

ENVIRONMENTAL MANAGEMENT PLAN

FOR

FAIRFIELD CITY

2006 - 2016





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Overview

Fairfield City Council has developed a Strategic Plan which affirms 11 visions that the organisation is working towards in its delivery of services to its communities. The Strategic Plan also contains key indicators and strategic objectives, and these indicators provide some means of measuring how well we are moving towards the desired vision for the City.

The State of the Environment Report provides an accurate snapshot of the annual environmental works within our City. It does not indicate how our services and related activities are impacting on our total environment, and this is the purpose of the Environmental Management Plan – to set targets which enable us to measure how well we are going in reaching the visions for the City and to assist in identifying actions that will help achieve the adopted targets.

The Environmental Management Plan contains targets which focus on a ten year timeframe, but will be reviewed after five years to ensure the appropriateness and currency of the targets.

The Environmental Management Plan is, in effect, a translator between the Fairfield City Council Strategic Plan, the Council's Management Plan and the State of the Environment Report. It provides Council with the targets against which the environmental performance of the City can be measured, and puts Council to report on how effectively we are moving towards the City's visions. See Figure 1. *Relationship between Stakeholders*

Consultation in the preparation of the plan has aimed to canvass relevant stakeholders regarding the most important issues facing Fairfield and its natural environment. Consultation with staff and community members has identified many environmental issues, which have then been grouped into the following six key themes:

- Urban Capacity
- Creeks
- Biodiversity
- Sustainable Living
- Sustainable Business
- Community Culture



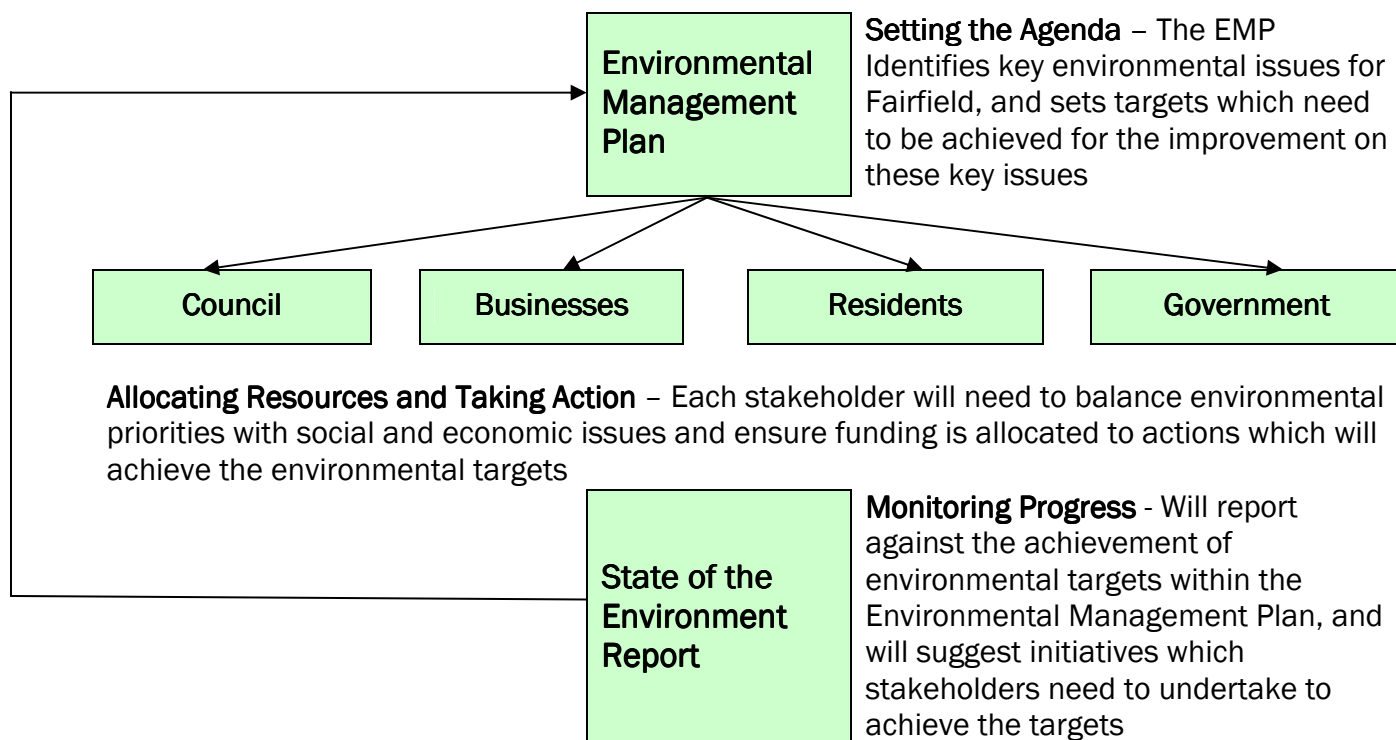
This Environmental Management Plan includes environmental targets for each of these themes. Targets enable Council to measure progress towards desired results. They are measurable conditions, to be reached within a given timeframe. Targets constitute a public statement about Council's commitment to continual improvement for the City and will need to be communicated and monitored.



In preparing the plan, it was clear that whilst many actions are already in place in Fairfield City, a need existed to prioritise these actions and to ensure trends are monitored in those areas. Environmental programs within Council and externally, also need to be measured against these targets, to determine whether efforts are combining to achieve the desired results.

The Environmental Management Plan is not meant to identify actions that are being implemented within Fairfield. The Environmental Management Plan is the standard against which actions should be tested before implementation to ensure the environment is sustained at the standard the community desires. Results will be reported in the Council's Annual Report and the State of the Environment Report.

Figure 1 – Relationship between Stakeholders.



The Environmental Management Plan has been designed to contain targets which focus on a ten year timeframe, but will be reviewed after five years to ensure the appropriateness and currency of the targets.





Why have an Environmental Management Plan?

The City of Fairfield is a complex system of natural and built components that reflect the urbanisation of the area approximately 32 kilometres from Sydney Central Business District. It covers an area of 104 square kilometres, incorporating 27 suburbs, and is one of the largest cities by population in Australia.

This Environmental Management Plan (the Plan) provides the framework for the environmental conditions that will be achieved over a period of time. The targets have been developed in consultation with the community. The timeframe for the plan is long term but has generally focused on a ten year period with a series of ongoing reviews every five years.

The Plan details the Council's Vision and Environmental Objectives for the City and then outlines the themes that need to be addressed to ensure that Fairfield becomes a sustainable city.

The Plan provides the framework against which actions by Council and others should be tested before implementation.

Each of the themes has been broken down into the major challenges for the City. The aims and targets have been identified for each of these challenges with a view to achieving sustainability for the City. Some targets can be measured now; however, some targets will need to be developed over time. Many targets will link to policies and requirements established by State or Federal Government. Water Plans, Development Control Strategies including BASIX, and the Metropolitan Strategy are significant policies that affect how Fairfield will develop over time.

The Plan forms the starting point for strategic planning for the sustainability of the City. It will help guide Council actions and policies as the Government of the City as well as a business operator.





Profile of Fairfield

Area	104 km ²
Number of Suburbs	27
Number of Industrial Districts	8
Area of non-urban land	1,785 ha
% of LGA which is non-urban land	18%
Area of industrial districts	786 ha
% of LGA in industrial districts	8%
Area of original bushland	211 ha
Number of parks	580
Estimated resident population (2002-2003)	188,711
Rate of population growth (1991-2001)	3.9%
Number of DAs received in 2004-2005	1,917
Number of DAs determined in 2004-2005	1,921
Number of DAs approved in 2004-2005	1,679
Proportion of population born overseas	52%
Median household income	\$39,520
Workforce participation rate in 2001	52.7%
Residents at risk of poverty in 2001 (income < \$200/wk)	37.1%

For over 30,000 years Aboriginal people have lived in the area now known as Fairfield. European settlement began in the mid 19th century supported by the construction of the railway in 1856. At the turn of the century the area contained a population of 2,500 people, and with its relatively fertile soils produced crops for distribution in Sydney.

Rapid population increase after the Second World War resulted from the settlement of many ex-service men and European migrants. Large scale Housing Commission development in the 1950s swelled the population to 38,000. By 1979 the population had reached 120,000 and Fairfield City was becoming one of the larger local government areas in NSW. In 2001, the population of Fairfield City was 181,936 people.

Today the City covers an area of some 104 square kilometres and incorporates 27 suburbs. It is one of the most culturally diverse cities in Australia with more than half of all residents having been born overseas, mostly in non-English speaking countries.

The majority of residents speak a language other than English at home; the most common being Vietnamese, Cantonese, Assyrian and Spanish. Fairfield City also has a high proportion of residents who do not speak English well or at all.

While mainly residential, the City contains large-scale employment zones at Wetherill Park and Smithfield, as well as local industrial centres. There are four major business and retail centres at Fairfield, Cabramatta, Bonnyrigg and Prairiewood, and a number



of suburban shopping centres. The majority of residents, however, travel outside Fairfield to work with a high proportion (over 70%) travelling by private transport.

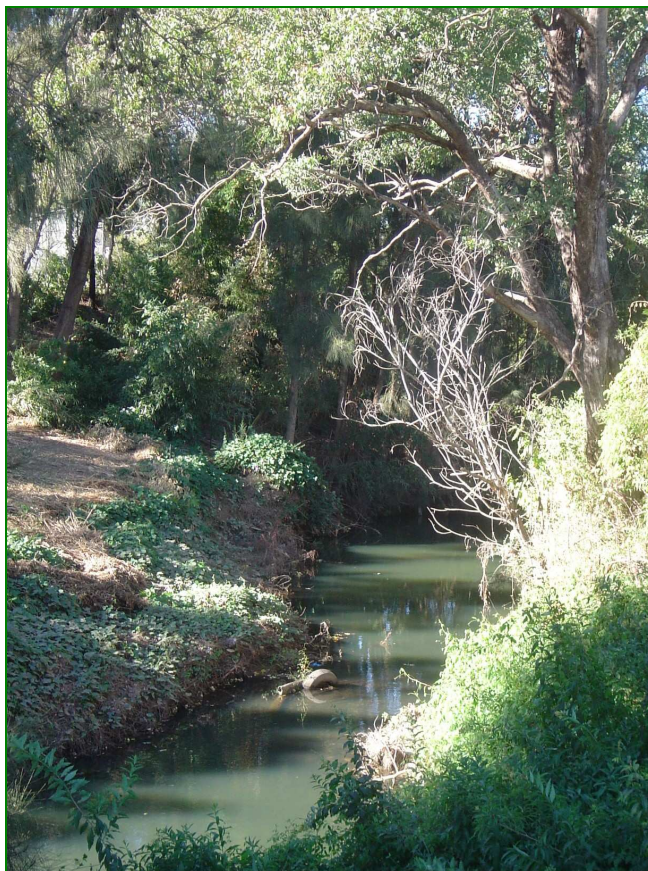
Large expanses of rural land characterise the suburbs of Horsley Park and Cecil Park.

There are 580 parks, including 60 major parks plus the new Western Sydney Regional Parklands.

Accommodation in the City comprises mainly detached housing with some relatively small pockets of residential flat development surrounding the older established town centres. In recent times there has been a growth in low-rise medium density developments throughout the area.

Much of the original bushland cover within the City has been cleared through past land management practices, although a few small areas of remnant bushland remain, including examples of Cumberland Plain vegetation, which is listed under the Threatened Species Conservation Act.

Fairfield City contain approximately 80km of creeks with several of these creeks having their headwaters in the City and flowing into the Georges River and Hawkesbury Nepean Catchments.

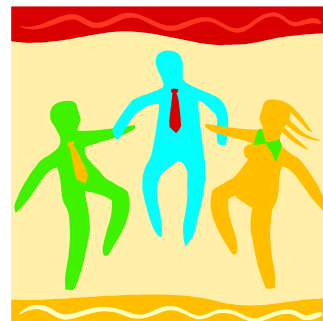




City Vision

Fairfield City Council has developed a vision for the city which includes the following environmental goals:

- A City where the character of its people, communities, neighbourhoods and places are supported and celebrated;
- Confident young people who are able to achieve their potential and are proud of where they come from;
- Employable people, encouraged to take advantage of educational opportunities and overcome barriers to success;
- A clean, green city with restored waterways, cleaner air and a wide range of open spaces that support increased biodiversity as well as recreational opportunities;
- A city that responsibly maintains its publicly owned built and natural assets for current and future generations;
- Well-designed residential areas able to meet changing needs with well maintained infrastructure and landscape;
- Vibrant, welcoming, competitive urban centres, each one unique, taking advantage of the transport links and the City's cultural assets to provide opportunities for locals and tourists;
- Thriving employment areas, taking advantage of potential growth and a variety of employment opportunities;
- An accessible City, which connects people, places and activities, that has a wide choice of safe, affordable and convenient transport options within and beyond the City;
- A City where the changing and special needs of different groups in the community are met; and
- A place where everyone is encouraged and supported to play an active role in the management of our City.





Environmental Objectives

In the carrying out of its functions, the environmental objectives of Fairfield City Council which are contained in its Management Plan are to:

- Encourage and support the active participation of local communities in the decision-making process, through direct consultation and involvement;
 - Collaborate with both government and non-government organisations and ensure partnership opportunities are actively pursued;
 - Ensure the City's resources and assets are managed in a sustainable manner;
 - Celebrate and reinforce a positive sense of community and neighbourhood across the City;
 - Increase community pride in Fairfield City, its past and future, and its many cultures;
 - Manage rural and urban catchments to sustain the community – environmentally, socially, culturally and economically;
 - Ensure creeks are well maintained, accessible and suitable for people to use and enjoy;
 - Conserve natural assets including bushland and open spaces using the principles of intergenerational equity and ecological sustainability while maintaining harmony with human activity;
 - Improve regional air quality;
 - Keep the City clean and dispose of waste in an ecologically sustainable manner;
 - Build a shared sense of meaning and commitment to a culture that supports individuals, community groups, business and government agencies working towards a healthy and sustainable environment;
- 
- Work collaboratively so that residents have knowledge of, and access to, local facilities/services that contribute to a safe and healthy life; and
 - Ensure Council's statutory instruments and formal policies provide a regulatory framework for the sustainable management and development of the City.



Introduction

The City of Fairfield consumes significant levels of resources including land, clean air, native vegetation, open space, electricity, water and gas and produces significant levels of valuable production and in doing so produces large quantities of waste.

The transport system includes a major rail line and a regional bus transitway, and yet relies upon the motor vehicle as the principal mode for transport.

Large amounts of land have been cleared over the last 150 years however, and in recent times significant effort has been put into revegetating the city.

In an attempt to slow consumption and reduce green house gas emissions, domestic waste is now treated to produce reusable products such as compost and energy. Domestic waste is no longer sent to landfill, thereby reducing methane production.

Council is implementing policies that recognise the need to produce development that not only provides a high level of amenity but are sustainable.

Following consultation with relevant stakeholders, the many important environmental issues facing Fairfield City and its natural and built environment have been grouped into six key themes:

- Urban Capacity
- Creeks
- Biodiversity
- Sustainable Living
- Sustainable Business
- Community Culture

The following chapters focus on the many issues within the abovementioned themes. These need to be addressed to ensure the city continue to grow in an environmentally sustainable manner.

By achieving the aims and targets within this Plan, Fairfield will become a sustainable City. These targets focus on a ten year timeframe, but will be reviewed after five years to ensure their appropriateness and currency.

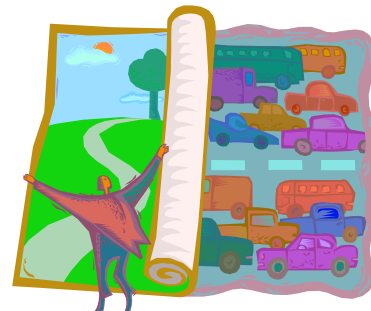


Urban Capacity

The population growth being experienced across Sydney is placing pressure on Fairfield to develop more housing and industry, and is likely to increase with the opening of the Western Sydney Orbital.

Development is driving a reduction in average block sizes and increase in housing densities. Key pressures caused by increasing development include:

- Loss of green space;
- Pressure on drainage infrastructure leading to flooding;
- Loss of prime agricultural land, as well as loss of rural landscapes and character;
- Waste treatment challenges;
- Air pollution;
- Flooding;
- Noise from industry and traffic; and
- Increase pressures on the demands or use of road space.



Urban Capability

Aim: To maintain urban capability in each locality

Ecologically sustainable development (ESD) is based on more sustainable urban development practices. It introduces greater urgency into the need to consider planning concerns such as density, commercial centres planning and public transport provision. It seeks to promote improved air and water quality, protect natural systems, minimum use of scarce resources, encourage recycling and re-use, and introduce energy-efficient transport systems and urban forms.

Urban capability studies in Fairfield have looked at the capacity of each locality to support development. In assessing the desirable level of development in each area, important considerations include the level of infrastructure, the availability of services, as well as any environmental constraints. It is important that development does not proceed without adequate infrastructure, services and environmental protection.

The Metropolitan Strategy will have a major influence over the future strategies that will impact upon the urban capacity of this city.

Council will also need to assess the levels of densities which are the optimum for each locality. Areas which are close to transport and facilities may be suitable for higher densities, with lower densities more appropriate in localities further from the towns. In order to define and measure this target, Council will need to review current



zonings, implement the urban capability assessment and define the most desirable densities for each locality.

Target 1: Maximum carrying capacity for each locality is not exceeded

Target 2: Council's planning controls enable Target 1 to be achieved

Open Space

Aim: Well-designed and well planned open space for each suburb

Open space such as parks, bushland, picnic and walking areas are important for people's health and well-being, and they make Fairfield a more attractive and healthy place to live and visit. It is important to ensure that people living in existing and new housing areas have access to open space which meets their needs.

Fairfield City currently has 580 parks, which allow residents to easily enjoy their open space. As a result of having these parks, 70% of the housing in Fairfield City is within 400m of open space. The target aims to ensure that all residents are able to experience open space within a reasonable distance of their homes.

Target 1: 90% of all residents have a park within 400m of their homes

Target 2: There is a park in each suburb that achieves the standards detailed in the "Parks Improvement Program"

Target 3: Sports fields located and constructed to meet the needs of the Fairfield's sporting community.

Permeable Surfaces



Aim: To retain the maximum amount of permeable surface area across the City while facilitating development

When natural areas are developed for housing or business, the natural absorption of rain and runoff is reduced with the laying of impermeable surfaces such as concrete and tiles. When water is not being absorbed, this increases pressures on the drainage infrastructure and flooding is more frequent. It is important to

ensure that sufficient permeable surfaces are retained amongst built areas to reduce flooding and excess runoff.

With urban development and the construction of roads, house and drainage, the landscape has changed from native vegetation to hard surfaces and gardens. This



has changed the way water and salt move through the environment and where they concentrate.

Significant parts of Western Sydney are affected by the presence of salinity and like all other Councils in this region, Fairfield City Council needs to manage the problem through careful planning and development. Salinity has the potential to destroy brickwork and other masonry, and damage roads and public infrastructure. If not properly protected and managed, salinity damage can result in increasing costs to property owners, Council and the community.

Council will need to look at opportunities to increase permeability or offer incentives for this to happen.

There is currently no accurate measure of the levels of hardstand areas in Fairfield local government area. In order to undertake this assessment, Council will need to utilise aerial photos to measure current levels. This may lead to revisions to the existing Development Control Plans (DCPs).

According to the Fairfield City Overland Flood Study completed in 2004, 41.2% of the study area in the Prospect Creek Catchment was impervious. In order to minimise the overall increase in hardstand areas, policies will need to be developed which regulate the ratio of permeable to non-permeable space in new developments. This will facilitate the formulation of a quantifiable target for this issue. This target is to be determined within 24 months after further scientific investigations are completed.

Target 1: Each sub-catchment provided with a defined maximum level of impervious surfaces.

Agricultural Land

Aim: Maximise land available for agricultural use

According to the NSW Department of Agriculture the value of agricultural production in Fairfield in 2001 was \$10,279,980. While the agriculture industry in Fairfield is relatively small, there are some identifiable Fairfield products which are being distributed through major retail outlets. These include cut flowers, poultry, vegetables and fruit. The area is one of the few areas with parcels of flood-free agricultural land in the Sydney Region. However, this land is facing development pressures which are compounded by the development of the Western Sydney Orbital.

It is important that valuable agricultural land in Fairfield City is protected. Council's geographic information system contains information regarding the availability of agricultural land, and whether development approval has resulted in its loss. The extent of agricultural land in Fairfield City is to be determined within the next 12 months.



Target 1: To maintain minimum of 50% of the existing agricultural land

Target 2: To eliminate pollution runoff from agricultural land

Flooding

Aim: Reduce financial damage from floods

Fairfield local government area includes an area of floodplain with extensive residential and industrial areas. In addition, the drainage infrastructure in Fairfield was not designed to meet current demands, and increasing impervious surfaces caused by development of the catchment also increase the risk of flooding. Flooding causes damage to houses such as carpets, furniture and electrical appliances, and businesses can lose stock as well as suffering property damage.

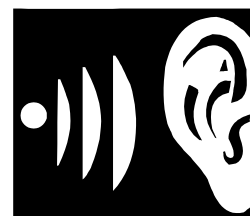
Council's Flood Risk Management Policy (2005) provides a new comprehensive framework to manage flood risk issues having regard consideration of performance, that is, the merits of a proposal, and prescriptive criteria, while establishing controls for building, floor levels, structural soundness, evacuation and car parking.

Target 1: No substantive increase in risk of flooding

Noise

Aim: Minimise unwanted noise

Noise is defined as undesirable sound that can impact on the enjoyment of our local amenity and can unreasonably interfere with our daily activities. Noise can have a number of undesirable effects on our wellbeing, and can be assessed in terms of the duration, intensity, frequency and general character of the noise.



All developments result in activities that generate noise. Noise can have an adverse impact on the health and well being of the community. The impact depends upon the type of noise, time and location that the noise is made.

The substantive land use must not be adversely affected by noise. This is particularly important in areas designated for residential use. Controls will be required to balance residential needs with associated development including transport. These controls will involve reduction at source, construction techniques and barriers. In some locations such as major roads, retro fitting may be required to maintain or reduce the impacts of noise.

Target 1: Minimise the impact of noise



Target 2: The maximum background noise level shall not exceed the levels measured as part of the 2005/06 background noise survey for each identified sub-locality

Air Pollution

Aim: Improve regional air quality

Air quality can have a significant impact on ecological health as well as human health. 'Good air' is essential for respiration, as well as the good health and wellbeing of human and animal life. The quality of the air we breathe in the Fairfield locality is impacted upon by the land uses that surround us. Industry, transport, bush fires, wood heaters, as well as the generation and use of power all play a part in reducing the quality of the air both locally and regionally.



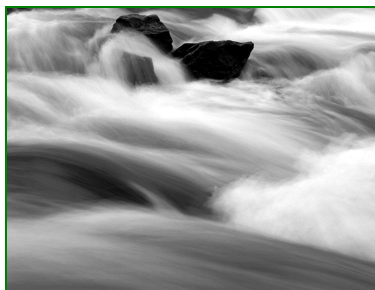
To consider the quality of air in the Fairfield locality in isolation of the entire Sydney 'air-shed' would be inappropriate. Air quality is a regional issue and can change from hour to hour depending on wind direction, wind speed, temperature and rainfall.

The regional air pollution index measures air quality in South Western Sydney and the High Regional Pollution Index (RPI) corresponds to a measured pollution level that exceeds health or visibility goals for ozone, nitrogen dioxide or fine particles. A high RPI corresponds to pollution levels that have reached or exceeded the National Environment Protection Measure (NEPM) standard levels.

Target 1: More than 80% of air pollution level readings shall be "low" on the regional air pollution index readings for each year



Creeks



The creeks that run through the Fairfield local government area are the city's most important environmental asset. As well as being important habitat sites for flora and fauna, the creeks are key components of the stormwater network, and they also provide recreational opportunities for residents. Pressures on the creeks include water pollution from industrial and residential sources, erosion of stream banks, weed invasion and litter.

The main creeks in Fairfield are local creeks in the urban area – Burns Creek, Cabramatta Creek, Green Valley Creek, Clear Paddock Creek, Orphan School Creek, Prospect Creek, Long Creek and their tributaries – as well as the creeks in the rural area – Ropes Creek, Reedy Creek and Eastern Creek.

Natural Watercourses

Aim: To achieve the maximum length of the creeks in a natural state

Earlier this century, it was thought that turning creeks into concrete channels would be more predictable and stable, so most of the creeks in Fairfield were channelled underground or redirected into concrete drains. It is now understood that creeks in their natural state are a much safer system in flood with lower velocities and energy. They also provide valuable wildlife habitat and recreational benefits.

Once creeks have been restored to their natural state, the riparian zones require revegetation to stabilise the banks and prevent flooding.

Target 1: 30% of both sides of creek banks rehabilitated to natural condition

Target 2: 50% of riparian zones revegetated

Usable Waterways

Aim: Enable people to use the creeks for recreational activity

Council carries out comprehensive water quality-monitoring, with overall results revealing that Fairfield City's waterways are not suitable for the protection of aquatic habitats, primary contact recreation (swimming) and human consumption of fish that inhabit these waterways. For the last seven years, water quality in Fairfield's waterways has been assessed as below the acceptable standard for the protection of aquatic ecosystems (SoE 2004).



There are currently eight monitoring sites: four at Prospect Creek, two at Orphan School Creek, Burns Creek and Cabramatta Creek. Each of these sites is assessed for a range of purposes, and then compared to national guidelines for these purposes. Over the year, the current target is to meet the selected criteria in over 50-75% of all samples in each of the creeks. In the future, it would be desirable for Council to operate a biological monitoring programme, at which time the target will be revised to focus on the biological health of the creek system.

Target 1: Over 75% of all creek water quality samples each year meet ANZECC guidelines for secondary contact recreation

Target 2: Chipping Norton Lakes available for secondary contact and Prospect Reservoir available for primary contact use (swimming).

Noxious and Exotic Weeds

Aim: Maximise extent of creek system free of noxious and exotic weeds

There are four noxious weeds which have infested the creeks of Fairfield – Alligator weed, Castor Oil plant, Green Cestrum and Lantana. These and other exotic weeds are unattractive, and they inhibit the growth of a diversity of stabilising native vegetation. The ultimate aim would be to eliminate the number of noxious and exotic weeds from all lands within Fairfield City.

There is 80km of creek system in Fairfield, 30km of which is currently free of noxious and exotic weeds. Another 30km is being targeted to eliminate noxious and exotic weeds.

Target 1: 75% of the creek system is free of noxious and exotic weeds

Target 2: 50% of private land adjoining creeks is free of noxious weeds and exotic plants

Litter

Aim: Reduce amount of litter in creeks

The creeks in Fairfield are subject to a large amount of littering and illegal rubbish dumping. This detracts from the natural beauty of the creeks for visitors, as well as being a hazard for aquatic and terrestrial wildlife. There are various environmental education initiatives aimed at reducing litter, and warning and fines are also issued.



There are many litter collection devices in place in the creeks, and one of the methods is the installation of gross pollutant traps (GPTs). These help to improve the overall health and appeal of our creeks. There are 34 GPTs installed in key locations



along the creeks, and it is hoped that as community awareness improves, that less litter will make its way into these traps. GPTs are very effective structures, but are also very costly to install and maintain. More will be installed at key locations as funding permits.

Target 1: 30% reduction in weight of litter collected from gross pollutant traps at current service frequency

Recreation Opportunities

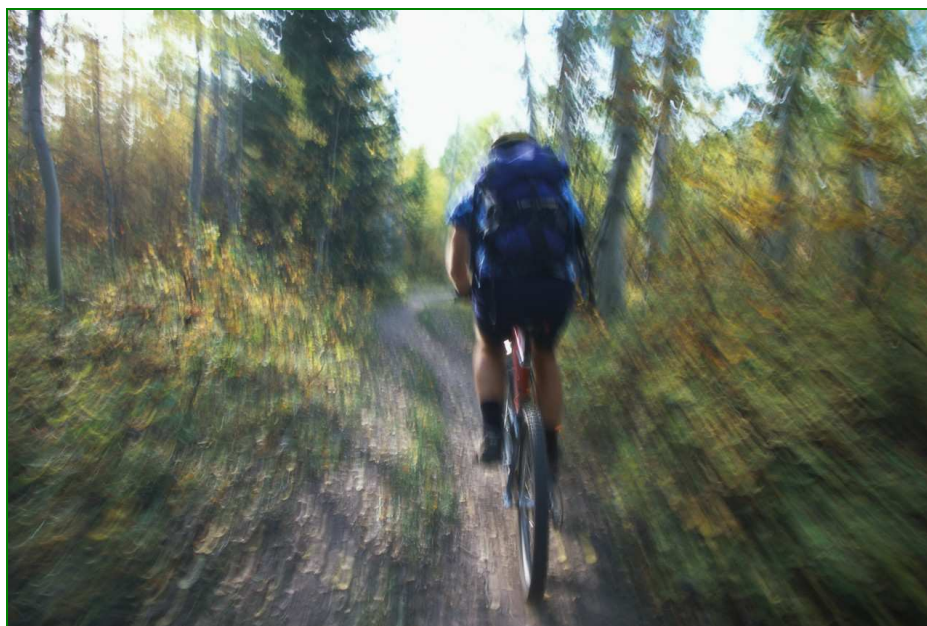
Aim: Increase in recreation opportunities in the creeks accessible to the community

The creeks in Fairfield are an important environmental asset which can be enjoyed by everyone. As people are able to enjoy riding, walking, picnicking or playing by the creeks, the environmental issues facing the creeks become visible to them. Opportunities to enjoy nature are also important for people's health and wellbeing, and the creeks are the most accessible natural features in Fairfield.

Currently there are approximately 44 km of cycleways along the creeks. The Council has an expansion program, and plans to build 2.5 km of additional cycleways over the next twelve months. The current level of usage of the cycleways will have to be determined over the next 12 months.

Target 1: Completion of the primary route of the creek cycleway system

Target 2: Increase cycleway usage by 25%.





Biodiversity

The term biodiversity derives from 'biological diversity'. It means the variety of life, the different plants, animals and micro organisms, the genes they contain and the ecosystem of which they form a part.

Biodiversity contributes to the maintenance of essential ecological processes, and contributes to air and water quality, visual amenity, cultural identity and agricultural productivity. There are also important ethical, moral and economic reasons for conserving biodiversity.



Bushland, native animals and tree cover are important features of the natural environment in Fairfield. However, they face a number of pressures including the clearing of trees and bushland for development and the spread of feral animal and plant species. Strategies will need to address both increasing the amount of native bushland and the inter-connection of existing remnants to develop bushland corridor.

Native Bushland

Aim: Increase cover of original bushland

The Department of Environment and Conservation (DEC) has identified the biodiversity of the Cumberland Plain, Western Sydney (an area that includes the City of Fairfield) as a priority for conservation as it is one of the most threatened regions in NSW. Much of the original bushland cover within the Fairfield local government area has been cleared through past land management practices.

A few small remnant areas of this original bushland remain, making up a total area of approximately 211.25 hectares in the Fairfield local government area. It is estimated that around 13% of the Cumberland Plain vegetation for the Sydney Basin area remains intact.

Target 1: Increase canopy cover of original bushland to 15%

Target 2: Increase canopy cover of native bushland in public ownership by 5%



Native Animal Species

Aim: Improve number and health of native animal species

The existence of native animal species in Fairfield is not monitored or documented systematically. Programs will be required to involve community and government agencies in improving knowledge of the type of native species, and then to ensure that their number and health improves. Sighting targets are to be established over the next two years

Target 1: Establishment of a program to monitor "sightings" of native animal species over at least two set periods per year

Tree Cover

Aim: A Greener City

In order to achieve the goal of a *Clean, Green Fairfield*, the net amount of green cover in Fairfield will need to increase. There are a range of programmes to increase the cover of vegetation on public and private land. This will enhance the appearance of Fairfield as well as ensuring increased habitat for native animals. The extent of tree cover will need to be measured through aerial photography; however, this data is currently not yet available. This information will be determined over the next 24 months.

Target 1: 30% of the City with tree canopy

Target 2: Plant 30,000 indigenous trees, shrubs and ground covers per year





Sustainable Living

Most environmental problems are caused by the habits and lifestyle choices of all of us combined. Every individual can make a difference to water availability, global warming, air quality and waste disposal by:



- Reducing car dependence;
- Minimising water and energy use;
- Responsible disposal of litter; and
- Waste minimisation.

This section of the plan will look at the role of residents, businesses, councils and government agencies in encouraging more sustainable living practices.

Energy Use

Aim: Decrease in energy use per capita

Efforts to reduce energy use are aimed at also reducing greenhouse gas emissions and stabilising climate change. In addition, most types of energy we use are from non-renewable sources.

Current energy use from the residential sector in Fairfield is 677,918,888 kWh per year. Using the 1996 census figure of 181,785 people in Fairfield, then the current energy use per capita is 3,729kWh per year. The Cities for Climate Protection programme has set an energy reduction goal of 20%, and this is an ambitious but achievable goal.

Target 1: To reduce energy use by 20% to 3,000 kWh per person per year.

Waste Management

Aim: Maximise waste diverted to sustainable use

Traditionally, the waste collected by local governments has been buried in landfills. By burying waste, we lose natural and man-made resources which could be re-used, and in addition land is taken up which could be used for other purposes. It is important to increase the amount of waste which is diverted from landfill for recycling or re-use. With the installation of the new waste processing plant, the amount which will be diverted from landfill will be significantly reduced.



In 2004, only 9.8% of the waste stream was diverted from landfill, however, future years will see a significant improvement in this figure.

Target 1: 80% of the waste stream diverted from landfill to sustainable use

Water Use

Aim: Decrease in water use per capita

Sydney's water supply is depleting, and lower rainfall levels and increasing demand in recent years has created a situation in which the water supply is not adequate to meet the city's needs. Addressing the water shortage requires effort from each individual, who can reduce their water consumption in a myriad of ways. There is also a variety of ways in which residents can re-use water, with the main option being the installation of rainwater tanks.

During 2004 the average water usage was 16kLtrs per unit and 67kLtrs per house. The NSW Government has established a water reduction target of 40%, and this can be applied to individuals in Fairfield.

Target 1: Reduce average water consumption by 40% to 10kLtrs per unit and 40kLtrs per house

Target 2: 20% of houses with systems to reduce consumption of potable water (for existing dwellings)

Target 3: Increase access to recycled or grey water sources.

Public Transport

Aim: Increase in usage and usability of public transport

Reducing people's reliance on private cars means cleaner air, less use of fuel and reduced traffic noise. Improving public transport also means that people who do not have the use of private cars can move around more easily.

The Department of Transport is setting new bus operator contracts for the Sydney region, and part of the contracts require operators to provide data on the number of people using certain routes. At the time of writing this Plan, the Department of Transport is finalising the data and aims to provide Council with the number of passengers and the kilometres travelled within the Fairfield local government area.





Target 1: Increase the km/person travel on buses within the Fairfield local government area by 20%

Target 2: Increase train patronage

Car Dependence

Aim: Fewer and shorter car trips and more walking and cycling

Walking and cycling are pollution free modes of transport and use minimal fossil fuels. They reduce the need to build, service and dispose of cars. Motor vehicles are the most significant source of urban air pollution. Technological improvements have reduced emissions from new vehicles, but in the Sydney region in particular these gains may be offset by a continuing growth in the use of vehicles.

Motor vehicles emit greenhouse gases, (most significantly carbon dioxide but also nitrous oxide and methane), which contribute to climate change and the greenhouse effect. In Australia, in 2002, cars contributed 43 million tonnes of carbon dioxide or equivalent greenhouse gases, which is 8% of total national emissions. Trucks and light commercial vehicles contributed 24 million tonnes. Together these represent 13% of Australia's total emissions and since 1990 this figure has increased by 28%.

The majority of vehicle emissions are released when engines are started (up to 40 per cent more), in stop-start traffic and during short trips. By walking or cycling some of these trips, instead of driving, people can help reduce air pollution.

The Department of Infrastructure, Planning and Natural Resources (DIPNR) keeps information regarding car use, walking and cycling. Information received from DIPNR covering the period 2000 - 2003 indicates that of the 808,308 trips starting or ending in Fairfield on an average day of the week, 78.86% of these are in a private motor vehicle and 21.14% are made using other modes – train, bus, walking, taxi, bicycle or other. To achieve an increase in the use of public transport is not an easy task for Council as it depends on many factors that are outside its control.

Target 1: 25% of trips in Fairfield utilise modes of transport other than the private car

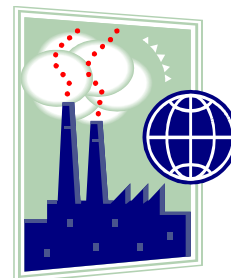




Sustainable Business

In a similar vein, businesses can also contribute to environmental degradation by over-use of natural resources, air and water pollution, land contamination and noise.

The business community in Fairfield is unique, with the industrial estate at Wetherill Park being one of the largest in NSW. While mainly residential, the City contains large-scale regional industrial estates at Wetherill Park and Smithfield, as well as local industrial centres, making up eight industrial districts over 786 hectares. As of 30 June 2004 there were 450 commercial businesses provided with a garbage and/or recycling service by Fairfield City Council.



Being a diverse community, communications and initiatives which encourage and enforce environmental sustainability need to be specifically targeted to improve behaviours. Industrial and commercial enterprises in Fairfield have an important role to play in improving the natural environment. In order to make these improvements, businesses will need to invest time and effort in order to reap the rewards of cleaner production. The knowledge and the motivation to make these improvements will arise from an increasing understanding of environmental problems and how to implement their solutions.

Building Design

Aim: Increase % of new businesses using ESD in building design

Many existing businesses in Fairfield are using older technology which inhibits their ability to reduce pollution and resource use. By ensuring that new businesses use technology which reduces air and water pollution as well as energy and water use, commercial and environmental sustainability is improved for all.

Council will need to provide some guidelines and a policy framework which ensures that new businesses are able to comply with best practice and relevant environmental legislation. Once these guidelines are in place, all new businesses will be required to comply.

Target 1: 100% of new businesses comply with Council guidelines for sustainability

Note: This target will not be implemented until the necessary guidelines have been prepared and approved by Council.



Business Compliance

Aim: Decrease in numbers of non-complying business through audits

There is a raft of environmental legislation which is aimed at ensuring that businesses are responsible corporate citizens. This legislation covers issues such as water and energy use, waste generation and disposal, and pollution control. Fairfield City Council conducts audits of commercial and industrial premises to determine the compliance with environmental legislation, and takes appropriate action when non-complying premises are identified through these audits.

Currently about 50% of audits undertaken by the Council identify breaches in environmental legislation. Through education and awareness raising, as well as through penalties for serious breaches, the audit programme aims to encourage businesses to comply with environmental legislation.

Target 1: 90% compliance found in business audits

Business Energy Use

Aim: Decrease in business energy use

Energy usage in commercial and industrial businesses can be reduced to reduce the use of non-renewable energy sources and stabilise climate change.



Current energy use for the business sector is 392,661,111 kWh per year in the commercial sector, and 5,525,056,944 kWh per year in the industry sector. The Cities for Climate Protection reduction goal is 20%, and therefore this Plan will also adopt this target.

Target 1: Reduce industrial and commercial energy use by 20%

Business Water Use

Aim: Decrease in business water use

Water usage in commercial and industrial businesses can be also be reduced to augment Sydney's water supply.



Water use for the business sector for 2004 was 1,317,027 kltrs in the commercial sector, and 2,222,015kltrs in the industry sector. The NSW Government has established a water conservation target of 40%.

Target 1: Reduction of 40% in water use from the commercial and industrial sectors

Target 2: Harvesting target

Target 3: Reuse target.

Note: Targets 2 and 3 to be determined over the next 12 months in consultation with Sydney Water.

Business Recycling

Aim: Improving business recycling

Waste should be avoided where possible. Where waste cannot be avoided, it can be reduced by ensuring that it is in a form that allows it to be reused or recycled. The waste management hierarchy for industrial and commercial premises is avoidance, reuse, recycling, recovery of energy, repository storage, treatment and containment.

In 2004, Council disposed of 1,851 tonnes from commercial and industrial sources, with the recycling service for business users significantly under-utilised. Council aims to increase the use of the recycling service to the extent that 10% of waste collected is recycled. These figures are lower than for residential users because of the extent of private contractors collecting business waste, as well as the higher costs of providing a recycling service for businesses.

Target 1: 10% of business waste is recycled or re-used





Community Culture



With 52% of Fairfield's population born overseas, there are significant challenges in crossing the language barriers and varied cultural attitudes towards the environment. Most environmental initiatives and projects include a component of environmental education, made more difficult amongst a population with many different languages. Some cultures are more appreciative of environmental values, while others do not treasure nature in the same way. Indigenous cultures have

a particular perspective which can be helpful in efforts to conserve the natural environment. Engaging the whole of the Fairfield community is required in effectively addressing any of the environmental issues.

Environmental Volunteers

Aim: Increase the number of environmental volunteers

When people volunteer to undertake environmental improvements, they are taking action and making a commitment to improve their world. There are a range of opportunities for environmental volunteering in Fairfield, including Clean Up Australia Day, creek clean up days, Streamwatch, revegetation programmes and environmental committees. The number of people who are active on environmental issues is an important measure not only of activity but also of commitment.

Target 1: 1% of the total population are volunteering to assist with environmental improvements

Streetscapes

Aim: Increase the number of people maintaining their streetscapes

When people take care of the areas of public space in front of their houses, then the entire streetscape becomes more appealing and positive. Of the 54,000 residences in Fairfield, only a small number take responsibility for mowing, planting and maintaining their nature strips. It is important that everyone has pride in their street, and takes action to improve the overall appearance of the area.

Target 1: 3% of the resident population maintain their streetscapes



Attachment to Place

Aim: People feel attachment to their neighbourhood

Ultimately, improvements in the natural environment rely on people making an effort to improve their neighbourhood. When people take pride in their streets and their neighbourhood then they will be less likely to litter and pollute, and more likely to participate in activities to improve the health of their environment.

Each year Fairfield City Council undertakes a survey of residents to determine their attitudes to a variety of issues. One of the statements which people are asked to verify is “*My neighbourhood is an attractive place to live*”. In 2003, 80% of people agreed with this statement; and in 2004, 79% of people agreed with this statement.

Target 1: 85% of people agree that their neighbourhood is an attractive place to live





Summary of Targets

This Plan contains a series of targets which will need measuring, monitoring and reporting. Officers at Fairfield City Council have worked on these targets to ensure that they are measurable and achievable. The following table nominates responsible officers for each of the targets. These targets will be reported in the State of the Environment Report, which is required by the Local Government Act each year.

Target	Responsible Officer
Urban Capacity	
Maximum carrying capacity for each locality is not exceeded.	Program Manager Accessible City
Council's planning controls enable Target 1 to be achieved.	Program Manager Accessible City
90% of all residents have a park within 400m of their homes.	Program Manager Healthy City
There is a park in each suburb that achieves the standards detailed in the "Parks Improvement Program".	Program Manager Healthy City
Sports fields located and constructed to meet the needs of Fairfield's sporting community	Program Manager Healthy City
Each sub-catchment provided with a defined maximum level of impervious surfaces.	Manager Development Planning
To maintain minimum of 50% of the existing agricultural land.	Program Manager Accessible City
To eliminate pollution runoff from agricultural land.	Program Manager Accessible City
No substantive increase in risk of flooding.	Program Manager Healthy City
Minimise the impact of noise	Manager Environment & Health
The maximum background noise level shall not exceed the levels measured as part of the 2005 background noise survey for each identified sub-locality.	Manager Environment & Health
More than 80% of air pollution level readings shall be "low" on the regional air pollution index readings for each year.	Manager Environment & Health



Creeks	
30% of both sides of creek banks rehabilitated to natural condition.	Manager Engineering Services Manager City Assets
50% of riparian zones revegetated.	Manager Engineering Services Manager City Assets
Over 75% of all creek water quality samples each year meet ANZECC guidelines for secondary contact recreation.	Manager Environment & Health
Chipping Norton Lakes available for secondary contact and Prospect Reservoir available for primary contact use (swimming).	Manager Environment & Health
75% of the creek system is free of noxious and exotic weeds.	Manager City Assets
50% of private land adjoining creeks is free of noxious weeds and exotic plants.	Manager City Assets
30% reduction in weight of litter collected from gross pollutant traps at current service frequency.	Manager Waste Services
Completion of the primary route of the creek cycleway system.	Program Manager Accessible City
Increase cycle usage by 25%.	Program Manager Accessible City
Biodiversity	
Increase canopy cover of original bushland to 15%.	Program Manager Healthy City
Increase canopy cover of native bushland in public ownership by 5%.	Program Manager Healthy City
Establishment of a program to monitor “sightings” of native species over at least two set periods per year.	Program Manager Healthy City
30% of the City with tree canopy.	Program Manager Healthy City
Plant 30,000 indigenous trees, shrubs and ground covers per year.	Program Manager Healthy City
Sustainable Living	
To reduce energy use by 20% to 3,000 kWh per person per year.	Manager Environment & Health
80% of the waste stream diverted from landfill to sustainable use.	Manager Waste Services



Reduce average water consumption by 40% to 10kltrs per unit and 40kltrs per house.	Manager Environment & Health
20% of houses with systems to reduce consumption of potable water (for existing dwellings).	Manager Environment & Health
Increase access to recycled or grey water sources.	Manager Environment & Health
Increase the km/person travel on buses within Fairfield local government area by 20%	Program Manager Healthy City
Increase train patronage.	Program Manager Healthy City
40% of trips in Fairfield utilise modes of transport other than the private car.	Program Manager Healthy City
Sustainable Business	
100% of new businesses comply with Council guidelines for sustainability.	Manager Environment & Health
90% compliance found in business audits.	Manager Environment & Health
Reduce industrial and commercial energy use by 20%.	Manager Environment & Health
Reduction of 40% in water use from the commercial and industrial sectors.	Manager Environment & Health
Harvesting target. To be determined over the next 12 months in consultation with Sydney Water.	Manager Environment & Health
Re use target. To be determined over the next 12 months in consultation with Sydney Water.	Manager Environment & Health
10% of business waste is recycled or re used.	Manager Waste Services
Community Culture	
1% of the total population are volunteering to assist with environmental improvements.	Manager Engineering Services
3% of the resident population maintain their streetscapes.	Program Manager Healthy City
85% of people agree that their neighbourhood is an attractive place to live	Program Manager Healthy City



References

Department of Local Government (2004) *Comparative Information for Local Government 2002-2003*

Fairfield City Council (2003) *State of the Environment Report 2002/2003*

Fairfield City Council (2004) *State of the Environment Report 2003/2004*

Fairfield City Council (2005) *State of the Environment Report 2004/2005*

Fairfield City Council (2004) *2004-2007 Management Plan*

Fairfield City Council (2005) *2005-2008 Draft Management Plan*

Fairfield City Council (2005) *Annual Report 2004/2005*

www.GreenVehicleGuide.gov.au

www.environment.nsw.gov.au/soe

www.epa.nsw.gov.au/soe

Other Relevant Documents

Fairfield City Council (2003) *State of the Community Report*

Fairfield City Council (2003) *Urban Capability Study*

Fairfield City Council (2004) *Prospect Creek Stormwater Management Plan 2004-2007*

Fairfield City Council (2004) *A Joint Water Quality Monitoring Program: Prospect Creek Catchment*

Fairfield City Council (2005) *Cities for Climate Protection: Milestone 1 Report*

WESROC (2000) *Western Sydney Regional State of the Environment Report 2000*