



Comprehensive State of the Environment Report 2005 -2009

ANNEXURE 1 - Cessnock City Council 2005-2009 Report



Acknowledgments

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ABBREVIATIONS

ANZECC	Australian and New Zealand Environment and Conservation Council
AS	Australian Standard
CCC	Cessnock City Council
CCRS	Cessnock Community Renewal Strategy
CYCOS	Cessnock Youth Centre & Outreach Service
DCP/DCPs	Development Control Plan/s
DEC	Department of Environment and Conservation NSW
DECC	Department of Environment and Climate Change (formerly DEC)
DIPNR	Department of Infrastructure, Planning and Natural Resources
DNR	Department of Natural Resources NSW (formerly DIPNR)
DO	Dissolved Oxygen
DoH	Department of Housing
EEC	Endangered Ecological Community
EPA	Environment Protection Authority (now the DEC)
EPBC Act	Environment Protection and Biodiversity Conservation Act
ESD	Ecologically Sustainable Development
GPT	Gross Pollutant Trap
Ha	Hectare
HCRCMA	Hunter – Central Rivers Catchment Management Authority
HEZ	Hunter Economic Zone
HIR	Hunter Integrated Resources
HRR	Hunter Resource Recovery
HWC	Hunter Water Corporation
ICAC	Independent Commission against Corruption
IMS	Integrated Management System
ISO	International Standards Organisation
KABC	Keep Australia Beautiful Council
kL	Kilolitres
KWh	Kilowatt hours
L	Litre
LEP/LEPs	Local Environmental Plan/s
LGA	Local Government Area
HCCREMS	Hunter and Central Coast Regional Environmental Management Strategy
ML	Mega litres
MoU	Memorandum of Understanding
MWhrs	Megawatt hours
NO ₃	Nitrate Nitrogen
NPWS	National Parks and Wildlife Service NSW
NHMRC	National Health and Medical Research Council
NSW FB	New South Wales Fire Brigade
NTU	Nephelometric Turbidity Units
OH&S	Occupational Health and Safety
OP	Orthophosphate
PVP	Property Vegetation Plans
RFS	Rural Fire Service
RTA	Roads and Traffic Authority
SoE	State of the Environment Report
TCM	Total Catchment Management
WWTP/WWTW	Wastewater Treatment Plant/Wastewater Treatment Works

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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 a comprehensive report on the State of the Environment (SoE). This report covers the period from 1st July 2005 to 30th June 2009 and it indicates trends that have occurred in different areas of the Environment of the Cessnock LGA.

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 has been done to address adverse impacts and whether those actions have been successful in delivering results.

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

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

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

This report also continues the process of the transition from environmental reporting to sustainability reporting with the inclusion of economic and social development information in the Towards Sustainability chapter. Future reports will continue this process by including 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 August 2006 a census was conducted reporting the population of the Cessnock LGA as 46,206. The Cessnock LGA 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).

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.

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 2009 are shown in Figures 1 to 6. The maximum temperature recorded for the year at Cessnock Airport was 40.6°C on 15th February 2009 and the minimum temperature was -2.8°C on 12th July 2008. Total rainfall for 2008-09 was 930.8mm (approx.10 % decrease on 2007-08) and there were 4 days over 40°C.

Figure 1: 2008 Cessnock Average Temperatures



Figure 2: 2009 Cessnock Average Temperatures



Figure 3: Highest Temperatures in the Cessnock LGA 2005-2009

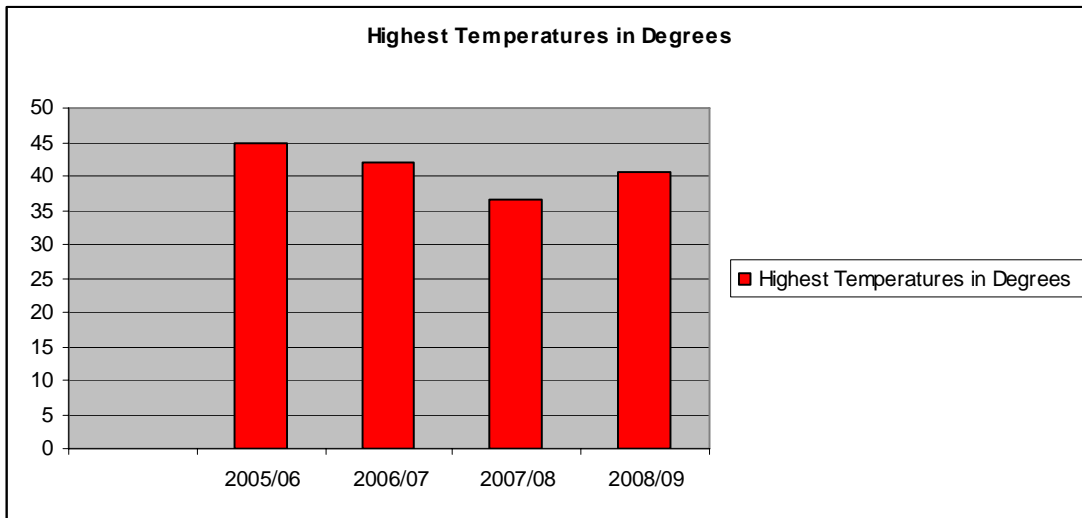


Figure 4: 2008 Cessnock Average Rainfall

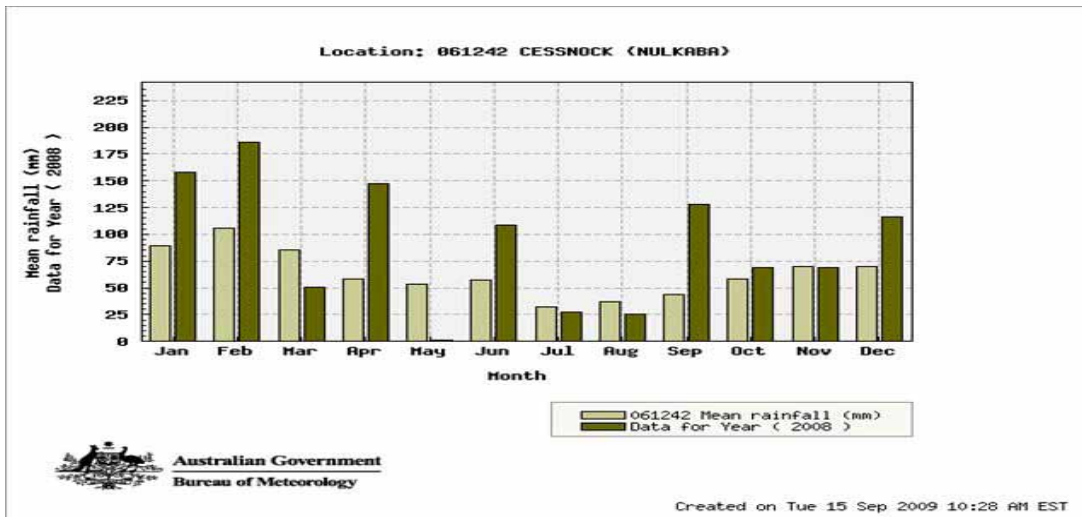


Figure 5: 2009 Cessnock Average Rainfall

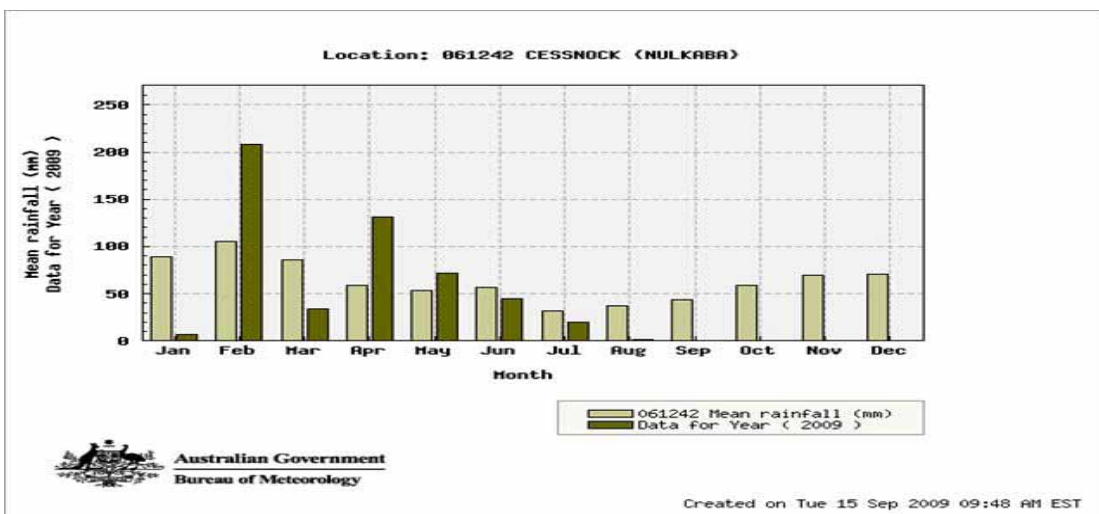
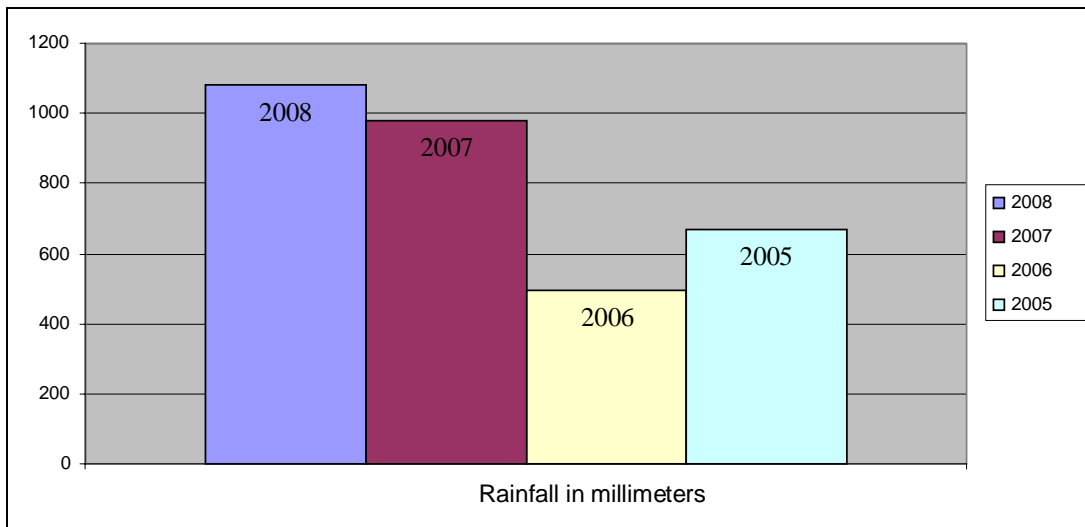


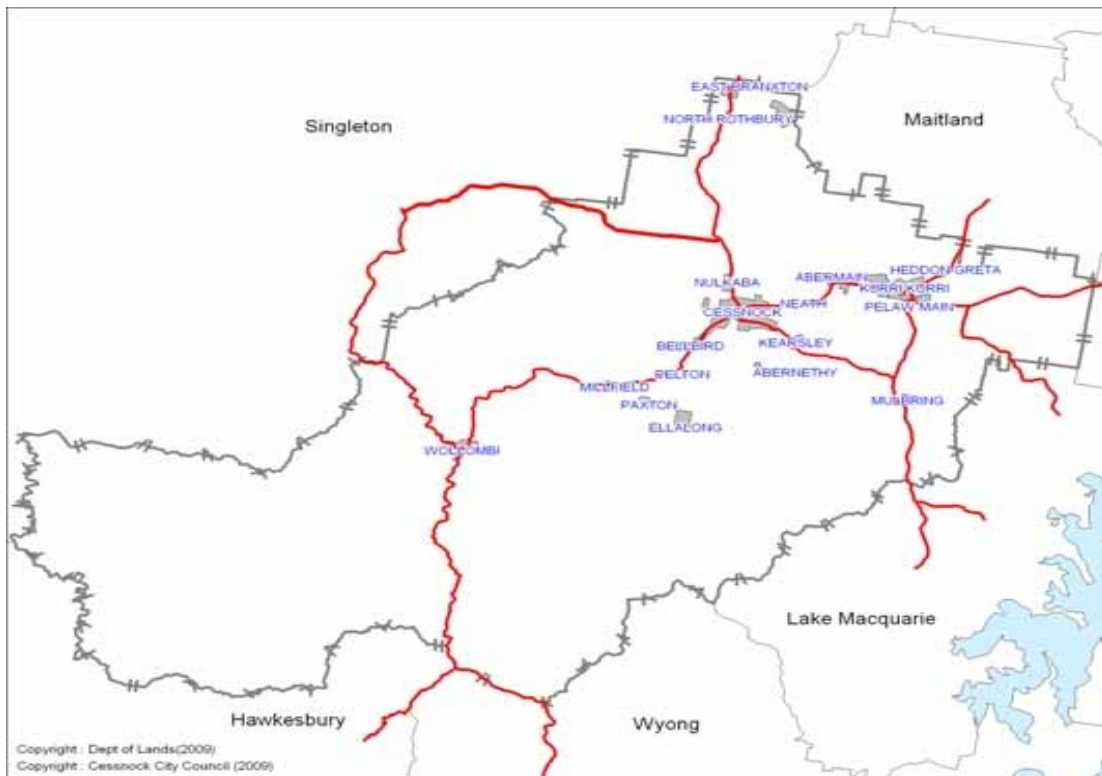
Figure 6: 2005 - 2008 Cessnock LGA Rainfall



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.

Boundary Map of the Cessnock Local Government Area



TOWARDS SUSTAINABILITY



ENVIRONMENTAL EDUCATION

Sign up for Sustainability

In May 2008 Council received advice of funding from the Environmental Trust to employ a project officer to undertake the "Sign up for Sustainability" program. The program is based on written pledges from the Community, commencing with an in-depth survey on the knowledge, awareness, attitudes and actions of a sample of the whole community. From this research a program of educational activities was developed to take to local service clubs, P&C Groups, youth groups and community events. A pledge system will be incorporated into the program whereby residents were 'signing up' to undertake specific actions to change their behaviour and improve their sustainability impacts. These pledges were then be tracked for evaluation purposes to see if actions are being undertaken and savings achieved.

The aim of this program was to promote and enable sustainable behaviour by residents of Cessnock LGA. The programs objectives were to:

1. Gauge level of the community's knowledge, awareness, attitudes and actions on urban sustainability issues.
2. Decrease participant household energy and water usage by at least 10%.
3. Increase participant knowledge of biodiversity and dry land salinity issues.
4. And, enable existing community groups to develop sustainability skills

The program also established 4 Home sustainability self audits kits for loan out to community members. Production of workshop materials (flyers, weblinks, brochures, access to Landcare trailer, etc) and outlines. The overall outcome of the program delivered a measureable reduction in participant energy and water consumption, and increased knowledge of local

biodiversity and dryland salinity in the Cessnock community, and local community groups empowered as local sustainability champions and the establishment of a network for further educational opportunities.

The outcome of the project was covered in a final report (*Sign Up for Sustainability*). That can be viewed on Council's website. Copies were also provided to the Environmental Trust

ACHIEVEMENTS

Delivery of the *Sign Up For Sustainability* project in Cessnock LGA significantly improved awareness of sustainability issues in the Cessnock community and provided valuable resources for community use.

The Council initiated project and outcomes were made possible through funding assistance from Environmental Trust, Hunter Water Corporation and the Department of Environment and Climate Change, and in kind contributions from the local community.

Encouraging households to change daily routines to implement energy and water saving measures produced significant reductions in household energy and water use. Continued reduction in household energy and water consumption through altered behaviour will subsequently produce a number of flow-on benefits to program participants, Council and the wider community. These include reductions to household natural resource consumption, CO₂ emissions and financial savings to program participants, the wider community of Cessnock LGA and benefits to Council's environmental education policy and programs.

Valuable educational resources developed through the project will provide the community with freely available information to further encourage and facilitate sustainable living practices. In particular the development of an ecological database for Cessnock LGA and sustainable lifestyle resources builds on Councils existing *Sustainability in Action* programs further increasing knowledge and raising awareness of urban sustainability issues.

The *Sign Up For Sustainability* project has provided a practical insight into the strengths and weaknesses of developing and maintaining programs with a focus on ecologically sustainable development (ESD).



SUSTAINABILITY IN ACTION

"Sign up for Sustainability"

Household Energy and Water Audit Kit

Sign Up For Sustainability Water and Energy Home Audit Kits have been developed using funding from NSW Environmental Trust, Hunter Water Corporation, Department of Environment & Climate Change. Cessnock City Council have placed the household audit kits in public libraries to provide households with the opportunity to borrow the kit to conduct energy and water audits in the home.

Audit kits tools include the following items with instructions for use:

- Mark 2 Energy Meter:** meter shows how much individual appliances cost to run.
- Power Point Timers:** timers refine appliance electricity use patterns.

Energy tools enable measurement of electricity consumption for electrical appliances in working and standby consumption.

- Garden Soaker Hose and Timer:** Hose & timer will help modify garden watering habits
- Shower Timer:** timers can be set to encourage you to take shorter showers.

Water tools provide instructions on how to reduce water consumption in the home:

Electricity and water audit kit tools and instructions help households to make simple changes to assist reduced household energy and water costs. Using audit tools in conjunction the information provided on Councils web site will identify additional opportunities to promote sustainable living practices in your home.



Water and Energy Home Audit Kit

For information *Sign Up For Sustainability*

HUNTER WATER

Further Information
www.cessnock.nsw.gov.au

CESSNOCK

Councils Biodiversity Webpage

Council has established this biodiversity web page to help increase awareness and protection of the important biodiversity values in the area so that the ecological character and quality of Cessnock can be maintained and improved.

As a part of The *Sign Up For Sustainability* program these educational and community resources have also been developed to build upon partnerships between Department of Environment and Climate Change (DECC), the Environmental Trust and Hunter Water Corporation.

Future assistance and information may be available through Council's Grants Officer who may assist the community and other stakeholders in understanding or participating in government, industry and community initiatives that promote Council's biodiversity policy and programs. Web resources provide links to and between:

- government agencies
- regional bodies
- non-government organisations
- volunteer community networks



COMMUNITY AND SOCIAL DEVELOPMENT

SOCIAL AND COMMUNITY PLAN

During 2008-09 the following actions were undertaken from the Social and Community Plan.

- The Local Area Planning Team Meeting was held on 8 occasions. The meetings were used to gather information regarding the best methods to engage and consult with the community. The Community Survey, a method of research for the upcoming Social and Cultural Plan 2009-2014 was devised and piloted by the team. A further project was a workshop with service providers to understand community service needs and strengths. The team also worked on a project that aimed to attract more General Practitioner Services within the Cessnock Local Government Area.
- Numerous consultations were undertaken with the Community, in preparation for the drafting of the Social and Cultural Plan 2009-2014. The consultations were successful in understanding community need and the identification of potential action strategies.
- The Cessnock and Anti-Violence Committee continue to work in partnership and deliver projects which aim to reduce family violence.

- Outreach activities targeted at youth, including those relating to social and recreation were delivered across the Local Government Area, by a number of Youth Services. Outreach activities included events at local skate parks, including bike and skating competitions. Additionally, there were many activities provided to young people as part of Youth Week. These activities were delivered and organised by a collection of youth services.
- A number of service providers have consistently met over the past twelve months to research the needs of young parents. An outcome has been the need to develop and organise an educational course that encourages and promotes engaging in further learning.
- The 2008 NAIDOC Event was well attended by both community members and service providers. Furthermore, the event allowed for networking between local Indigenous Service Providers and Cessnock City Council.
- Activities as part of 2009 Seniors Week were well attended by the local community. The calendar of events offered a diverse range of activities. The feedback for Seniors Week 2009 was positive.
- The strategy "To improve knowledge of the available services within the LGA" was achieved. For instance the community directory was updated, community and welfare services were promoted at a Seniors Week Event, and talks were held with community groups regarding the range of services on offer in the Cessnock Local Government Area.
- The Community Development Expenditure Scheme Committee for the Cessnock Local Government Area allocated approximately \$95,000.00 for social and welfare projects.

Crime Prevention

- Key community stakeholders and community service organisations were consulted in respect to crime and crime prevention. The community consultation process assisted in the identification of eight action strategies. The Cessnock Local Government Area Crime Prevention Plan 2009-2012 was subsequently adopted by Council in June 2009.

YOUTH SERVICES

In the past twelve months Cessnock Youth Centre and Outreach Service (CYCOS) had approximately 6,353 young people attend and participate in structured programs and drop-in services. Furthermore, CYCOS was involved in the delivery of youth events as part of Youth Week and have participated in numerous school based programs. In 2008, CYCOS delivered a series of workshops to young people with the aim of highlighting mental health issues and educating the range of supports that exist.

Transport

- The community has collectively advocated for a bus service from Cessnock to Morisset Station. As a result the service began its operations in July 2009.

Early Intervention and Prevention - Family and Community Violence

- The Cessnock Anti Violence Network continues to meet and is currently working on a range of programs that aim to reduce family violence within the Cessnock LGA.

Early Intervention and Prevention - Risk Taking / Antisocial Behaviour

- The Pirate Quest program was run in 2008. Pirate Quest was held within Local High Schools and was targeted to children in year seven. The program educates the range of community support services available to youth.

Early Intervention and Prevention - Aim: Health and Wellbeing

- The 'Active After Schools Sports' continues to operate at East Cessnock Primary School. This program is designed to make available a range of sports for children who may not be able to access traditional sporting opportunities and that can be played informally in the safety of their school grounds.

Community Ownership and Pride

- The East Cessnock Cottage, an initiative of the Department of Housing, has been an appropriate base for many social services to deliver a range of outreach programs to the community. The East Cessnock Residents Committee continues to meet at the cottage.
- The Cessnock Shed and Community Garden (a project auspiced by the Samaritans) continues to deliver a variety of programs at the site.

Community Facilities Dollar for Dollar Grants in 2008-09 were:

- Abermain Plaza Hall – purchase of floor cleaner and 2 chair trolleys
- Bellbird Community Hall – replacement of boundary fencing and gates along the front and side of the hall
- Branxton Community Hall – purchase of new refrigerator
- Branxton Playgroup – upgrade of playground including purchase of new play equipment and top up of safety surfacing
- Branxton Preschool – installation of shade shelter over playground and repaint exterior of 1 classroom
- Cessnock Multipurpose Children's Centre – purchase of new tables, chairs, high chairs, play equipment and a book shelf for the day care room
- Cessnock Occasional Childcare Centre – purchase of new tables, chairs and high chairs to cater for all children attending the centre
- Greta Community Preschool – purchase of outdoor tables and chairs and play equipment
- Hunter Prelude EIC – purchase of 20 Bilibo chairs for children with special needs
- Kurri Kurri Community Centre – to prepare and paint meeting rooms and offices
- Kurri Kurri Kidzone Playgroup – installation of shade cover over play equipment
- Kurri Kurri Senior Citizens – purchase of 8 tables
- North End Community Hall – convert storage room into bar area, repairs to male toilets
- Weston Civic Centre – purchase of 100 stackable chairs
- Weston Community Preschool – painting and carpeting the interior of the preschool
- Wollombi Community Hall – the purchase of wine glasses to complete table settings for 100 people
- Wollombi Valley Progress Association – replace existing stove top and purchase 30 new chairs

Recreation works completed in 2008-09 include the following:

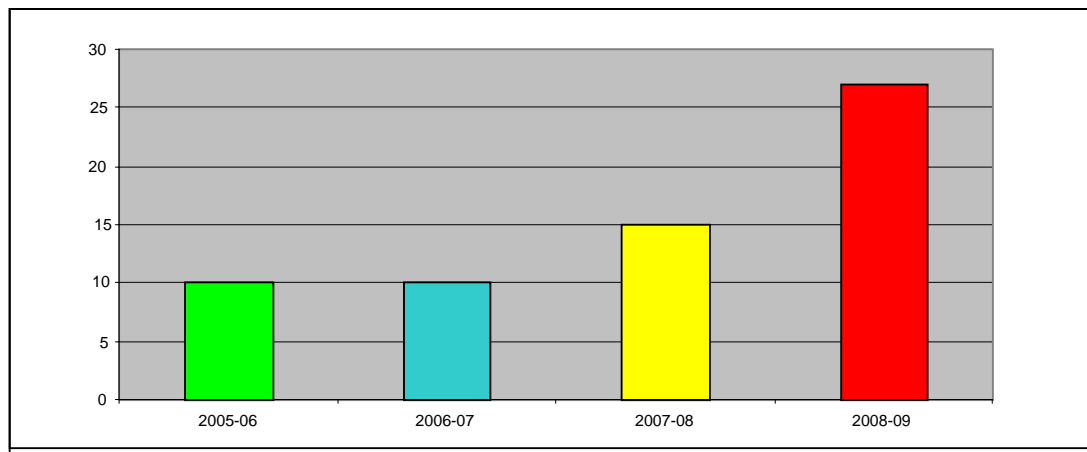
Minor Works:

- Improvements to Councils sporting fields through the slicing, application of fertiliser & herbicide, and top dressing programs, maintenance of parks signage and review of planning documents for all facilities.
- Howe Park Abermain – planting of advance stock trees
- Booth Park Kurri Kurri – installation of picnic seating and concrete slab beneath existing shelter, improvements to practice cricket nets
- Millfield Oval – picnic shelter and aluminium bench seating
- Margaret Johns Park Kurri Kurri – extension to irrigation lines
- Slacks park Wollombi – refurbishment of picnic shelters and 115 chain mesh fencing
- Lions Park Branxton – installation of a picnic shelter and seating
- Peace Park Weston – concrete pathway to link carpark to picnic facilities

Capital Works:

- Manning Park Cessnock – fire fighters training facility
- Greta Central Oval – stage 3 fencing
- Mulbring Oval – demolition of existing cricket nets and replacement with 2 new sets in partnership with Cricket NSW
- Greta Central Oval – installation of synthetic surface on tennis court in partnership with Greta Tennis Club
- Baddeley Park Cessnock – fencing and pathways at hockey centre
- Miller Park Branxton – installation of automatic irrigation on main soccer field
- Jeffrey's Park Kearsley – installation of 110m weldmesh fencing
- Cessnock Netball Courts – garden improvements
- Apex Park Cessnock – stage 2: Park upgrade. Installation of pathways and advanced stock
- Howe Park Abermain – successful with the grant from NSW Sport and Recreation, as a result 2 floodlighting poles were installed.

Community Facilities Dollar for Dollar Grant Projects 2005-2009



TIDY TOWNS PROGRAM

Some changes to the Tidy Towns program were introduced by Keep Australia Beautiful Council (KABC) at the start of 2007. The most notable of these was the change of the program name to "Tidy Towns – Sustainable Communities". The name change was introduced to better describe the activities of Tidy Towns groups across the state that not only focus on tidy streets, litter prevention and beautification but also are involved in conservation and restoration of bushland, historical and cultural heritage, and recycling and resource recovery to minimise the community's impact on the environment.

Council continues to support the Tidy Towns Program through a Dollar for Dollar Grant Program, payment of annual fees to 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.

During 2007-08 a new Tidy Towns group was formed in Paxton bringing the total in the LGA to 13.

As in previous years Tidy Towns from the Cessnock LGA groups received a variety of awards for outstanding community and environmental projects here are the winners for 2005-2009

Awards for 2008-2009

- Cessnock Tidy Towns winner of category D for the Waste & Reuse Centre 3rd place in Cat E overall town
- Greta Tidy Towns winner Cat 4 School Environment Highly Commended _ Clubs Partnership
- Kurri Kurri Tidy Town highly Commended Cat 1 Schools Environment Winner Cat D Water conservation project Kurri TAFE

Awards for 2007-2008

- Abermain-Neath Tidy Towns was awarded:
 - Highly Commended in Population Category C
 - Cultural Heritage Award in population category C for the Abermain Eistedford
- Wollombi Tidy Towns received:
 - Highly Commended in Population Category A for their Millpond Walkway.
- Kurri Kurri Tidy Towns were awarded:
 - Litter Prevention and Waste Minimisation Award for their submission on Council's Waste and Reuse Centre
 - Highly Commended in the Energy Innovation Award in Population Category D for their entry on behalf of the Kurri Kurri TAFE Campus – "Managing their Environment with innovation".
- Cessnock Tidy Towns received:
 - Civic Partnership Award Population Category E for their entry of the Walking Trail Booklet, and Friendly Town Award Population Category E for the second year in a row

Awards for 2006-2007

- Greta Tidy Towns was awarded:
 - Winner in population Category C for a project called "We Collect our Refuse" in the Litter Prevention Category.
 - A Highly Commended award for the project of "Our Communal Oasis (Whitburn Dam)" in the Wildlife Corridors and Conservation Category.

A highly commended award for the project "Your Aim Will Help" in the Waste Minimisation Category

- Greta Workers Sport and Recreation Club Limited received a Highly Commended award in population Category C in the Clubs Partnerships Category.
- Abermain – Neath Tidy Towns won an award in population Category C for projects completed as part of "Abermain Neath Tidy Towns and Cessnock City Council Community Partnership" in the Tony McCrane Memorial Category for Civic Partnerships.
- Kurri Kurri Tidy Towns received a Highly Commended award in population Category D for the "Towns with Hearts Community Mural Project" in the Tony McCrane Memorial Category for Civic Partnerships.
- Cessnock Tidy Towns was awarded:
 - Winner of the Tony McCrane Memorial Category for Civic Partnerships for "Conway's Corner Park Improvements" in population Category E
 - 1st place (population Category E) in the Friendly Town award.
 - 3rd place over all (in population Category E) in the State Award.
- Highly Commended Cat D Overall Town

Awards for 2005-2006

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

Tidy towns Projects funded from the Dollar for Dollar Grants during 2005-09

Projects undertaken during 2008-2009

- Sandstone cladding of Bendeich Fountain a& Garden - Branxton
- Seating Log of Knowledge Park - Kurri
- Additional seating along walkway between Kurri & Heddon Greta
- Push mower & replacement ride -on mower - Weston
- New brushcutter - Laguna
- Seating at Millpond – Wollombi

Projects undertaken during 2007-2008

- Construction of concrete path in Centenary Park, Abermain / Neath
- Supply of equipment (lawn mower, whipper snipper, ladder, bull float and docking saw), Weston
- Stencilled concrete round Noticeboard and Log at entrance to Log of Knowledge Park, Kurri Kurri
- Purchase of ride on mower, Ellalong.

Projects undertaken during 2006-2007

- Work to Snake Gully water refuge and photos for Neath noticeboard.
- Signage for the Convict Trail on Heritage Rd, Bucketty.
- Upgrading of the garden at Log of Knowledge, Kurri Kurri.
- Construction of a concrete path to the Mill Pond, Wollombi.
- Construction of garden beds near the picnic shelter on Wollombi Rd, Millfield.

Projects undertaken during 2005-06 include:

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

ECONOMIC DEVELOPMENT

2008 YEAR IN REVIEW - WINE AND TOURISM

The Recovery from the 2007 Queens Birthday storms and flooding weekend was aided by the August major advertising campaign which flowed through to most of 2008 in all categories with positive annual comparative growth as displayed in the various sector charts.

The introduction of measures for Conferencing has been a large step in understanding the value that this brings to the region, and tagged as Business Tourism. Collection of this data has been limited mainly to the Resort sector that has the facilities to offer package stays and small to large scale conference rooms.

Growth in Cellar Door outlets and Accommodation units levelled out compared to previous years, though two of the major Resort facilities continued extensions to their inventory that will come on line during 2009 – 2010.

Tourism Dollar Spend.

This is the sixth year that dollar spend figures have been presented, and in some cases there has been adjustments to methodologies in calculations for the prior year to ensure correctness and continuity for future charts.

Assistance from the research group and notable director in establishing the formula's used in each category to determine outcomes has been appreciated.

All figures were calculated using monthly results with separations and daily trading figures, and expressed as dollars over the following number of businesses.

- **There were 115 Wineries, 109 of which had cellar door trading.**
 - Results were calculated on the number of trading days for each cellar door.
 - Tourism spend was calculated on the monthly daily average of each category group.
 - Non-wine product has been calculated on the monthly percentage of non-wine to total product sold.
- **There were 191 accommodation establishments that account for 1983 rentable units. (See following notes on this page for changes)**
 - Results were calculated on the established categories occupancy percent, with mid-week and weekend separation.
 - Tourism spend was calculated on their advertised rack rate less 15%, faded in during the year as the additional units came on line.
- **There were 60 Cafes and Restaurants (excluding fast food chains and licensed member Clubs).**
 - Results were calculated on covers as a percentage of the total number of licensed seats, or available seats if un-licensed.
 - Tourism spend was calculated on covers for each session and average lunch and dinner fare inclusive of wine if licensed.
- **There were 20 Wedding Reception Venues recognized (not counting Wedding Ceremony Venues)**
 - The objective was to count the number of Wedding receptions including Guest numbers and Wine consumption.
- **There were 12 properties recognised that had the facilities to conduct Conferencing including overnight accommodation in HVWC region.**
 - The object was to recognize the value of Business Tourism to the region, and market the success for ongoing growth in this sector.

Notes on Sector results:

Wedding Reception revenue is based on the count of wedding guests from the data received multiplied by a mean average of \$72 per head. This figure does not include accommodation costs or cellar door spend as it is covered in the major figures for those sectors. Other exceptional costs such as vehicle hire, flowers, church hire, celebrants and photography are not monitored.

Note that Golf Revenue conservative estimate is based on a declining 10% P/A since 2004 and 2005 when figures were submitted.

Other major tourism spend areas such as, The Gardens and more so Concerts, generate large tourist visitation and revenue that are not monitored.

TOURISM VISITORS 2008

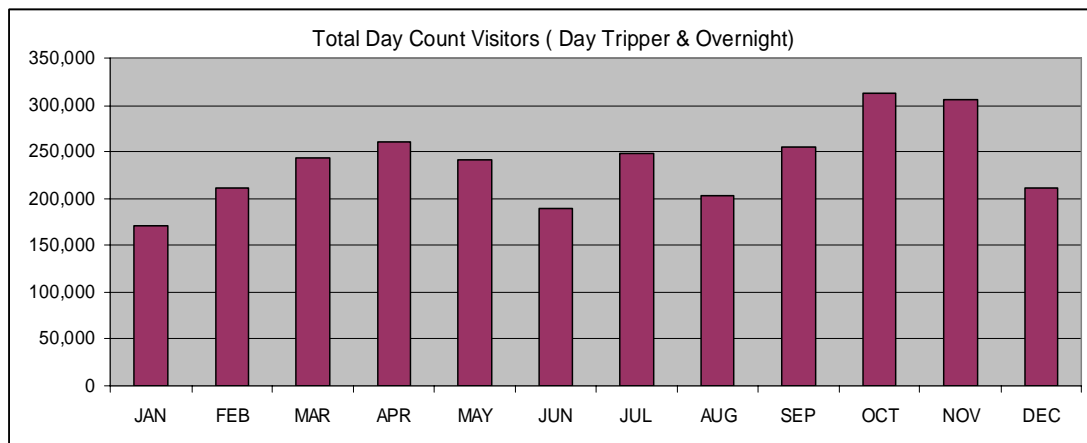
To determine the number of Tourists or Visitors to Hunter Valley Wine Country during the past years, a number of fact gathering surveys have been used to determine visitor/nights and day-tripper ratios.

Other information needed was gathered only at Cellar Door outlets, asking whether the visitor was staying overnight or day tripping, along with other relevant information directed to the cellar door experience. (with thanks to the H.V.W.I.A. cellar door forum committee)

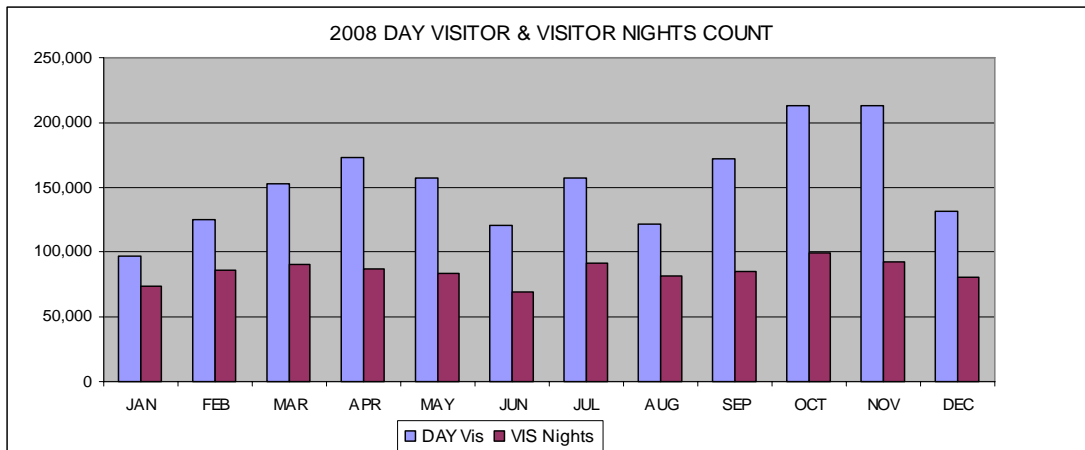
The outcomes of the research were combined with accommodation occupancy figures and average unit/person stay numbers each month to produce the number of people staying in Wine Country, with sums developed to produce day-tripper numbers.

Using the formulas and percentages attained, the first graph displays both Visitor/nights and Day-tripper numbers to produce daily count visitor numbers;

Total Visitor Count Chart 2008



The above chart is the daily count of both Day Trippers plus Overnight stay, totalled for each month



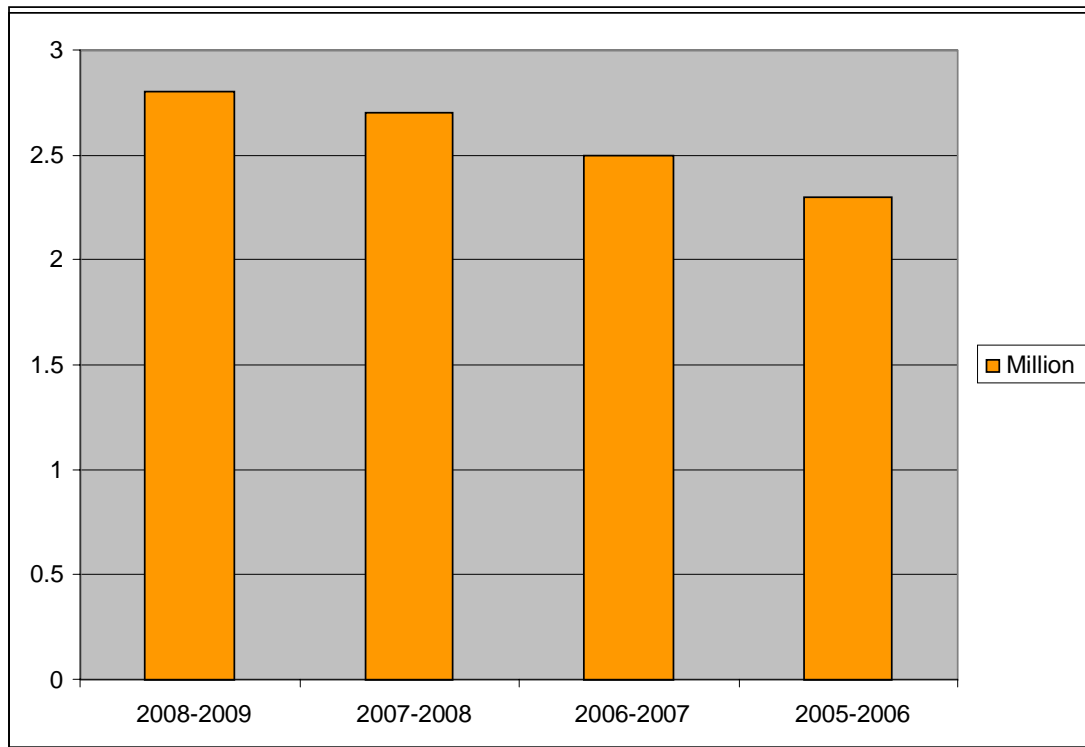
TOTAL CALCULATIONS

Daily count of Visitors

Daily Count Visitor Nights:	1,020,089	+2.4%
Day-tripper Visitors:	1,832,650	+6.8%
Total Day Count Visitors 2008:	2,852,739	+5.2%

<u>Over Night Visitors:</u>	468,698	+2.5%
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Total Day Count Visitors 2005-2009



Overnight Visitors, unlike day count visitor nights is the Actual number of people who visited the region that include on average 1.8 nights stay with 2.2 people staying per unit Mid-week and 2.6 people staying per unit Weekends.

The increases in Day Trippers and Visitor Nights can be attributed to the large increase in visitors to the major events in the latter part of the year and follow-on from the major marketing campaign launched in late 2007 and follow up early in 2008.

GRANTS

Cessnock City Council believes strongly in investment in community, demonstrated through participation in community, cultural and environmental activities, and support of local business and preservation of heritage. Council aims to draw on these strengths and provide the support which will help them flourish and grow.

Council has a number of grants and a sponsorship program which provide funding across a range of activities encompassing community, cultural, environmental and economic. The funding and support provided through these programs supports a diverse range of services and projects that directly benefit the Local Government Area.

The provision of grants and sponsorships are also a mechanism for Council to further the aims identified in social, economic, environmental and cultural policies; applications are assessed against these policies and against broad Council objectives and plans.

Grants are defined as funds given to organisations to assist with the services or projects which they provide, where the Council only receives acknowledgement as the grant giver.

Types of Grants:

- Federal - Federal funds are all monies received directly from the Australian Federal Government, the expenditure of which is administered through or under the direction of any Federal agency.
- State - Tiered funding to other levels of government (local). These grants provide the main source of general revenue for local government.
- Local - a grant of Federal or State funds, allocated for specific programs, that a local council may use for initiatives it wishes to fund.
- Philanthropic - The effort or inclination to increase the well-being of humankind, as by charitable aid or donations by organisations.
- Charitable Foundations - A foundation is a legal categorisation of non-profit organisations. Foundations may also and often have charitable purposes.
- Community Trusts - Community Trusts are created for the purpose of providing money, property or benefits to or for eligible charities or for the establishment of eligible charities.

GOVERNANCE

INTEGRATED MANAGEMENT SYSTEM

Councils Integrated Management System (IMS) has been developed by the Infrastructure and Services Department to meet the requirements of the RTA Single Invitation Contract and the requirements of the International and Australian Standards for Quality ISO 9001:2000, Environmental ISO 14001:2004 and OHS Management Systems AS 4801:2001. The documentation has also been written to comply with the NSW Government OHS and Environmental Management System Guidelines.

During July 2008 SAI Global conducted surveillance audits of these systems and Certification was continued. No non-conformances raised. 6 Areas of Concern and 10 Opportunities for Improvements were raised. These are currently being addressed as System Improvement Requests.

In November 2006, Council achieved prequalification to R5 which allows Council to tender for projects with the RTA to \$5 million. The prequalification status also means that Council's Integrated Management System meets the requirements of RTA Specifications Q6 Quality, G22 Occupational Health and Safety and G36 Environmental Management Systems. Currently Council is developing systems to comply with the new RMCC Contracts (Road Maintenance Council Contracts).

Hunter Region Business Excellence Awards

THE WINNERS OF THE 2008-2009 HUNTER REGION BUSINESS EXCELLENCE AWARDS INCLUDED:

Arts and Crafts	Hobby Hampers, Beresfield
Restaurants, Cafes	The Verandah Restaurant, Pokolbin*
Fresh Produce	Valley Fresh Flowers, Buchanan*
Highly Commended Certificate	Ridgey Didge Pies, Abermain*
Business Services	Alliance People Solutions, Maitland
Health Services	Maitland Physiotherapy & Sports Injuries, East Maitland
Hairdressing/ Beauticians	Johannes Hairtique, Kurri Kurri*
Construction/Home Improvements	Topline Garages & Sheds, Kearsley*
Highly Commended Certificate	Cronan's Design & Drafting, Ashtonfield
Highly Commended Certificate	BMB Painting & Decorating, Maitland
Entertainment	Body and Soul Healthworks, Maitland
Highly Commended Certificate	Maitland PCYC
Financial Services	Mortgage Choice Cessnock*
Trades, Manufacturing	Newcastle MBA Group Training, Broadmeadow
Tourism and Accommodation	Segenhoe Inn, Aberdeen
Highly Commended Certificate	Quest Maitland Apartments
Export	Tuffrock Pty Ltd, Weston*
Innovation Award	Online Safety Systems, East Maitland
Highly Commended Certificate	Hummingbird Electronics, Singleton
Home Based Business	Christine Jones Conveyancing, Wallalong
New Start Business	Industry Recruitment Solutions, Maitland
Retail	Covelli, East Maitland
Environmental Excellence in Business	Somewhere Unique, Wollombi*
NEIS Business of the Year	Health.Habits4Life, The Junction
Indigenous Business	Ungooroo Aboriginal Corporation, Singleton
Customer Service Award (Lower Hunter)	Ravi Arora, Zaffrans Indian Restaurant, Maitland
Customer Service Award (Upper Hunter)	Two Rivers Wines, Denman
Business Woman of the Year	Cherie Donovan, Segenhoe Inn, Aberdeen
Highly Commended Certificate	Ali Binskin, Contours Raymond Terrace
Business of the Year	MBA Group Training, Broadmeadow

Cessnock Local Government Businesses are highlighted in blue*

HUMAN SETTLEMENTS

AT A GLANCE

Population and Settlement Patterns			Data Gaps: On-site wastewater treatment systems requiring maintenance or working effectively is unknown. Noise quality monitoring data for the LGA is required.
State	Increasing	Continued urban, rural and rural-residential expansion.	
Pressure	Increasing	Demand for land in LGA is placing pressure on undeveloped areas. Few local employment opportunities, isolation and lack of public transport adding to this issue.	
Response	Good	Cessnock DCP 2006 adopted.	
Drinking Water			
State	Stable	5,343,271kL of water consumed in the LGA during 2008-09, an approximate increase of 10 % on last year's consumption.	
Pressure	Stable	Demand continues to increase with population and development. Additionally, average household consumption decreased by 14% on 2006-07.	
Response	Limited	Hunter Water continues to undertake programs such as envirosaver and water tank rebates .	
Transport			
State	Poor	44,169 vehicles registered in the LGA. Private vehicles continue to be the main mode of transport in the area.	
Pressure	Increasing	Lack of public transport and isolation are increasing pressure on this issue.	
Response	Limited	Pathways Program constructed 0.3kms of pathway.. Transport initiatives (including Road Safety program) continues being implemented.	
Waste Management			
State	Increasing	34,190 tonnes of waste was landfilled; 3,971 tonnes of recyclables were collected from kerbsides; a further 9,403 tonnes was diverted from the landfill; and 5,096 ML of waste water was treated during 2007-08.	
Pressure	Stable	The amount of solid and liquid waste has remained constant on a per person basis.	
Response	Good	Numerous waste reduction and recycling programs being undertaken in the LGA.	
Tranquillity and Noise			
State	Unknown	No noise quality monitoring has been undertaken in the LGA. 94 noise complaints (32% about motor bikes) received by Council.	
Pressure	Stable	Noise issues have remained stable on past years.	
Response	Limited	Issues of noise are considered in the development consent process and the EPA regulates noise generating premises. Changes to POEO (Noise Control) Regulation aimed at providing simple, straightforward and enforceable noise controls.	

RESPONSES TO POPULATION AND SETTLEMENT PATTERNS ISSUES

STATE ENVIRONMENTAL PLANNING POLICIES

On 31 July 2009, State Environmental Planning Policy (Affordable Rental Housing) 2009 commenced. The aims of the SEPP are as follows:

- (a) to provide a consistent planning regime for the provision of affordable rental housing,
- (b) to facilitate the effective delivery of new affordable rental housing by providing incentives by way of expanded zoning permissibility, floor space ratio bonuses and non-discretionary development standards,
- (c) to facilitate the retention and mitigate the loss of existing affordable rental housing,
- (d) to employ a balanced approach between obligations for retaining and mitigating the loss of existing affordable rental housing, and incentives for the development of new affordable rental housing,
- (e) to facilitate an expanded role for not-for-profit-providers of affordable rental housing,
- (f) to support local business centres by providing affordable rental housing for workers close to places of work,
- (g) to facilitate the development of housing for the homeless and other disadvantaged people who may require support services, including group homes and supportive accommodation.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 commenced on 27 February 2009. The SEPP seeks to streamline assessment processes for development that complies with specified development standards. The policy provides exempt and complying development codes that have State-wide application, identifying, in the General Exempt Development Code, types of development that are of minimal environmental impact that may be carried out without the need for development consent; and, in the General Housing Code, types of complying development that may be carried out in accordance with a complying development certificate as defined in the EP&A Act 1979.

Branxton F3 Link

Branxton is located to the north of the Cessnock LGA at its boundary with both Singleton and Maitland LGA's. The population of Branxton relies significantly on higher-order commercial centres within the other LGA's. Branxton is located on both the New England Highway and the rail corridor.

The proposed F3 highway extension is expected to generate significant growth in this area, and this is reflected in the recent Branxton-Huntlee proposal. This "new town" development site estimates a residential lot yield of 7200 lots, 300 rural – residential lots, and 160 hectares of land for employment (commercial and industrial). The majority of this development site lies within the Cessnock LGA, between Branxton and North Rothbury

RESPONSES TO DRINKING WATER ISSUES

Domestic water consumption for the Cessnock LGA was 3,231,196kL averaging out to 188kL per household and 117kL per flat/unit. Industrial, Commercial and Agricultural users consumed another 2,112,075kL. This data was supplied by Hunter Water based on the water year which is 20 April 2008 to 19 April 2009. This represents an increase in water consumption in the LGA from 2007-08 as displayed in the Figure 3 over.

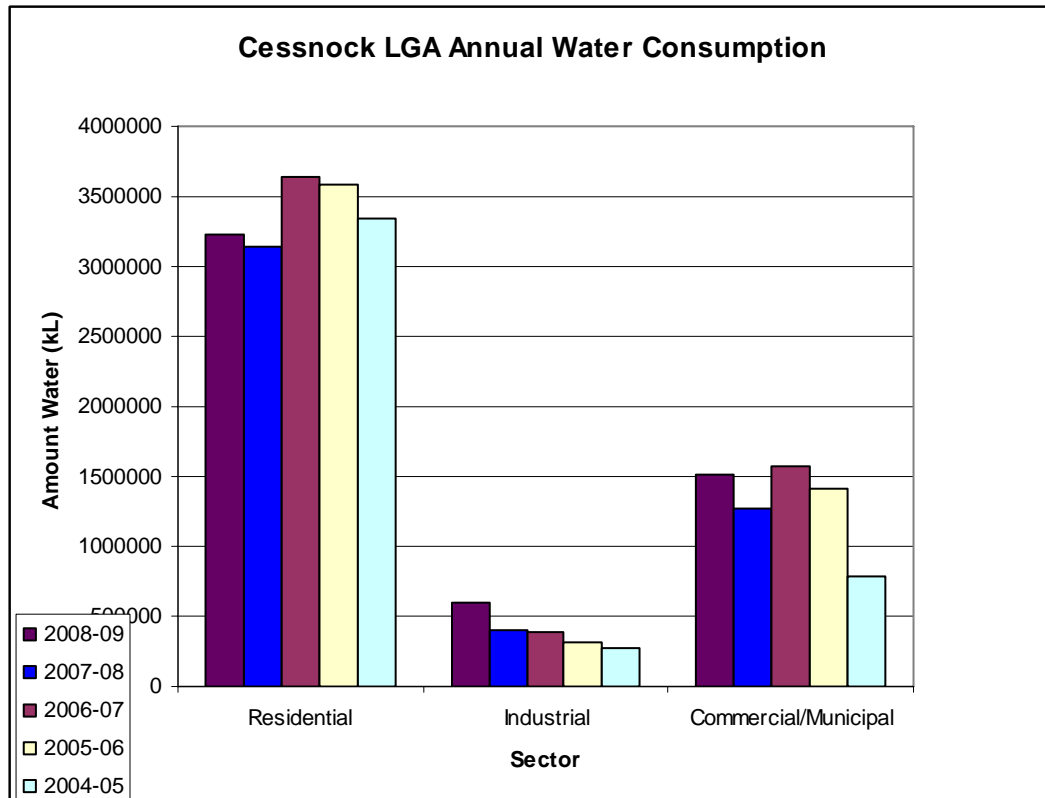


Figure 3: Annual Water Consumption in the Cessnock LGA

Total Water Storage – 30 June 2009

System	Capacity	Total Volume	% full
Grahamstown Dam	188,117ML	189,991ML	100.0%
Chichester Dam	21,590ML	21,500ML	99.0%
Tomago Sandbeds	60,000ML	60,000ML	100%
Anna Bay Sandbeds	11,580ML	16,024ML	72.3%
TOTAL	281,197ML	287,515ML	97.8%

RESPONSES TO TRANSPORT ISSUES

VEHICLE REGISTRATIONS

During 2008-09, there was an increase of 1,162 vehicles registered in the LGA from 2007-08. Figure 6 shows a breakdown of types of vehicles registered in the LGA as at 30th June 2009 and Figure 7 a comparison with the 2007-08, 2006-07 and 2005-06 registrations. Additional data on fuel types of registered vehicles was also provided by the RTA for 2008-09, this is displayed in Figure 8. It is interesting to note that vehicles run on leaded fuel has dropped to 5% from 2006-07 and those running on LPG has increased to 2.5% from 2006-07.

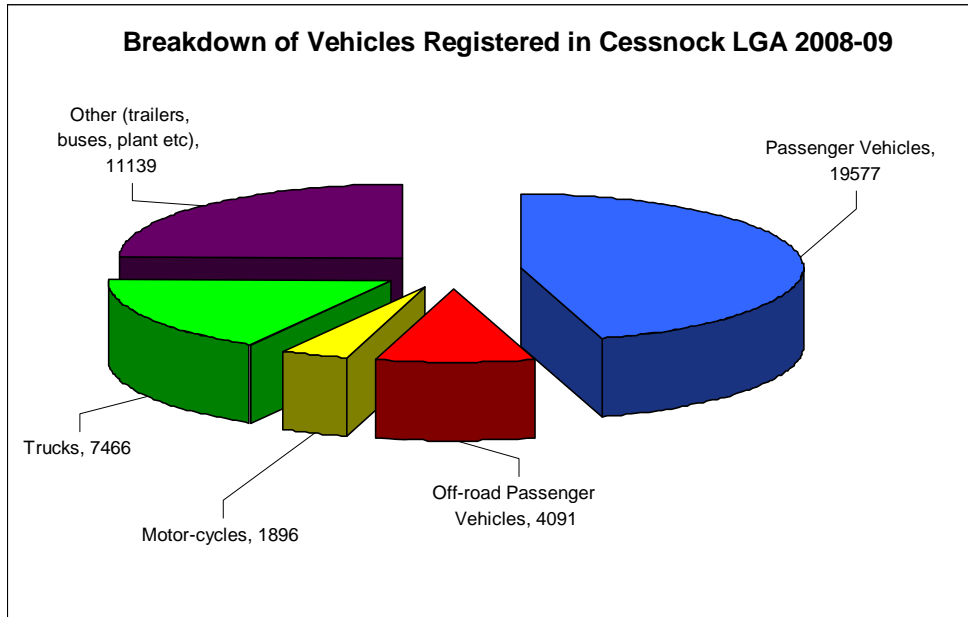


Figure6: Breakdown of types of vehicles registered in the Cessnock LGA.

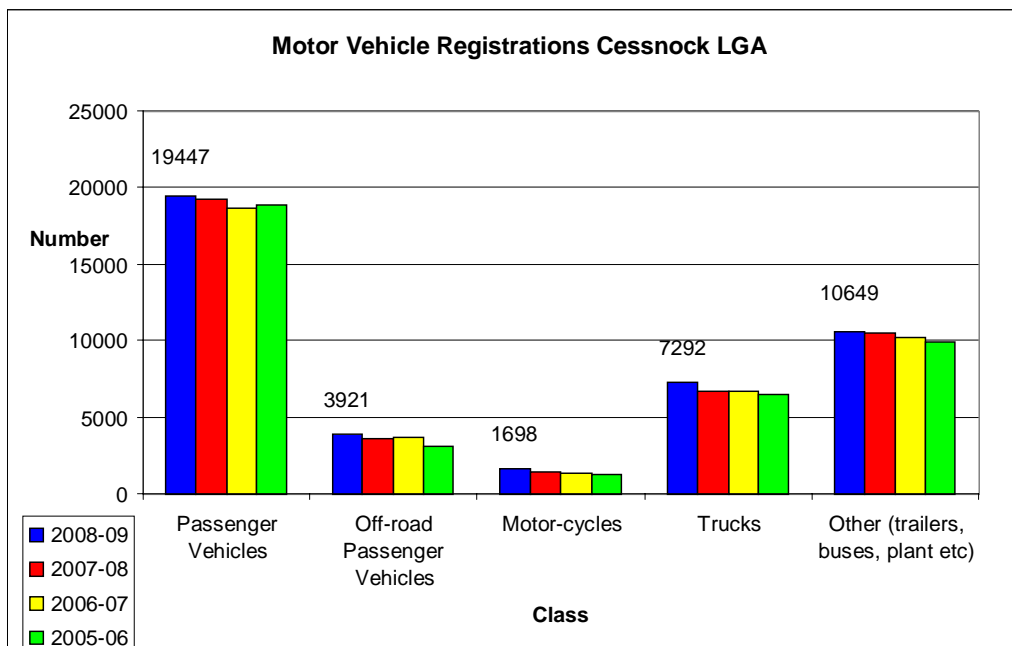


Figure 7: Comparison of vehicles registered in Cessnock LGA over time

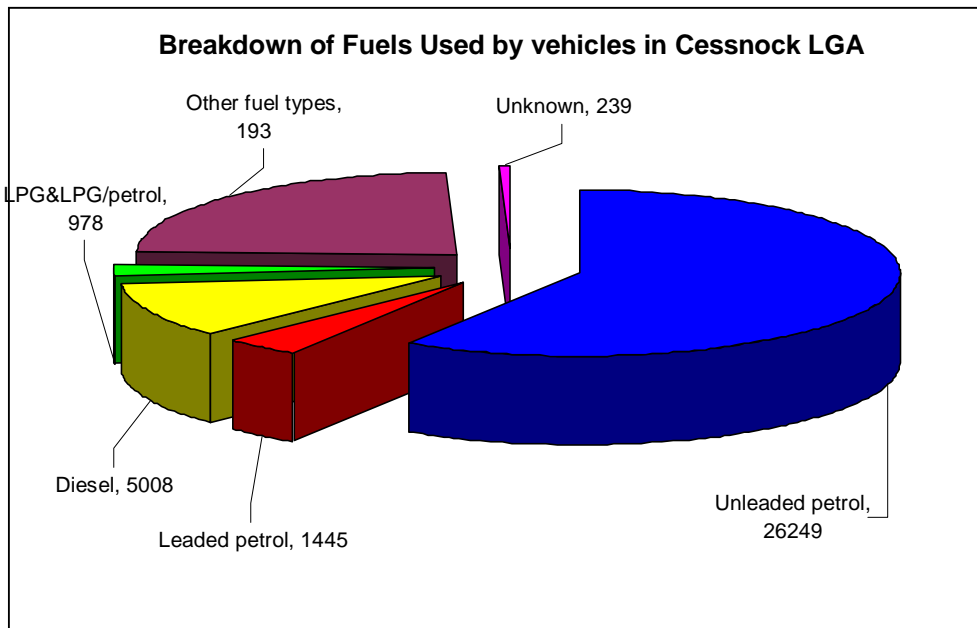


Figure 8: Breakdown of fuel types used by vehicles registered in the Cessnock LGA 2008-2009.

LGA PATHWAYS PROGRAM

In 2008-09 two projects have been completed.

Footpath Mount View Road from Scott St. Pathway, Cessnock

Starting From the End of Existing Shared Cycleway to Scott Street

Length = 350m Width = 1.2m (No shared Cycleway require in this section, therefore concrete footpath) Area = 420 sq/m

Shared (Sealed) Cycleway from Sports Ave to Existing Foot Bridge (Stephen St) Cessnock

Length = 50m Width = 2m Area = 100 sq/m

RESPONSES TO WASTE MANAGEMENT ISSUES

SOLID WASTE MANAGEMENT

Landfill Extension

It remains apparent that there will be an ongoing need for landfill capacity for the foreseeable future. Through negotiation with the Dept of Lands, Council has secured suitable land adjacent to the existing landfill operations which will meet both immediate and long term needs.

Preparation of the environmental impact study (EIS) for the landfill expansion has been completed and a Development Application lodged in March 2009 (currently awaiting determination). The area includes a proposed landfill development site with capacity for approx 20 years and a waste investigation area for possible future expansion.

This development is part of an overall proposal to develop the Cessnock Resource Management Park that will include possible future development of crown land adjoining the current industrial subdivision and a dedicated environmental protection zone linking National Parks and State Forest. Council has been appointed as the Trust Manager, undertaking management of the environmental protection zone that will provide both buffer area to the proposed landfill and flora and fauna linkage between the National Park and State Forest.

Waste Disposal

During 2008-09, 34,190 tonnes of waste was landfilled at the Cessnock Waste and Reuse Centre. From the 1 of June 2007 the second of 5 annual State Government Waste and Environment Levy increases (aimed at significantly reducing the amount of waste sent to landfill) was imposed on fees charged at the Waste and Reuse Centre. Table 4 below provides a comparison of the quantity of waste landfilled at the Cessnock Waste and Reuse Centre over the last five years. A reduction in the amount of demolition works (as signified by a 95% reduction in asbestos received) may have contributed to the reduced amount of waste to landfill.

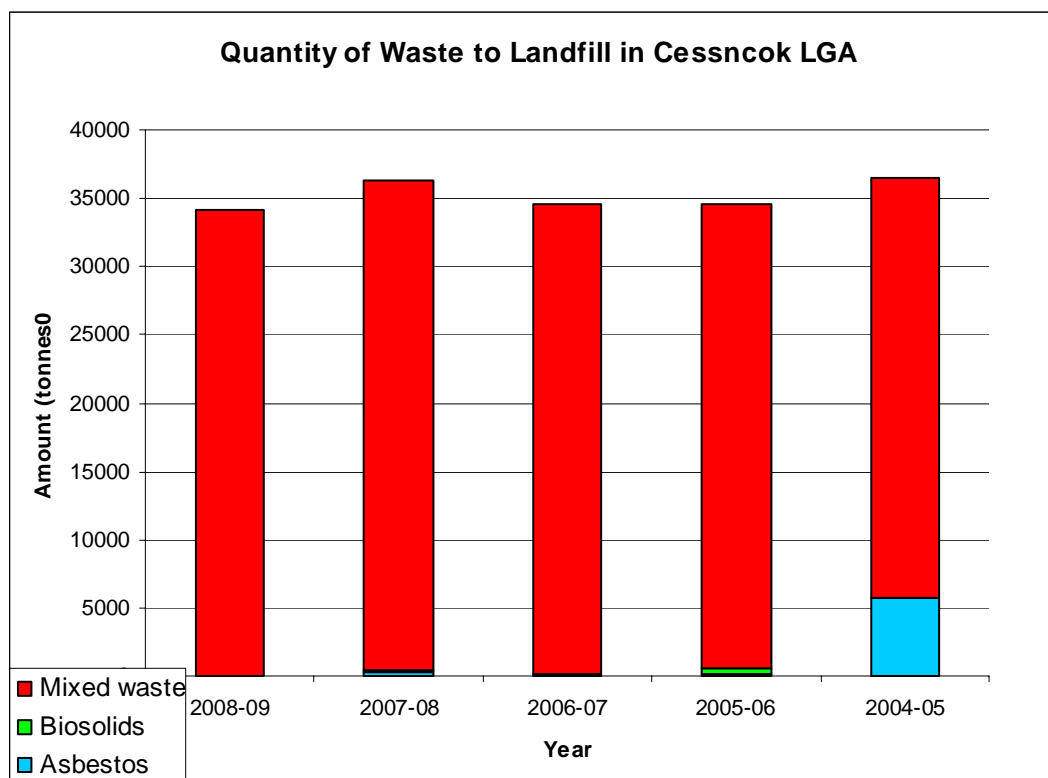


Table 4: Quantity of waste Landfilled at Cessnock Waste and Reus Centre for last 4 years.

Domestic waste expressed per person (using 2007 population) is equivalent to 0.68 tonnes (a decrease of 100kg per person on 2007-08) of waste produced during 2008-09. Note this does not include greenwaste, reprocessables or recyclables.

Waste Minimisation at the Cessnock Waste and Reuse Centre

During 2008-09, approximately 130 tonnes of paper and cardboard, 7,673 tonnes of greenwaste, and 1,000 tonnes of concrete waste was reprocessed and diverted from landfill. In addition, approximately 15,800L of used motor vehicle oil was collected from the waste oil recycling station, and 600 tonnes of metal recycled at the Waste and Reuse Centre.

Kerbside Recycling

During 2008-09, 3,971 tonnes of recyclables (down 6% from 2007-08 with an additional 439 households commencing the service) were collected through the kerbside service. The breakdown of the types and amounts of recyclables collected from the Cessnock LGA are shown in Figure 5 (along with a comparison to 2007-08, 2006-07, 2005-06, and 2004-05 collection amounts). The recycling of these materials equates approximately to saving enough electricity to power 3,500 homes; enough water to fill 22 Olympic swimming pools; and, removing 565 cars worth of greenhouse gas emissions from the roads for the year.

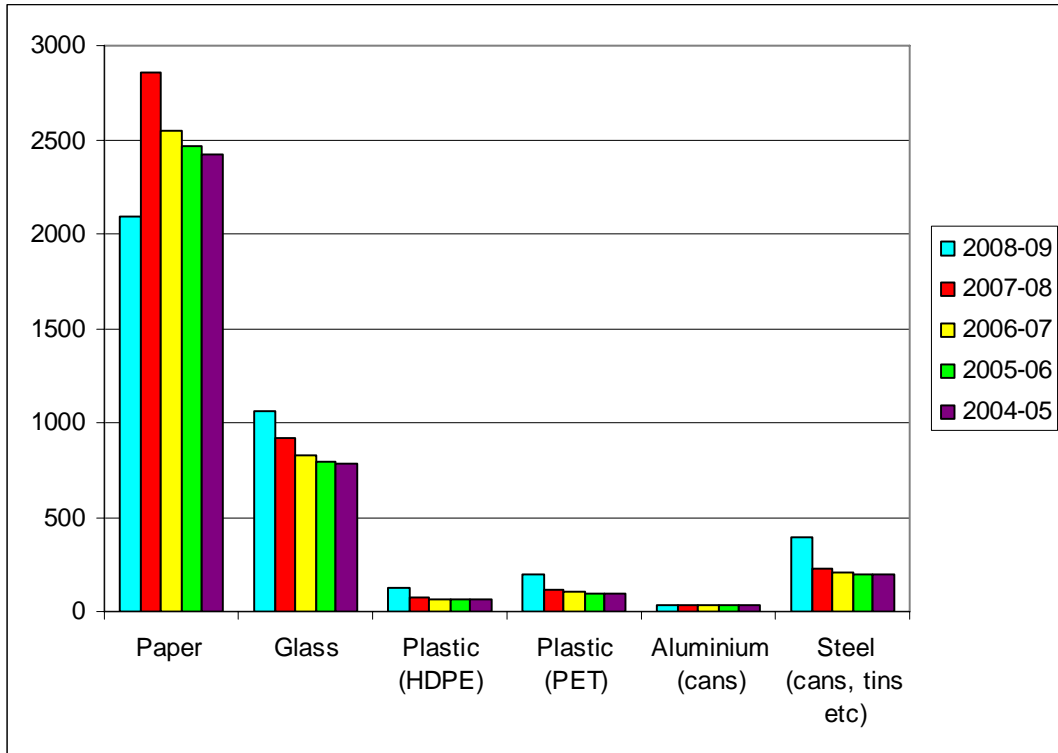


Figure 5: Cessnock LGA Recyclables Stream (tonnes for 2008-09 displayed and compared to 2007-08, 2006-07, 2005-06, and 2004-05 collection)

Hunter Resource Recovery Activities

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

- **Schools Program** - 28 schools in the Cessnock LGA now participate in the free schools recycling service.
- **Advertising Program** - advertisements were placed in the Cessnock Advertiser with positive reinforcement messages being used to coincide with National Recycling Week 2007. In addition HRR purchased space in the White pages Directory with the "How to recycle correctly" ad and the 1800 number appearing on page 278.
- **Sponsorship** - of one of the Mayoral Academic Awards in 2007 was undertaken and a contribution to the Mayoral Schools Challenge was made. HRR also sponsored the academic challenge and two MAA awards. A school presentation was held at Cessnock West Public School with 60 students attending.
- **Adopt-a-Road Program** - HRR ceased Sponsorship of Adopt a Road ending 7 years of community support.
- **Lifecycle Program** - Life Cycle collections in Cessnock LGA resulted in 3020 kilos diverted landfill avoiding 7.2 cubic meters of landfill use and reducing greenhouse gas by 122.5 tonnes.

E-waste recycling was introduced with Cessnock residents recycling 7560 kilos on the first collection with an average of 48.46 kilos per car setting a benchmark figure yet to be surpassed.

Domestic Recycling resulted in 3,901,630 kilos recycled for the period 08-09 down 9% on the previous year.

For more information on Hunter Resource Recovery go to www.hrr.com.au.

LAW ENFORCEMENT

Operation Ibis a success -11th May 2009

More than 60 officers spent the Mothers Day weekend identifying and catching people illegally dumping waste and illegally riding trial bikes through environmentally sensitive lands in the Cessnock LGA.

The multi agency team participating in the 2 day blitz represented Cessnock City Council, the Department of Environment and Climate Change, NSW Police, the Department of Lands, the Department of Premier and Cabinet, Hunter Councils, the Rural Fire Service and the Department of Primary Industries

'Operation Ibis' found 214 rubbish dumping sites, 56 asbestos dumping sites, 12 stolen and dumped vehicles, 12 unlicensed and unregistered trail bike riders and even managed to catch dumpers either in-the-act or through evidence left at the scene.

"This is the third operation conducted by the Hunter and Central Coast Regional Illegal Dumping Group (HCCRIDG), and unfortunately these results indicate there is still a significant problem with people dumping waste illegally in the bush around Cessnock," Cessnock Mayor Councillor Alison Davey said.

The Group formed in 2006 and is in the process of implementing a new three year strategy which will include ongoing blitz campaigns, clean ups, and education and data collection to help combat the problem. HCCRIDG concentrates solely on strategies to combat behaviour including investigation of illegal dumping incidents by identifying and tracking offenders by various strategies.

"As a consequence of illegal dumping, the local environment suffers through contamination of bushland, waterways, harming both plants and animals. The environmental also suffers from illegal trial bike riding through erosion and the destruction of local habitat" said Councillor Davey.

Illegal dumping penalties have increased significantly since May 2006 with corporations now facing a maximum penalty of \$5 million for or \$2 million for an individual and/or seven years' imprisonment if an individual is found guilty of wilfully committing an offence like illegal dumping.

The Hunter Region Illegal Dumping Group will continue the fight against illegal dumping and trail bike riding with future blitz campaigns planned for the region, however the Group is also asking community members to report any observations of dumping to help protect local bushland to the Environment Line on 131 555, which is available 24 hours, seven days a week. Community members are encouraged to document the following information when making reports:

- Street location of illegal dumping
- Types of dumped materials, whether you believe it constitutes a hazard
- Date and time of dumping
- Name and address of person(s) responsible
- Associated vehicle registration number(s), and
- Photographs of the incident(s) which may assist the prosecution.

Clean Up Australia Day

Approximately 240 community volunteers took part in Clean Up Australia Day activities on Sunday 1st March across 23 registered sites in the Cessnock Local Government Area (LGA), cleaning up roadsides, parks and waterways. In addition, 8 schools across the LGA registered for participation in the schools Clean Up Day activities conducted on 27th of February.

This year 26 tonnes of rubbish was collected and taken to the waste depot as a direct result of Clean Up Australia Day activities. The total waste received at the waste depot on the day was 102 tonnes. As in previous years residents getting into the Clean Up spirit were able to take waste to the depot free of charge. Individual letters of appreciation to groups from Council have also been sent with a feedback sheet to further develop and improve the event in Cessnock in 2010 as well as to develop other litter reduction programs with which to address this serious environmental problem. Cessnock City Council has also provided additional support to registered volunteers by issuing extra garbage bags, gloves, sunscreen and bottled water, which were well received by the community.

The participation by the community was down on last year, which may have been caused by the lack of advertising in form of posters. Posters were supplied in previous years and displayed in shops, servo's etc. in order to remind the local community of the upcoming event. Nevertheless, the event has been a great success again and with early planning next year, it will be even better.

Hunter Region Waste Project

This project is a joint initiative of the four member Councils (Cessnock, Lake Macquarie, Maitland and Newcastle) assessing the opportunity to apply technology in lieu of landfill to process the organic rich waste stream via anaerobic digestion.

The 20 year project will divert up to 160,000 tonnes of waste from landfill per year with outputs from the process including a soil enhancer (compost) suitable for broad acre application/rehabilitation such as open cut mine sites, electricity production and metal recovery.

The Heads of Agreement (agreement in principle) for the \$100M project was signed by the member Councils and contractor in November 2007. Work got underway to develop the Project Deed with expected completion in November 2008.

Operation was expected to commence by 2010, but on the 19/2/09, the HIR Board of Directors resolved not to proceed with the project after significant cost escalation encountered due to the worldwide financial crisis & the uncertainty of pending legislation. The company remains operative with a view that it may be used as the vehicle for regional participation if further (regional) opportunity eventuates in the future.

LIQUID WASTE MANAGEMENT

Wastewater Treatment Plants (WWTP)

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

FREE EWASTE COLLECTION DAY

Cessnock residents have been given the chance to collect all those unwanted electrical items from around their homes to finally get rid of them. Hunter Resource Recovery (HRR) has conducted its first eWaste collection on Saturday the 13 June 2009. The initiative has resulted in the recovery of valuable resources and contributed to the reduction in potentially toxic landfill.

HRR has collected TVs, DVD and CD players, stereos, microwave ovens, computers, printers, mobile phones, fax machines, kitchen appliances and other portable electrical items like hair dryers and hand tools.

The service is for residents only and you will need to provide ID to the staff when you make your drop off. This service is provided to residents classed as domestic/residential only. For more information check out the [Hunter Resource Recovery website](#)

The first eWaste collection day has been a great success as the figures indicate in the table below: The next eWaste collection day has been scheduled for 10th October 2009.

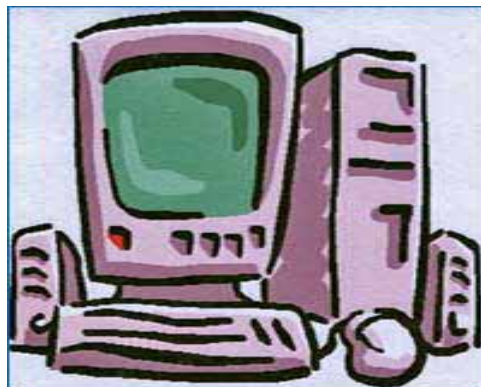
Cessnock

13th June 2009	Turner Park Cessnock
Site users:	156
Tonnes collected:	7.56
Kilograms collected:	7,560
Average per user:	48.46kg

Percentage of product disposed of:

Computers and monitors:	70%
Televisions:	20%
Assorted electrical items:	10%
Mobile phones:	17

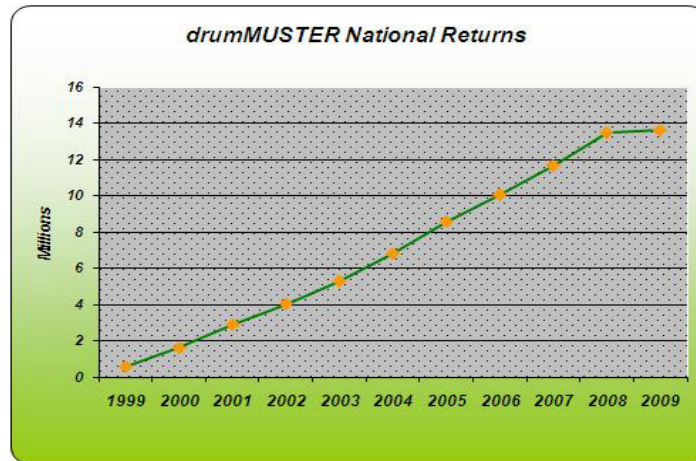
Hunter Resource Recovery is an initiative of Cessnock, Lake Macquarie and Maitland City Councils representing an estimated 33500 residents with 115811 homes serviced each fortnight.



drumMUSTER Snapshot

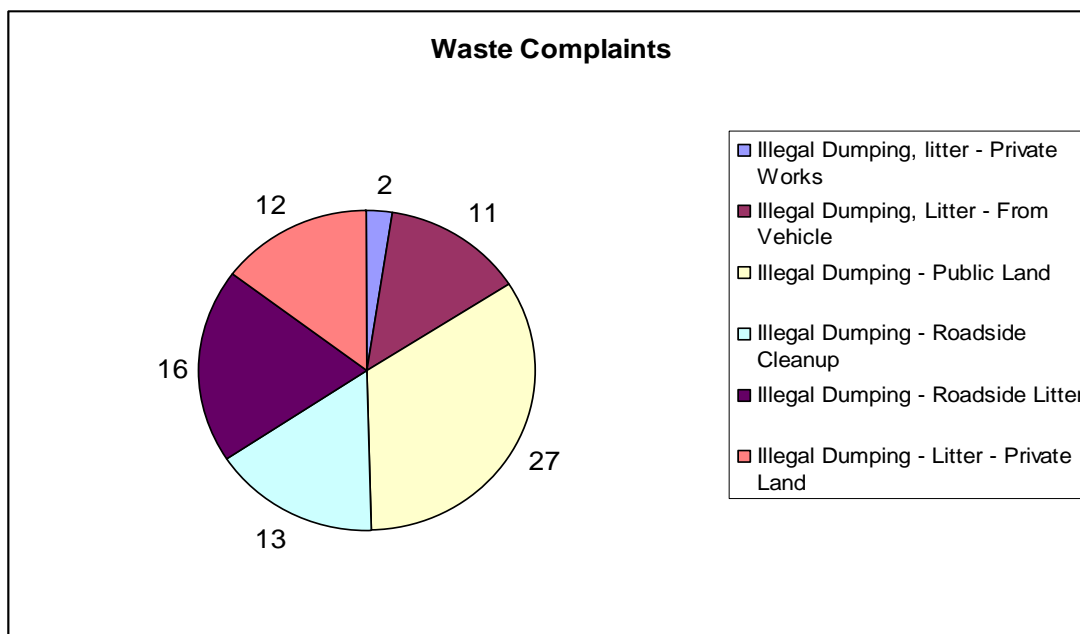
Since the inception of the program in May 1999 there has been **13,536,356** containers collected across Australia. This represents **18,216** tones' of recyclable materials. *drumMUSTER* has **716** active receiver sites across Australia provided by **480** collection agencies. **428** Local councils are participating in the program with **52** other agencies providing collection services. There have been **4523** personnel trained as drumMUSTER inspectors across Australia since the implementation of the program.

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



ILLEGAL WASTE DUMPING COMPLAINTS

During 2008-2009 Council received 81 reports of illegal waste dumping 33% of these related to dumping of waste on public land. The incidence of reported illegal waste dumping and location and represented in the following table:-



Waste as Art

This years Waste as Art Competition ran from February until July 2008. The event attracted 198 entries by 157 artists (a decrease of 23% on artists who participated in 2007) which were displayed at the Honeysuckle Rail Sheds from the 1st June 2008 till 13th July 2008 with over 3,358 people viewing the displays.



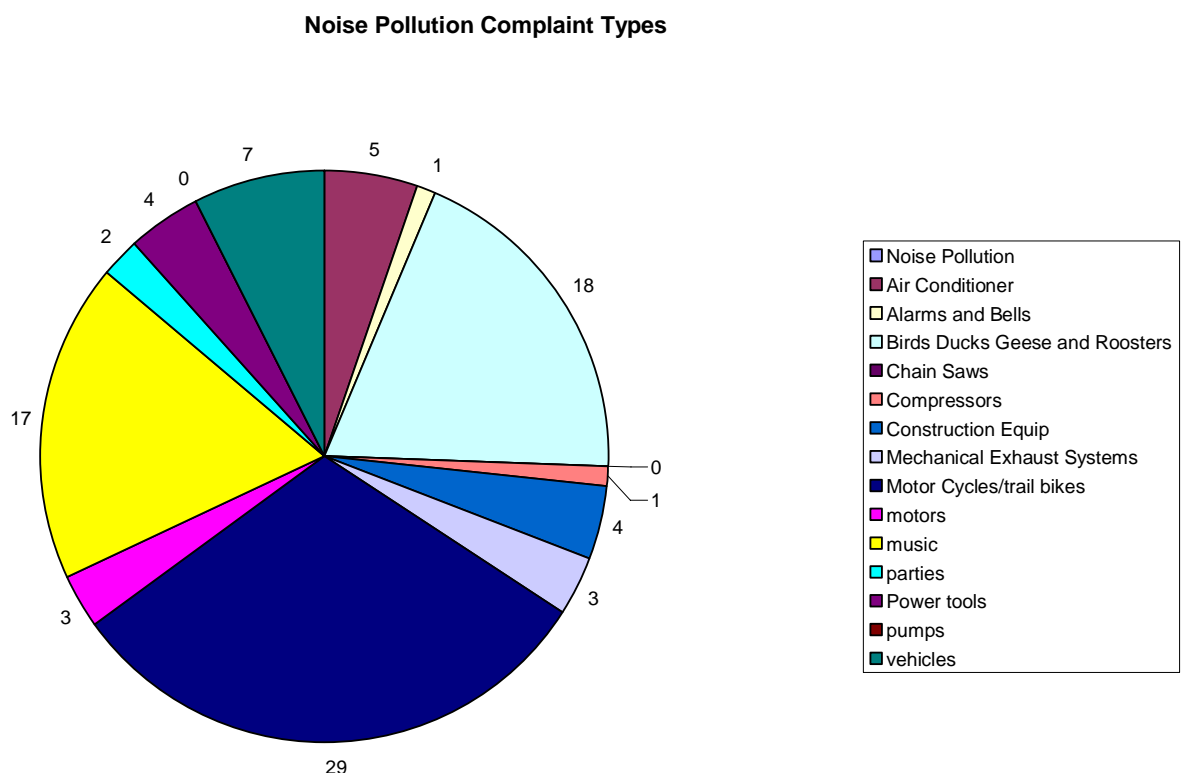
Adopt-a-Road Program

During 2007-08 4 new agreements were entered into bringing the total number of sponsors to 21 covering 76.4kms of roadside. These agreements will remain in place until 2010-2011.

RESPONSES TO TRANQUILITY AND NOISE ISSUES

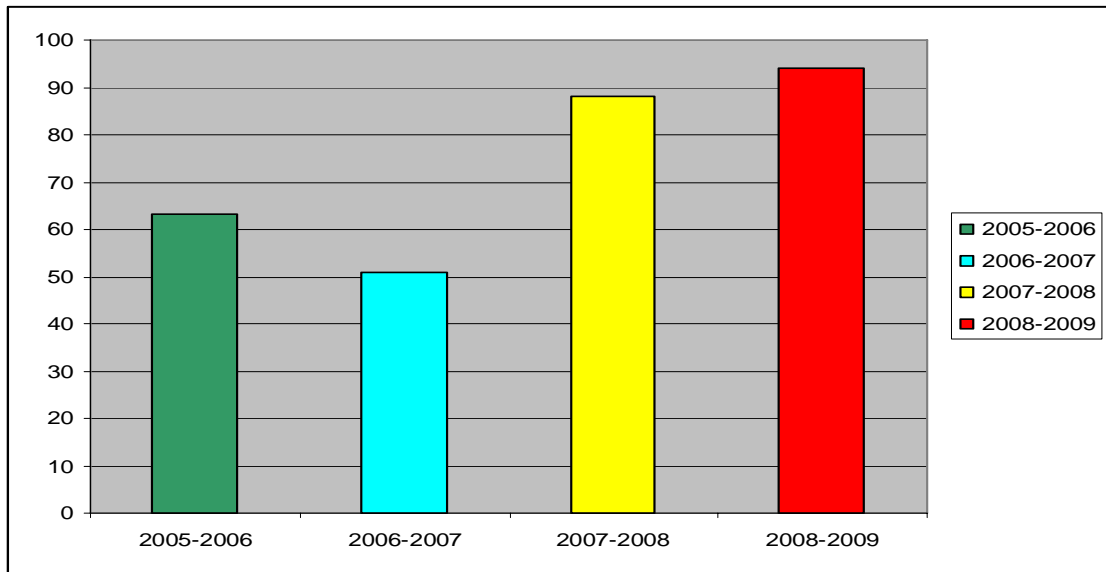
During the 2008-09, the number of complaints received by Council in relation to noise pollution totalled 94. Complaints were received in relation to a variety of areas, but, as with previous years the greatest majority of complaints related to motor cycles and trail bike usage totalling 32% of noise complaints received. Noise from animals and music also contribute to a significant proportion of the complaints received.

The following chart identifies the number and type of noise complaint received.



Council has been an active member of the Hunter Illegal trail bike riding working group in an effort to reduce the level of complaints and disturbance from motorbike/trail bike usage. This working group has produced a brochure on 'Trail Bike Riding in the Hunter' informing bike riders on a range of safe trail bike riding issues including noise.

Noise Pollution Complaints 2005-2009



The new heatpump style hotwater heaters have also contributed to the increase in complaints but trail bikes are still the main source of all noise complaints.

LAND

AT A GLANCE

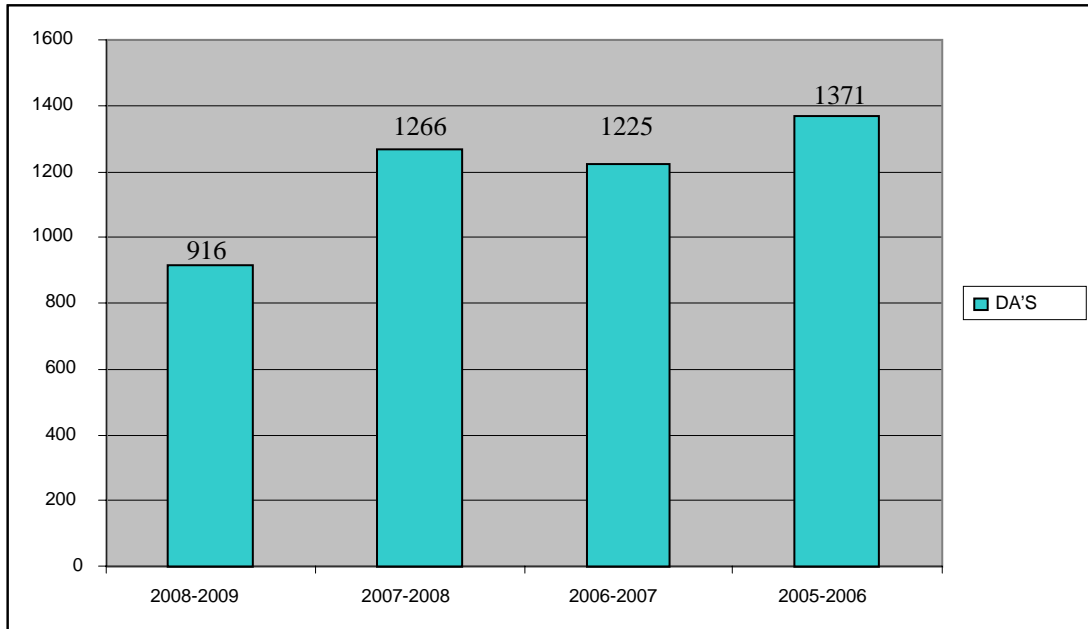
Landuse Change			Data Gaps:
State	Increasing	Continued development with 916 development applications, 674 construction certificates and 95 sub-division certificates approved/issued in 2008-09.	
Pressure	Increasing	Demand for land in LGA is placing increased pressure on undeveloped areas.	
Response	Improving		
Open Space			
State	Decreasing	No change to the area of land under Council Management.	
Pressure	Increasing	Growing population continually demanding open space for year round recreational purposes.	
Response	Unchanged	Continuing to implement Draft Recreation and Open Space Plan .	
Vegetation Removal			
State	Increasing	CMA approved no clearing during 2008-09. 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 is available on salinity in the LGA.	
Response	Limited	CMA Salinity Monitoring program operating.	
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 streambank 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

DEVELOPMENT ACTIVITIES

During 2008-09, Cessnock City Council received 916 Development Applications with a total value of \$102,558,660. A further 674 applications were received for Construction Certificates, and 95 applications for Subdivision Certificates.

Development Applications 2005-2009



LOCAL ENVIRONMENT PLAN

The City Wide Settlement Strategy (Stage 1) was adopted by Council in 2003 and endorsed by the Department of Planning (DoP) in 2004 as an environmental study for the purposes of preparing a new citywide Local Environmental Plan (LEP). The strategy was catchment-based, which was consistent with the State Government directives at the time. This direction has been abandoned under more recent amendments to the EP & A Act. As Councils are now required to prepare a comprehensive LEP that conforms to a Standard Instrument, the endorsed strategy has been reviewed to align with this new direction. The CWSS (2003) remains relevant as a background study.

The CWSS (Stage 2) was adopted by Council in 2005, but not endorsed by the Department of Planning. A number of adopted directions have been reviewed at the Department's request. This revised CWSS (2009) incorporates both stages of the CWSS into one document to form a single strategy.

The Lower Hunter Regional Strategy (LHRS) was also released by the Department of Planning in 2006. The strategy aims to guide the Lower Hunter's growth for the next 25 years (2006-2031) by identifying future development areas, principal land use types, settlement patterns and conservation outcomes. All councils in the Lower Hunter are required to implement the outcomes and actions in the LHRS primarily through local environmental plans.

The draft CWSS (2009) incorporates the outcomes and actions arising from the LHRS (where possible in the timeframe for preparation of the new LEP) and extends the life of the CWSS to correspond with the twenty five (25) year time frame.

HEZ Update

The Hunter Economic Zone is still progressing with provision of infrastructure. Construction on the Aluminium Extrusion Plant site is nearing completion. Council has also approved a Regional Maintenance Facility including workshop and office building for a major international company. Construction associated with this development is likely to commence shortly with the development scheduled to be completed by mid 2010. A concrete batching plant and wholesale plant nursery have also been approved by Council

OPEN SPACE

Recreation

The Recreation and Open Space Strategic Plan was adopted by Council in May 2009. The Plan aims to guide the provision of recreation and open space areas within the LGA. Some of the key issues addressed in the Plan are integration of cycleways/footpaths; addressing high levels of obesity and heart disease in the LGA; guidelines and minimum standards/sizes for parks and sporting facilities; and, continued rationalisation of open space.

Sporting Facilities and Equipment Dollar for Dollar Grants in 2005-09

Sporting Facilities Grants in 2008-09

- Aberdare Tavern Cricket Club – repairs to cylinder mower
- Abermain Hawks Rugby League Club – purchase of chest freezer, fridge, tackle bags and bump pads
- Bellbird Junior Soccer Club – supply and installation of hotplate and range hood for kiosk
- Branxton Croquet Club – Laser levelling of croquet lawn 2
- Branxton District Netball Club – purchase of stand alone shelving and storage boxes
- Cessnock Basketball Association – purchase of blinds for the centre. Purchase of kiosk items including a security grill, preparation and serving benches
- Cessnock City Hornets – installation of shade cover over existing grandstand
- Coalfields Horse Riding Club – purchase of horse jumping equipment
- Kurri Kurri Junior Football Club – purchase of new goal posts and 6 aluminium bench seats
- Kurri Kurri Little Athletics Centre – purchase of ride on mower and line marker
- Kurri Kurri Tennis Club – repairs to tennis courts, replacement of padlock systems to improve security
- Mulbring Cricket Club – purchase of cricket pitch cover
- Neath Target Archers – installation of concrete pad for shipping container and purchase of archery equipment
- Wollombi Valley Pony Club – purchase of pony and play equipment
- Wollombi Tennis Club – extension of the existing croquet court to full size, purchase of maintenance equipment

Sporting Facilities Grants in 2007-08

- Bellbird Junior Soccer Club – travelling irrigator, hoses, PA system and a microwave.
- Branxton Greta Pony Club – new gates and rails, ground improvements, minor drainage works and purchase of paint.
- Cessnock Athletics Centre – purchase of a ride on lawn mower.
- Cessnock City Hornets FC – field improvements and installation of a security system.
- Cessnock City Women's Soccer Club – purchase of a storage container.
- Cessnock Dog Club – purchase of a ride on mower, materials for ground improvements and five shade cabanas.
- Cessnock Minor Rugby League – field improvements and purchase and installation of a shade shelter.
- Cessnock Tennis Club – pressure cleaning of six tennis courts.
- East Cessnock Cricket Club – purchase and installation of scoreboards.

- Kurri Kurri Little Athletics Centre – purchase of a new public address system.
- Mulbring Cricket Club – replacement of synthetic grass in cricket practice nets.
- Wollombi Valley Pony Club – purchase of portable dressage equipment and shelter over barbecue.
- Wollombi Tennis Club – clubhouse enhancement with new doors, screens, etc.

Sporting Facilities Grants in 2006-07

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

Sporting Facilities Grants in 2005-06

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

VEGETATION CLEARING

No information on clearing from Forests NSW or CMA is currently available.

Native Vegetation Regulation

Information on Property Vegetation Plans (PVP's) from the CMA reported 4 PVP's undertaken in the Cessnock LGA during 2007-08 covering a land area of 289 hectares.

LAND MANAGEMENT

HCCREMS – Rural Residential Landowners Education Program

During 2007-08, the Rural Residential Landowners kit received further funding from the Catchment Management Authority to allow printing of the resource as a CD and the construction of an accompanying website.

The website version of 'A Guide to Rural Residential Living' (www.ruralresidentialliving.com.au) was officially launched at the Total Small Farms Field Days on the weekend of 3rd to 4th May 2008. In addition to the web based version of the Resource Guide, 5000 CD versions have also been produced and are available to landowners for free from their local council. 50 folder versions have also been produced and can be accessed by landowners at Council Administration Centres and libraries.

The particular strategies being utilised to promote the Resource Guide to landowners in the region include:

- Direct mailing of a promotional flyer during June 2008 to approximately 15,000 properties across the region. A copy of the flyer is shown on the right.
- Promotional displays in Council Administration Centres, libraries and other community facilities
- Regional and local media releases promoting the launch and availability of the Resource Guide.
- Articles in local council newsletters
- The provision of links to the web based Resource Guide on individual council websites.

For more information contact: www.ruralresidentialliving.com.au



LANDCARE ACTIVITIES

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

FIRE HISTORY AND MANAGEMENT

In the 2008/09 year there were approx. 610 reported fires in the Cessnock LGA. Of these approx. 276 were reported bush, grass or vegetation fires. A further 184 outside rubbish fires, involving a combination of grass, vegetation and general waste were also reported. During this period NSWFSB records show 2 Hazard Reductions with NSWFB involvement, as well as 9 Fire Permit Inspections being conducted.

HCCREMS REGIONAL SOILS MAPPING PROJECT

The soils mapping being carried out as a sub-project of the regional vegetation classification and mapping project is currently underway, with all relevant data having been supplied to the consultants. The outputs from this project should be in draft stage by the end of the current year. This sub-project will provide a seamless soils mapping layer for the entire region and will be a useful dataset for a range of purposes, including as an input into vegetation modelling.

AIR (ATMOSPHERE)

AT A GLANCE

Greenhouse Gas Emissions			Data Gaps:
State	Increasing	Due to changes in the methodology used by Energy Australia to provide electricity usage, data for 2008-09 is not currently available	
Pressure	Increasing	Electricity consumption is assumed to increase in line with population growth. Heavy reliance on motor vehicles for transportation.	
Response	Limited	Council Energy Improvement Program , REMS Climate Action Project and pathways program being implemented to address this issue.	
Diffuse Air Pollution Sources			
State	Unknown	69 odour complaints 08-09 (47 from Chicken sheds) reported to Council. National Pollutant Inventory identified 73 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	RFS reported no wildfires and only minor hazard reduction burns covering.	
Pressure	Unknown	Impacts of domestic heating and burning associated with agriculture or forestry unknown.	
Response	Limited	Woodsmoke reduction program continued.	
Indoor Air Quality			
State	Unknown	55 regulated air-conditioning 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.	
			<p>Further information on travel to work is required.</p> <p>Information on volume of pollutants produced in bushfires or wood fires is unknown.</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>Recommendations:</p> <p>Council fund initiatives that have outcomes aimed at savings in energy, water, waste, etc.</p>

RESPONSES TO GREENHOUSE GAS EMISSIONS ISSUES

ENERGY CONSUMPTION

Due to changes in the methodology used by Energy Australia to provide electricity usage, data for 2008-09 is not currently available.

CESSNOCK COUNCIL ENERGY IMPROVEMENT PROGRAM

A summary of the electricity consumption data since the Energy Improvement Program commenced for Council's 4 highest consumers is provided in figure 6 below.

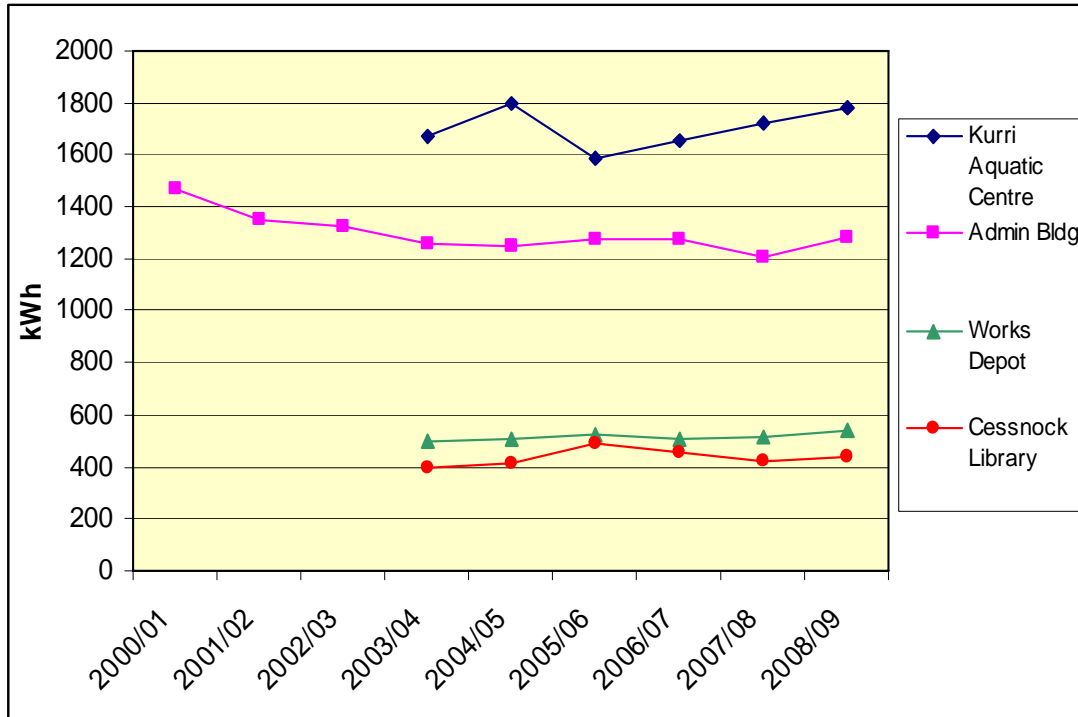


Figure 6: Council Energy Consumption History

Average daily use for these 4 sites is displayed in table 2 below.

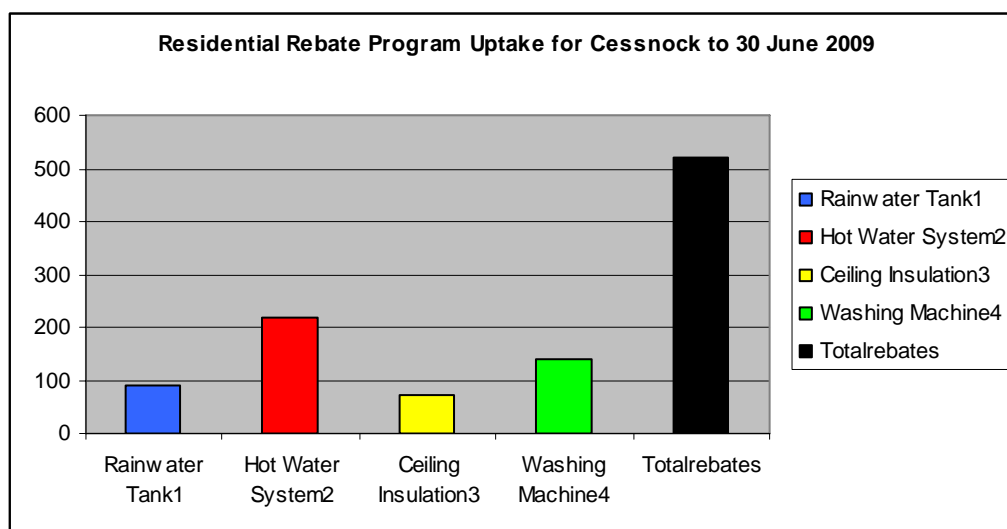
Table 2: Council Energy Consumption History

Year	Admin Building	Works Depot	Cessnock Library	Kurri Aquatic Centre
2000/01	1,470	-	-	-
2001/02	1,346	-	-	-
2002/03	1,326	-	-	-
2003/04	1,255	498	396	1,674
2004/05	1,247	508	412	1,796
2005/06	1,272	520	486	1,587
2006/07	1,272	503	457	1,652
2007/08	1205	512	420	1722
2008/09	1279	541	441	1781

RESIDENTIAL REBATE PROGRAM

The \$100 million Residential Rebate Program is part of the NSW Government's Climate Change Fund, established to help people make their homes more water and energy efficient. It provides rebates for rainwater tanks, climate-friendly hot water systems and water-efficient washing machines.

More than 101,000 rebates have been claimed by NSW householders, saving more than 2 billion litres of water and 88,000 tonnes of greenhouse gas emissions a year.



HCCREMS - CLIMATE ACTION PROJECT

Stage 1 of the four research stages being undertaken by the University of Newcastle for the Regional Climate Change Project was completed in 2007 which included identification and analysis (including quality assurance checking) of climate and climate related data sources for the whole area.

Research Stage 2

Stage 2 of the project provides a comprehensive analysis of sub-regional climate distributions, including seasonal, interannual and interdecadal variability of key climate variables and extreme events. It has also identified and analysed the drivers of climate variability in the region, including key synoptic patterns and their influence on sub-regional climate distributions.

Findings from Stage 2 also include the identification of sub-regional temporal trends in key climate variables including precipitation and minimum and maximum temperature. These results will provide the basis for the analysis of sub-regional climate change through to 2100AD using projected data from global climate models that will be completed during Stage 3 of the project research.

Stakeholder Consultation

Given the wide range of potential climate change impact scenarios that could potentially be investigated across the region, the stakeholder consultation aims to narrow the focus for the remaining project stages. In particular, the results of the consultation will assist in identifying the nature of four climate change impact case studies to be developed.

The consultation process targets representative government; industry and land use sectors across the region, and is based around seven consultation themes. These themes are considered to be representative of, or iconic to the region, and likely to be noticeably impacted upon by climate change.

The consultation themes and the nature of the representative stakeholders being targeted in regard to each of these are included in Table 1 below.

Consultation Theme	Representative Stakeholder Groups
Water Balance	Water Authorities & Utilities, Local Government, Hunter Central Rivers Catchment Management Authority (CMA), Department of Primary Industries (DPI), Department of Water & Energy
Biodiversity	Department of Environment & Climate Change (DECC), Hunter Central Rivers CMA, Local Government, Tourism
Human Health	NSW Health, Local Government
Agriculture	Industry Associations, Department of Primary Industries, Tourism
Coasts and Estuaries	DECC, Local Government, Department of Planning, DPI (Fisheries), Tourism
Built Environment & Infrastructure	Local Government, Department of Planning, Industry Associations (eg Architects, Builders)
Natural Disaster / Emergency Management	Local Government, Rural Fire Service, State Emergency Service, Hunter Central Rivers CMA, DECC (flooding), Tourism

Planning for Stage 3 is currently under way and involves downscaling of CSIRO Global Climate Model predictions for NSW to the regional scale. For further information regarding details contact: www.hccrems.com.au

RESPONSES TO AIR QUALITY ISSUES

OUTDOOR AIR QUALITY

Diffuse Source Air Pollutants

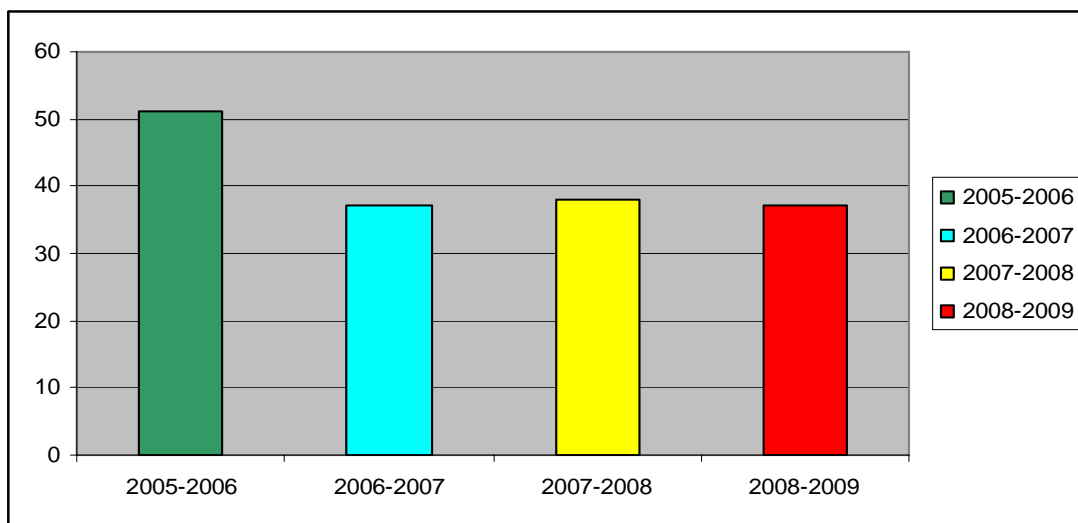
During 2008-2009 Council received 17 reports of air pollution incidents 3 times higher than the complaints received in 2007-2008. All of these complaints related to dust issues including dust from private and public property and roads.

During 2008-2009 Council received 69 complaints in relation to odour, 47 of these complaints were in relation to odours from chicken sheds. 66% of the 47 chicken shed odour complaints were received in March and April 2009 where investigations identified the odours to be originating from two (2) poultry farms trialling a new method of litter management. The trial was considered unsuccessful and both farms have reverted to the original litter management methods as a result the spike in complaints has reverted to a more consistent and manageable complaint trend.

Woodsmoke Reduction Program

Council received 16 complaints in relation to woodsmoke with Council Officers working with all parties to resolve the issues, no notices or orders were issued. Complaints were attended with Council officers acting in largely an educational capacity, no notices or orders were issued

Air Pollution Complaints 2005-2009



Local Government Air Quality Toolkit

The Local Government Air Quality Toolkit is available for local government as an authoritative information and guidance on the air pollution issues faced on a daily basis. The comprehensive set of resources provided in the toolkit will assist officers in managing local air quality issues; it has information on:

- air pollution, its sources and impacts
- the regulatory framework for protecting air quality in NSW
- general information about air quality management procedures and technologies
- specific information in the form of guidelines for managing a number of air polluting
- activities that have been identified by council officers as priority issues.

For more information visit: www.environment.nsw.gov.au/air/lgaqt.htm

POINT SOURCE AIR POLLUTANTS

During 2008-2009, there were no major wildfires in the Cessnock LGA.

Notification of Pesticide Use

From February 2007 it became compulsory for 3 key pesticide user groups (public authorities, professional pesticide treatments and pest management technicians) to give notice of their plans to use pesticides. The aim of this notification is to let people choose to reduce their exposure to pesticides as they wish.

NATIONAL POLLUTION INVENTORY

Within the Cessnock LGA, 73 substances were identified from 49 sources.

More information on the National Pollutant Inventory can be found at www.npi.gov.au.

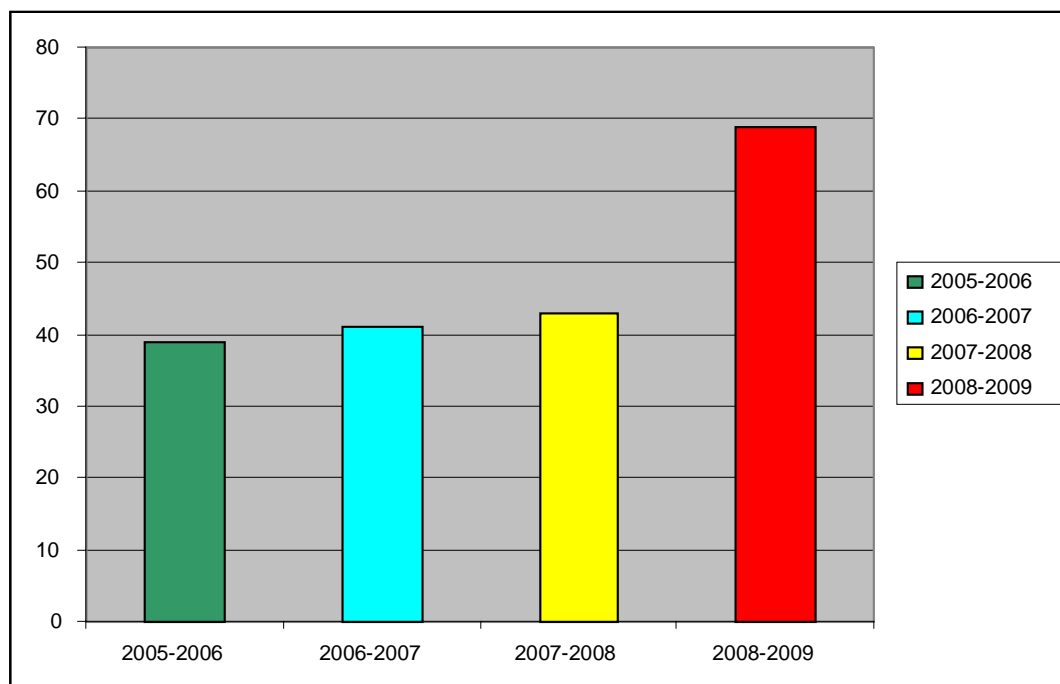
INDOOR AIR QUALITY

There are currently 55 cooling towers registered in the Cessnock LGA. Each tower was inspected in May/June 09 to ensure that they are operating and being maintained in accordance with legislative requirements.

ODOUR COMPLAINTS

The majority of odour complains were caused by commercial chicken sheds. Out of 69 odour complaints in 2008-2009, 47complaints were chicken shed related.

Odour Complaints 2005-2009



WATER

AT A GLANCE

Water Quality			Data Gaps:
State	Fair	LGA water quality varies within each catchment (affected by the level and type of development). 22 Waterwatch groups monitored 44 sites and reported 125 datasets. 59 complaints to Council on water quality (37 regarding wastewater/effluent discharges) were received.	
Pressure	Increasing	Increasing development for a variety of landuses in the LGA and continued land degradation affects water quality.	
Response	Improving	Hunter Water and Community water quality monitoring programs. Several strategies/plans are being implemented at selected sites.	
Wastewater			Information on environmental flows of LGA waterways is unknown - including impacts of landuse change and management of runoff. Information on unlicensed water extractions and farm dams and their impacts is unknown.
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.	
Ground and Surface Water			Wastewater outputs from licensed premises other than WWTP's are unknown. Information on the number of GPT's in the LGA is unknown. Recommendations: A register of GPT's in the LGA be established providing the location, type, maintenance schedule and materials collected data for reporting and planning purposes.
State	Unknown	Little data exists on the current groundwater quality. Ground and surface water extractions are regulated by DNR through licensing . Currently 248 surface water licences and 274 groundwater licences.	
Pressure	Increasing	Groundwater quality is under continual pressure from agricultural activities and on-site effluent disposal. Changing land uses from grazing to viticulture are increasing pressure on water resources.	
Response	Limited	Water tank rebates , the envirosaver program and REMS Regional Water Project are addressing some surface water issues.	
Stormwater			
State	Fair	All new developments must meet requirements in relation to stormwater management.	
Pressure	Increasing	In line with increasing development.	
Response	Improving	Council Stormwater Management Plan and HCCREMS Regional Water Program .	

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 1) for potable water supply, the maintenance of aquatic ecosystems and agricultural uses (see Table 3). The mean of the data set for each parameter has been used as the value to assess the water quality guidelines against. It is interesting to note that the water quality of Black Creek is improved after addition of water from the sewage treatment plant.

Table 3: Water Quality Monitoring Data 2007-08 for upstream and downstream of HWC wastewater treatment plants. Updates currently not available.

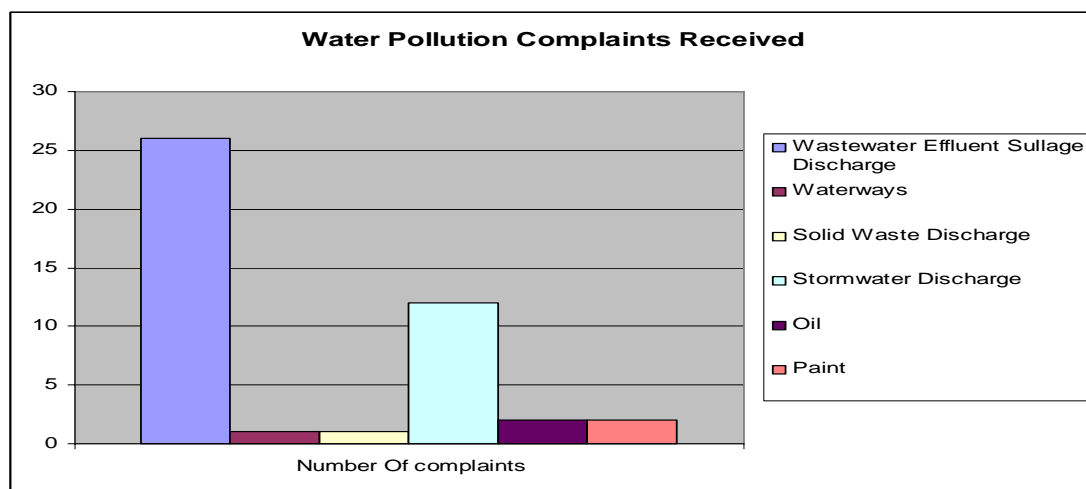
Water Quality Sampling Site	Water Quality Parameter						
	pH	Turbidity	Conductivity	Nitrate Nitrogen	OP	Faecal Coliforms	Chlorophyll-a
Anvil Creek – Upstream							
Potable Water Supply	-	-	-	✓	-	-	X
Agriculture	-	-	-	✓	-	-	*
Maintenance of aquatic ecosystems	-	-	-	✓	-	*	X
Anvil Creek – Downstream	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

- ✓ denotes compliance with ANZECC and NHMRC guidelines
- x denotes non-compliance with ANZECC and NHMRC guidelines
- * denotes no guideline available
- - denotes information unavailable Faecal coliform levels at Wollombi were too high for both primary and secondary contact recreation. Further investigation is required to determine the possible cause, which may be due to stock access or septic tank overflows.

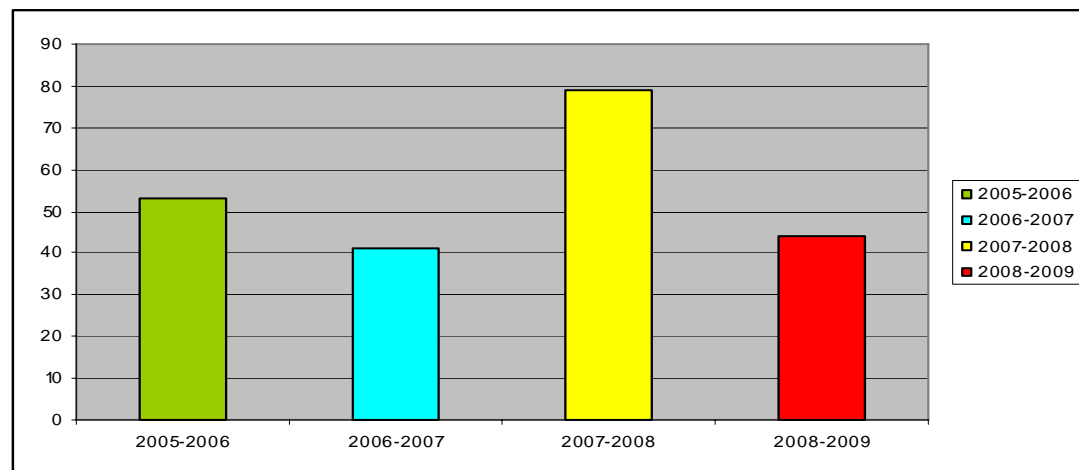
For further information on NSW Waterwatch visit www.waterwatch.nsw.gov.au and Water Bug Surveys visit www.bugsurvey.nsw.gov.au .

WATER POLLUTION COMPLAINTS/INCIDENTS

Council received 44 water pollution incident reports in 2008-09 representing a 25% reduction on the water pollution complaints received by Council in 2007-2008. 26 of the 44 water pollution incidents were related to wastewater, effluent or sullage discharge.



Water pollution complaints over a four year period



Hunter Community Stream Salinity Project

On Tuesday 15th April 2008 the CMA held its third and final salinity workshop at the Greta Community Hall. The final workshop for this project allowed landholders to discuss their observations and results and to share their findings of the stream salinity monitoring program. The project has not been active for the period 2008-2009.

WATERWATCH ACTIVITIES

Hunter-Central Rivers Waterwatch activities for 2008-2009

Group Training

Waterwatch groups are trained in water sampling, calibration of testing equipment, water quality testing, macro-invertebrates, habitat surveying and uploading data to the NSW Waterwatch website at www.waterwatch.nsw.gov.au. The training of Waterwatch groups ensures that activities are carried out safely and accurately according to Quality Assurance procedures and conducted in a 'train the trainer' format so that participants can pass on their knowledge to others in their group.

During 2008-2009, there has been a significant increase in the number of community groups trained in Waterwatch procedures. The Waterwatch Coordinators have attended a number of community workshops organised by the CMA and other agencies. This has resulted in increased interest from landholders and community members motivated to test their local waterways.

Between July 2008 and June 2009 CMA Waterwatch Coordinators conducted 102 water quality training workshops for schools and community groups with a total of 1937 participants.



Waterwatch training days with L-R: Gresford Public School, Congewai Public School, Booral Public School and Wingello Creek Bushcare.
Top right: Brisbane Water Secondary College

Water Bug Surveys



Above: Water Bug Survey with Landsdowne Public School

Conducted in Autumn and Spring each year, the NSW Water Bug Survey is a valuable way of investigating the health of our local waterways.

Freshwater aquatic macro-invertebrates, which we call water bugs, include insects, crustaceans, molluscs and worms, and are important indicators of the health of our waterways. Some water bugs are very sensitive to changes in their environment so keeping an eye on the number and type of bugs found in a particular waterway can reveal an increase or decrease in water quality due to the possible presence of pollutants and other influencing factors.



Above: Water Bug Survey with Niagara Park Public School

In 2008-2009, 36 groups from Hunter-Central Rivers CMA Waterwatch took part in the Water Bug Surveys and uploaded their results to the NSW Water Bug Survey website (www.bugsurvey.nsw.gov.au)

Quality Assurance (QA) 2009



Above: Upper Landsdowne Public School students undertake testing for QA 2009

Quality assurance (QA) trials are part of a program organised in conjunction with Sydney Water Streamwatch and are designed to test the validity and accuracy of testing methods used by Streamwatch and Waterwatch groups in NSW.

QA Trials were conducted in May 2009 and 64 groups from the Hunter-Central Rivers CMA region took part. Groups tested standardised samples of pH, electrical conductivity (high range, low range and estuarine), turbidity (freshwater and estuarine) and available phosphate and their results compared with National Association of Testing Authorities (NATA) accredited laboratory results. For the first time in 2009, groups were also asked to identify seven macroinvertebrate specimens provided to them in separate small vials.



Above: Jilliby Waterwatch undertake testing for QA 2009

Of the seven physical-chemical tests that were conducted, we achieved 85% accuracy to the NATA accredited laboratory results. The majority of participants could correctly identify the macroinvertebrates using their common names.



Above: Students from Millfield Public School taking a sample for P Week

P Week 2008 –Phosphorus Awareness Week

P Week is an annual event that aims to raise community awareness of the problems associated with excessive nutrient levels in the waterways of the CMA region. Phosphorus occurs naturally as well as in polluted run-off and treated wastewater. When the amount of phosphorus in waterways reaches a certain level it can contribute to the production of dangerous 'algal blooms', which release toxins into the water and deprive fish and other aquatic animals of oxygen. This level is 0.06mg/L and is called the trigger value.

Activities for P Week 2008 occurred during the week of 17-21 November.

Fifty groups took part and monitored 159 sites for P Week 2008. Fifty-one percent of results were on or under the recommended trigger value of 0.06mg/L for soluble phosphorus.

Catchment Crawls and Stormwater Scampers

Catchment Crawls and Stormwater Scampers are extremely important events in environmental and catchment education for schools and the community. Information on the health of a particular catchment is given and they provide a valuable opportunity for strengthening networks between Waterwatch groups, community and government representatives. Participants conduct a range of activities such as water quality testing, water bug surveys, site and habitat assessments, litter surveys and drain stencilling.

Seven Catchment Crawls were held in 2008-09. The Winding Creek, Tilligerry Creek (community and schools) and Ironbark Creek Catchment Crawls were organised by Hunter-Central Rivers Waterwatch. Central Coast Waterwatch ran Catchment Crawls in the Gosford Lagoons, Piles Creek, Wetland and Jiliby Creek Catchments.

Two Stormwater Scampers were held in 2008-09. Hunter-Central Rivers Waterwatch organised a Stormwater Scamper in the Throsby Creek Catchment. Manning Great Lakes Waterwatch organised the Great Lakes Stormwater Scamper.



Above: Gosford Lagoons Catchment Crawl



Above L-R: Ironbark Creek Catchment Crawl, Winding Creek Catchment Crawl, Islington Public School Stormwater Scamper



Above: Planet Savers at the Wetlands Centre

Below: Wollombi Public School on National Tree Day



Presentations and Displays

In 2008-2009, the CMA Waterwatch Coordinators conducted over 70 presentations and displays. They discussed water quality and catchment issues with the community, and interacted with 4280 individuals across the CMA region.

The presentations and displays included events such as:

- World Water Day
- Watertight Days
- National Science Week
- World Wetlands Day
- National Tree Day
- Hunter Water Catchment Day
- Total Field Days
- Planet Savers at the Wetlands Centre
- Lake Macquarie Catchment Connections Carnival
- Upper Allyn River Project Workshop

RESPONSES TO WASTEWATER ISSUES

PROTECTION OF THE ENVIRONMENT OPERATIONS ACT, 1997 SCHEDULED PREMISES

In relation to the Protection of the Environment Operations Act 1997 there are currently 13 scheduled premises (for water) within the Cessnock LGA (these are listed in table 6 below).

Table 6: EPA licensed premises (in relation to water pollution) under the Protection of the Environment Operations Act in Cessnock LGA during 2008-09.

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

During 2008-09 nine trade waste permits were issued by Hunter Water in the Cessnock LGA.

During 2008-09, Hunter Water completed a concept design, Environmental Impact Assessment investigations and community consultation for the upgrade of the Branxton Wastewater Treatment Works. The upgrade is expected to commence late 2009 and be commissioned in 2011. The upgraded plant will have a service capacity of 13,000 equivalent persons (currently the plant has a 4,500 equivalent person capacity).

ENVIROSAVER PROGRAM

During 2008-09, the Envirosaver/Fieldforce program installed 467 AAA-rated water-saving showerheads and water flow restrictors in homes in the Cessnock LGA. This equates to a saving of more than 30,000 kL of water annually. This is rapid increase from last years installations 2007-2008 produced 160 combined installations of AAA-rated showerheads and water flow restrictors.

WASHING MACHINE REBATES

The NSW Washing Machine Rebate became available from August 1, 2008. It provided a \$150 cashback on any 4.5 star rated washing machine purchased for a residential property in NSW. A 4.5 star water efficient washing machine can save up to 100 litres per wash compared to an old top-loader. A family washing more than six loads a week would save up to 31,000 litres of water a year.

From the 1 August 2008 when the rebate scheme commenced, 138 rebates have been payed out up until the 30 June 2009 for the Cessnock Local Government Area. This particular scheme has been initiated by the DECC and has contributed to the saving of a significant amount of water.

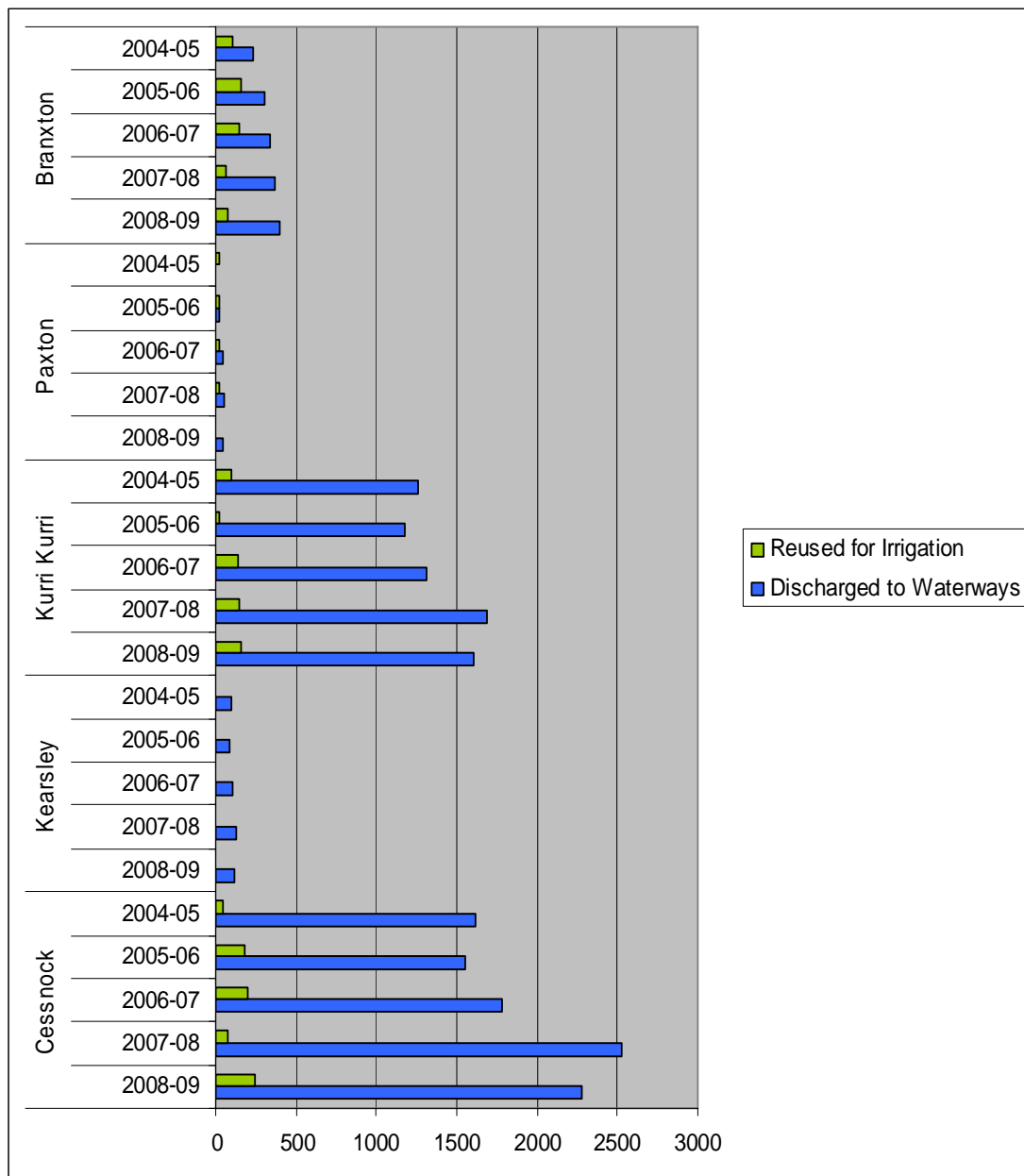
CESSNOCK LGA WASTEWATER TREATMENT PLANTS

The effluent discharge for 2008-09 (with comparison to 2007-08, 2006-07, 2005-06 and 2004-05) of each of the wastewater treatment plants in the Cessnock LGA is summarised in Figure 7.

During 2007-08, Hunter Water also commenced Environmental Impact Assessment investigations and community consultation for the upgrade of the Branxton Wastewater Treatment Works. The upgrade is expected to be commissioned in 2012 and will have a service capacity of 13,000 equivalent persons (currently the plant has a 4,500 equivalent person capacity).

Figure7: Effluent treated and disposed of at HWC wastewater treatment plants during 2008-09, 2007-08, 2006-07, 2005-06 and 2004-05 in the Cessnock LGA.

Waste Water Treatment Works Discharges and Reuse 2005-2009



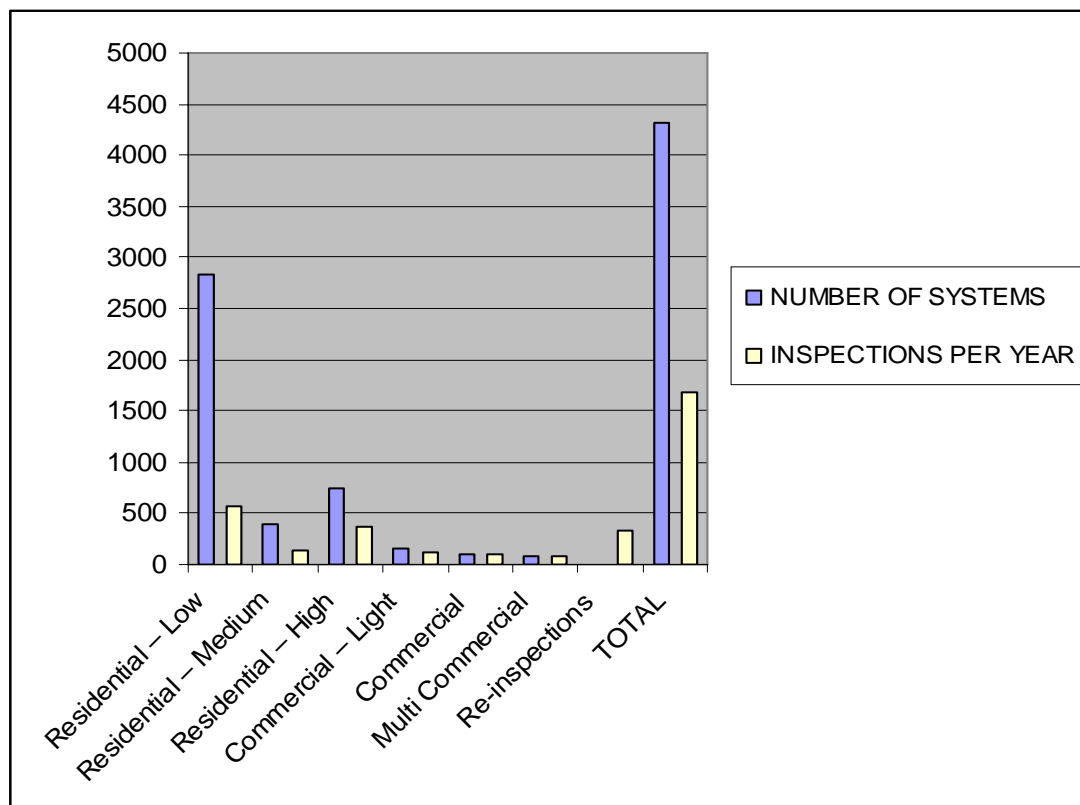
Quantity in Mega Litres

ON-SITE EFFLUENT DISPOSAL

Council has reviewed its program in relation to on-site effluent disposal and have employed one additional On-site Sewage Project Officer to undertake routine inspections of the on-site effluent disposal systems and to provide advice to household on effective on-site effluent management.

The on-site effluent disposal inspection program has been revised to ensure that all of the 4316 properties within the Local Government Area that have an on-site effluent disposal system are risk classified and are inspected at least once every five (5) years. The inspection frequency and projected inspection numbers is outlined in the table below.

CLASSIFICATION	NUMBER OF SYSTEMS	INSPECTION FREQUENCY	INSPECTIONS PER YEAR
Residential – Low	2839	1 per 5 years	568
Residential – Medium	398	1 per 3 years	132
Residential – High	746	1 per 2 years	373
Commercial – Light	166	1 per 18 months	110
Commercial	97	1 per year	97
Multi Commercial	70	1 per year	70
Re-inspections		25%	338
TOTAL	4316		1688



RESPONSES TO WATER USAGE ISSUES

SURFACE AND GROUNDWATER EXTRACTION

DNR records indicate that there are currently 248 surface water extraction licenses and 274 groundwater extraction licenses in the Cessnock LGA. The most common use for this water is for irrigation, stock and grape vines.

RAINWATER TANK REBATES

From the 1st July 2007, the NSW Government commenced its Rainwater Tank Rebate program available to all households in NSW. The rebates provide up to \$1,500 to install any type of rainwater storage system in an existing home with rebates scaled so that the highest amount is paid for tanks connected to toilets and washing machines.

During 2008-09, the DECC provided rainwater tank rebates to 56 homes (16 of which were included connection to toilets and washing machines) in the Cessnock LGA totalling \$33,674.00 For details of eligibility and amounts of water tank rebates see the DECC website at http://www.hunterwater.com.au/files/DECC_Hunter_Water_Tank_Rebate_form.pdf

Rainwater Tank Sizes	Number of rebates	Average roof area (m2)
2,000 – 3,999 – tank only	216	116
2,000 – 3,999 – 1 connection	13	107
2,000 – 3,999 – 2 connections	75	122
4,000 – 6,999 – tank only	173	111
4,000 – 6,999 – 1 connection	4	125
4,000 – 6,999 – 2 connections	84	116
>7,000 – tank only	249	209
>7,000 – 1 connection	6	261
>7,000 – 2 connections	66	258

91 Rainwater Tank Rebates have been payed out in the Cessnock LGA July 2007 June 2009

COMMUNITY WATER GRANTS

The Federal Governments Communities Water Grants ceased on the 30th June 2008

RECYCLED WATER GUIDELINES

The NSW Department of Water and Energy (DWE) has released the Management of Private Recycled Water Schemes Guidelines (200). This guideline aligns the principles of the National water recycling guidelines with NSW approvals processes and provides advice and examples for obtaining council approval to install and operate private recycled water systems.

Additionally, NSW Health has released guidelines on the use of rainwater tanks where a public water supply is available. The guidelines look at the appropriate cleaning and maintenance practices for the use of water from rain water tanks including drinking and cooking.

HCCREMS WATER PROGRAM

URBAN WATER CYCLE MANAGEMENT (UWCM)

Sustainable urban water cycle management is a core part of overall urban sustainability — impacting as it does on amenity, environmental health and water supplies. The goal of this two year program is to mainstream integrated water management across the 14 councils participating in the Hunter Central Coast Regional Environmental Management Strategy (HCCREMS). A number of terms are currently used to describe integrated management of water in the urban environment.

Perhaps the most common are "*integrated water cycle management*" (IWCM), "*urban water cycle management*" (UWCM) and "*sustainable urban water management*". Each of these three terms encompass all aspects of potable water supply, reuse, and disposal, as well as the management and use of roof and stormwater.

They also subsume that part of the urban water cycle addressed by "Water Sensitive Urban Design" or "WSUD", which although sometimes used as an alternative term, generally excludes consideration of reticulated potable mains water. Its main use is in describing the suite of urban planning considerations associated with managing the changes in stormwater flow patterns and water quality derived from roofs, paving, roads and other hard (impermeable) surfaces.



PROGRAM OBJECTIVE

The objective of the program is to raise the profile of sustainable water management to:

- Mainstream water sensitive urban design policy and practises
- Progress an urban water cycle approach to management programs and practises in Councils
- Promote innovation and best practice.



MAJOR PROGRAM ACTIVITIES & OUTCOMES

1. Promotion of Water Sensitive Urban Design (WSUD) adoption in local government planning instruments.
2. Develop a register of demonstration sites around the region to demonstrate WSUD and IWCM.
3. Provision of linkages between key stakeholders, including local and State government, CMA and industry.
4. Research investment opportunities and assist stakeholder with preparing applications for assistance in the meeting the project's objectives.
5. Promotion of the www.urbanwater.info website as tailored support package for councils and others working with UWCM.
6. Incorporation of WSUD/UWCM into Development Control Plans (DCPs) and other relevant planning instruments.
7. Increased capacity of council staff to design, implement, monitor and maintain UWCM policies and practices in their Local Government Areas (LGAs).
8. Improved capacity of developers and consultants to implement WSUD/UWCM in their proposals.
9. More sustainable urban design form in the region.
10. A reduction in equivalent stormwater discharge volumes and pollutants from new urban developments and reduced downstream impacts.



URBANWATER TOOLKIT

In order to develop a comprehensive, interactive training tool for use by all Councils throughout NSW, the NSW Stormwater Trust funded the development of an online resource to help council officers, developers and the community, better understand and implement water sensitive urban design technologies.

The final output of the project was the development of a WSUD Capacity Building CD and Toolkit for councils, containing a range of reports, presentations, and video based training modules and tools. The resulting (award winning) toolkit is available at; www.urbanwater.info. It contains links to videos, presentations, and the Water Smart Planning Provisions outlined above.



BIODIVERSITY

AT A GLANCE

Terrestrial Biodiversity			Data Gaps:
State	Declining	Various developments pose threats to terrestrial biodiversity in the LGA. Currently listed under the <i>Threatened Species Conservation Act 1995</i> for the LGA are 52 fauna species, 20 flora species, CMA approved no clearing .	
Pressure	Increasing	Demand for rural, rural residential, industrial and urban expansion as a result of population growth increasingly affects biodiversity.	
Response	Fair	Landcare and Land for Wildlife programs, Threatened Flora of Lower Hunter Recovery Program , Tree plantings and giveaways and REMS Roadside Environmental Management and Vegetation Management programs are having effects.	
Aquatic Biodiversity			
State	Unknown	Little is known of the aquatic biodiversity in the LGA.	
Pressure	Increasing	Increasing development is placing pressure on aquatic ecosystems through disturbance, pollution and changes in water quality and quantity.	
Response	Limited	Salvinia removal programs are continuing to address this menace but are limited by resources.	
Introduced Flora and Fauna			
State	Unknown	New weeds classes were implemented in the State. Complete numbers of introduced species are unknown. Preliminary list of 20 Regional Weed of Significance established.	
Pressure	Increasing	Development in the LGA is increasing the incidence of weed infestation and introduction of feral animals into natural bushland.	
Response	Fair	Council employs 2 Weeds Officers and participates in many regional weed programs as well as receiving grant funding to initiate programs. State Forests are participating in pest management programs.	

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.

Data on aquatic species composition and distribution is unknown.

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) is unknown.

Information on the impact of feral animals on local fauna populations is unknown.

The full distribution of weed species and their extent of competition with native species is unknown.

RESPONSES TO BIODIVERSITY ISSUES

THREATENED FAUNA SPECIES

A complete list of threatened fauna species within the Cessnock LGA is available on the NSW Threatened Species website (www.threatenedspecies.environment.nsw.gov.au). Since 1980 there have been 1410 records comprising of 52 threatened fauna species.

Forests NSW Pest Control

Records of pest control activities undertaken in Forests NSW lands during 2008-09 were not available. However, a majority of State Forests within Cessnock LGA are now declared as hunting areas under the Game Council of NSW.

Indian Myna Bird Control

Green Corps and the Hunter Region Landcare Network have undertaken a program to help eradicate Indian Myna Birds in the Wollombi area. No results of this program are currently available.

THREATENED FLORA SPECIES

A complete list of threatened flora species within the Cessnock LGA is available on the NSW National Parks and Wildlife Service website (<http://wildlifeatlas.nationalparks.nsw.gov.au>). Since 1980 there have been 889 records comprising of 20 threatened fauna species.

HABITAT FRAGMENTATION AND CLEARING

During 2006-07, the authority to approve land clearing was removed from the Department of Natural Resources (DNR) and placed with the Catchment Management Authorities. No clearing applications were received by the CMA during 2007-08. (No info available for 2008-2009)

INTRODUCED SPECIES - WEEDS

During 2008-09, Council's Weeds Officers received 219 customer requests regarding weed issues, ranging from requests for plant identification to control works and Councils Weeds Officers inspected 400 properties. 3 section 18 Weed Control Notices were issued. An aerial inspection was carried out, in conjunction with Hunter Councils, as part of the Post Flood Aquatic Project. This inspection located several *Salvinia* infestations, which were mapped for later treatment.

The 2008-09 Council weed control program concentrated on terrestrial weeds such as Green Cestrum, Mother of Millions, Lantana, Blackberry and Crofton Weed, with some aquatic weeds such as *Salvinia*, Water Hyacinth and Alligator Weed. Funding of \$4,500 was received from the Department of Lands for weed control activities conducted on Crown Lands.

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

- Held a weeds information display at the Wollombi market day on 6th October. Unfortunately the weather was not the best, though there was steady flow of enquiries.
- held an information session (in conjunction with Upper Hunter Weeds Authority works coordinator) for Branxton and Greta residents. This session provided landholders with information regarding the Post Flood Aquatic Project funded by NSW DPI and the H-CRCMA, in particular, future activities such as inspections, treatments, funding arrangements and landholder obligations regarding the Alligator Weed infestations.
- Continued a program of community education on weeds through making available a poster on major weeds of the area and printed fact sheets at Councils administration building and libraries. These are also available on Councils website.
- Developed new promotional material as handouts for the General public as a means of education on the importance of weed identification and control including: key rings, ruler's erasers, drink holders and calico bag, all available from customer services.

Post Natural Disaster – June 2007 Flood Implications:

Post Flood Aquatic weed funding was sought and received by the Regional Weeds Committee. This funding provided the urgent strategic response needed to deal with the impact of severe flooding in the Hunter region of NSW on the spread of Alligator and other aquatic weeds. Inspections were carried out by Council officers and the Regional Post Flood Aquatics Project Officer, housed at Hunter Councils.

One of the outcomes of the Regional Post Flood Aquatics Project will be the setting up of a number of Salvinia monitoring points along the Wollombi Brook. These will be checked on a regular basis by landowners and Council and Hunter Central Rivers Catchment Management Authority officers for the presence of Salvinia. The monitoring by landholders is part of the landholders agreement struck with the CMA.

There are several small dams requiring treatment for Salvinia. These will be treated as part of the Regional Post Flood Aquatics Project.

Alligator Weed

The dispersal of fragmented Alligator Weed throughout the Branxton area (Anvil and Black creeks) during the flood has financial, environmental and social implications for Council and private landholders alike. This declared weed spreads through vegetative means and any small fragments or nodes will produce a viable plant. It grows vigorously in both aquatic and terrestrial situations. The major vector for spread is machinery - excavation plant, slashers and mowers – with fragments stuck to tracks, buckets, mower decks, etc. From this, contaminated material may be excavated and spread to other locations as well.

The Hunter, along with the Sydney Basin, represents almost 95% of the 5,000ha of Alligator Weed known to occur throughout Australia. As such the region's infestation poses a major regional, state and national risk in terms of its potential spread and impact on water resources and significant economic and environmental assets.

Many new outbreaks of aquatic weed, particularly Salvinia; have been located in dams adjacent to Wollombi Brook, in the past 6-12 months, thought to be the result of flooding. Council's officers have worked with the community reminding landowners to be vigilant in monitoring susceptible areas, locating and eradicating any new outbreaks.

Anvil and Black Creeks and surrounding properties within Cessnock and Singleton LGAs were badly flooded during the severe storm of June 2007. An Alligator Weed infestation within the creek system has now spread into the Hunter River and adjoining rural properties downstream into an area that was previously free of the weed.

Approximately fifty (50) private properties may have been affected, covering an area in the order of 160ha, not including roadsides, creekbanks, and playing fields. Field conditions at the time made it difficult to identify potential new outbreaks and as such follow-up inspections were carried out during 2008 with control works carried out during 2009.

Owing to the length of the Hunter River infested, inspections and control works will be required during subsequent years, particularly in the Singleton LGA.

Salvinia Control

Cessnock City Council in collaboration with the Hunter Central Rivers Catchment Management Authority and Hunter Councils produced a regional management strategy and implementation plan for the control of Salvinia on the Wollombi Brook in 2006. This was in response to years of build up of the weed along the entire 118kms of the Brook, and the absence of any coordinated effort between the landowners with primary responsibility for the weed's control and management, and other authorities.

Subsequent to the initial steps in the implementation plan, which commenced in 2006, and involved:

- mapping of the infestation along all 118kms of the Brook
- sending letters to all landholders advising them of their responsibilities and asking them to cooperate in the coordinated implementation of an eradication strategy
- convening in-situ workshops to familiarise landholders with the details of the program and to discuss any issues
- one-to-one meetings with landholders to discuss incentive monies available if they undertook works within the strategy timetable
- developing a package which outlined the incentive payments available to landholders for fencing and assistance with removal of Salvinia
- eradicating major infestations by employing Conservation Volunteers Australia teams to target hotspots
- commencing the process of signing landholders to agreements that guaranteed incentive payments for works conducted by the landholder within the timeframe of the Strategy

The following activities have also been carried out:

- aerial inspection of the Brook, both north and south arms
- mapping infestations that had been deposited on private property as a result of the flood
- placing containment devices, i.e. booms and mesh traps to limit downstream movement of Salvinia
- carrying out control of Salvinia under Landholder Agreements

As a result of the flood events the focus of the Wollombi Creek Salvinia Project has changed to concentrate on cleaning up what Salvinia is left on the Brook and in dams off-stream. Cessnock Council has installed extra booms which will help to contain any Salvinia that may be floating along the Brook. This now provides an opportunity for the landholders to assist by removing any small quantities that still exist on parts of the Brook adjacent to their property, easily and inexpensively. It also makes the job of monitoring and maintenance much easier – providing the opportunity to get on top of any outbreaks that may occur from the remaining plants.

Regional Weed Projects

Cessnock City Council in conjunction with Port Stephens, Maitland, Wyong, Gosford, Dungog and Upper Hunter Councils have collaborated in developing eight active Regional Weed Management Plans for Green Cestrum, Giant Parramatta Grass, Mother of Millions, Alligator Weed, Pampas Grass, Blackberry, Bitou Bush, and Aquatic Weeds. Each of the eight plans will be implemented over the next five years with support from grant funding of over \$100,000.

Weeds of Regional Significance – July 2008.

Environmental weeds (plants other than declared noxious species) are also of importance, but at this time there is no legislative mechanism to deal with them. The Regional Weeds Management Strategy (RWMS) have established a preliminary list of 20 Weeds of Regional Significance (WORS) with the view to develop management plans to combat them. It is noted that there are in fact many more plants that can meet the criteria listed below. As actions under are implemented the WORS list will be reviewed and other plants may be added.

In determining the 20 WORS, field officers of the Hunter and Central Coast Weeds Management Committee (HCCWMC) used the following selection criteria:

1. The plants threaten biodiversity and ecological integrity and are a threatening process as described in the Threatened Species Act.
2. Level of invasiveness (ease of dispersal and methods).
3. A threat to public and animal health.

4. A threat to water quality.
 5. An economic burden (loss of productivity, land degradation).
 6. Is of limited distribution.
 7. Ease of control (are control methods effective, is control feasible).
- Abundance of infestations
 - Rare - occur as isolated plants or low numbers
 - Marginal - more widespread but numbers are generally low
 - Core - widespread and well established

Weeds of Regional Significance in the Hunter and Central Coast

Common Name	Abundance	Reason for Inclusion	Habitat
Blackberry *#	Marginal, Core	1.2.5.7	All situations
Crofton Weed *	Rare, Core	1.2.3.7	Riparian Zones, Damp Gullies
Alligator Weed *#	Rare, Marginal, Core	1.2.4.5.6	Drains, Creeks, Rivers, Floodplains
Lantana	Marginal, Core	1.2.5.7	Bushland, Riparian Zones, Roadsides
Salvinia *#	Rare, Marginal, Core	1.2.4.5.7	Dams, Lagoons, Creeks
Water Hyacinth *#	Rare, Marginal, Core	1.2.3.4.5.6	Dams, Lagoons, Creeks
Bitou Bush *#	Rare, Marginal, Core	1.2.5.6.7	Coastal Heath and Bushland. Sandy areas
Green Cestrum *#	Rare, Marginal, Core	1.2.3.5	Urban Bushland, Fence lines, Roadsides
Morning Glory	Marginal, Core	1.2.5	Urban Bushland, Riparian Zones
Privet	Marginal, Core	1.2.3.5.7	Urban Bushland. Riparian Zones
Pampas Grass *#	Rare, Marginal, Core	1.2.5.6.7	Urban Bushland Roadsides
Giant Parramatta Grass *#	Rare, Marginal	2.3.5.6.7	Roadsides Pastures
Mother of Millions *#	Rare, Marginal, Core	2.3.5.7	Roadsides, Old Homesteads Bushland
Camphor Laurel	Marginal	2.5.6.7.	Urban, Riparian zones, Bushland. Roadsides, Backyards
Bridal Creeper	Rare, Marginal	2.6	Urban Bushland Riparian zones
Mexican Clover	Core	2.5	Footpaths, Lawns, Turf
Madeira Vine	Rare, Marginal	2.5.7	Urban Bushland. Riparian zones
Paterson's Curse	Rare Marginal	2.5.6.7	Pastures Roadsides Cropping areas
Wild Olive	Marginal, Core	2.5.	Roadsides, Urban Bushland
St Johns Wort	Rare, Marginal	2.5.7	Roadsides Pastures cropping areas

* Declared noxious plants

Regional weed management plans

NSW Weed Awareness Plan 2007-2011

The NSW Weed Awareness Plan is one component of the NSW DPI State-wide Weeds Communication Strategy aimed at developing a NSW Weed Awareness Program. The overall objective of the Program is to increase the awareness of the impact of weeds in NSW. Specific objectives are to:

- Increase the availability of weed information and community engagement resources to NSW weed professionals.
- Increase the participation of local government, State agencies and non-government organisations in NSW weed awareness activities.
- Increase support for weed awareness initiatives by the decision makers in NSW.

The NSW Weed Awareness program 2007-2011 will undertake a significant planning phase prior to implementation to ensure success in meeting the objectives. It will also undertake on-

going evaluation and planning once implementation commences to ensure the program activities remain relevant over time and achieve positive benefits for the State of NSW.

It is envisaged that from July 2010, weed control funding for the region will be dependant on submissions that are linked to objectives listed in the Invasive Species Plan.

FIRE AND FUEL REDUCTION

In the 2008/9 year there were approx. 610 reported fires in the Cessnock LGA. Of these approx. 276 were reported bush, grass or vegetation fires. A further 184 outside rubbish fires, involving a combination of grass, vegetation and general waste were also reported. During this period NSWFSB records show 2 Hazard Reductions with NSWFB involvement, as well as 9 Fire Permit Inspections being conducted.

LANDCARE ACTIVITIES

The following reports from Landcare groups operating in the Cessnock LGA have been provided: Some Landcare Groups have not provided updates on their activities for 2008-09.

Friends of Tumblebee Landcare

- Hold frequent guided walks through Werekata National Park
- Water quality monitoring

Buttai Landcare

- Concentrated on advocacy projects providing comments on development applications and making submission to NSW State Government trying to prevent the importation of Savannah Cats.

Kurri Kurri Landcare and Weston Greening Group

- Installed flood warning sirens in several sections of Swamp Creek between Weston and Kurri
- Manufacture and installation of parrot nesting boxes
- Riparian rehabilitation of Swamp Creek in the Weston area

Abermain Landcare

- Maintaining control of giant reed
- Maintaining remaining site not washed away in June 07 flood
- Monitoring progress of proposed works on Swamp Creek for flood mitigation such as in-stream vegetation management and channelisation

Wollombi Landcare

- During 2008-2009, Wollombi Valley Landcare Group has continued to be active, Working with the CMA and Cessnock Council on combating the spread of Salvinia
- An ongoing program to assist members seeking to remove Tree of Heaven from their properties

Cessnock Landcare and Congewai Landcare

- The groups put a lot of effort into submissions and negotiations for tree planting. Ellalong Lagoon and the proposed WWTP are current issues

Mount Vincent Landcare

- Undertaking corridor tree planting and lantana control over a number of properties.

Burralong Valley Landcare

- Two major projects involving willow removal and erosion control measures along the North end of Wollombi Brook.

BIODIVERSITY AND CONSERVATION

The Lower Hunter Regional Strategy (LHRS) identifies the dichotomies in managing natural resources as the key environmental challenges for the Region - how to accommodate significant population growth while protecting and managing the biodiversity and conservation values of the key green corridors of the Region; maintaining or improving the biodiversity value of the Region; protecting the rural character and viable agricultural lands of the Region; and protecting the mineral and coal resources of the Region. The Hunter-Central Rivers CAP describes biodiversity as:

“the variety of life that provides us with valuable environmental services such as maintaining groundwater tables, absorbing carbon, protecting water quality, controlling pests and supporting species that pollinate crops. Restoring ecosystem function by increasing biodiversity means that ecosystems are more resilient to negative influences such as drought, pests and wildlife. To protect biodiversity we must protect the habitat on which it relies”

A number of key agencies administer legislation that has overlapping biodiversity outcomes. Consultation with these agencies highlights that a number of issues require addressing in the overall biodiversity strategy, ranging from protecting key fish habitats through to conservation of regionally significant vegetation. Where mapping data is not available or able to be analysed in the timeframe of this review process, the issue remains unresolved in the CWSS (2009) and the new LEP.

Conversely, policy statements or directions have been incorporated into both the CWSS and the new LEP, where it is appropriate to do so. Preparation of a comprehensive biodiversity strategy is listed as an outstanding component in the CWSS 2009 (see Chapter 2). A working partnership between the various agencies involved in biodiversity and conservation (Dept of Environment and Climate Change including the Hunter-Central Rivers CMA, Dept of Water and Energy and the Dept of Primary Industries) is required.

In the interim, the CWSS (2009) and the new LEP 2009 will be Council's first response to biodiversity and conservation and an initial step towards bio-certification of the planning instrument. (More info is available on Cessnock City Councils website: Draft City Settlement Strategy 2009)

ESTABLISHMENT OF A 'GREEN CORRIDOR'

Two regionally significant vegetation corridors are identified in the LHRS. The most valued of these is described as the green corridor that links the Watagans and Yengo national parks with the coastal plains of the Tomago Sand beds, Stockton Bight and Port Stephens, incorporating 14,600 ha of land. The south-western section of this corridor lies within the Cessnock LGA, and provides a vegetated link between the ranges and the wetlands.

While a proportion of this section of the green corridor has been secured for conservation purposes, a significant number of properties affected within the Cessnock LGA are in private ownership. Additional protection of biodiversity and conservation values over private lands is to be achieved through appropriate planning controls, as well as the exclusion of one-off development proposals in these areas. In this regard, the Standard Instrument provides for a number of environmental protection zones.

The proposed land use zone in the new LEP should have regard to the number of private landholdings involved and current land use practices. Forestry areas will be renamed to the new RU3 Forestry zone. Sustainable forestry management practices will ensure biodiversity values are considered.

REGIONAL ROADSIDE ENVIRONMENT PROGRAM

The Regional Roadside Environment Program aims to maintain and improve the important ecosystem services and environmental values that high quality and well managed roadsides contribute to the landscape. These include biodiversity conservation, improved catchment and ecosystem health and maintaining the aesthetic character of the landscape.

The program pursues a holistic approach to the management of roadsides that encompasses all aspects of roadside management from planning and environmental assessment through to implementation of road maintenance and construction activities. This includes development of a suite of tools and resources that relate to all levels of road planning, construction and maintenance and the staff involved in these. These include planners, asset managers, field supervisors, GIS officers and environment staff. Core elements of the program have included:

Widespread consultation with councils to identify, document and validate the suite of management issues experienced by councils when managing roadside environments. Identifying and documenting the value of high quality roadside vegetation remnants across the region. Developing a Regional Roadside Environmental Management Strategy to provide the strategic framework, direction and priorities for implementation of the Regional Roadside Environment Program; Developing a suite of management tools and products specifically tailored to addressing the management issues identified by councils.

These include a model roadside environment policy, management guidelines, environmental assessment templates, GIS resources, staff training manual and field guides. Commencement of a roadside marker program to demarcate roadside environmental issues in the field.

IDENTIFICATION OF ROADSIDE MANAGEMENT ISSUES

Over seventy council staff across the region representing a diversity of roles and council management hierarchies participated in a consultation process. The range of organisational priorities and values that councils presently attribute to roadside environments include:

- Legislative compliance
- Safety and risk management
- Management and maintenance obligations, costs and efficiencies
- Natural resource and environmental values
- Recreational and visual amenity.

Consultation identified that considerable opportunity exists for regional collaboration between councils in regard to the implementation of enhanced roadside environmental management initiatives. This is particularly true in the areas of training, materials purchasing, community education and awareness, and the development of regionally consistent policy, planning, and environmental assessment and management tools.

REGIONAL ROADSIDE ENVIRONMENT STRATEGY

Central to implementation of the project has been development of a Regional Roadside Environmental Management Strategy. The Strategy has been developed to provide the strategic framework, direction and priorities for implementation of the Regional Roadside Environment Program.

The Strategy incorporates a suite of recommendations that have been formulated to meet and address the needs and management issues that have been identified by councils, and incorporate and build upon existing roadside management initiatives, programs and systems identified during literature reviews and consultation processes. The recommendations aim to:

- Build a consistent and comprehensive understanding, suite of skills, and information resources within councils to facilitate improved environmental assessment, protection, management and rehabilitation of council managed roadside environments.
- Recognise the considerable potential that exists for collaboration and resource sharing between councils in this regard to achieve multiple benefits including cost savings and efficiencies, avoidance of duplication of effort, and consistency in policy and practises.
- Contribute to the achievement of key management targets and investment priorities included in the Hunter-Central Rivers Catchment Action Plan.
- 'A Strategy for the Management of Roadside Environments in the Hunter, Central and Lower North Coast Region of NSW' can be downloaded [here](#).

ASSESSMENT OF HIGH QUALITY ROADSIDE VEGETATION (ICON SITES)

The objective of this study was to document and evaluate the vegetation condition and biodiversity value of high quality roadside vegetation remnants surveyed within the Hunter, Central and Lower North Coast region under the 'Saving our Corridors' Program.

ROADSIDE ENVIRONMENT TOOLKIT

The Roadside Environment Toolkit provides a suite of practical resources to assist councils when undertaking road related environmental assessment and planning activities.

SECTION 1 - INTRODUCTION	An introduction to roadside environments and the resources contained within this kit. Introduction
SECTION 2 - ROADSIDE ENVIRONMENT POLICY	This section includes a Model Regional Roadside Environment Policy which aims to promote a consistent approach by councils in the Hunter, Central Coast and Lower North Coast region to the protection, management and remediation of roadside environments. A briefing paper is also supplied which outlines the background information relevant to the policy and the potential resource implications for councils, should the policy be adopted. Roadside Environment Policy
SECTION 3 - GIS MAPPING	This section provides a users guide for the GIS mapping data layer supplied on CD 2 within the Resource Kit. This specialist data layer is designed to allow council staff to immediately access natural resource attributes information for every road segment within their local government area. GIS Mapping
SECTION 4 - REVIEW OF ENVIRONMENTAL FACTORS TEMPLATES	This section provides templates to assist council staff in completing Review of Environmental Factors assessments for common road maintenance tasks. These will assist councils to consider and meet the requirements of essential environmental legislation related to road related maintenance activities. Templates are included for road slashing / mowing & shoulder grading. Review of Environmental Factors Templates

REF Template and Environmental Assessment Guidelines

An Environmental Assessment Guideline has been completed that outlines the legislative responsibilities of local councils when conducting road maintenance, modification or construction activities. Based on this guideline, a Review of Environmental Factors Template has also been developed.

In order to ensure currency with legislative changes and consistency across the 14 member councils, the option of upgrading the template into an electronic format is being explored. An electronic form would step users through the assessment process and utilise live weblinks to existing federal and state legislative information and tools. The benefits to developing a tool of this nature will be gauged will councils over the coming months.

HCCREMS – REGIONAL VEGETATION MAPPING PROJECT

Vegetation Community Classification & Mapping: The current focus of the Biodiversity Program is directed towards completion of Stage 2 of the Catchment-Wide Vegetation Classification & Mapping Project. To date the project has carried out a gap analysis based on over 5000 existing vegetation survey sites and completed 366 additional vegetation surveys to fill those gaps.

Based on these surveys a draft vegetation classification scheme has been completed for the entire Hunter, Central & Lower North Coast Region. The draft scheme has been presented to a panel of vegetation experts from both within and outside the region and the feedback from this review is currently being used to assist in finalising the scheme. The next phase will be to produce a vegetation community map which has complete coverage of all land tenure within the region

Regional Vegetation Classification Scheme

The regional classification scheme for the Hunter, Lower North Coast and Central Coast Region has been completed in 2008. A total of 210 vegetation communities were identified which can be grouped into vegetation formations as follows.

Table 1: Vegetation formations

Formation	Communities
Rainforests	21
Wet sclerophyll forests (grassy sub-formation)	14
Wet sclerophyll forests (shrubby sub-formation)	21
Dry sclerophyll forests (shrub/grass sub-formation)	27
Dry sclerophyll forests (shrubby sub-formation)	61
Grassy woodlands	15
Grasslands	2
Heathlands & Shrublands	16
Forested wetlands	19
Freshwater wetlands	12
Saline wetlands	2

Grassland Community Workshop: Due to the nature of the vegetation data available for the classification work it was felt that grassland communities in the region would not be well represented in the resulting classification scheme. To address this expert workshop has been held with a number of grassland experts in order to derive a set of grassland communities for the region. In addition to this the workshop discussed current techniques for surveying and mapping grasslands to inform the upcoming mapping phase.

Additional Sub-projects: In preparation for the mapping phase of the project additional sub-projects aimed at producing various inputs for the mapping phase are also currently being carried out. The first of these is the completion of targeted, aerial photograph interpretation based vegetation mapping. This work will provide fine scale mapping of vegetation in areas which are considered problematic in terms of modelling vegetation distribution which will act as a constraint to the modelling in order to improve the accuracy of the final map product in these areas.

The second of these sub-projects is aimed at standardising and edge matching the existing soils maps for the region. In addition the project will produce "soil facets" to further sub-divide the soil landscapes represented in these maps. As soils mapping is an important input into vegetation models this work will improve the overall accuracy of the models and resulting vegetation map products.

A relational database has been developed to store the regional classification scheme and associated biotic and abiotic data and allow various reports to be produced on each of the communities. Information which can be provided in these reports includes the geographic, topographic, geological and climatic distribution of communities, diagnostic plant species, common naturalised plant species, conservation significance and relationships to other classification schemes. A range of other information has also been developed through the analysis of vegetation communities including the relationships between various weed species and specific communities which they commonly infest.

Local scale aerial photography based vegetation mapping

Aerial photography interpretation based, fine scale vegetation mapping has been carried out in a number of coastal areas (Great Lakes, Taree, and Port Stephens) which will be used as a constraint to future regional vegetation mapping. The line work has been completed for all areas and the data capture and integration are also nearing completion. As well as providing constraints to the modelling work this mapping will be available to the relevant councils for use in environmental planning contexts such as the identification of Endangered Ecological Communities.

Reports & Publications

A series of reports and publications have been published throughout August and September summarising the work completed in this stage of the region-wide mapping program -

- Vegetation Classification Scheme: Hunter, Central & Mid-North Coast regions of NSW
- Detailed Vegetation Community Profiles
- Comprehensive Vegetation Survey Dataset Audit: Hunter, Central & Mid-North Coast regions of NSW
- API Mapping report
- Private Landholder, National Parks, and State Forest Survey reports

HERITAGE

AT A GLANCE

Aboriginal Heritage			Data Gaps:
State	Unknown	810 sites are recorded on the NPWS Aboriginal Sites register. The location of sites within the LGA is generally kept confidential for security reasons.	
Pressure	Increasing	Many identified areas are on land not in Aboriginal control and may be subject to disturbance through various activities including agriculture, forestry, mining and urban development.	
Response	Limited	NPWS are the lead agency for protection of aboriginal artefacts.	
Non-Aboriginal Heritage			
State	Stable	There are 6 items of State Environmental Heritage, 24 items of Local Environmental Heritage and 160 items listed in the Hunter Heritage Regional Environmental Plan 1989.	
Pressure	Increasing	Increased development activity places increased pressure on both identified and unidentified sites.	
Response	Increasing	A Heritage Schedule to the draft Cessnock LEP 2009 has been prepared and includes 252 heritage items and 2 conservation areas. Convict Trail Project and local heritage groups actively working on restoration, education and protection of some sites.	

RESPONSES TO ABORIGINAL HERITAGE ISSUES

810 sites 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.

RESPONSES TO NON-ABORIGINAL HERITAGE ISSUES

HERITAGE LEP AND REVISION OF HERITAGE STUDY

As part of the Comprehensive LEP, Council engaged a consultant to review the 1994 Cessnock Heritage Study and existing Regional and Local Environmental Plan schedules of Heritage Items. This involved a review of 657 potential heritage sites and landscapes. As recommended by the consultant, the heritage schedule of the draft LEP 09 contains 252 heritage items and 2 conservation areas. The LEP must utilise the heritage provisions contained in the Department of Planning Standard Instrument.

CULTURAL CONTRIBUTION

CULTURAL COMMUNITY DEVELOPMENT DOLLAR FOR DOLLAR GRANT PROGRAM

Each year Council provides funding for community arts/cultural projects through the Community Cultural Development Dollar for Dollar Grant Program. Projects assisted with funding through the scheme during 2008-09 include:

- Purchase of trophies for the 2009 Abermain Eisteddfod
- Annual Art Scrawl exhibition to assist with the artists' awards
- Installation of a kitchen for the use of guests and volunteers in the reception area of Central Hunter Community Broadcasters
- Purchase of 40 chairs for the Cessnock CWA rooms to replace ageing existing chairs
- 2009 Cessnock City Country Music Festival
- Purchase of a display case for the display of themed exhibits such a memorabilia from local schools and early sports in the district prepared by the Cessnock District Historical & Family History Society Inc
- Purchase of a notebook computer, office software and printer by the Cessnock Gem and Mineral Club
- Purchase of 30 chairs, 5 tables and a library cupboard by the Cessnock Quilters & Embroiderers
- Purchase of 2 dust extractors, a mini lathe and stand and a standard lathe by the Cessnock Woodturners Inc
- Recording and production of Nock Rock 09/10 CD (youth band project) by the Cessnock Youth Development Project
- Produce 12,000 pages of local history research for the Coalfields Library and Archives (stationery supplies only) by the Coalfield Heritage Group Inc.

- Installation of lights at the former St Michael's church, Wollombi by the Friends of St Michael's
- Provision and installation of a sound system and lighting for the new school hall at Greta Public Hall
- Advertising, transportation, staging and signage for the 2009 Sculpture in the Vineyards exhibition
- Funding towards the Wollombi Valley Arts Council 2009 Emerging Artists Awards
- Purchase of card tables, chairs and a hot water urn for the Wollombi Valley Tennis & Sports Association

HERITAGE DOLLAR FOR DOLLAR GRANT PROGRAM

Council did not run a Heritage Dollar for Dollar Grant Program in the 2008 / 2009 financial year.

GREAT NORTH ROAD – MOUNT MANNING TO WOLLOMBI

On 2 June 2009, 30kms of the section of the Great north Road between Mount Manning and Wollombi was listed on the State Heritage register. This section of the Great North Road contains a variety of features that provide tangible physical evidence of convict road engineering and construction. The section also contains a number of individually significant structures, including unique examples of culvert and flume construction as well as cuttings, side drains and pavements. Parts of this section of the road remain in use

Under the 2009-2011 NSW Heritage Grants Program the Convict Trail Project Inc. will receive \$135,000 for conservation and interpretation works along the newly listed section of the road. \$75,000 of the grant will be used to carry out urgent repairs to the Ramsay's Leap culvert and stone wall and clear invasive vegetation to make the site more accessible.

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APPENDIX 1 - WATER QUALITY GUIDELINES

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

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

APPENDIX 2 – WATERWATCH WATER QUALITY MONITORING RESULTS FOR CESSNOCK LGA 06'/07'

Water Quality Sampling Site	Water Quality Parameter			
	pH	Conductivity	Turbidity	Total Dissolved Solids
^Congewai Landcare – Congewai Creek (at ford on Congewai Rd) (WBN005)				Readings: 4
Potable Water Supply	✓	✓	x	*
Agriculture	✓	x	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
^Congewai Landcare – Dam at 'Glenbori' (WBN008)				Readings: 3
Potable Water Supply	✓	✓	x	*
Agriculture	✓	x	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
^Congewai Landcare – Congewai Creek (along entrance to <i>Reedy Creek</i>) (WBN010)				Readings: 5
Potable Water Supply	✓	✓	x	*
Agriculture	✓	x	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
^Hunter-Central Rivers Waterwatch – Quorrobolong Ck (culvert on Congewai Rd)(WBN060)				Readings: 1
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
^Congewai Landcare – Congewai Creek (Thursby Rd bridge) (WBN040)				Readings: 2
Potable Water Supply	✓	x	x	*
Agriculture	✓	x	✓	x
Maintenance of aquatic ecosystems	✓	✓	✓	x
^Congewai Landcare – Ellalong Lagoon (WBN055)				Readings: 3
Potable Water Supply	✓	-	x	*
Agriculture	✓	-	✓	✓
Maintenance of aquatic ecosystems	✓	-	✓	x
^Millfield Public School & ^Congewai Landcare – Wollombi Brook North Arm at Millfield (WBN070)				Readings: 1
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
^Wollombi Public School – Wollombi Brook (waterhole) at Wollombi (WBN090)				Readings: 7
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
^Hunter Community Salinity Monitoring – Wollombi Brook Big Arm, Broke Rd, Wollombi (WBT060)				Readings: 11
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
Hunter Community Salinity Monitoring & Burralong Valley Landcare – Will'o'Wyn, Burralong Valley (WBS010)				Readings: 1
Potable Water Supply	x	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	x	✓	✓	x
Hunter Community Salinity Monitoring & Burralong Valley Landcare – Tuckers pond, Murray's Run (WBS020)				Readings: 1
Potable Water Supply	x	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	x	✓	✓	x
Wollombi Nutrient Monitoring Project – Wollombi Brook (Payne's Crossing) (WBT070)				Readings: 2
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	x	x
Wollombi Nutrient Monitoring Project – Wollombi Brook (North Arm below Cedar Ck) (WBN085)				Readings: 2
Potable Water Supply	x	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	x	✓	✓	x
Ellalong Public School – Quorrobolong Creek (End Truro St) (WBN050)				Readings: 2
Potable Water Supply	✓	x	x	*
Agriculture	✓	x	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
Wollombi Nutrient Monitoring Project – Wollombi Brook (North Arm) (WBN100)				Readings: 2
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
Wollombi Nutrient Monitoring Project – Watagan Creek (at bridge on Watagan Ck Rd) (WBS090)				Readings: 1
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	✓	x
Laguna Public School – Wollombi Brook, Laguna (WBS100)				Readings: 1
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	✓
Maintenance of aquatic ecosystems	✓	✓	x	x

Water Quality Sampling Site	Water Quality Parameter			
	pH	Conductivity	Turbidity	Total Dissolved Solids
Yango Creek Waterwatch – Yango Creek Creek (The Grove) Readings: 3				
Potable Water Supply	x	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	x	✓	✓	-
Hunter Community Salinity Monitoring Group, Nulkaba – Black Creek, Nulkaba Readings: 1				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
^Abermain Guides – Centenary Park Constructed Pond, Abermain Readings: 1				
Potable Water Supply	✓	-	x	*
Agriculture	✓	-	✓	x
Maintenance of aquatic ecosystems	✓	-	✓	x
^Friends of Werakata, Tumblebee and Buttai – Peace Park, Weston (SWA020) Readings: 4				
Potable Water Supply	x	x	x	-
Agriculture	✓	x	✓	-
Maintenance of aquatic ecosystems	x	✓	✓	-
^Friends of Werakata, Tumblebee and Buttai – Black Hollows Readings: 4				
Potable Water Supply	x	✓	x	*
Agriculture	✓	x	✓	✓
Maintenance of aquatic ecosystems	x	✓	✓	x
^Friends of Werakata, Tumblebee and Buttai – Wallis Creek, John Renshaw Drive (WAL050) Readings: 3				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
^Friends of Werakata, Tumblebee and Buttai – Swamp Ck, Kearsley (Abermain 2 Colliery) Readings: 6				
Potable Water Supply	x	✓	x	*
Agriculture	✓	x	✓	x
Maintenance of aquatic ecosystems	x	✓	✓	✓
^Friends of Werakata, Tumblebee and Buttai – Swamp Ck (along Willai firetrail) Readings: 1				
Potable Water Supply	x	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	x	✓	✓	-
Greta Public School – Anvil Creek Readings: 3				
Potable Water Supply	✓	x	x	*
Agriculture	✓	✓	✓	x
Maintenance of aquatic ecosystems	✓	✓	✓	x
Hunter Community Salinity Monitoring (Nulkaba) – Black Creek (footbridge between Baddley Pk & football field) Readings: 1				
Potable Water Supply	x	x	x	-
Agriculture	x	✓	✓	-
Maintenance of aquatic ecosystems	x	✓	✓	-
^Friends of Werakata, Tumblebee and Buttai – Deadmans Waterhole Readings: 1				
Potable Water Supply	✓	x	x	-
Agriculture	✓	✓	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-
^Friends of Werakata, Tumblebee and Buttai – Saltwater Creek Readings: 2				
Potable Water Supply	✓	x	x	-
Agriculture	✓	x	✓	-
Maintenance of aquatic ecosystems	✓	✓	✓	-

✓ denotes compliance with ANZECC and NHMRC guidelines * denotes no guideline available
 x denotes non-compliance with ANZECC and NHMRC guidelines - denotes information unavailable
 ^ denotes group undertook Quality Assurance Certification during 2006 (no QA provided in 2007-08 due to Waterwatch NSW rescheduling) **No updates currently available**

APPENDIX 3 – THREATENED SPECIES LISTINGS FOR CESSNOCK LGA

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

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

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

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

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

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

APPENDIX 4 – NOXIOUS WEED DECLARATIONS FOR CESSNOCK LGA

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

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

APPENDIX 5 - ENVIRONMENTAL WEBSITES

ABARE Homepage	http://www.abare.gov.au/
Australian Association for Environment Education	www.aeee.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.environment.gov.au/biodiversity/index.html
Birds Australia	http://www.birdsaustralia.com.au
Bureau of Meteorology	http://www.bom.gov.au
Clean Up Australia	http://www.cleanup.com.au/
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.planning.nsw.gov.au
Dept. of Energy, Utilities and Sustainability	www.deus.nsw.gov.au
Dept. of Agriculture, Fisheries and Forestry Australia	http://www.daff.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 - DECC	http://www.environment.nsw.gov.au
Fisheries R and D Corporation-Homepage	http://www.frdc.com.au
Flora Bank	http://www.florabank.org.au
Forests NSW	http://www.dpi.nsw.gov.au/forests
Greenhouse Challenge Plus	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.keeppaustraliabeautiful.org.au
Land and Water Australia	http://www.lwrrdc.gov.au
HCCREMS	http://www.hccrems.com.au
Environment Protection and Heritage Council	http://www.ephc.gov.au
National Geographic	http://www.nationalgeographic.com

National Landcare Program Homepage	http://www.daff.gov.au/natural-resources/landcare
National Native Title Tribunal	http://www.nntt.gov.au
NSW 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 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.daff.gov.au/rfa
Rivers – Land and Water Australia	http://www.rivers.gov.au
Sustainable Building Guide	http://www.yourhome.gov.au
Waterwatch	http://www.waterwatch.nsw.gov.au/
Total Environment Centre Index	http://tec.org.au
World Wide Fund for Nature	http://www.panda.org

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