

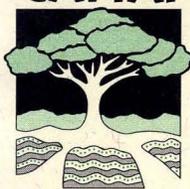


CLEAN UP THE CATTAI

CATTAI CATCHMENT MANAGEMENT COMMITTEE

**AN
INFORMATION GUIDE
TO THE
O'HARAS CREEK
BUSHLAND
ENVIRONMENT**

CATTAI



CATCHMENT MANAGEMENT COMMITTEE



CATCHMENT MANAGEMENT TRUST

First published 1998

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PO Box 6142
Dural Delivery Centre
NSW 2158

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This Report was prepared by Yaeli Myerson, O'Haras Creek Bushland Project Officer for
the Cattai Catchment Management Committee

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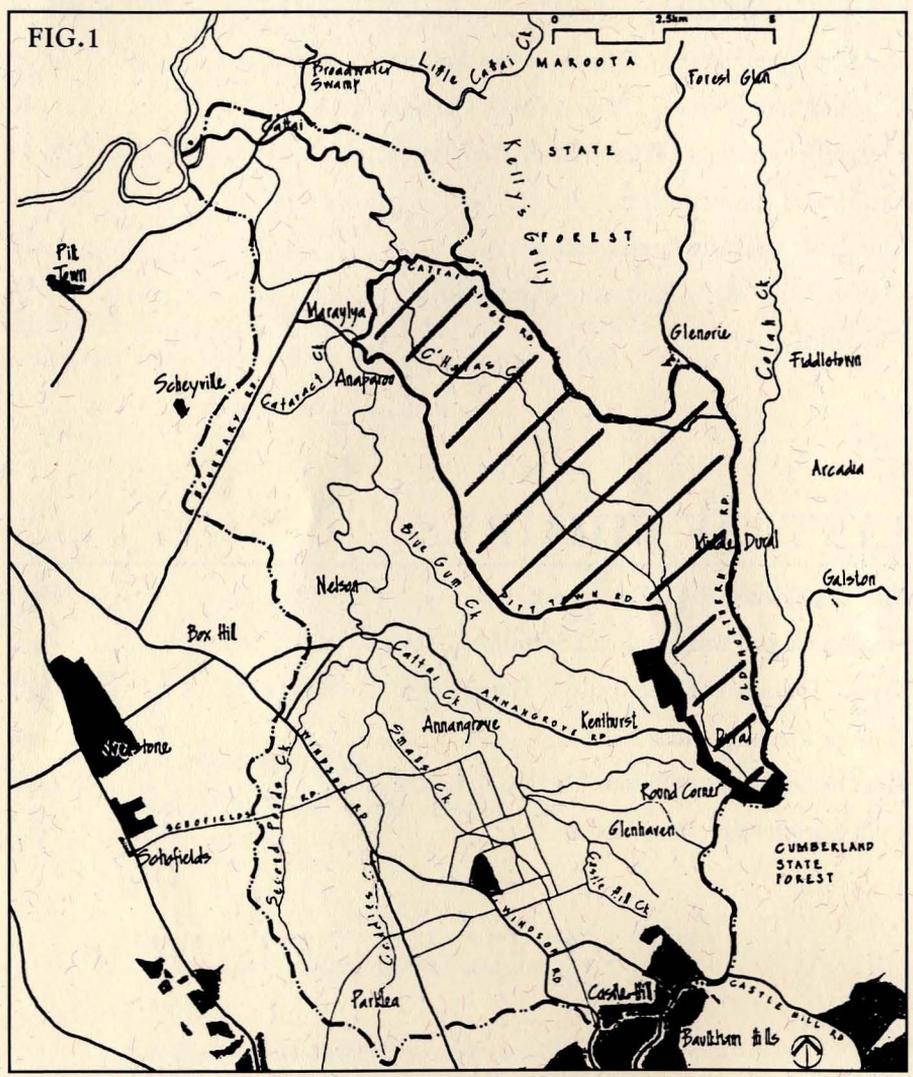
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MAP OF O'HARAS CREEK CATCHMENT



THE IMPORTANCE OF BUSHLAND IN O'HARAS CREEK CATCHMENT

So What Exactly is Native Bushland?

Bushland is land on which there is vegetation which is either a remainder of the natural vegetation of the land, if altered, is still representative of the structure and floristics of the natural vegetation.

(clause 4 SEPP 19)

Vegetation types which are representative of the original flora include forests, woodland, heath, grassland and other plant communities. In addition it is important to incorporate the local soil, leaf litter, tree logs, bush rock and seed bed in any consideration of native bushland as they are all vital components of the unique bushland ecology.

Why Is Our Native Bushland So Important?

Our native bushland is an important feature of what makes Australia unique. This bushland is the result of long term evolutionary processes and has adapted to sometimes harsh environmental conditions.

Local Bushland:

- provides **habitat** for native animals, insects, birds and all other indigenous creatures (fauna) in the local area.
- **conserves** all the plants (flora) which are uniquely Australian from the towering gum trees to the smallest moss.
- **enhances the view** of local suburbs by providing scenic bushland views, shade and breaking up the monotony of urban development.
- contains many sites of **cultural heritage importance**. These include archaeological evidence of Aboriginal occupation and early European settlement.
- influences numerous **environmental functions** including wind velocity, air temperature, pollution levels (such as dust and noise) and reduces storm water run off and soil erosion.
- is a **natural classroom** where we can all **learn** a great deal about native flora, fauna and the effects of human development in the area.
- provides the setting for many **recreational activities** including rock climbing, bush walking, bird watching, fishing and picnicking.

Threats to Local Bushland

The ecology of native bushland has been increasingly disturbed in recent years by local development. This development has altered environmental conditions, and destroyed native fauna and flora. Weeds have spread vigorously from gardens into nearby bushland. Exotic garden plants are also spread by dumped garden refuse, by wind, and by birds or are transported along local Creeks. The list below summarises the main threats to local bushland as a result of intense urban development.

- **Land Clearing:** Largely to make way for housing, associated amenities and infrastructure or roads.
- **Fragmentation:** After development remaining bushland is broken into small pockets often not large enough for the original species to retain a viable habitat.
- **Increased Nutrients:** Particularly in soils and waterways these nutrients make the environment unsuitable for native species but improve weed growth. The sources of these increased nutrients include dumped garden rubbish, fertilisers, sewage overflows, storm water and run-off from cleared areas.
- **Weed Growth:** One of the major environmental problems around O'Haras Creek is weed invasion of native bushland. Weeds originating from neighbouring gardens can out compete native species by exploiting alterations in the natural ecology.
- **Changed Fire Regime:** Urban development alters the pattern, frequency, and intensity of wildfire behaviour, all of which can, in turn, alter the diversity of species present in the area (see fire section for further information).
- **Introduced Animals:** An increase in cats, dogs, rabbits and other feral animals to the area creates a major threat to native flora and fauna. By hunting a range of native animals these feral animals have significantly reduced their numbers in O'Haras Creek catchment.
- **Misuse of Urban Bushland:** Inappropriate vehicle access to bushland causes vegetation destruction and soil compaction. This prevents the re-establishment of seedlings and increases soil erosion. In addition, dumping of garbage, old cars and garden refuse can effect biodiversity and detract from the aesthetic appeal of local bushland.
- **Recreational Use:** Whilst recreational use of bushlands is essential to public appreciation and ownership, over-use or mis-use can lead to severe impacts and degradation.

How You Can Help Preserve Local Bushland

Effective management of local bushland can only be achieved if community members are supportive of management objectives.

- Be involved in bush regeneration activities organised by Councils and/or Cattai Catchment Management Centre (CMC) in your area.
- Find out what non-native species need to be removed from local bushland areas and hand remove young ones as they appear.
- Find out what positive action local Councils have taken to preserve and restore bushland, and encourage them to continue this by participating in organised activities and voicing your bushland concerns.
- Propagate local native plants for replanting.
- If you are a student ask teachers or lecturers to spend some time focusing on bushland issues
- Ensure that your garden does not contain any plants which will invade bushland. Fill your garden with as many local native plants as possible.
- When you are visiting local bushland be careful not to trample plants, litter or damage the bushland environment in any way.

For Further Information See:

1. Cattai Catchment Management Committee (1997), **Indigenous Plants of Cattai Catchment**
2. Cattai Catchment Management Committee (1997), **Garden Escapees Poster**. Available from Cattai Catchment Centre.
3. Buchanan, R. (1989) **Bush Regeneration. Recovering Australian Landscapes**, TAFE Student Learning Publications, Sydney.
4. Department of Planning (1991), **Urban Bushland Management Guidelines**.
5. SGAP-Tasmania (1995), **Caring for your Local Reserve**

All references listed are available for use at the Cattai Catchment Centre

GEOGRAPHY AND GEOLOGY OF O'HARAS CREEK CATCHMENT

The O'Haras Creek Catchment area is one of the largest sub-catchments in the Cattai Creek Catchment region. It is bounded along watershed ridges by Old Northern Road and Cattai Ridge Rd to the north, and Pitt Town Road in the south. Round Corner is the most concentrated area of settlement.

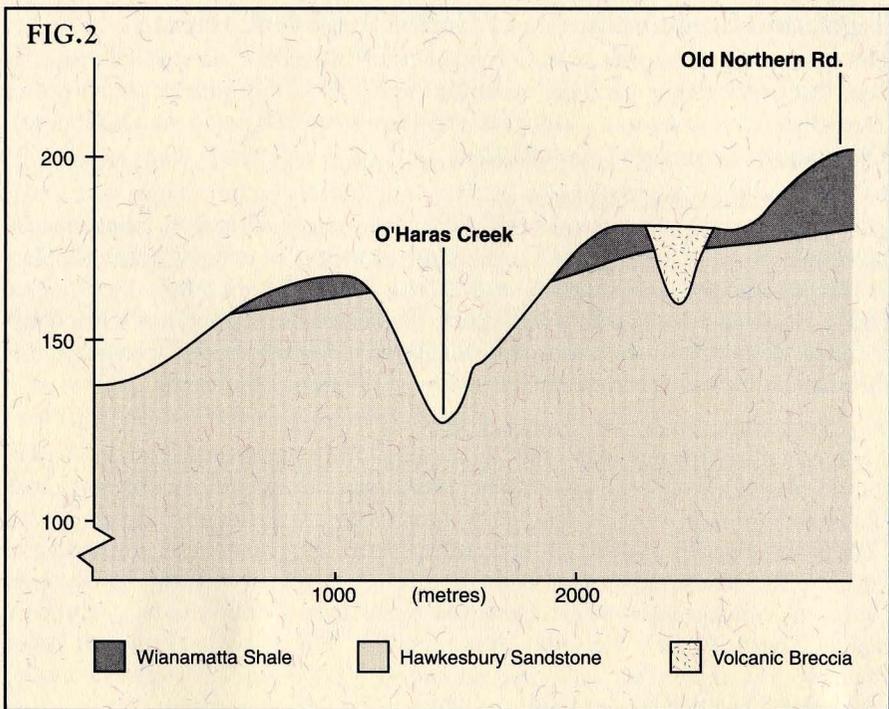
The surface geology of the sub-catchment consists primarily of Hawkesbury Sandstone and Triassic Wianamatta Shale, these are the two dominant rock types in the Sydney Basin. In addition there are two small intrusions of volcanic breccia. This geology combined with local climate largely determine sub-catchment topography, soils, and flora and fauna communities.

Specifically the surface geology of the area consists of older Hawkesbury sandstone sediments overlain with shales of the Wianamatta group. Tectonic activity during the Jurassic and Cretaceous periods have resulted in the small sections of volcanic breccia. Most of the Creek beds contain Quaternary alluvials with much of the O'Haras Creek bed covered with sand. The Wianamatta shales in the central and northern sectors of the Catchment have largely been eroded giving rise to the underlying Hawkesbury Sandstone now exposed as the dominant geological unit.

Topography and soil structure of the sub-catchment area can be classified into two regions, which are largely determined by this underlying geology. The southern end of the sub-catchment is a predominantly gentle hilly landscape, whereas the northern area is dissected by narrow-floored steep-sided valleys and flat plateau (characteristic of the Hawkesbury Sandstone environment). These steep-sided valley slopes limit development opportunities in large areas of the sub-catchment, however much of the relatively fertile shale based areas west of the Hornsby Plateau have been cleared for housing and agriculture.

The climate of the study area is chiefly determined by its location on the eastern edge of the Cumberland Plain. In general, the Cumberland plain region is classified as temperate, with warm-hot summers, cool-cold winters and continual rainfall throughout the year. Proximity to the Blue Mountains escarpment has a marked effect on local climatic patterns.

O'HARAS CREEK CATCHMENT CROSS SECTION DIAGRAM



The figure above illustrates a geological and topographical section of the Catchment.

For Further Information See:

- Clouston, (1992). *Cattai Creek Open Space and Recreation Study*.
- Benson, D. & Howell, J. (1990) *Taken for Granted: The bushland of Sydney and it's suburbs*.

All references listed are available for use at the Cattai Catchment Centre

DESCRIPTION OF FLORA OF O'HARAS CREEK CATCHMENT

Vegetation Communities of O'Haras Creek Catchment

The vegetation types present in O'Haras Creek Catchment are derived primarily from the underlying geology, resulting soil types, topography and various microclimates (see section: Geology & Geography of O'Haras Creek Catchment). These vegetation communities include:

- Wianamatta Shale Communities

These communities have been extensively cleared throughout the area, however small stands remain on ridge tops largely in the South-eastern parts of the Catchment. They are dominated by *Eucalyptus tereticornis* (Forest Red Gum), *Eucalyptus crebra* (Iron Bark), *Eucalyptus moluccana* (Grey Box), *Eucalyptus punctata* (Grey Gum) and *Syncarpia glomulifera* (Turpentine). An example of a Wianamatta Shale community is the remnant Turpentine-Ironbark community in Ellerman Park, Dural.

- Hawkesbury Sandstone Communities

This vegetation type dominates the Catchment. Urban development has resulted in the clearing of much of the ridge top sandstone vegetation, however O'Haras Creek Catchment retains some of the largest intact vegetation communities in Cattai Catchment. Species distribution is largely affected by geographical positioning of flora on the sandstone derived soils. Species representative of the Hawkesbury Sandstone communities include, *Eucalyptus haemastoma* (Scribbly Gum), *Angophora hispida* (Dwarf Apple), *Corymbia eximia* (Yellow Bloodwood), *Angophora bakeri* (Narrow leaved Apple) *Syncarpia glomulifera* (Turpentine), *Angophora costata* (Smooth Barked Apple) and *Banksia* species.

The valley floors which have alluvium soils contain tall open forest dominated by *Eucalyptus saligna* (Sydney Blue Gum) with occasional Blackbutt.

- Sandstone Shale Ecotone

Vegetation of this form is found in bridging areas of the shale and sandstone geologies. This transition provides habitat for plants and plant communities with elements from both the Cumberland Plain and the Hornsby Plateau vegetation associations. Perhaps most importantly, these communities support nationally significant species such as *Darwinia biflora* (Dwarf Scent-Myrtle) and *Persoonia hirsuta* (Hairy Geebung) which are restricted to the shale/sandstone interface and endemic to Sydney. Typical forms of this vegetation type occur in O'Haras Crown Lands within Sydney sandstone ridge top vegetation.

- Volcanic Breccia

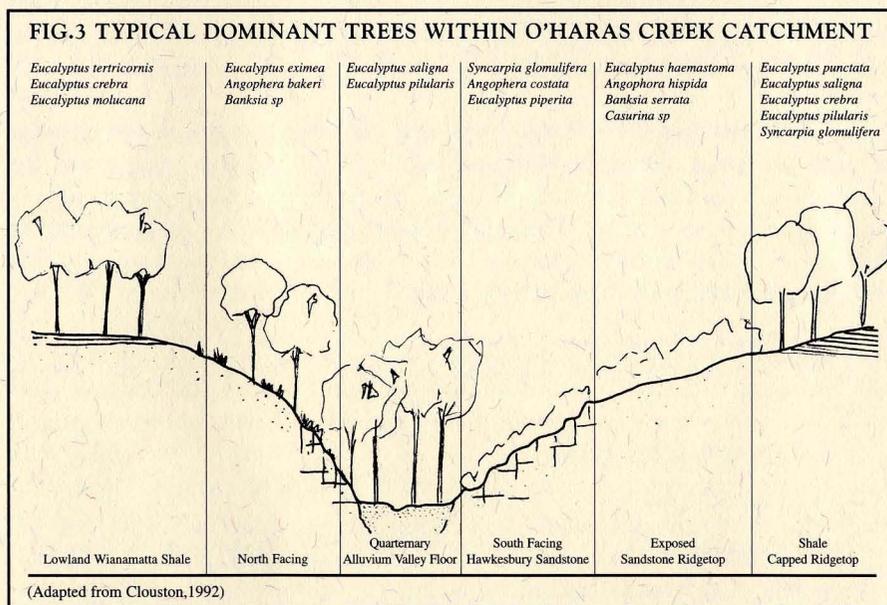
Little remains of the natural vegetation on these rock types as they have been substantially cleared. Only a few degraded remnants remain at Glenorie and Dural. The higher soil fertility associated with this geology supports *Eucalyptus saligna* (Sydney Blue Gum) and marginal rainforest species.

Some rare, endangered and uncommon species and communities within the sub-catchment include:

- Persoonia hirsuta*
- Darwinia biflora*
- Tetratheca glandulosa*
- Blue Gum Forest
- Swamp Mahogany Forest
- Turpentine Ironbark Forest

The Importance of Wildlife Corridors within O’Haras Creek Catchment

The tracts of remaining bushland along the adjacent slopes of O’Haras Creek are important for their wildlife corridor value. Despite urban development on higher ground, the angle of slopes adjacent to the Creek have made development impractical. This has enabled present vegetation to remain as a continuous strip of bushland allowing the free movement of both flora and fauna along this area. Such unfragmented sections of bushland are rare within more developed areas of Cattai Catchment, therefore highlighting the importance of preserving remaining bushland within O’Haras Creek Catchment.



For Further Information See:

- National Parks and Wildlife Service, (1997) **Urban Bushland Biodiversity Survey**
- Clouston, (1992). **Cattai Creek Open Space and Recreation Study.**
- Benson, D. & Howell, J. (1990) **Taken for Granted: The bushland of Sydney and it’s suburbs.**

All references listed are available for use at the Cattai Catchment Centre

DESCRIPTION OF FAUNA OF O'HARAS CREEK CATCHMENT

The natural landscape of the O'Haras Creek sub-catchment is both diverse and complex. It is this diversity combined with its ecological integrity which determines the quality of fauna habitats. Smaller habitats which are frequent throughout the area provide homes for reptiles, birds and insects (such a goannas, king parrots and ring tailed possums), with larger, less disturbed areas supporting mammal communities.

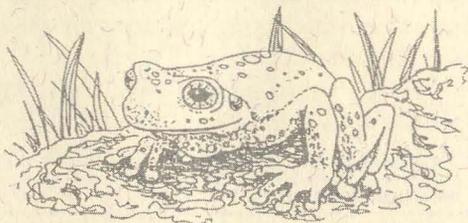
Fragmentation of bushland throughout Cattai Catchment by roads and urban development has caused barriers to wildlife corridor links. This reduction in whole habitat area effects the bushland's ability to support viable communities of larger mammals. In addition, the ability of animal communities to repopulate after fire or drought is reduced while the proliferation of feral animal populations is encouraged.

Within the sub-catchment, Hawkesbury sandstone vegetation communities provide the largest and most pristine fauna habitats. In particular the ridge slopes where development is restricted are able to sustain large diverse committees.

The eastern boundaries of O'Haras Creek support relatively extensive communities of small terrestrial mammals, birds and reptiles. Reduced development and the extent of less disturbed bushland in the northern region enables populations of larger mammals to remain. These include Swamp Wallabies and sightings of Platypus and Koala within the Crown Land in Maroota. The fresh water wetlands within the sub-catchment also provide a varied habitat for numerous bird species.

O'Haras Creek Crown lands in particular have been noted to contain significant remnants of urban bushland. Rare and endangered species found in this area include:

Yellow bellied glider
Masked Owl
Powerful Owl
Red-Crowned Toadlet



For Further Information See:

- National Parks and Wildlife Service, (1997) **Urban Bushland Biodiversity Survey**
- Clouston, (1992). **Cattai Creek Open Space and Recreation Study.**
- Benson, D. & Howell, J. (1990) **Taken for Granted: The bushland of Sydney and it's suburbs.**

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CULTURAL HERITAGE OF O'HARAS CREEK CATCHMENT

The cultural heritage of Cattai Catchment and the O'Haras Creek Catchment extends thousands of years prior to European settlement. This heritage has been divided into three main influences, these include:

1. Aboriginal Heritage
2. European Heritage
3. Land Use and Ownership to Present Day

Aboriginal Heritage

Evidence of Aboriginal culture within New South Wales extends for at least 40,000 years. Evidence suggesting aboriginal use of sites within the area for over 20,000 years have been attributed to the Dharuk Tribe.

The nature of their hunter gatherer lifestyle has left few obvious or permanent relics of occupation. Remaining relics in the regions are both subtle and small scale which is characteristic of nomadic communities (Clouston, 1992).

Evidence of Aboriginal activity within the Catchment is more prevalent in the lower reaches of the Creek, however a few relics are evident towards the south west.

These heritage sites include:

- Axe grinding grooves
- Rock engravings and art in shelters
- Sandstone shelters and archeological deposits

(See Fig.4, page 12)

European Heritage

European settlement within Cattai Catchment and O'Haras Creek Catchment have resulted in drastic landscape modifications. Logging during the last century severely depleted the forest populations of Red Cedars, Blackbutts and Blue Gums.

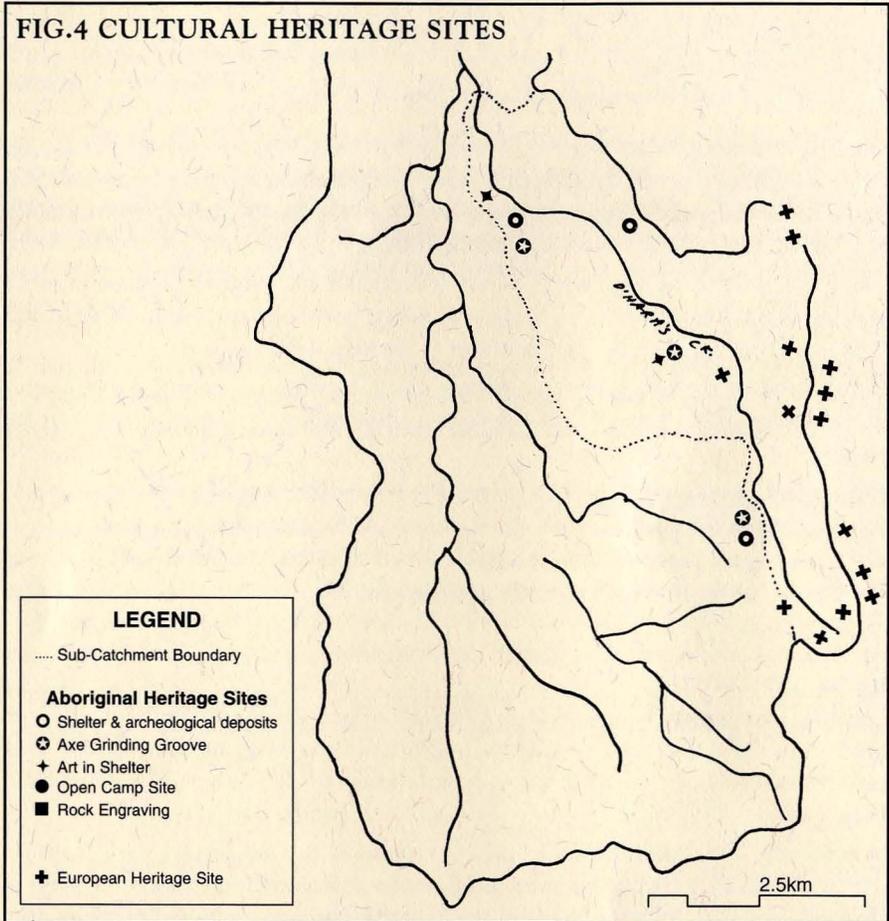
In addition, the initial agricultural development on the fertile shale soils in the first decades of occupation resulted in the shale communities being largely cleared. Old cottages and barns in the Catchment survive as evidence of this early rural settlement while orchards and other horticultural industries remain as a significant land use in the area today.

Land Use and Ownership-Present Day

The main land uses within O'Haras Creek Catchment are rural residential properties, agricultural and horticultural practices. Small agricultural practices in this area have gradually reduced as properties are used for largely residential purposes.

This change in land use has resulted in an increasing proportion of urban-related facilities occupying nearby land, such as shopping malls, recreation centres and playing fields.

Residential expansion has been accompanied by the provision of extensive infrastructure. The major features of which include roads, transmission lines, sewage treatment works, storm water outlets, as well as domestic water and gas supplies.



For Further Information See:

- Clouston, (1992). *Cattai Creek Open Space and Recreation Study*.
- Cattai Catchment Management Committee (1996), *Cultural heritage of Longneck Catchment*.
- National Parks and Wildlife Service, (1997), *A Profile of Western Sydney. Urban Bushland Biodiversity Survey*
- Sue Rosen, (1995). *Losing Ground: An environmental History of the Hawkesbury-Nepean Catchment*.

All references listed are available for use at the Cattai Catchment Management Centre

FIRE AND O'HARAS CREEK BUSHLAND

Urban development within the Catchment area has dramatically altered the nature of wild fire activity. These changes are primarily due to fire exclusion so as to avoid property damage and the more frequent use of low intensity man made fire to clear accumulated fuel from the ground. The alteration of fire regime can dramatically affect the diversity and survival of species present.

Although some native plant species are fire sensitive, a wide range of plants are able to regenerate or re-grow after certain types of fires. The Australian native flora has evolved with fire as an integral part of its ecology. As a result, many species are able to recover and thrive after a fire.

Some survival mechanisms of plants present in the Catchment include:

- the dormant epicormic buds beneath the bark of some Eucalyptus which can sprout after the outer bark has been burnt away;
- the seeds of many Acacias are stored in the soil and will germinate after fire;
- almost all Eucalypts and some Acacias, Casaurinas and Banksias are often able to re-shoot from lignotubers.

The occurrence of a fire in a natural area signifies a rapid and dramatic alteration to the elements of the ecosystem. Where a fire in a residential area signifies damage to us, to the Australian bush a fire may also have many advantages. The extent of the advantages is dependant on the **Fire Regime** of the area.

To describe a **Fire Regime** we need to combine the three following variables:

1. Intensity (a combination of fire heat, fuel weight and rate of spread)
2. Frequency (period between each previous fire)
3. Season (time of year)

The survival of animals and plants varies according to the nature of the fire regime. For example, the components of a fire regime which are of importance to the long term survival of plants are determined in the following order:

Frequency > Season > Intensity

Whereas the survival of animals is determined by the fire characteristics in a different order of importance:

Intensity > Frequency > Season

Fire History

Historically, major bushfires which have occurred within the O'Haras Creek Catchment area have occurred on hot, dry days where gusty winds prevail blowing in a north-westerly direction. Bushfire danger season for the area is generally between October 1st to March 31st. This period is effected by prevailing weather conditions which can alter the time and length of the fire danger season.

FIRE DISTRIBUTION OF O'HARAS CREEK SUB-CATCHMENT (1980-1998)

Fig. 5



As illustrated in the map opposite, the bushland ridges adjacent to O'Haras Creek have been exposed to a series of fires at close intervals.

How To Prevent A Bush Fire

Prevent children playing with matches

*Only light campfires in properly constructed
fire places, make sure all surrounding ground
is clear of flammable material*

*NEVER light outdoor fires during a Total Fire
Ban. Including barbecues*

Do not throw cigarette butts on the ground

Report all fires on '000'

For Further Information See:

1. Rural Fire Services, September 1996. **Bushfire Protection for New and Existing Houses in Urban Areas.**
2. Baulkham Hills Rural Fire Service, Annangrove. (Tel) 9654 1244.
3. Rural Fire Services, August 1995. **FIRE The Australian Experience.** Fireguard Resource.
4. Baulkham Hills Rural Fire Service, **Fuel Management Plan.**

All references listed are available for use at the Cattai Catchment Management Centre

STREAMWATCH IN O'HARAS CREEK CATCHMENT

What is Streamwatch?

Streamwatch is a schools and community water quality monitoring program that helps to raise awareness of the local environment. Participants monitor numerous water quality indicators in their Creeks, including dissolved oxygen, biochemical oxygen demand, faecal coliform, pH value, temperature, total phosphorus, nitrates, turbidity and dissolved solids.

At present the Hawkesbury - Nepean Streamwatch network has around 100 groups involving some 3,000 people and they have produced 1700 sets of data. The data collected is used by Local Councils, the EPA and community groups.

Streamwatch is an important way in which the Hawkesbury Nepean Catchment Management Trust can monitor and encourage efforts to improve the quality of our river systems for future generations.

How To Keep Your Local River System Healthy

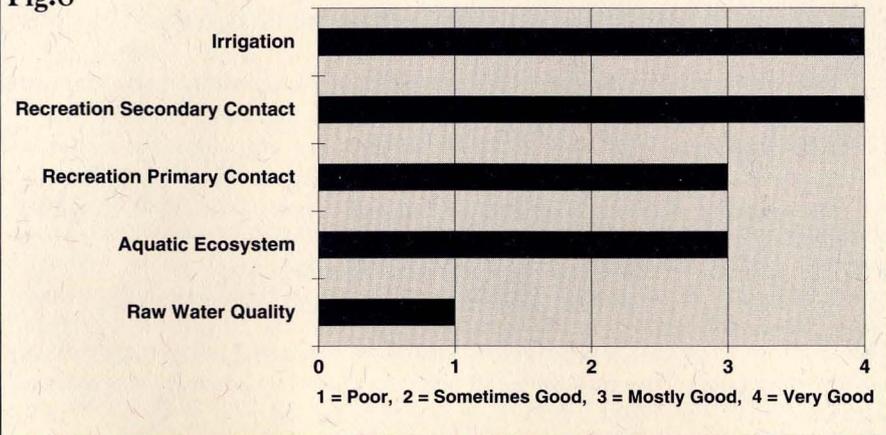
- Use only **Phosphorus Free** cleaning products
- Use a sink strainer
- Keep street gutter and drains clear of garden and lawn clippings
- Mulch plant materials and spread it on lawn and gardens
- Cover any piles of soil or sand with tarpaulins or plastic sheets
- Wash cars on the lawn or a grass verge
- Wash only full loads in dishwashers and washing machines
- Check for leaks in sullage and septic systems and make sure they are properly connected
- Try not to over fertilise gardens
- Regularly service septic tanks, aerated systems and avoid overflows
- Implement Councils erosion and sediment control plans when building or extending existing structures

Streamwatch and O'Haras Creek Sub-Catchment

Streamwatch data for O'Haras Creek has been collected from behind the Hills Grammar School since July 1991 until present day. This data is summarised and pictured in the following graph

O'HARAS CREEK STREAMWATCH RESULTS TO DATE

Fig.6



Note: for details of this graph, see reference number 2 listed below.

In summary the following environmental values are currently rated as:

- | | |
|---|-------------|
| • Raw Water for Drinking Water Supply (subject to screening) | Poor |
| • Protection of Aquatic Ecosystems | Mostly Good |
| • Recreational Water Quality-Primary Contact (swimming, diving) | Mostly Good |
| • Recreational Water Quality-Secondary Contact (boating, fishing) | Very Good |
| • Irrigation water Quality | Very Good |

For Further Information See:

1. Hawkesbury Nepean Catchment Management Trust, **Streamwatch Community Action Report.**
2. Avtar Singh, 1997, **How Healthy is The Hawkesbury-Nepean? A Water quality review using Streamwatch data.** Hawkesbury Nepean Catchment Management Trust
3. Hawkesbury Nepean Catchment Management Trust, **Streamwatch in the Hawkesbury-Nepean Catchment**

All references listed are available for use at the Cattai Catchment Management Centre

THREATS TO O'HARAS CREEK AND FUTURE BUSHLAND MANAGEMENT

Previous sections of this booklet have outlined the diversity and uniqueness of O'Haras Creek Catchment as a valuable environmental resource. In summary, these include:

1. The contrasting geology of the transitional Hawkesbury Sandstone and Wianamatta Shale landscapes
2. The numerous rare and remnant vegetation communities which are representative of the past communities which inhabited the Sydney Basin.
3. The presence of rare and endangered animal communities whose population numbers are as yet undetermined
4. The existence of numerous culturally important sites.
5. A diversity of natural landscapes, and relatively untouched bushland.

This diverse and unique ecology is most at risk by continued urban expansion and human interaction. The environmental pressures caused by urban development and associated service provision can be summarised as follows:

- Increased storm water runoff
- Increased sewage loads
- Increased recreational demands (include. 4WD)
- Loss of productive agricultural land
- Loss of natural vegetation
- Increase in domestic and feral animals
- Weed infestation
- Reduction of publicly owned land
- Changes in fire regime

Of these threats, the reduction and fragmentation of floral and fauna habitat and diversity, the isolation of habitats and infestation of weeds and feral animals, have played the most dramatic role in bushland degradation and biodiversity destruction. All of these continuing impacts result primarily from urban and rural development in the region. It is thus the responsibility of Council planners, local community organisations and residents to ensure that, not only is future development planned with acknowledgement of these threats and the value of the local environment. Council also needs to encourage current and future residents but that current and future residents to act in an environmentally responsible manner to ensure minimal impact on surrounding bushland.

Numerous studies completed within the area have emphasised the importance of O'Haras Creek Catchment as one of high natural heritage value. The management proposals which have resulted from this research can be summarise as follows:

1. Natural and aesthetic conservation should be of prime concern
2. The extension and linking of current parks and reserves should be pursued to ensure viable habitats that will allow the maintenance of fauna and floral biodiversity
3. Formal recreation development and community facilities should be kept low key and small scale to minimise impact upon existing bushland areas

(Clouston, 1992)

You can help.....

Often the most successful actions to protect local environments have been initiated or carried out by community groups, schools and individuals. It is a common misconception that whether you, as an individual, do the right thing for the environment or do not, will not make a difference. It is precisely this idea that has caused some of the major bushland problems within O'Haras Creek.

By tackling problems on a small scale, or at their source, not only is the problem then manageable but other residents will become aware of their link to the bushland environment and the important role and effects we all have upon its well being. Meeting with neighbours and local residents to discuss and identify environmental problems is a practical starting point from which organising bushcare groups can follow. These meetings can also provide authorities with valuable information.

In 1987, The National Park and Wildlife Service of NSW (NPWS) referenced and put forward a proposal for the conservation of part (500 ha) of O'Haras Creek Crown Lands. This has been a long standing proposal to convert a vacant part of the O'Haras Creek Crown Lands into the O'Haras Creek Nature Reserve. Currently the Service is awaiting a final determination from the Department of Land and Water Conservation (DLWC) who is responsible for administering crown lands. You can help move this process along by contacting DLWC, NPWS and Council and voicing your concern for the conservation of this land within the Catchment.

Cattai Catchment Management Committee is a community resource where you can obtain information about environmental issues, or about processes such as the conversion of land to nature reserves, get contact names and numbers as well as help on starting a local environmental or bushcare action group.

GLOSSARY

Animal/plant populations : all the individuals of one species in an area.

Biodiversity : the variety of all life forms, this include genetic, species and ecosystem diversity

Bushland remnants: a small portion of a plant community which was once dominant in the area

Catchment: the area of land from which rainwater or snow melt drains into a lake, river or creek ie. Cattai Catchment

Communities: living things both plant and animal, living together in a specific area

Ecological integrity: the health of on ecological environment

Ecology: the interrelationship of living things and their physical, chemical and biological environment

Ecosystem: a system where living thing are dependant or interact with their physical, chemical and biological environment (eg: forest, creek, pond)

Eco-tone: a transition zone between two distinct habitats

Endangered: any living thing that is likely to become extinct unless action is taken to remove or reduce the reasons which threaten their survival.

Epicormic: buds, flowers or shoots which grow from the old bark of plants

Exotic: a plant or animal which is introduced to a region.

Fauna: animals

Flora: plants

Indigenous: originating and characteristic of a particular region

Infrastructure: buildings and services required for urban living (eg: buses, roads, electricity).

Lignotuber: A lignotuber is a mass of dormant buds contained within a woody swelling buried beneath the ground. The lignotuber is able to hold nutrient reserves which are vital to the re-establishment of the plant.

Microclimate: the climate of a small area caused by the environmental conditions of a this area.

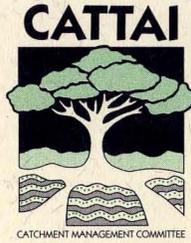
Rare species: living things which are uncommon but currently not considered to be in danger of extinction

Species: a group of organisms which can breed and produce offspring which are capable of reproducing.

Sub-catchment: a smaller watershed area within a larger Catchment ie. O'Haras Creek Sub-catchment

Transitional: a change in characteristic from one state to another

Wildlife corridor: a tract of vegetation linking one section of bushland to another enabling the movement of flora and fauna for feeding and habitat needs.



For further enquiries on any information contained in this booklet or for other information regarding bushland management in the Cattai Catchment area, please contact:

Cattai Catchment Management Committee

PO Box 6142

Dural Mail Centre

Dural NSW 2158

Ph: (02) 9651 2170

Fax: (02) 9651 2237

*See our booklet “Indigenous plants of the
Cattai Catchment” for species available
to plant on your property.*



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