

State of the Environment

07/08

Hawkesbury City Council





# State of the Environment Update Report

2007-2008

## CITY-WIDE FOOTPRINT REPORTS

ABORIGINAL HERITAGE

AIR

AQUEOUS WASTE

BIODIVERSITY

LAND

NOISE

NON ABORIGINAL HERITAGE

RIVER HEALTH

SOLID WASTE

WATER USE

## COUNCIL—SPECIFIC FOOTPRINT REPORTS

ENERGY

GREENHOUSE GAS EMISSIONS

WATER



# State of the Environment Update Report

2007-2008

## ABOUT THIS REPORT

As a requirement of the Local Government Act 1993, Councils must submit an annual State of the Environment (SOE) Report within five months of the completion of the financial year. A comprehensive report is to be prepared every four years (within 12 months of the local government elections) and supplementary update reports are to be produced in the intervening years. The SOE Report is a monitoring and reporting tool that can be used to assist local government to make environmentally related decisions and recommendations. The report also provides yearly data and assessment of the progress of particular actions or outcomes.

This SOE Update Report is the third in a new format being pioneered by Hawkesbury City Council that seeks to present key information in a simple yet informative way. The Report is divided into two primary sections to separate Council's environmental outcomes from those of the wider local government area (LGA). Each section then describes the state of the environment under a number of specific categories, or themes. Each of these themes are presented in simple, one-page **Footprint Reports** that comprise five main components:

- Details of how performance is measured
- A rating for performance of the LGA or Council in that issue
- Quantified representation of the LGA's or Council's performance outcomes.
- A summary of the pressures facing the LGA or Council regarding the issue.
- A summary of Council's response to these pressures.

The report is heavily based on quantifiable performance data, which is drawn from environmental performance data collected and managed by Council. This data is maintained in as current a format as possible, and will be available to the public from mid 2009 when Council launches its **Environmental Footprint Portal**. The portal will contain all key outcomes data contained in this SOE Update Report, as well as links to relevant secondary or supporting data.

This version of the SOE Update Report has been produced to satisfy Council's internal reporting requirements as well as requirements for submission of the Plan to the Department of Local Government. An online version of the Report will be developed and launched onto the Hawkesbury City Council website in December 2008, which will allow users to move easily around the report, and (after July 2009) link directly to corresponding current performance data contained on the Environmental Footprint Portal.

Development of this SOE Update Report was coordinated by Planet Footprint Pty Ltd, who are also coordinating development of the Environmental Footprint Portal in partnership with Hawkesbury City Council.

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Hours: Monday to Friday 8.30am - 5.00pm



# Aboriginal Heritage

HAWKESBURY CITY COUNCIL

## ABORIGINAL SITES ABORIGINAL CULTURE

### Measures of performance

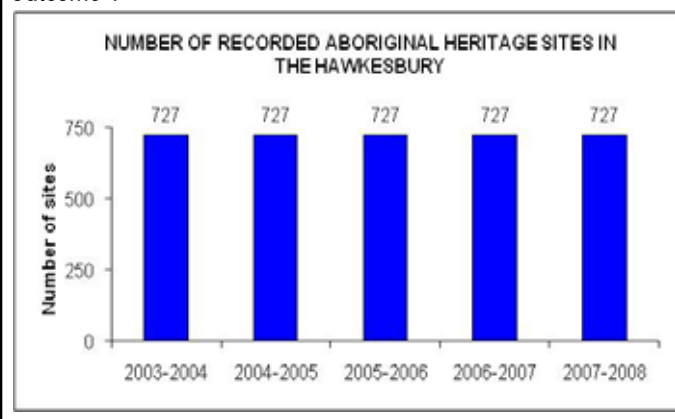
1. Total number of recorded Aboriginal heritage sites in the Hawkesbury.

### How is the Hawkesbury performing?



Aboriginal heritage sites are managed by the New South Wales government, but are reported here as an indicator of the cultural health of the local government area.

### Outcome 1



### Summary of Pressures

Aboriginal heritage sites occur throughout many zonings in the Hawkesbury LGA and are threatened by most land uses. In the past, development has occurred without the investigation of the archaeological potential of the development site and without consultation with the local aboriginal community.

The lack of information available to Council on aboriginal heritage sites is also a problem. At the moment all information Council holds about aboriginal sites is archaeologically based. Sites of cultural significance that don't contain physical evidence are not identified and not always protected.

### Summary of Hawkesbury City Council's Response to Aboriginal Heritage Issues

Council actively supports a number of community groups that promote and manage aboriginal heritage across the Hawkesbury. These include the Aboriginal Police Support Group, and Merana Aboriginal Community Association for the Hawkesbury Inc.

The Merana Project Manager enlightened the attendees of The Sorry Day Commemoration for 2007. A change of venue this year, with the event being held at "Bush Tucker Garden", Macquarie Park at Windsor. The event involved a ceremony, tree planting and a community gathering.

### AIR QUALITY

#### Measures of performance

N W S R I

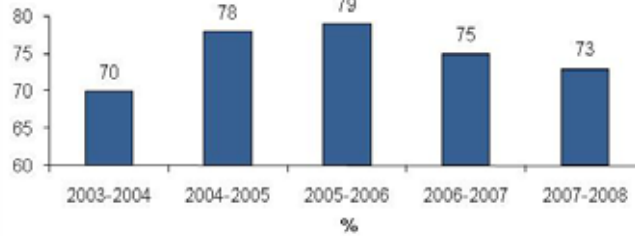
#### How is the Hawkesbury performing?



T H 200

#### Outcome 1

**PROPORTION OF DAYS WHERE AIR POLLUTION IN THE HAWKESBURY WAS RATED AS LOW (%)**



#### Summary of Pressures

M T S  
T W S  
O H O  
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#### Summary of Hawkesbury City Council's Response to Air Quality Issues

C LGA  
T O E C A R 2002 E  
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E S C C C

# Aqueous Waste

HAWKESBURY CITY COUNCIL

## CITY SEWERAGE

### Measures of performance

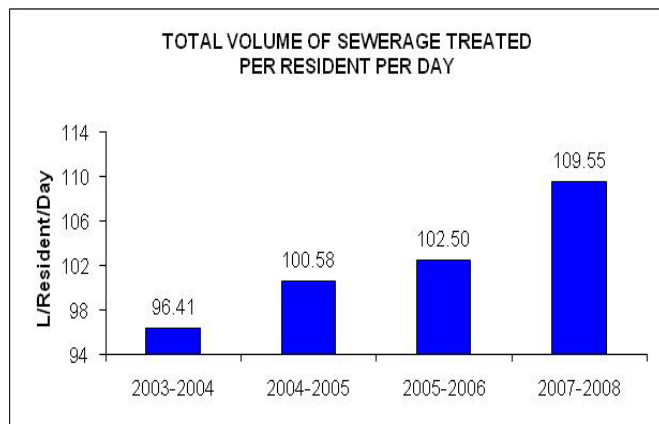
1. Total volume of sewage treated per resident per day.
2. Proportion of sewage treated that is recycled.

### How is the Hawkesbury performing?

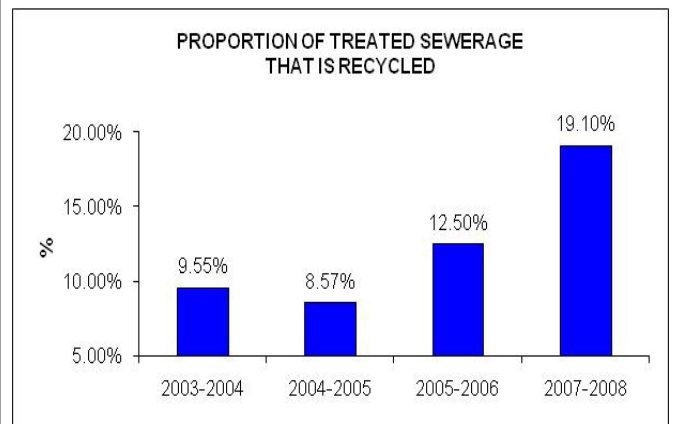


The proportion of treated sewage that is recycled and therefore not discharged to waterways has increased significantly between 2003-2004 and 2007-2008.

### Outcome 1



### Outcome 2



### Summary of Pressures

Hawkesbury City Council and Sydney Water is responsible for delivery of sewerage treatment and associated infrastructure within the Hawkesbury. The major pressure facing Council in delivering adequate treatment services is population growth and the need to ensure treatment infrastructure is maintained and expanded to cope with increasing treatment requirements.

Approximately 80% of the LGA residential areas are seweraged, with the remaining premises being serviced by various septic tank disposal systems or humus type units.

Both the McGraths Hill and South Windsor treatment plants are owned and operated by Hawkesbury City Council. There are approximately 7,000 premises being serviced by the two treatment plants. Of those premises serviced by a reticulated sewerage system, approximately 80% of the waste would be treated at the McGraths Hill treatment works, the remainder being handled at the South Windsor treatment works.

The premises being serviced by a pumpout type system would total approximately 1700 domestic and approximately 110 non-domestic services.

### Summary of Hawkesbury City Council's Response to Aqueous Waste Issues

Council is working to improve the management of aqueous waste in the Hawkesbury through a number of activities and initiatives, including

Continual upgrading of sewerage infrastructure, including installation of variable speed drives and soft starter equipment on pump motors to improve their efficiency.

Continuing to investigate and improve on Effluent re-use. Presently, 80-90% of the effluent from the McGraths Hill plant is used to irrigate a red river gum, swamp mahogany forest and benefit crops such as Lucerne and rye grass.

Sludge produced from the processing of the sewage, is presently being utilised back onsite at each treatment facility.

Council is progressing with upgrades and maintenance of its sewerage reticulation system. Council is being pro-active using Closed circuit TV to assess the condition of sewer mains in order to extend the life of its existing assets and protect public health and the environment.

Continuation of the SSS program in the Hawkesbury to improve the management of on site septic systems, and support land-owners to improve septic management and performance.

### FLORA FAUNA

#### Measures of performance

1. Proportion of total number of flora species in the Hawkesbury that are listed as threatened.
2. Proportion of total number of fauna species in the Hawkesbury that are listed as threatened.

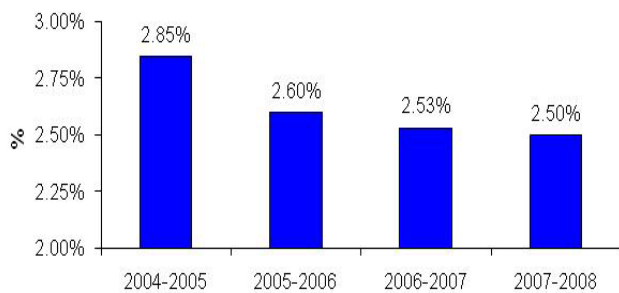
#### How is the Hawkesbury performing?



The number of threatened flora and fauna species in the Hawkesbury as a proportion of total species has reduced from 200 - 2007 levels.

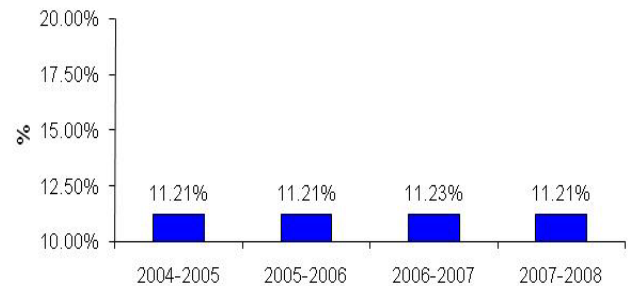
#### Outcome 1

PROPORTION OF TOTAL NUMBER OF FLORA SPECIES IN THE HAWKESBURY THAT ARE LISTED AS THREATENED (%)



#### Outcome 2

PROPORTION OF TOTAL NUMBER OF FAUNA SPECIES IN THE HAWKESBURY THAT ARE LISTED AS THREATENED (%)



#### Summary of Pressures

Pressures include the conservation of native plants, animals, habitat and ecological processes. Provide priorities and guidance in making decisions relevant to managing these native plants and animals and the natural environment of the area.

Provide guidance for the use, conservation and enhancement of natural resources according to principles of Ecologically Sustainable Development.

Flora and fauna within the Hawkesbury are pressured and threatened from land clearing activities, weed invasion, competition and grazing by feral species, fires, and edge effects such as grazing and frequent mowing.

#### Summary of Hawkesbury City Council's Response to Biodiversity Issues

Council is working to improve biodiversity in the Hawkesbury through a number of activities and initiatives, including

Continued enforcement of the 1 Local Environment Plan that seeks to protect areas of threatened vegetation, provide a buffer around areas of ecological significance, protect environmentally sensitive land areas of high scenic value, and restrict development on land that is inappropriate for development by reasons of its physical characteristics or bushfire risk.

The identification of areas of threatened species via completion and maintenance of vegetation maps, such as the Remnant vegetation within the Hawkesbury Local Government Area.

Ongoing bush regeneration activities, and the provision of funding to support regeneration projects within the Hawkesbury are maintained. Council funds invested into revegetation rehabilitation activities within the reporting period 1, .00.

Staff are involved in the assessment of significance of threatened species, or endangered population, to determine if impacts are likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

### PARKLAND CONTAMINATION AND SALINITY

#### Measures of performance

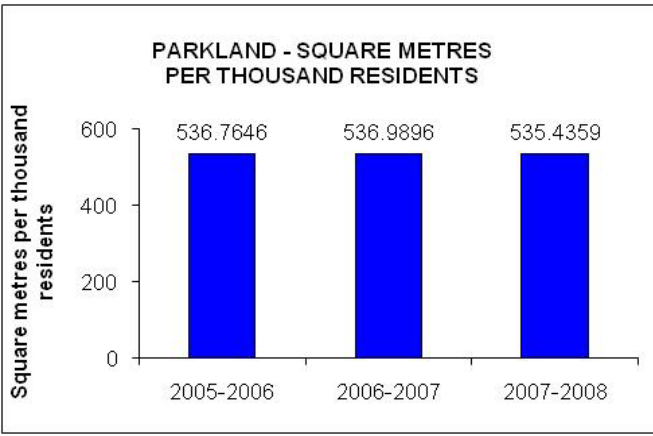
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#### How is the Hawkesbury performing?

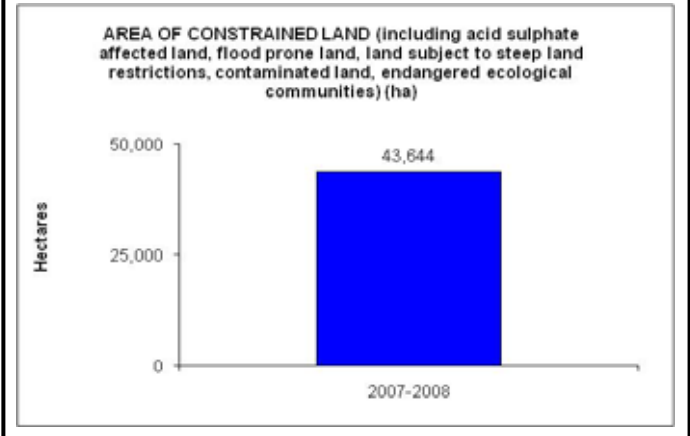


There has been no significant change in area of parkland per resident between 2005-2006 and 2007-2008. The performance measurement of C L 200 2008

#### Outcome 1



#### Outcome 2



#### Summary of Pressures

H I H C  
C L E  
H

#### Summary of Hawkesbury City Council's Response to Land Issues

C C I  
C W S S C



### NOISE POLLUTION NOISE COMPLAINTS

#### Measures of performance

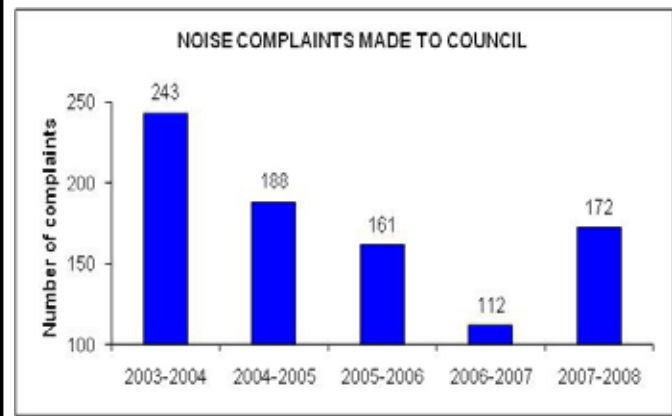
1. Total number of noise complaints made to Council.

#### How is the Hawkesbury performing?



The number of noise complaints made to Council has increased since 2006-2007. However, all complaints were addressed by Council staff.

#### Outcome 1



#### Summary of Pressures

Noise pressures in the Hawkesbury predominantly come from sound equipment, motor vehicles, motorcycles, animal/industrial/commercial noise and rural/residential land use conflict. In particular, aircraft traffic noise is an important issue in the Hawkesbury due to the proximity of Richmond RAAF base to the towns of Richmond and Windsor (although not registered in Council's log of complaints as these are generally made directly to the RAAF).

During the reporting year major commercial upgrades and renovations have occurred at premises where noisy activities are held. There was an increase in sound equipment complaints which may be attributed to residents generally being less tolerant to neighbourhood noise.

#### Summary of Hawkesbury City Council's Response to Noise Issues

Council's primary means of dealing with noise issues in the LGA is via enforcement of relevant sections of the Protection of the Environment (Operations) Act 1997, which gives Council increased powers to control offensive noise. In particular, under the Protection of the Environment (Noise Control) Regulation 2008 Council can issue notices relating to the use or timing of use of certain equipment, as well as residential disturbances. This usually occurs after Council has attempted to resolve the issue directly with the noise source and the complainant.

Council also endeavours to proactively manage noise issues by incorporating noise control conditions into approvals for new developments, with conditions of consent placed on industrial and commercial activities to control permissible hours of operation. Council sees the development application stage as the most effective time to bring potential noise pollution to the forefront, thereby allowing noise pollution to be addressed in the early stages and potential problems avoided.

Complaints regarding RAAF activities are dealt with by the Commonwealth Department of Defence and are often resolved by discussion with the complainant and provision of an explanation of what is occurring and its duration. The RAAF has also set voluntary curfews to minimise disturbances to residents, with these only exceeded in emergencies. During 2005-2006, the noise 'footprint' (or area of noise impact) was downsized due to an overall reduction in noise levels from RAAF operations, largely the result of improved technology.

# Non-Aboriginal Heritage

HAWKESBURY CITY COUNCIL

## HERITAGE BUILDINGS HERITAGE SITES

### Measures of performance

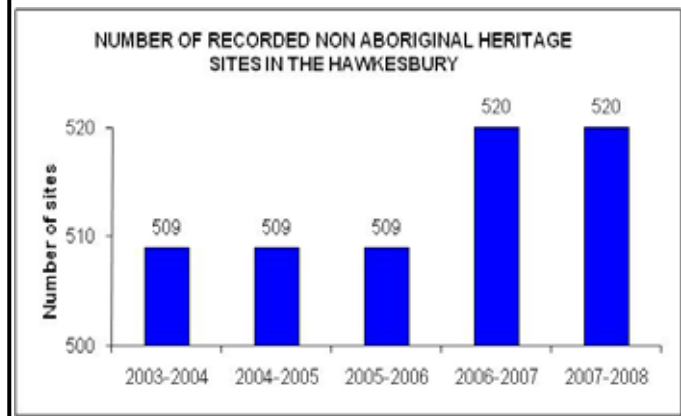
1. Total number of recorded non-aboriginal heritage sites in the Hawkesbury.

### How is the Hawkesbury performing?



The number of identified and managed non-Aboriginal heritage sites in the Hawkesbury has remained stable in 2007-2008 .

### Outcome 1



### Summary of Pressures

Pressures resulting from ignorance of best practice conservation measures, as well as inadequate maintenance and unauthorised unsympathetic works on heritage items are the main issues facing Council.

### Summary of Hawkesbury City Council's Response to Non Aboriginal Heritage Issues

Council employs a consultant heritage adviser to guide Council with its strategic heritage management programs. The adviser visits fortnightly giving advice to Council, government agencies and owners of heritage items on development matters and policy formulation.

The organisation also supports a Heritage Advisory Committee that meets periodically to examine all aspects of heritage. The committee gives advice to Council and owners of heritage items as well as selecting successful applicants for Council's Local Heritage Assistance Fund.

Council funds invested into the protection, restoration or management of non-Aboriginal heritage sites including grant money ,72 .00. Council staff hours invested into the protection, restoration or management of non-Aboriginal heritage sites including development of conservation management plans 2 hours.

# River Health


HAWKESBURY CITY COUNCIL

## WATER QUALITY RIVER FLOWS

Measures of performance

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How is the Hawkesbury performing?




C H R

Outcome 1

AN ECC

W Q G



Outcome 2

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W C NSW

T C M H L NSW D SCA  
W C

N R C

Summary of Pressures

T H N R A T N R R I  
R OO S D N S R G R H  
U N R

S H H R N S W T

I S S

Summary of Hawkesbury City Council's Response to River Health Issues

C A D C N R C H H N C M  
R 200 200

A H N C M A C R H

C S W S S S

S T A C K C C M G H S C W G S H C W R M  
B W H

S S C W T O C G NSW 2008

# Solid Waste

HAWKESBURY CITY COUNCIL

## CITY WASTE COLLECTION AND MANAGEMENT

### Measures of performance

1. Total annual waste collected per resident.
2. Proportion of collected waste that is recycled.

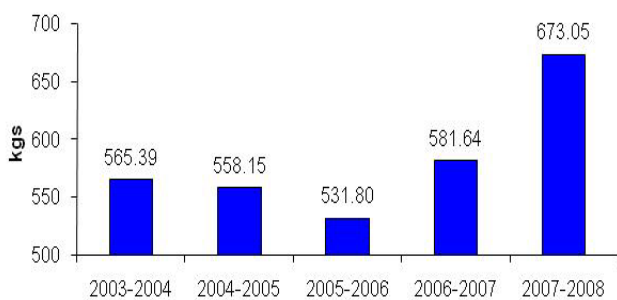
### How is the Hawkesbury performing?



Per resident waste collection has increased between 2003-2004 and 2007-2008. However, this has been offset by a significant increase in the proportion of waste that is recycled.

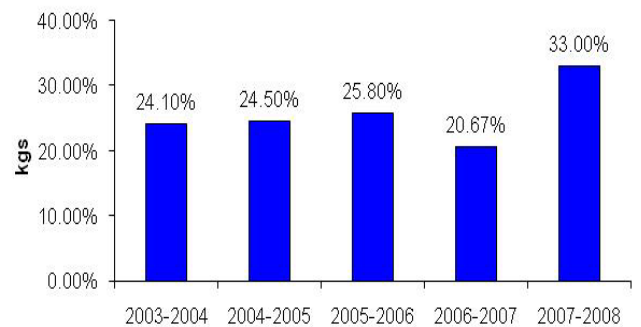
### Outcome 1

TOTAL ANNUAL WASTE COLLECTED BY HAWKESBURY CITY COUNCIL PER RESIDENT (kgs)



### Outcome 2

PROPORTION OF WASTE THAT IS RECYCLED (%)



### Summary of Pressures

As economies and population continue to grow, so does waste generation. Communities around the world are facing problems associated with diminishing landfill space and the need to reduce the consumption of natural resources through more efficient recycling and resource recovery systems.

One of the most significant issues facing the Hawkesbury with regards to waste is the pressure on landfill disposal. The cell availability at Council landfill site is diminishing, with landfill lifespan currently estimated to 2011. However this does not take into account any increase in waste volume resulting from population and economic growth.

### Summary of Hawkesbury City Council's Response to Solid Waste Issues

Council has introduced a number of changes at the Facility in recent years in an effort to maximise capacity. These include the diversion of vegetation to produce mulches, the separation of recyclable materials including steel, timber and concrete, as well as cost incentives to encourage the separation of recyclable materials when delivered by the local community.

Council is also working to improve the management of solid waste in the Hawkesbury through a number of activities and initiatives, including

- Provision of a fortnightly kerbside recycling service to residents.
- Development of management plans for the landfill to monitor groundwater, surface water, landfill gas, leachate, noise, dust and odour.
- Involvement in the drumMUSTER (agricultural drum recycling) program.
- Enforcement programs to police illegal dumping and poor waste management practices in the community.

# Water Use

HAWKESBURY CITY COUNCIL

## POTABLE WATER CONSUMPTION

### Measures of performance

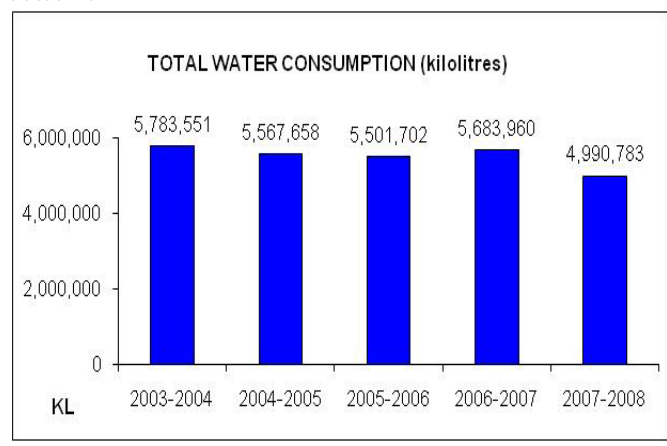
1. Total water consumption
2. Water consumption per resident.

### How is the Hawkesbury performing?

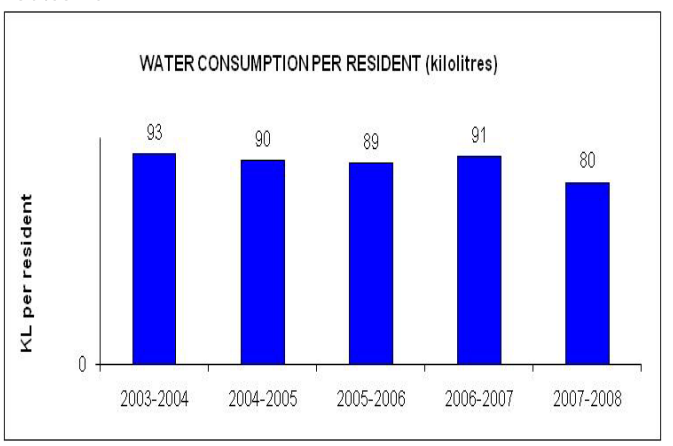


Water consumption across the Hawkesbury decreased significantly between 2003-2004 and 2007-2008.

### Outcome 1



### Outcome 2



### Summary of Pressures

A combination of drought conditions and increasing population is putting pressure on the potable water supply of Sydney and the Hawkesbury.

The NSW Water and Energy savings initiatives were introduced by the NSW Government in May 2007. Administered by the Department of Environment and Climate Change (DECC) and requires certain businesses, government agencies and local councils to prepare Water and Energy Savings Action Plans.

### Summary of Hawkesbury City Council's Response to Water Use

The majority of responsibility for reducing water consumption in the Hawkesbury rests with the State Government (e.g. water restrictions), and the local water utility (Sydney Water). However, Council actively encourages water use reduction among residents as part of its overall environmental awareness programs, and provides advice and information to residents looking to reduce their water consumption.

Council is actively working to reduce its water consumption through continual infrastructure improvements to its facilities to improve water performance. In particular, it is taking a leadership role in reducing water consumption by developing a Water Savings Action Plan to cover its own operations.

During 2007-2008 the Plan was updated and resubmitted to the New South Wales Department of Environment and Climate Change.

Specifically, actions included in the Plan relate to upgrading of water fittings in all buildings (including toilets, taps and showerheads), improvements to Council pools, and use of recycled water at facilities such as the Animal Shelter.

### COUNCIL ENERGY CONSUMPTION (INCLUDING STREETLIGHTING)

#### Measures of performance

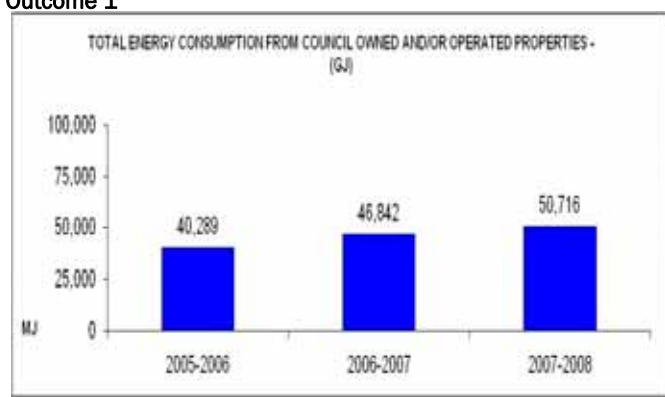
1. Total energy consumption from council operations.
2. Council energy consumption per resident.

#### How is the Hawkesbury performing?

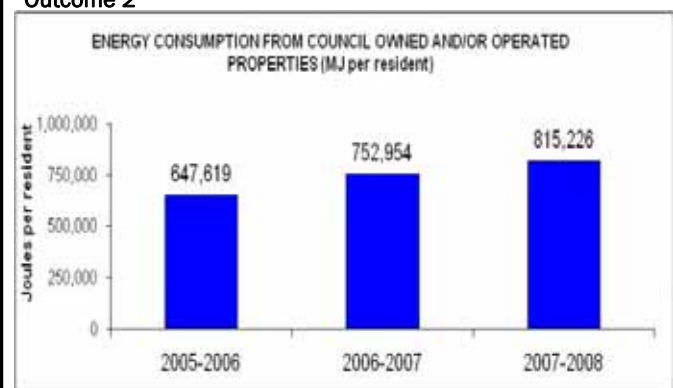


The increase in councils energy consumption has slowed in 2007-2008 compared with increase to previous years

#### Outcome 1



#### Outcome 2



#### Summary of Pressures

Increasing demand for Council services as a result of increasing City population is leading to a rise in energy consumption from Council infrastructure (including streetlighting).

The NSW water and energy savings initiatives were introduced by the NSW Government in May 2005. Administered by the Department of Environment and Climate Change (DECC) and requires certain businesses, government agencies and local councils to prepare Water and Energy Savings Action Plans.

#### Summary of Hawkesbury City Council's Response to Energy Issues

Council has been actively working to reduce energy consumption from its own operations for many years, and has implemented a number of state of the art energy efficient features into its buildings and assets. Much of this has been driven by Council's involvement in and successful completion of the Cities for Climate Protection (CCP) Program. The CCP Program is a global initiative that encourages local government to actively reduce greenhouse gas emissions from their own operations, and to influence a reduction in emissions from the wider community.

In terms of energy abatement actions, key projects completed recently include the installation of building management systems in the primary energy consuming buildings to improve control over heating, cooling and lighting, introduction of power factor correction to key buildings, and the ongoing implementation of a staff energy awareness campaign.

Council has also incorporated energy efficient design into its new buildings, the most notable being the Deerubbin Centre and Hawkesbury Regional Museum which comprises of many energy efficient design features.

Hawkesbury City Council is required to develop a Energy Savings Action Plan (ESAP) in accordance with the guidelines set out by NSW Government. The Plan focuses on the top ten water consuming sites operated by Council. Legislation requires that the Plan is adjusted annually and reviewed every four years to refine effective business cases for further water efficiency measures.

This Plan includes provisions for potential energy saving actions over the next four years prioritized by the optimum pay back period per site.

Council funds invested within this reporting period into Council energy reduction initiatives \$76, 953.00

# Greenhouse Gas Emissions

HAWKESBURY CITY COUNCIL

COUNCIL FOOTPRINT

## COUNCIL EMISSIONS FROM ENERGY SOURCES (EXCLUDING STREETLIGHTS)

### Measures of performance

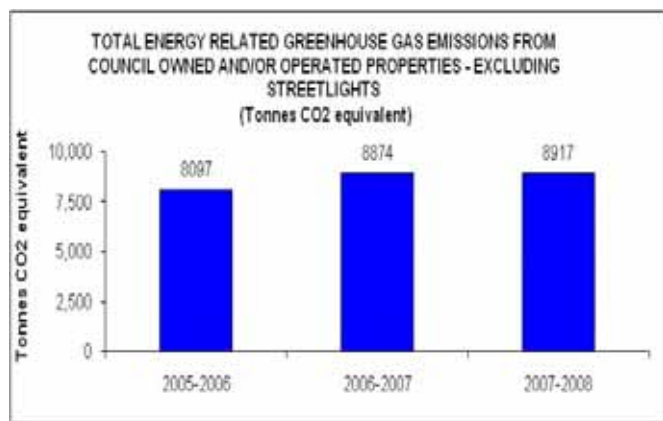
1. Total greenhouse gas emissions from electricity and gas usage within council operations.
2. Council greenhouse gas emissions per resident.

### How is the Hawkesbury performing?

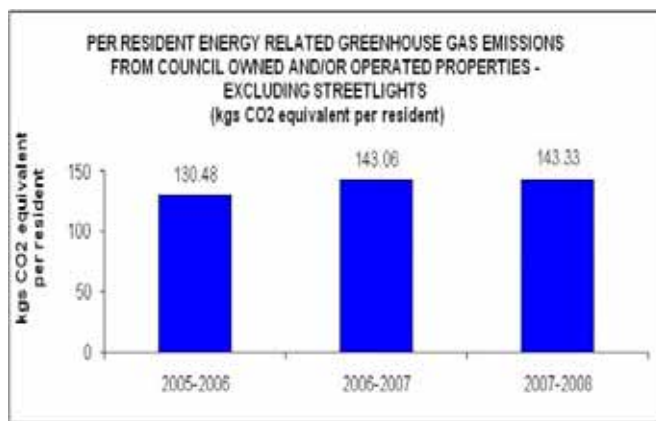


Council's greenhouse gas emissions have remained stable between 2006-2007 and 2007-2008.

### Outcome 1



### Outcome 2



### Summary of Pressures

Increasing demand for Council services as a result of increasing City population is leading to a rise in energy consumption from Council infrastructure, which in turn is leading to a potential increase in Council-related greenhouse gas emissions.

### Summary of Hawkesbury City Council's Response to Green House Gas Emission Issues

Council has successfully completed all five milestones of the Cities for Climate Protection (CCP) Program. The CCP Program is a global initiative that encourages local government to actively reduce greenhouse gas emissions from their own operations, and to influence a reduction in emissions from the wider community.

Involvement in the CCP Program has seen Council develop a Green Energy Strategy, which served as Council's blueprint for reducing emissions between 2002-2003 and 2005-2006. During 2005-2006, Council replaced the Green Energy Strategy with an Energy and Water Savings Action Plan which sets out a revised set of actions to continue greenhouse gas abatement.

Hawkesbury Council currently monitors its organisations environmental footprint with the assistance of Planet Footprint . Planet Footprint captures and monitors data on waste, energy, water, street lighting and fleet management. Refinement in the Fleet Management Data is required to enable an accurate measure our Green House emissions.

Hawkesbury City Council can use Planet Footprint's programs for a range of applications including greenhouse reporting, asset management programs, carbon neutral programs, environmental education, and general organisation triple bottom line reporting.

The Australian Government has released a National Greenhouse and Energy Reporting Measurement Guidelines. These objectives of the guidelines is to set a criteria for the measurement of greenhouse gas emissions, the production and consumption of energy.

Hawkesbury Council is in a comfortable position that ensures our legislative obligation for reporting on our Greenhouse Gas Emissions can be delivered in accordance with best practice guidelines.

### POTABLE WATER CONSUMPTION—COUNCIL OPERATIONS

#### Measures of performance

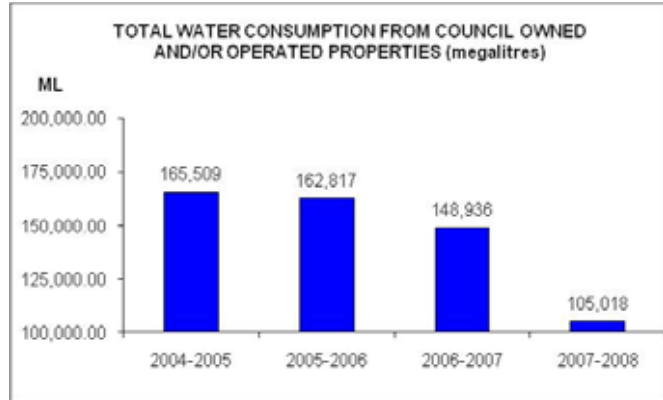
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#### How is the Hawkesbury performing?

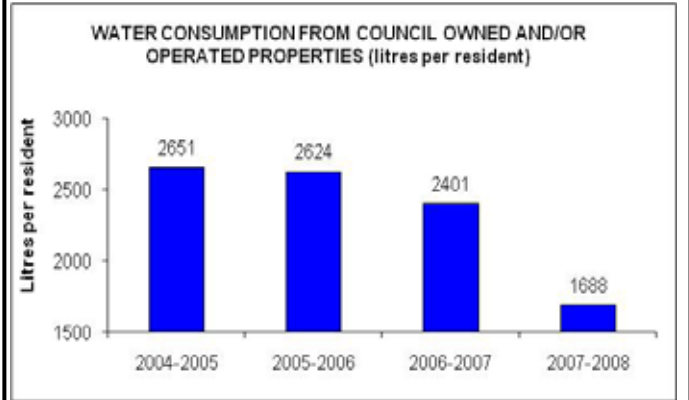


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#### Outcome 1



#### Outcome 2



#### Summary of Pressures

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#### Summary of Hawkesbury City Council's Response to Water Issues

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