funding commissioned consultants to inspect all the sites on the Great North Road still in need of conservation work and draw up plans for those site. There were two sites in Cessnock City Council area in need of work, the safety fencing on Ramsey Leap and at Thompson's Bridge. The problem is when vehicles hit the safety fencing the supporting posts are pushed against the walling (which is dry-stone walling without any mortar) and gives way.

Also in 2004-05, the Convict Trail Project (again with Heritage Office funding) commissioned consultants to assess the Historic Cultural Landscape Values of the timber bridges associated with the Great North Road. Many of these bridges are within the Cessnock City Council area. The report found that as a group these mainly twentieth century bridges demonstrate various values at both state and local levels with the existence of each bridge enhancing the significance of the others in the group. The bridges are considered to be of high regional significance and contribute to the ambience of the country drive experienced by the tourist community.

Other Convict Trail Project work that has occurred in Cessnock City Council area during 2004-05 includes:

- Research into the significance of Thomas Budd's lone headstone, beside the road at Sweetman's Creek. As Thomas Budd was a Royal Veteran and the headstone is likely to be the only physical

evidence remaining of this failed social experiment, the headstone is potentially of National Significance. Wollombi Tidy Valley and the RTA determined it is not a lone grave the others present are unmarked.

- Examining and starting to research the old road from Laguna that runs along Wattagan Creek up into the Wattagans.

RICHMOND MAIN HERITAGE PARK

In the past 12 months the main administration building at Richmond Main Heritage Park has been repainted finalising the funding received from the NSW Heritage Office. Richmond Vale Preservation Society has also been successful in receiving a grant from the Mineworkers Trust towards the restoration of the demonstration non-air coal train.

MARTHAVILLE

Council replaced the roof on the historic Marthaville homestead. In undertaking the roof repairs the original shingle roof was revealed.

WOLLOMBI MONUMENT

Council erected a small monument, a plaque on recycled sandstone plinth, at the corner of Negro St and Payne's Crossing Rd, Wollombi honouring John McDougall, one of Wollombi's earliest white settlers.

GILLIES BRIDGE, ROTHBURY

\$500,000 worth of repairs to historic Gillies Bridge on Wilderness Rd Wollombi has been completed. The bridge is an early 20th century De Burgh's Truss Bridge and was opened in 1902. The repairs were carried out according to the Conservation Management Plan using special paints and timbers to ensure the bridge is restored to its original condition.

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APPENDIX 1 - ENVIRONMENTAL WEBSITES

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

National Native Title Tribunal	http://www.nntt.gov.au
National Parks and Wildlife Service	http://www.npws.nsw.gov.au
Natural Heritage Trust	http://www.nht.gov.au
Nature Conservation Council NSW	http://www.nccnsw.org.au/
NSW Agriculture	http://www.dpi.nsw.gov.au/agriculture
NSW Department of Local Government	http://www.dlg.nsw.gov.au
NSW State Forests	http://www.forest.nsw.gov.au
NSW State Parliament	http://www.parliament.nsw.gov.au
NSW Wildlife Atlas	http://www.wildlifeatlas.npws.nsw.gov.au
Planet Ark	www.planetark.com
Regional Forest Agreements	http://www.rfa.gov.au
ReUSE net	http://www.reusenet.org
Rivers – Land and Water Australia	http://www.rivers.gov.au
Sustainable Building Guide	http://www.yourhome.gov.au
Streamwatch	http://www.streamwatch.org.au/
Total Environment Centre Index	http://tec.nccnsw.org.au/
World Wide Fund for Nature	http://www.panda.org

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)

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?

Please Return to:

Cessnock City Council,
Strategic and Community Services Department,
P.O. Box 152,
CESSNOCK. NSW. 2325