

# The bushland of Fred Caterson Reserve





## Council's Bushland Reserves

The Hills Shire Council manages 970 hectares of bushland in over 170 different reserves.

It is Council's goal to restore and maintain the biodiversity and cultural heritage of these community lands.

## Council Contact Information

The Hills Shire Council

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[www.thehills.nsw.gov.au](http://www.thehills.nsw.gov.au)

24 Hour Vandalism Hotline 1300 884 885

(e.g. to report rubbish dumping and water pollution)

Originally Published by Baulkham Hills Shire Council 2007

ISBN 978-0-9587344-5-5

Other brochures in this series:

*The Bushland of Hunts Creek Reserve and Seville Reserve*

*The Bushland of Bidjigal Reserve*

Text, maps, illustrations and layout: Virginia Bear (Little Gecko Bushland Interpretation).

Photographs: Virginia Bear unless otherwise credited.

Aerial photographs and map cadastre information: Baulkham Hills Shire Council.

Map contours: Land and Property Information (NSW).

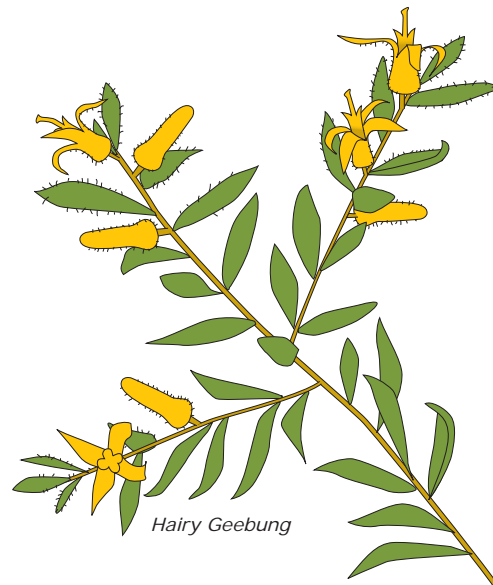
Acknowledgements. Baulkham Hills Council staff Lisa Willock, Sandra Dudley, Noelene Pullen, Don Higginbotham, Steve Duneskey, Peter Irish and William Wright provided ideas, feedback and access to information held by Council. Many others have provided useful comments particularly Danie Ondinea and Christine Bear. Doug Benson, Bundeluk, Edgar Freimanis, and Ann Parks had important knowledge to contribute. Heather Watson's detailed recollections of Castle Hill last century were invaluable. The ecologists who had previously studied and reported on Fred Caterson Reserve and the local area deserve thanks for providing such an important resource.



## The Bushland of Fred Caterson Reserve







*Hairy Geebung*

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The bushland of Fred Caterson Reserve is known to visitors from far and wide as a picturesque backdrop to the popular sports fields, where they come to watch and play soccer, cricket, basketball, tennis, baseball, BMX and model car racing.

Over thousands of years previously, Aboriginal people came to understand its resources and learned to live sustainably as part of it.

While Castle Hill was a farming area and cars were scarce, locals visited on foot and horseback, enjoying this wild place, with its lush native grasslands, massive scribbly gums and wildflowers among sandstone outcrops. Cattai Creek was a home to Platypus and yabbies, and the perfect place to cool off in the water on a summer's day.

The land that would later become Fred Caterson Reserve, Castle Hill Pony Club, the Showground and the Cemetery was first reserved in 1861 as the site for a new village, but was never used. In 1895 the future Fred Caterson Reserve and Pony Club was given to the people of NSW for public recreation.

The reserve remained undeveloped until the mid 1960s, and until the late 1980s it was part of a large natural area along the upper reaches of Cattai Creek. Most of the local bush has since been replaced by houses and Fred Caterson Reserve is the largest of a series of bush remnants that remind us how the area's ancient landscapes once looked.

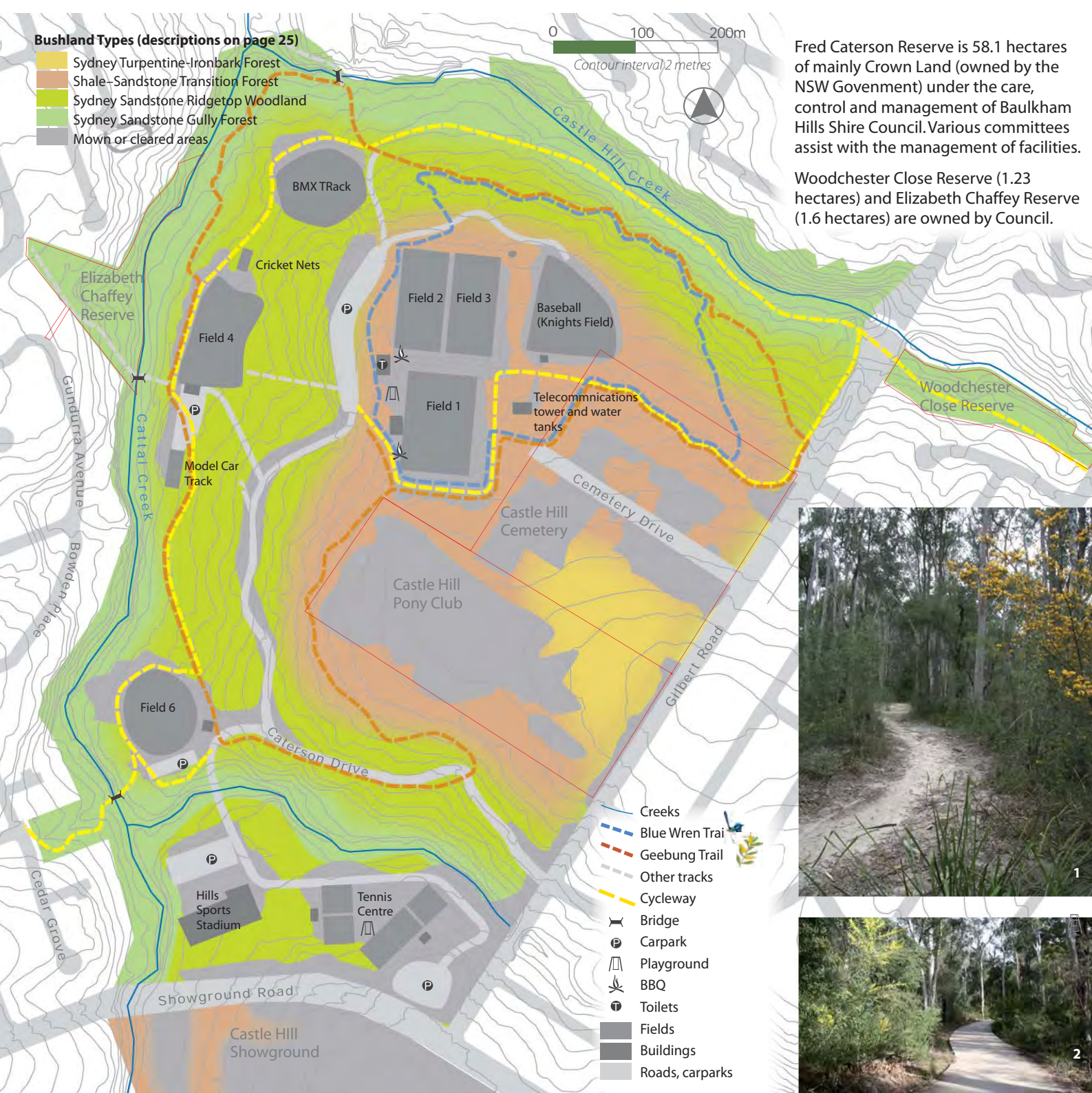
The remaining bushland is still full of fascinating plants and animals—many of them now rare. This booklet was produced to help visitors, students, neighbours and others discover more about them, and the reserve's interesting past.





## Bushland Types (descriptions on page 25)

- Sydney Turpentine-Ironbark Forest
- Shale-Sandstone Transition Forest
- Sydney Sandstone Ridgetop Woodland
- Sydney Sandstone Gully Forest
- Mown or cleared areas



Fred Caterson Reserve is 58.1 hectares of mainly Crown Land (owned by the NSW Government) under the care, control and management of Baulkham Hills Shire Council. Various committees assist with the management of facilities.

Woodchester Close Reserve (1.23 hectares) and Elizabeth Chaffey Reserve (1.6 hectares) are owned by Council.

## Features and Facilities

**Bushwalking.** There are two tracks maintained by Council, and a network of other minor tracks.

- **Blue Wren Trail** 1.5km, takes about 40 minutes.
  - **Geebung Trail** 3.5km, takes about 75 minutes **1**.
- These are “bush style” tracks, with sections of rocky and uneven ground, and patches that become muddy in wet weather.

There are informal creek crossings in the reserve. The rocks are often slippery. The creeks flow strongly during wet weather, and the crossings may become dangerous or impassable.

**Cycleway.** The 2.5km, “Mario Vargas Way” has a mostly flat, level surface, sealed in parts **2**. There are some steep, uneven sections near Gilbert Road.

**BMX track**, with dirt jumps. *Free public use except during club events.*

**6 Playing Fields** for cricket, soccer and baseball, also cricket nets. *Free public use or bookings for club or other events.*

**Picnic tables and timber BBQs.** *Free public use.*

**Public toilets** *Open 8:00-5:00 weekdays and 8:00-9:00 weekends*

**Playground equipment.** *Free public use*

**Hills Sports Stadium.** An indoor venue for sports, seminars, functions etc. is run by the NSW Basketball Association. *Available for hire.*

**Caterson Tennis Centre.** Run by Hills District Tennis Association. *10 courts available for hire.*

**Remote Control Car Track.** *Free public use.*



### Visitors please note

- creek water is unsafe for drinking or swimming
- dogs must stay on a leash at all times in the reserves, dog walkers are responsible for collecting and disposing of their dogs droppings
- cyclists must keep to tracks and not ride through bushland areas
- motor bikes must stay on the sealed road—not on walking tracks, cycleways or in the bush



# When the land provided everything

With intimate knowledge of the bush gathered over thousands of years, Aboriginal people found everything they needed to live healthy sustainable lives and maintain a rich culture of stories and ceremonies.

Fred Caterson Reserve is part of the traditional lands of the Darug people. Despite great changes since Europeans arrived, and the loss of some traditional knowledge, much has been handed down through Darug families. Other information has been recovered from records made by early colonists.

What the local area couldn't provide (e.g. stone such as basalt for axe heads, silcrete and quartz for sharp blades) could be traded from the Hawkesbury and Blue Mountains. Cattai people would have travelled to other regions for social gatherings and ceremonies. Many people visited them, with large gatherings held at a meeting area on Caddies Creek (near Commercial Road).

Mindful of the future, the Darug people actively conserved and farmed local resources. Laws and customs prevented too much collecting or hunting of particular plants and animals. After fruit was eaten the seeds were often replanted. Underground tubers were often only partly eaten, the top section was replanted to regrow.

## **Fred Caterson Reserve has easy access to a variety of environments:**

- **Cattai Creek** with water for preparing food, washing and playing, rocks and water for axe sharpening, eels and yabbies to eat.

◀ Bundeluk with one of the old Scribbly Gums in Fred Caterson Reserve. Bundeluk is a Darug man who grew up in Kellyville. He is part of an unbroken chain of indigenous Australians who have enjoyed the bush tucker of Fred Caterson Reserve. Now a professional tour guide, artist and educator he shares his knowledge of Darug culture and history with the wider community.

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- **The Cumberland Plain** had plentiful underground vegetables in the grasslands and along the river flats, and grazing animals to eat.
- **Sandstone gullies** offered a wide choice of fruit and nectar, also goannas, possums, and wallabies, and caves provided shelter.
- **The chain of ponds creeks** housed yabbies and fish, with underground vegetables in the swampy valleys.
- **Tall forests of the ridgetops** are the home of Native Cherry 9, also lilies orchids and grazing animals.

## **Some useful resources:**

- **Timber** for water and food containers, hunting and foraging gear such as spears, boomerangs, clubs, and digging sticks. Canoes (for further downstream when Cattai Creek broadens and deepens), bark for waterproof shelters (used on the plain where there are no rock overhangs).
- **Fire** could be lit with old grass tree flower heads, and carried using tea tree branches.
- **Sandstone** for shelters, waterholes 8, grindstones for seeds, and places for art.
- **Baskets** can be made from strappy leaved plants such as Lomandra 1, Dianella 2 and Blady Grass.
- **String and rope** can be made from

fibrous plants such as rice flower, bog rush, and the bark of the stringybark tree.

- **Wrapping** for food to be roasted etc, came from the paperbark tree 7.
- **Medicines** were everywhere for those who knew. Some, such as tea tree and eucalyptus oil, were so effective they became instantly popular when the rest of the world discovered them.

## **Some local bush food:**

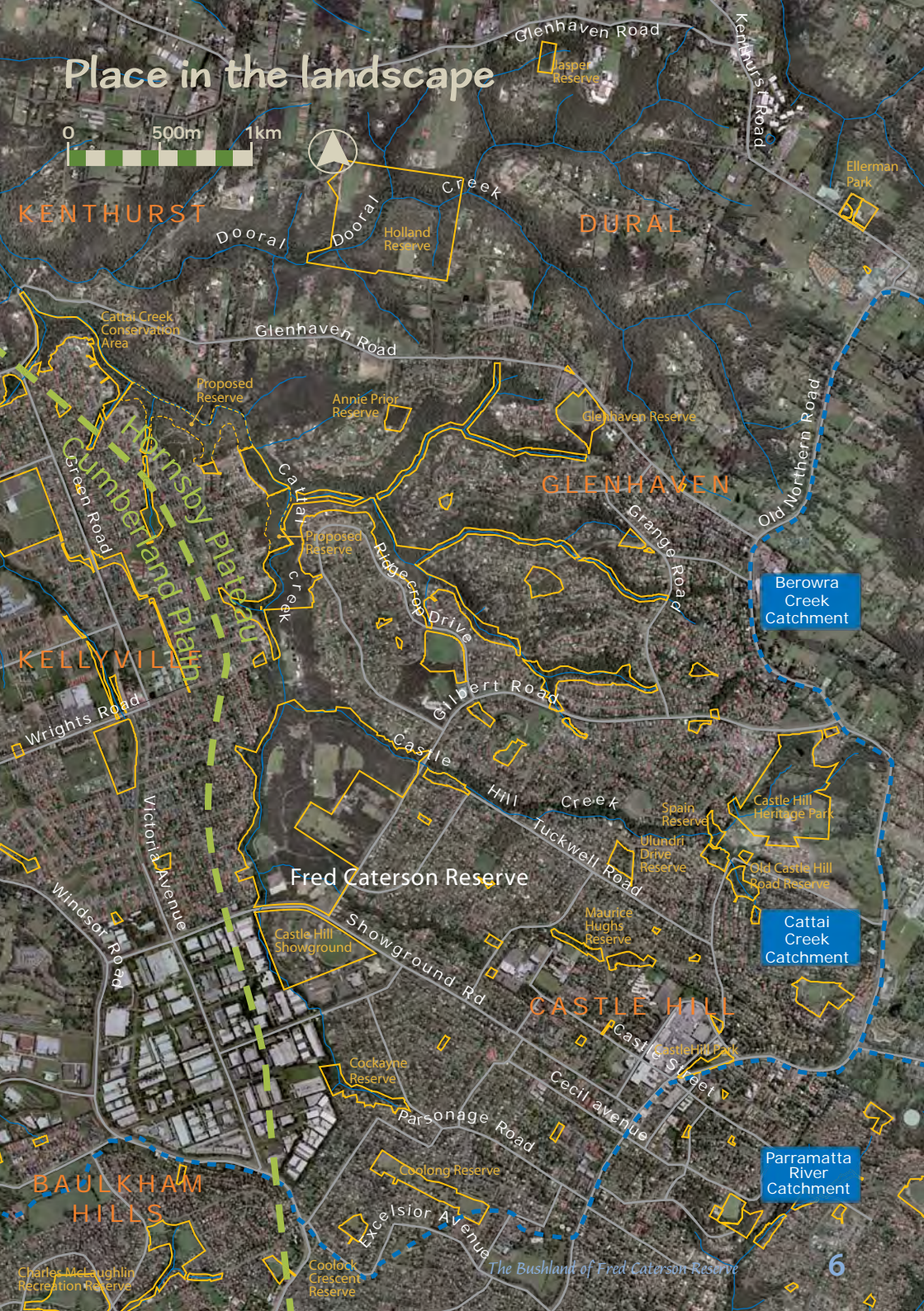
- **Animals** such as possums, kangaroos, goannas, wallabies 5, echidnas, ducks 6, yabbies, eels, and fish were speared, snared, cornered and trapped.
- **Insects**, such as ant larvae and moths were sometimes eaten, and native bee honey was a favourite.
- **Fruit** such as Wombat Berry 11, Native Currant, Native Cherry 9, geebung 12 and Devils Twine, could be eaten when ripe.
- **Flour** was made by grinding seeds of saw sedge 3, wattle 4, etc.
- **Nectar** can be sucked straight from the flowers of Mountain Devils 10, banksias etc, or dipped in water to flavour it.
- **Underground vegetables**, such as tubers and roots of orchids, lilies, yams and native carrot were particularly important food for people living away from the coast.



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Fred Caterson Reserve is one of the many patches of bush that make up Sydney's extraordinary natural landscape. Unusually for a major city, there are large areas of ancient forest to the north, south and west, and a series of bush islands and fingers reaching into urban areas. This bush network filters our air and water, provides unique recreational opportunities and supports the wildlife so familiar to, and popular with, Sydneysiders such as parrots, kookaburras, possums, butterflies, and frogs.

It is a medium size patch of bush, linked to other natural areas by narrow corridors. It forms part of a wider local bush network, offering a range of different habitat types.

### Creeks and Drains

Fred Caterson Reserve is near the top of Cattai catchment. Cattai Creek first emerges from the stormwater drains in Cockayne Reserve. The creek flows north through Fred Caterson Reserve to join the Hawkesbury River 11km away in Cattai National Park, before finally reaching the sea at Broken Bay. Castle Hill Creek collects water falling on the

western side of Old Northern Road. It flows through Heritage Park and joins Cattai Creek on the north west boundary of the Reserve.

### Plateau and Plain

The upper part of Cattai Creek marks a change in the landscape where the Hornsby Plateau levels out to meet the Cumberland Plain. There are some rare plants and unusual types of bush in this ecological "mixing zone."

The Hornsby Plateau is a vast network of sandstone gullies and shale ridges, extending from Sydney Harbour to the Hunter Valley. North east of Castle Hill, the ridges once supported tall Blue Gum High Forest. On drier slopes further west, the Turpentine-ironbark Forest grew (there are still patches on Castle Hill Cemetery and the Pony Club). The rugged gullies and slopes to the east and north are sandstone country—much of them still cloaked in their original bush.

The woodlands of the Cumberland Plain that once stretched west to the Blue Mountains begin on Cattai Creek's western bank.



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## Geology, soils and bushland

1

Fred Caterson Reserve, along with most of the greater Sydney region, owes much of its natural character to the 45 million year old sandstones and shales that underlie it. The reserve straddles the boundary of these two rock types. The higher sections along Gilbert Road, where the landscape is flat or gently sloping, are on Wianamatta Shale. It is soft and weathers relatively easily, and a deep layer of soil forms on top. It is rare to see shale at the surface.

The lower slopes and gullies are on Hawkesbury Sandstone where, over thousands of years, the valleys of Cattai Creek and Castle Hill Creek have cut through the shale, down into the sandstone that lies underneath. Sandstone landscapes are generally steep and rocky. Hawkesbury Sandstone weathers unevenly, fracture lines and softer layers are eroded first. Pieces break off and form cliffs, and more resistant blocks and platforms remain as part of the landscape

1. Loose rocks are left scattered over much of the ground. Many animals (such as snakes and lizards) rely on a choice of loose, broad, flat rocks for shelter. In Fred Caterson Reserve, except for cliffs beside some parts of the creeks, the sandstone outcrops are small, and there are no large overhangs or caves.

Soils form slowly as the rock surface weathers and minerals are separated or broken down into simpler parts. Some minerals dissolve and wash away, and new minerals form. Organic matter from decomposing plants and animals adds nutrients, and a myriad of worms and insects move in, sifting and turning over the topsoil and recycling nutrients.

Soils that form on shale have a high clay content, and are usually a reddish colour 4. Clay particles stick together to resist erosion, and can retain water (often too much in a garden). Nutrients stick to the clay making the soils reasonably fertile. With enough rainfall,

they are able to support tall forests and dense grasslands—although in Sydney nearly all of these have been cleared for farming. The remaining bush patches are rare and valuable.

Soils formed from Hawkesbury Sandstone are a light yellow or cream colour 3. They are made up mostly of coarse, loosely packed quartz grains which carry few nutrients. They erode easily and are usually shallow, they dry out quickly and have low fertility. Plants of the sandstone country often have special adaptations for making the most of limited water and nutrients. Large areas of Sydney's sandstone country is still covered in bush,

because it was of little use for farming and too steep to easily build on.

Below the shale-sandstone boundary, there is a soil mixing zone, where shale soil washes down and combines with sandstone material. This supports a particular bushland type called Shale-Sandstone Transition forest.

Some of the sand and soil and organic matter washed off the ridges and slopes accumulates along the valley floors and floodplains 2. Soils here are usually dark brown, deeper and more fertile. They are first to become invaded by weeds like privet and honeysuckle.

### Stylised cross section of Fred Caterson Reserve

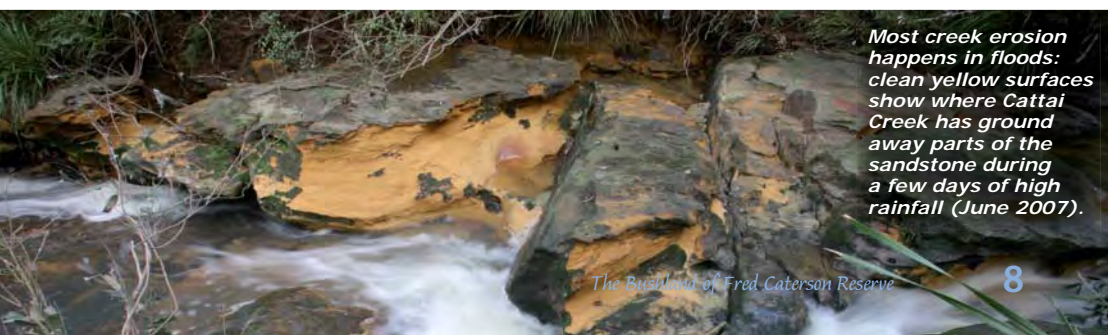
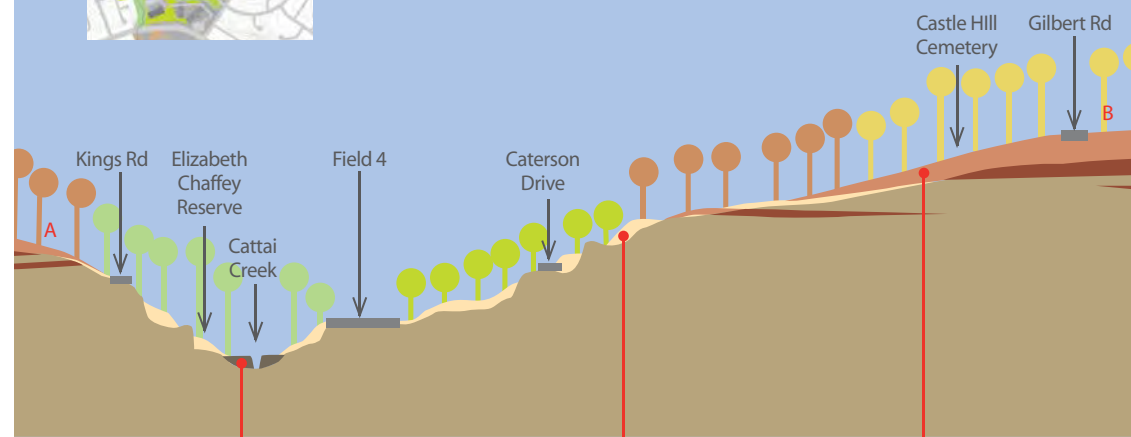


#### Rocks and soil

	Shale Soil
	Sandstone Soil
	Floodplain sediment and soil
	Shale
	Sandstone

#### Bushland Types

	Sydney Turpentine-Ironbark Forest
	Shale-Sandstone Transition Forest
	Sydney Sandstone Ridgetop Woodland
	Sydney Sandstone Gully Forest



Most creek erosion happens in floods: clean yellow surfaces show where Cattai Creek has ground away parts of the sandstone during a few days of high rainfall (June 2007).

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# Why does the bush need help ?

Fred Caterson Reserve contains one of the Shire's largest sporting complexes, and recently became part of a busy suburban area. The bush will need some help to survive and adapt to these changes.

## 1 It is an island surrounded by suburbia

Fred Caterson Reserve Bushland used to be part of a vast natural landscape stretching right across the continent. Even after most of the bush on surrounding flat land was cleared for farms, it remained part of a bush corridor extending north to the Hawkesbury and the vast natural areas of the Blue Mountains and Hunter Valley. Now it is almost surrounded by houses and roads 2, and linked to other bush patches only by narrow corridors.

## 2 It is full of holes like a Swiss cheese

Patches of bush have been replaced by roads, fields, carparks and, buildings. None of the bush is far away from disturbances associated with sports fields 3, gardens, roads and tracks.

## 3 There are many new environments where weeds thrive and bush plants struggle

- the edges, where the bush joins roads and houses.
- disturbed soil and imported fill, e.g. sports field edges 4, areas that were dug up when sewers were installed 5
- stormwater drains—most bush plants can't live in the moist, nutrient-enriched soil around drain outlets, but many exotics flourish, creating "weed plumes"
- sediment deposits in the creek



## 4 Weeds are in the reserve and nearby, ready to expand their territory

There are hardy grasses, shrubs, vines and trees from all over the world that are capable of dominating parts of the reserve e.g. Small-leaved Privet 1, 7 bamboo, honeysuckle, African Love Grass 6, and Balloon Vine.

## 5 Fire cycles have changed

Regular fires (perhaps every 7 to 20 years) are part of the natural cycle in the Fred Caterson Reserve. If fire is excluded, or is too frequent, the bush will change.

## 6 People damage it

Sometimes for fun people ride bikes through the bush, build bike jumps 8 and cubbies, tag trees with spray paint, smash rocks, chop down trees. But it damages the bush. There is very little publicly owned bush in the local area, so we can't afford to wreck it.

Some reserve neighbours dump rubbish in the bush—particularly lawn clippings and other garden waste. This kills native plants, creates fire hazards and starts weed infestations. Others, often with good intentions have used parts of the reserve like a backyard—but mowing, planting and tidying damages the bush.

## 7 We are creating a new climate

Fred Caterson Reserve, along with all the world's natural areas, is now on the threshold of a new threat. Unless the impact of climate change is reduced by a rapid reduction in worldwide fossil fuel use, the weather patterns, rainfall and temperature range that local plants and animals have adapted to, will change.



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## What is happening to the creeks ?

Cattai Creek was teeming with life in the early 1960s. Platypus were feasting on an abundance of yabbies and other water creatures, and creekside bush was almost weed free.

Today some of the rocky sections look much as they always did **1**—except for some weeds. But water quality has worsened and only the hardier water creatures can live there. In many parts the creeks look very different: the edges are eroding, and weeds have over-run the surrounding bush.

We can't put it back the way it was, but we can fix a lot of the problems,—if we learn to care for the catchment, and manage the weeds.

*Lomandras on the banks of Cattai Creek, form a safe place for a Water Skink to wait for insects*



2



3



4

### **1 Dirty Catchment** *The Drain is Just for Rain - but that's not all that goes in it !*

Creeks in urban catchments have very few buffers against pollutants such as dog droppings, oil, grease, detergents, fertilisers and pesticides. Whatever hits the road can be washed straight into the creek, and materials also wash in from our gardens. People still allow paint, car washing detergent, and soil to escape into the creek via drains. Chemicals spilt in Castle Hill Industrial Area have sometimes washed into the creek, killing many aquatic animals.

Rubbish, such as plastic also gets washed into the creek. Although it looks terrible, it is not as bad for the local environment as the chemical pollutants we don't see.

We don't know why the Platypus disappeared. It happened at the time agricultural chemicals became widely used. Perhaps the water creatures it ate were affected ?

### **2 Silting up and Eroding**

The removal of bushland in the catchment changed the way water moved through the landscape. In a natural area, much more rain water is absorbed by the soil. In the urbanised upper areas of Cattai Catchment, rain hits hard surfaces, such as roads, roofs and paved areas, and is fed immediately into the drainage system. A great volume of water reaches the creek quickly, resulting in frequent floods, with great erosive power. The creek is adjusting by creating a bigger channel. The sandstone bedrock prevents it easily cutting downwards, so it cuts sideways to widen its banks. In the Creek's upper reaches, the water once soaked into wetlands and filled a series of pools—these have since been replaced by a channel.

Sand and soil from higher in the catchment washes into the creek, particularly when roads and buildings are being constructed and there is a lot of loose material. This fills up swimming holes, and creates sediment plugs that weeds colonise **2**.

### **3 Loss of streamside bush**

The surrounding bush is also an important part of the creeks eco-system—it provides shelter and perching places for insects that spend part of their lifecycle on land **3**. Weeds love the creek edges and in some places have completely replaced native plants **4**. They don't provide the high quality habitat that native plants do.



# Restoring and managing

We can't fix everything but there is a lot we can do, and with a bit of assistance the bush can hold its own against weeds.

Regular visitors might have noticed that some areas are looking a lot better than they were 5 years ago. We are controlling weeds, particularly African Love Grass, Small-leaved Privet, bamboo, and Lantana and making space for the bush to regenerate.

Weeds are usually pulled out by hand, sprayed with herbicide, or the stem is cut and the stump is painted with herbicide. But much of the work may go unnoticed—we often target small weed infestations in out of the way areas and stop them before they get out of hand. And if things go well, the bush will grow back and it will be hard to believe the weeds were ever there.

## Bush Restoration Aims:

- do work that will last and is not just a quick fix—e.g. don't bother clearing weeds unless there are resources to maintain the area
- fix the source of the problem if possible (e.g. excess stormwater flow) then fix the symptoms (e.g. weeds)
- limit access to some sensitive areas, but provide good safe access in others
- work from the good bush to the bad, to strengthen and enlarge the healthy core areas
- protect wildlife habitat—leave weed patches if necessary until suitable alternative habitat can be provided
- combine weed removal along bush/backyard boundaries with thinning of vegetation for bushfire risk management
- use pile burning as a tool to encourage natural regeneration and remove cut weed debris
- combine bushfire hazard reduction burning with burning for ecological reasons

## Who is doing the work ?

### Bushcare volunteers

Some local residents are prepared to get their hands dirty to help the bush. They spend many unpaid hours removing weeds in the reserve.

**Call us first! Bushcare volunteers work under Council's direction. New volunteers are welcome but contact Council first —don't do any weeding, planting, tidying or mowing without specific approval.**

### Bush Regeneration contractors

Whenever funds are available Council employs professional bush regenerators as part of a long term program of strategic weed control.

**The NSW Fire Brigade and Rural Fire Service** assist Council to manage the reserves by carrying out prescribed burns in accordance with Council's specifications.

Bush regenerators from Ecohort remove a patch of privet and Lantana beside Caterson Drive 1. An area beside the cycleway that had been invaded by vines 2—but 2 months later the weeds have been carefully removed and the native plants are recovering 3. Red-rumped Parrots using an old scribbly gum on the Showground, where dead branches have been trimmed and the stumps left for habitat 4. The cycleway protects the bush from Kikuyu growing down from the field edge 5. Good rains in 2007 have helped plants to regenerate. There are many baby Angophoras in the reserve, 6 and even a few seedlings of the endangered Hairy Geebung 7.





1 NSW Fire Brigade personnel lighting a prescribed burn at Woodchester Close. 2 Council staff selectively removing shrubs to create an APZ. 3 Rural Fire Service volunteer lighting a prescribed burn.

## Living with fire

Natural fires (usually caused by lightening strike) and deliberate fires have shaped the character of the local bush over tens of thousands of years. Most local bush plants require, or are helped by, fire in some way e.g. to stimulate seed germination.

Aboriginal people used to burn the bush to:

- manage fuel loads
- encourage the growth of fresh grass for Kangaroos in the shale country
- maintain open country on travel routes

### Bushfire and neighbours

Despite the intense bushfires that occur regularly in Sydney, very few houses and lives are lost, because we know how to keep our community safe—even with bush close by.

80 to 90% of house damage in bushfires is not caused by the fire front, but by spot fires started from burning embers that land in places such as leaf filled gutters. Houses can be built and maintained to resist ember attack.

If well prepared people stay with their house they can usually extinguish these spot fires safely.

**Council manages fire risk in its reserves by:**

- managing bushfire fuel levels in the reserve with regular prescribed burning
- maintaining asset protection zones (APZs) fuel reduced areas at the bush edge—created by prescribed burning or selective thinning of plants
- maintaining a system of accessways and fire trails

**Residents should:**

- learn about bushfires and how to protect themselves and their property—it's called being "Firewise". Contact the Rural Fire Service 9654 1244 or NSW Fire Brigade 9742 7400
- keep fuel (woodpiles, flammable vegetation, etc) away from their house
- regularly remove leaves etc, from wherever they accumulate (such as gutters, and

## How neighbours and visitors can help

**Keep your dog on a leash within the reserves.** Unrestrained dogs can frighten or hurt people, wildlife and other dogs.

Always take plastic bags and **pick up your dog's droppings**, or risk a \$1500 fine.

**Ensure only water goes down the stormwater drain.**

**Your cat should be safe at home with you** day and night, not roaming in the reserve and on the roads. Even well fed cats kill and injure lizards, birds and small mammals. Keeping cats in only at night doesn't help because birds and lizards are also active during the day.

**Get to know the local plants and wildlife.** Council organises regular guided walks—call us or check the local paper for dates.

**Be part of the habitat network.** Do you have any bush, or "overgrown" areas on your property? Consider protecting or creating a haven for wildlife.

**Don't feed birds and other animals.** Feeding stations spread beak and feather disease etc. Regular feeding can cause unwanted changes to local wildlife populations.

**Volunteer for bushcare.** Learn new skills and meet people while helping to look after your local environment. Council will provide training and equipment. (But please don't try to improve the bush—e.g. by weeding, mowing, planting unless it is part of an approved bushcare project).

Lawn clippings and garden waste are not good for the bush—**so don't dump in the reserve.** The penalty is up to \$5,000. If you see someone dumping waste on public land, contact Council straight away. The information you provide will be handled in confidence.

**Don't let garden plants escape into the bush.** Stop them from seeding or growing out through the back fence.

**Tread gently in the bush.** Keep to tracks, don't create your own.

**Leave the bush in the bush.** Rocks and fallen timber provide shelter for native animals, and native plants need flowers and seeds to reproduce, so please don't remove or disturb them.

For the bushland's future and your own, do everything you can to **reduce the amount of carbon dioxide** released into the atmosphere, and help slow global warming. Find out the best way for your lifestyle—some suggestions (which might also save you money)

- reduce car use
- install energy efficient light bulbs
- replace old appliances with energy efficient ones
- strive for energy efficiency when building or renovating



3 different kinds of wattle have regenerated from seed 9 months after a pile burn at Elizabeth Chaffey Reserve.



# Bushland timeline for Fred Caterson Reserve

<b>400–180 million years ago The first plants and animals</b>			John Hillas and John Tibett receives land.		1951	Showground and in the reserve. Showground Road is sealed.	Early 1990s	east of Hermosa Circuit in 1993. Gilbert Road is extended to join Old Northern Road and traffic flow past the reserve increases.
	When animals and flowering plants first appear on earth, Australia is joined to other southern hemisphere continents in the supercontinent Gondwana. The shales and sandstones of the Sydney basin form.		The bush, particularly the tall Blue Gum and Turpentine-Ironbark forests, start to be cleared to make way for farming. The early landowners often clear only a small part of their property. Large areas of bush, particularly rocky and steep areas, remain intact until the 1980s. Native animals, such as Emus and Koalas, start to disappear.			<b>1960–1992 Development of the reserve and south east</b>	1995	The Hills Sports Centre, carpark and access road are completed.  State legislation (NSW Threatened Species Conservation Act) recognises local plants, animals and bush communities e.g. Shale-Sandstone Transition Forest, as threatened.
<b>180–30 million years ago Becoming an island</b>			People use the reserve area for hunting, picnicing, and local travel.		1964	Part of Reserve 22886 is leased for 50 years to Castle Hill Pony Club, most of the bush is soon cleared.	1996-99	Field 6 is built. BHSC commissions an assessment of the ecological impacts—the first formal study of the reserve's bushland.
	Gondwana breaks up and its parts slowly move apart to form the continents of today. By 45 million years ago Australia is an island covered in lush rainforest vegetation.	1801-1810	3880 acres of land stretching from Castle Hill to Glenorie (including the Future Fred Caterson Reserve) is set aside as the Castle Hill Government Farm. 700 acres of bush is cleared by 1810—mainly Blue Gum and Ironbark forests on the ridges where Old Northern Road and New Line Road now exist.		1970s	A major wildfire burns the reserve.	1997	The NSW Government organises a study of Western Sydney's bushland. (Western Sydney Urban Bushland Biodiversity Survey). 20 “significant bushland sites” are identified. One is Upper Cattai Creek South (upstream of Glenhaven Bridge). It includes 3 primary bushland areas: Fred Caterson Reserve and Castle Hill Cemetery, Samuel Gilbert Public School, and north of Rosebery Road.
<b>30 million–50,000 years ago Gum trees, wattles and grass</b>					1977-81	Council starts to develop the reserve, constructing walking/jogging trails (following existing tracks), a velodrome, the BMX track, Field 1,2 and 3 and Caterson Drive.		Cattai Catchment Management Committee organises the “Clean up the Cattai Day.” The first bushcare group forms and volunteers work regularly for three years.
	Australia's plants and animals evolves into many unique forms (80% of plant species are now found nowhere else). It becomes warmer and drier, and bushfires become more common. The rainforest retreats—slowly replaced by the typical bush we know today.	1801	A road is built (now Old Northern Road/ Junction Road) linking Castle Hill to Old Windsor Road.		Late 1970s	A sewage treatment plant is built on Cattai Creek.		BHSC contracts the first professional bush regenerators to work in the reserve controlling Genista around Field 4.
<b>50,000 years ago–1790s Aboriginal land</b>					1978	Building of Castle Hill industrial area starts.		
	Fred Caterson Reserve is part of a network of natural landscapes providing the indigenous Australians with all of life's necessities.	1810	New Windsor Road is built, providing easier access to the Cattai Creek–Smalls Creek area.		Early 1980s	Woodchester Close Reserve is dedicated. Land is added to Fred Caterson Reserve during development: east of Cedar Grove in 1980, between Castle Hill Creek and Knightsbridge in 1983.	2000	A volunteer group starts regularly weeding the bush in Castle Hill Cemetery.
<b>1788-1801 Cultural upheaval</b>		1818	Part of the Government Farm along Old Northern Road and New Line Road is subdivided and granted to private individuals.		1981	Baulkham Hills Council votes to name “The Gilbert Road Reserve” after Fred Caterson.	2001	BHSC commissions a survey of the reserve's plants and animals.
	British colonists arrive, claiming possession of the land under English law. Traditional Aboriginal life around Sydney soon ceases. Many people die and social structures are severely disrupted in the smallpox epidemic that sweeps Australia's east coast in the 1790s. Competition from the new settlers for land and resources soon make the hunter-gather lifestyle impossible. However, much knowledge survives along with many people of Darug heritage who, to this day, have strong associations with the area.	1823	Most of the suitable farming land in the district has been granted.		Mid 1980s	The bushland ridges to the north are cleared for the Ridgescrop Drive and Greenbank Drive developments, this greatly reduces the amount of bush surrounding the reserve.	2002	BHSC commissions a study of the bushland on the cemetery.
	45 million years of relative isolation for Australia's bushland ends as the first of many foreign plants and animals brought by the Europeans escape into the bush.	1861	A 165 acre village reserve, including the future Fred Caterson Reserve, is created from part of the Government Farm. This protected the bush, including some shale country with agricultural value, from being cleared.		1986	State legislation (SEPP 19) makes it compulsory to consider conservation issues if developing public bushland.	2002	The Mario Vargas Cycleway is opened.
		1880s	Rabbits have colonised most of NSW by the late 1880s. The local paper reports in 1893 “Good days shooting at Kellyville: Mr Eli James, from Castle Hill, succeeded in capturing 5 hares, 1 rabbit and 2 bears, [Koalas] the other day at Long Hill!”		Late 1980s	the Baseball Field is constructed.	2003	BHSC starts to use fire to manage bushfire fuel and improve bushland health.
		Early 1890s	Foxes arrive in NSW—they eat many rabbits but also local wildlife.		1989	An electricity easement is created along Castle Hill Creek, powerlines and an access road are installed in the reserve.	<b>The future Warmer and busier ?</b>	
1791	In an expedition led by Governor Phillip, the new settlers explore the country from Parramatta to the Hawkesbury for the first time—they see that the Castle Hill area had potential for farming.	1881	Part of the village reserve is re-dedicated as Castle Hill Cemetery (for many years Gilbert Rd was known as Cemetery Rd).		<b>1992-present The North West Sector land release</b>			The area becomes busier when a railway station is built near the Hills Centre. The trend to higher density development of older urban areas to the south, and from rural to urban in the north continues.
	To encourage farming, the government gives away parcels of land around Sydney—firstly at Parramatta, Prospect and Carlingford.	1890	Part of the Village Reserve is re-dedicated as Castle Hill Showground.		1992-94	BHSC's first community native plant nursery is established, then moves to Ted Horwood Reserve when the Hills Sports Centre is built.		Sydney has more frequent and severe fires, lower rainfall and higher temperatures.
<b>1801–1960 Farming and bushland</b>		1895	The rest of the old Village Reserve (now Fred Caterson Reserve, Elizabeth Chaffey Reserve and Castle Hill Pony Club) is dedicated for public recreation, known as Reserve 22886.		1991	More land is added to the reserve as adjacent land is developed: between Castle Hill Creek from Bowden Place to Lomandra Circuit in 1991 (now Elizabeth Chaffey Reserve), and		Hopefully..... we reduce carbon emissions and keep changes to a minimum. Natural areas are highly valued by the community and well cared for. Water quality in Cattai Creek improves. Local bush is looked after—weeds and feral animals are under control.
	Land granting continues north from Parramatta, reaching Kellyville in 1802 when	1930s	During the depression swagmen camp on the					



# A history in maps and photographs

Fred Caterson Reserve is equally the oldest area of public land in the Shire, and one of the oldest in Australia. It was first reserved as part of the Castle Hill Government Farm that operated between 1801 and 1810.

This undated parish map is the earliest known map of the reserve. In 1861 a portion of the old Government Farm containing the future Fred Caterson Reserve, Pony Club, Showground and Cemetery was set aside as the site for a new town. But the town of Castle Hill grew around the main road, (Old Northern Road) along the ridge. Urban development did not spread down to the reserve until 1985.

The map makers paid a lot of attention to the creeks. Castle Hill Creek, the top of Cattai Creek and the unnamed tributary did not have the deep continuous channels they have today. They were a series of deep pools in flat swampy valleys. These "chain of ponds" systems were once common in the Sydney Basin but disappeared after the landscape changed from bush to farms. This map even shows the size and placement of the pools. They appear to have been about 50m across, and were probably a few metres deep. Very little is known about what animals lived in the ponds but they sound like great habitat for yabbies and large fish!

The 1895 parish maps shows much less landscape detail. Part of the township reserve has been allocated for a showground (1890), a cemetery (1881) and the rest dedicated as a recreation reserve (1895), although it would be another 70 years before any facilities were built there.

In the 1930s government authorities started regularly photographing parts of the country from the air, mainly to assist with map making. It also gives us a fascinating historical resource.



1860s?



1897

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1947

## Fred Caterson Reserve, Pony Club and Cemetery

### Bushland remaining: 92%

The bush is largely intact, except for some clearing on the Cemetery **1**. The sites that are now the Basketball Stadium **2** and field **6** **3** have recently been cleared.

The network of tracks through the reserve were often used by people travelling around the local area on foot or horseback. Cars were not yet common and there were few roads.

People often visited for family outings including picnics, BBQs, swimming and yabby catching. Many local boys hunted for foxes and rabbits—often using beagles or ferrets. Wildflower collecting was popular.

Much of the bush looks very sparse and open compared to today - there are fewer trees and shrubs. Rainfall had been low since 1900, with major droughts between 1937 and 1945. (by 1944 the Hawkesbury River at North Richmond was dry). A bushfire had been through in



1939, with little rain since to help the plants grow back. Other areas of Sydney, e.g. parts of Ku-ring-gai Chase show similar effects.

### The Local Area

There are large tracts of bushland to the north and

north east, although parts of the ridgetops have been cleared. Cleared areas are mostly farms, with patches of native trees in paddocks and along creeks. Few artificial fertilizers were used, creeks are relatively clean and free of privet. Castle Hill Showground is mostly bush.





## Fred Caterson Reserve, Pony Club and Cemetery

**Bushland remaining: 80%**

Much of the Pony Club lease has been cleared, levelled and filled **2**. The developed part of the cemetery has expanded **1**. There are 6 tennis courts in the southern corner **3**, and an old DMR stockpile site has become a carpark **4**. A field has been created on Cattai Creek with a velodrome **5**. Caterson Drive has been sealed.

The bushland had thickened up since 1947. The 1950s were very wet years, and wetter conditions lasted until 2000. Many young trees had a chance to establish.

## The Local Area

There is still an extensive bush corridor around Cattai Creek, although a new road encircles the ridge that forms its core **6**.

Cleared areas are still largely rural, with a few less paddock trees and bush patches. But there are signs of big changes ahead: suburbia has extended down from Castle Hill as far

west as Cumberland Avenue **7**, and a sewerage treatment plant has been built just downstream of Fred Caterson Reserve **8**.

Most of the bush on the Showground has gone **9**, and parts of the land have been

filled and levelled. There are bright green bands of privet and other weeds along the creeks.



## Fred Caterson Reserve, Pony Club and Cemetery

**Bushland remaining: 62%**

Most of the facilities were built between 1978 and 1981: Fields 1, 2, and 3 **2**; the Baseball Field **3**; the BMX Track **4**; the Model Car track **5**; a new car park next to Field 4 **6**, and 4 more tennis courts **7** have been added.

The cemetery has continued to expand **1**. The first crypts have been built.

## The Local Area

There has been great change in the last 11 years. Although the north western half of the bush corridor is still largely intact, the central ridge has been replaced by houses, except for a remnant on the grounds of Samuel Gilbert Public School **8**. This once extensive and healthy bush is becoming a series of narrow strips exposed to edge effects, such as weeds and stormwater.

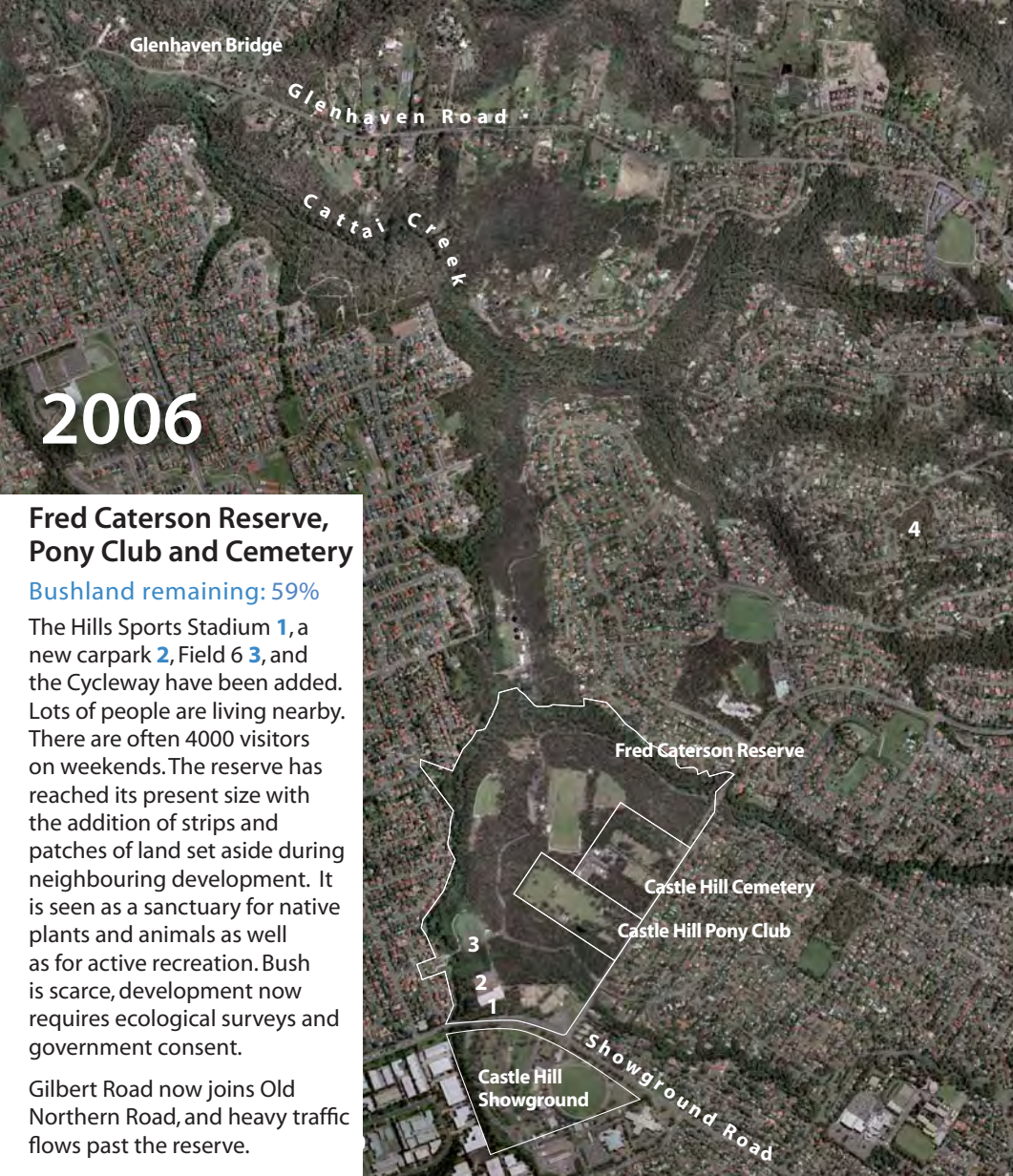
Cleared land to the west is still rural, but urban development has advanced across the



farmland right up to Gilbert Road on the south east edge of the reserve. A section of bush has been protected as Woodchester Close Reserve **9**. Gilbert Road now links many properties to Showground Road and traffic flow around the reserve has increased.

Land next to Cattai Creek, west of the Showground, has been developed into Castle Hill Trading Zone **10**, parts of the floodplain have been filled and factories and carparks extend up to its western bank.





2006

## Fred Catterson Reserve, Pony Club and Cemetery

**Bushland remaining: 59%**

The Hills Sports Stadium **1**, a new carpark **2**, Field 6 **3**, and the Cycleway have been added. Lots of people are living nearby. There are often 4000 visitors on weekends. The reserve has reached its present size with the addition of strips and patches of land set aside during neighbouring development. It is seen as a sanctuary for native plants and animals as well as for active recreation. Bush is scarce, development now requires ecological surveys and government consent.

Gilbert Road now joins Old Northern Road, and heavy traffic flows past the reserve.

## The Local Area

Upper Cattai area lost much of its bush in the last 15 years. Now the ground is covered in hard surfaces, creeks rise quickly and flood in heavy rain. The small urban blocks have little space for wildlife habitat.

Ridgetop habitat is gone, except

for a patch on Greenbank Drive Reserve **4**.

Much of the bush corridor remaining along Cattai Creek will be protected as public open space, although places where it is widest are still likely to be developed.

A lot of the edges are disturbed and weedy and will need careful restoration.

Landscapes to the north of Glenhaven Road are still mainly rural with extensive bush gullies.

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## Native plant communities

The character of the Australian bush changes depending on the soil, position in the landscape, climate, and fire history. Particular groups of plants tend to occur together and are known as plant communities. Ecologists and botanists have developed a standard way of defining



**1**  
**Sydney Turpentine-Ironbark Forest**

**1** In higher areas on flat or gently sloping shale country

**Status: endangered**

**Trees** Red Mahogany *Eucalyptus resinifera*, Grey Gum *Eucalyptus punctata*, Forest Oak *Allocasuarina torulosa*, Turpentine *Syncarpia glomulifera*, Native Cherry *Exocarpus cupressiformis*.

**Shrubs** Bearded Heath *Leucopogon juniperinus*, Blackthorn *Bursaria spinosa*, Breynia *Breynia oblongifolia*.

**Climbers** Happy Wanderer *Hardenbergia violacea*, Running Postman *Kennedia rubicunda*.

**Ground layer** Often thick with many grasses and lilies e.g. Kangaroo Grass *Themeda australis*, Wallaby Grass *Austrodanthonia tenuior*, Wiry Panic grass *Panicum simile*, Pratia *Pratia purpurascens*, Flax-lily *Dianella revoluta*, Sword-sedge *Lepidosperma laterale*.



**2**  
**Shale-sandstone Transition Forest**

**Downslope of the Ironbark forest where sandstone and shale soils mix Status: endangered** Plants from sandy and clay soils grow together. Includes many significant plants e.g. the endangered Downy Wattle *Acacia pubescens*, and Purple Heath *Epacris purpurascens*

**2** On soils with more shale

**Trees** 20–30m e.g. Broad-leaved Ironbark *Eucalyptus fibrosa*, Grey Gum *E. punctata*, Stringybark *E. eugenoides*, Red Bloodwood *E. gummifera*.

**Shrubs** Bearded Heath *Leucopogon juniperinus*. More clay species e.g. Downy Wattle *Acacia pubescens*, Paper Daisy *Cassinia aculeata*, Bush Pea *Pultenaea scabra*, Sickle Wattle *Acacia falcata*.

**Ground layer** Often thick swards e.g. Kangaroo Grass *Themeda australis*, Sword-sedge *Lepidosperma laterale*, Wallaby Grass *Danthonia spp.*

**3** On soils with more sandstone

**Trees** 20–30m e.g. Scribbly Gum *Eucalyptus schlerophylla*, Grey Gum *Eucalyptus punctata*, More Red Bloodwood *Corymbia gummifera*, and Sydney Red Gum *Angophora costata*.

**Shrubs** Many sandstone species e.g. Green Spider Flower *Grevillea mucronulata*, Hairpin Banksia *Banksia spinulosa*, Large leaved Geebung *Persoonia levis*.

**Ground layer** Often thick swards e.g. Kangaroo grass *Themeda australis*, Sword-sedge *Lepidosperma laterale*. More Spear Grass *Stipa pubescens* and *Lomandra longifolia*.



types and someone used to the Sydney bush can recognise them. There are 3 distinct communities in Fred Caterson Reserve, and some variation within them (see map page 2). They don't have precise boundaries but grade into one another. Fred Caterson Reserve is unusual because it still has remnants of the bush that grew on Sydney's shale soils. These communities

are now very rare, and this is recognised under state and federal legislation: Sydney Turpentine-  
Ironbark Forest and Shale-Sandstone Transition Forest were declared endangered ecological communities in 1998.



**Sydney Sandstone Ridgetop Woodland**

**On the mid-slopes, e.g. around Caterson Drive Status: uncommon** The Scribbly Gum *Eucalyptus schlerophylla*, Narrow-leaved Apple *Angophora bakeri* Woodland is particularly unusual: known from only a few scattered remnants in the upper Cattai and close by along Toongabbie Creek. Soils are generally shallow and sandy with some deeper pockets and clay rich patches. Shrub layer is thick and ground layer medium to dense

#### 4 On shallow rocky soils.

**Trees** 10–15m e.g. Scribbly Gum *Eucalyptus schlerophylla*, Narrow-leaved Apple *Angophora bakeri*, Cattai Mahogany *Eucalyptus cattai*.

**Shrubs** Narrow-leaved Geebung *Persoonia linearis*, Hairy Geebung *Persoonia hirsuta*, Grevillea *mucronulata*, Bushy Needlebush *Hakea sercia*, Hairpin Banksia *Banksia spinulosa*, Everlasting *Ozothamnus diosmifolius*, Tick Bush, *Kunzea ambigua*, Five Corners *Styphelia laeta*, Rice Flower *Pimelia linifolia*, Purple Heath *Epacris purpurascens*.

**Groundlayer** *Dianella prunina*, *Lomandra longifolia*, *Lomandra longifolia*, Spear Grass *Stipa pubescens*.

#### 5 On lower slopes and pockets of deeper soil

**Trees** 15–20m e.g. Scribbly Gum *Eucalyptus schlerophylla*, Sydney Red Gum *Angophora costata*.

**Shrubs** Bridal Daisy Bush *Olearia microphlla*, Bush Pea *Pultneaea villosa*, Narrow-leaved Geebung *Persoonia linearis*, Hairy Geebung *Persoonia hirsuta*, Grevillea *mucronulata*, Bushy needlebush *Hakea sercia*, Hairpin Banksia *Banksia spinulosa*, Rice flower *Pimelia linifolia*.

**Groundlayer** *Lomandra longifolia*, Weeping Meadow Grass *Microlaena stipoides*.

#### 6 Swampy low open woodland. In wet patches—often with groundwater discharge

**Trees** 4–10m e.g. Scribbly Gum *Eucalyptus schlerophylla*, Narrow-leaved Apple *Angophora bakeri*.

**Shrubs** Narrow-leaved Bottlebrush *Callistemon linearis*, Hairpin Banksia *Banksia spinulosa*, Purple Heath *Epacris purpurascens*, Tick Bush *Kunzea ambigua*.

**Groundlayer** *Lepidosperma laterale*, Scale Rush *Lepyrodia scariosa*.



**Sydney Sandstone Gully Forest**

**On lower slopes and gully floors and around the creeks Status: generally common—although the closed forest sub-community is unusual** Soils vary from shallow in rocky area to quite deep in the gully floors, conditions are generally moister than in woodland areas and trees are taller

#### 7 On drier areas shallower soils

**Trees** 25–30m e.g. Blackbutt *Eucalyptus pilularis*, Sydney Peppermint *E. piperita*, Scribbly Gum *E. schlerophylla*, Red Mahogany *E. resinifera*, Sydney Red Gum *Angophora costata*.

**Shrubs** Sparse to medium e.g. Hairpin Banksia *Banksia spinulosa*, Bushy Needlebush *Hakea sercia*, Everlasting *Ozothamnus diosmifolius*, Sydney Golden Wattle *Acacia longifolia*.

**Groundlayer** Many grasses and herbs e.g. *Lomandra longifolia*, Weeping Meadow Grass *Microlaena stipoides*, Oat Spear Grass *Anisopogon avenaceus*, Pixie Orchid *Acianthus fornicatus*.

#### 8 On south facing gullies, or lower slopes with deeper soils

**Trees** 25–30m e.g. Blackbutt *Eucalyptus pilularis*, Sydney Red Gum *Angophora costata*, *Eucalyptus resinifera*, Christmas Bush *Ceratopetalum gummiferum*

**Shrubs** usually dense e.g. Graceful Bush-pea *Pultenaea flexilis*, Lemon-scented Tea-tree *Leptospermum polygalifolium*. Often invaded by privet and honeysuckle.

**Groundlayer** Many ferns and sedges e.g. *Lomandra longifolia*, Bog Rush *Schoenus melanostachys*, Saw Sedge *Gahnia sieberana*, Maidenhair *Adiantum aethiopicum*, Pixie Orchid *Acianthus fornicatus*.

**Climbers** Old Man's Beard *Clematis aristata*, Wombat Berry *Eustrephus latifolius*.

#### 9 Closed forest. On deep, moist soils of the gully floor. One small patch on the northern side of Castle Hill Creek

**Trees** Dense sub-canopy of White Cherry *Schizomeria ovata* and Christmas Bush *Ceratopetalum gummiferum* underneath taller Sydney Red Gum *Angophora costata*.

**Groundlayer** Soft Bracken *Calochlaena dubia*, Gristle Fern *Blechnum cartilagenium*. Invaded by the weed Trad *Tradescantia fulminenses*.

**Climbers** Old Man's Beard *Clematis aristata*.



# Animals and their habitat

Many animals rely on the reserve. Now it is part of an urban area, they are trying to adapt.

The reserve wildlife habitat extends far beyond its boundary. Some animals (Copper-tailed Skink) spend all their lives there, others (certain insects) also use surrounding areas. Some (Leaden Flycatcher) migrate there each year from across the sea.

**Some will probably survive** because they can adapt to urban areas e.g. Eastern Water Skink, Eastern Water Dragon, Brush-tailed Possum, Garden Sun-skink, Blue-banded Bee, Common Brown Butterfly, and Kookaburra.

**Some may soon disappear** because they have trouble living in small urban bush patches e.g. Echidna, Jacky Lizard. They survived when the reserve was part of a large bush corridor, but may not for much longer now it is partly cleared and surrounded by houses.

**Some have already gone** because they need clean creeks or large patches of undisturbed bush. Platypus, yabbies, quolls, Green Tree Frog, Diamond Python, Green Tree Snake, Bearded Dragon, quail, Wonga Pigeon, Koala, Bandicoot and Swamp Wallaby.

**Some have increased in number and are causing trouble** e.g. Noisy Miners and Pied Currawongs which drive other birds away.

**New badly behaved animals have arrived.** Foxes and cats prey on native animals, feral bees use up nest hollows and nectar from flowers, Mosquito Fish eat frogs eggs, and rabbits eat regenerating seedlings.

## Habitat assets

- old trees with hollows for nesting Sugar Gliders **3** and parrots
- rocky outcrops with crevices for sheltering geckos **4**
- fallen timber **8** and loose rocks **9** for lizards and insects to hide under
- permanent creeks **2** providing water for birds to drink and bathe in, and a home for water creatures such as young dragonflies
- a variety of bush structures—thick shrubby patches **10** for small birds nests, open sunny

- areas for basking lizards, bare soft soil for ants nests, moist creeksides for frogs
- leaf litter where birds can forage for insects **1**
- food is available from a range of native plants providing nectar, fruits and seeds at different times of the year
- some new habitat opportunities are provided by weeds eg privet thickets can be safe nest sites for small birds
- larger bushland patches close by—a wider habitat network used by more mobile species e.g. birds, possums, bats and insects

## Habitat problems

- roads and fields have fragmented the bush into a series of small patches—nowhere is very far from people, dogs, cats, bikes and cars
- weeds have replaced native plants in parts of the reserve, reducing available resources
- the water is too polluted for platypus and yabbies
- stream habitats have changed dramatically, swamps have completely disappeared
- animals have to cross roads and gardens to reach other bushland patches
- many loose, flat rocks were taken to decorate gardens



**Food is on.** **5** Ants collecting drops of sugary liquid from small, sap-sucking insects called lerps (or psyllids) on a Scribbly Gum leaf—Birds like Lerp too, often eating the whole insect. **6** A Yellow-faced Honeyeater licks nectar from a Heath Banksia flower—an important winter food source. **7** The mid summer flowers of Angophora bakeri attract large numbers of beetles.

The Bushland of Fred Caterson Reserve

28



The Bushland of Fred Caterson Reserve

10

29

4



# Native plant list

Scientific Name	Common name
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## Ferns

<i>Adiantum aethiopicum</i> <b>9</b>	Maidenhair Fern
<i>Blechnum cartilagineum</i>	Gristle Fern
<i>Cyathea australis</i>	Rough Tree-fern
<i>Doodia aspera</i>	Rasp Fern
<i>Pteridium esculentum</i>	Bracken
<i>Calochlaena dubia</i> <b>1</b>	Soft Bracken
<i>Lindsaea linearis</i> <b>2</b>	Screw Fern
<i>Lindsaea microphylla</i>	Lacy Wedge Fern
<i>Cheilanthes sieberi</i> <b>3</b>	Mulga Fern
<i>Pellaea falcata</i>	Sickle Fern

## Orchids

<i>Acianthus fornicatus</i> <b>4</b>	Pixie Orchid
<i>Caladenia catenata</i> <b>5</b>	White Fingers
<i>Chiloglottis reflexa</i> <b>7</b>	Ant Archid
<i>Corybas aconitiflorus</i>	Cradle Orchid
<i>Pterostylis nutans</i> <b>6</b>	Nodding Greenhood

## Grasses

<i>Anisopogon avenaceus</i>	Three-awned Spear Grass
<i>Aristida vagans</i>	Wallaby Grass
<i>Austrodanthonia longifolia</i>	Wallaby Grass
<i>Austrodanthonia racemosa</i>	Wallaby Grass
<i>Austrodanthonia tenuior</i>	Tall Spear Grass
<i>Austrostipa pubescens</i>	Stout Bamboo Grass
<i>Austrostipa ramosissima</i>	Barbed Wire Grass
<i>Cymbopogon refractus</i>	Plume Grass
<i>Dichelachne crinata</i>	Small-flower Fingergrass
<i>Digitaria parviflora</i>	Tufted Hedgehog Grass
<i>Echinopogon caespitosus</i>	Right-angle Grass
<i>Entolasia marginata</i>	Right-angle Grass
<i>Entolasia stricta</i>	Browns Love-grass
<i>Eragrostis brownii</i>	Paddock Love-grass
<i>Eragrostis leptostachya</i>	Mat Grass
<i>Hemarthria uncinata</i>	Blady Grass
<i>Imperata cylindrica</i>	Microleana
<i>Microlaena stipoides</i>	Basket Grass
<i>Oplismenus aemulus</i>	Basket Grass
<i>Oplismenus imbecillis</i>	Two Colour Panic
<i>Panicum simile</i>	Tussock Grass
<i>Poa affinis</i> <b>8</b>	Kangaroo Grass
<i>Themeda australis</i> <b>10</b>	

## Groundcovers and Herbs

<i>Actinotus helianthi</i>	Flannel Flower
<i>Brunoniella pumilio</i>	Dwarf Trumpet
<i>Burchardia umbellata</i>	Milkmaids
<i>Caesia parviflora</i>	Pale Grass Lily
<i>Caustis flexuosa</i>	Old Man's Bears
<i>Centella asiatica</i>	Centella
<i>Commelina cyanea</i>	Scurvey Weed
<i>Cyathochaeta diandra</i>	
<i>Dianella caerulea</i> <b>13</b>	Flax Lily
<i>Dianella longifolia</i>	Flax Lily
<i>Dianella prunina</i>	Flax Lily
<i>Dichondra repens</i> <b>12</b>	Kidney Weed
<i>Drosera peltata</i> ssp <i>auriculata</i> <b>14</b>	Sundew
<i>Einadia hastata</i> <b>11</b>	Einadia
<i>Einadia trigonos</i>	Einadia
<i>Empodisma minus</i>	Spreading Rope Rush



- Gahnia clarkei*
- Gahnia sieberana*
- Galium propinquum*
- Goodenia bellidifolia*
- Goodenia hederacea*
- Gonocarpus teucroides*
- Hydrocotyle peduncularis*
- Lepidosperma laterale*
- Lepyrodia scariosa* **19**
- Lomandra cylindrica*
- Lomandra filiformis* ssp *filiformis* **15**
- Lomandra gracilis*
- Lomandra longifolia*
- Lomandra multiflora* **16**
- Lomandra obliqua*
- Opercularia aspera*
- Opercularia hispida*
- Opercularia varia*
- Oxalis perennans* **17**
- Persicaria decipiens*
- Phyllanthus hirtellus*
- Pomax umbellata* **18**
- Poranthera microphylla*
- Pratia purpurascens*
- Pseuderanthemum variabile* **20**
- Schoenus melanostachys*
- Senecio bipinnatisectus*
- Senecio linearifolius*
- Sigesbeckia orientalis*
- Solanum prinophyllum* **21**
- Stackhousia viminea*
- Stylidium graminifolium*
- Thysanotus tuberosus*
- Tricostularia pauciflora*
- Typha orientalis*
- Vernonia cinerea*
- Veronica plebeia*
- Wahlenbergia gracilis*
- Xanthorrhoea media*

## Climbers

- Billardiera scandens*
- Cassytha glabella*
- Cassytha pubescens* **22**
- Clematis aristata*
- Clematis glycinoides* **24**
- Smilax glyciphylla*
- Glycine clandestina*
- Glycine microphylla*
- Glycine tabacina*
- Hardenbergia violacea* **23**
- Kennedia rubicunda*
- Morinda jasminoides*
- Parsonsia straminea*
- Polymeria calycina*
- Polypodium scandens*

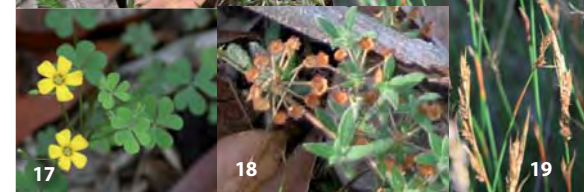
## Shrubs

- Acacia brownei*
- Acacia falcata* **25**
- Acacia floribunda*
- Acacia linifolia*
- Acacia longifolia* **26**
- Acacia lunata* **27**
- Acacia myrtifolia*

- Saw Sedge
- Saw Sedge
- Bedstraw
- Daisy-leaved Goodenia
- Violet-leaved Goodenia
- Raspwort
- Pennywort
- Variable Sword-sedge
- Scale Rush
- Needle Mat-rush
- Spiny-headed Mat Rush
- Many Flowered Mat Rush
- Twisted Mat-rush
- Stink Weed
- Stink Weed
- Stink Weed
- Smartweed
- Thyme Spurge
- Pomax
- White Root
- 20 Pastel Flower
- Black Bog-rush
- Fireweed Groundsell
- Indian-weed
- Forest Nighshade
- Stackhousia
- Trigger Plant
- Fringed Lily
- Needle Bog-rush
- Bull Rush
- Veronica
- Native Bluebell
- Grass Tree

- Apple Berry
- Devils Twine
- Devils Twine
- Old Man's Beard
- Old Man's Beard
- Sweet Sarsparilla
- Love Creeper
- Love Creeper
- Love Creeper
- Hardenbergia
- Dusky Coral Pea
- Morinda
- Common Silkpod
- Swamp Bindweed

- Wattle
- Wattle
- White Sallow Wattle
- Flax-leaved Wattle
- Sydney Golden Wattle
- Lunate-leaved Wattle
- Myrtle Wattle





- Acacia suaveolens **1**  
 Acacia terminalis  
 Acacia ulicifolia **2**  
 Astroloma humifusum **3**  
 V Austromyrtus tenuifolia  
 Babingtonia linifolia  
 Banksia oblongifolia **4**  
 Banksia spinulosa **5**  
 Bauera rubioides  
 Bossiaea obcordata  
 Breynia oblongifolia  
 Callistemon citrinus  
 Callistemon linearis  
 V Cassinia aculeata  
 Conospermum longifolium  
 Daviesia squarrosa  
 Daviesia ulicifolia  
 Dillwynia floribunda **6**  
 Dodonaea triquetra  
 Epacris pulchella  
 V Epacris purpurascens var. purpurascens **7** Purple Heath  
 Gompholobium glabratum  
 Gompholobium grandiflorum  
 Gompholobium minus  
 Goodenia ovata  
 V Grevillea diffusa ssp. diffusa?  
 Grevillea mucronulata **8**  
 Hakea dactyloides  
 Hakea sericea **9**  
 Hibbertia aspera  
 Hibbertia diffusa  
 Hibbertia obtusifolia  
 Hibbertia sp. aff. riparia  
 Hovea linearis  
 Isopogon anemonifolius  
 Kunzea ambigua  
 Lambertia formosa  
 Leptomeria acida  
 V Leptospermum arachnoides  
 V Leptospermum juniperinum  
 Leptospermum lanigerum  
 Leptospermum polygalifolium  
 Leptospermum trinervium  
 Leucopogon ericoides  
 Leucopogon juniperinus **10**  
 Leucopogon lanceolatus  
 Leucopogon microphyllus  
 Leucopogon muticus  
 Lissanthe strigosa  
 Lomatia silaifolia  
 V Maytenus silvestris  
 Micromyrtus ciliata  
 Mirbelia rubiifolia  
 Olearia microphylla  
 Ozothamnus diosmifolium **11**  
 E Persoonia hirsuta (p 39)  
 Persoonia lanceolata  
 Persoonia levis **12**  
 Persoonia linearis **13**  
 Petrophile pulchella  
 Phyllanthus gastroemii  
 Phyllota phyllicoides  
 Pimelea linifolia (p 38)  
 Pittosporum revolutum
- Sweet-scented Wattle  
 Sunshine Wattle  
 Prickly Moses  
 Cranberry Heath  
 Narrow-leaf Myrtle
- Banksia  
 Hairpin Banksia  
 River Rose  
 Spiny Bossiaea  
 Breynia  
 Crimson Bottlebrush  
 Narrow-leaved Bottlebrush  
 Common casinnia  
 Long-leaved Coneseeds  
 Bitter Pea  
 Gorse Bitter-pea  
 Parrot Pea  
 Hop Bush  
 NSW Coral Heath
- Golden Glory Pea  
 Golden Glory Pea  
 Dwarf Wedge-pea  
 Hop Goodenia  
 Spider Flower ?  
 Green Spider Flower  
 Broad-leaved Hakea  
 Needle Bush  
 Guinea Flower  
 Guinea Flower  
 Grey Guinea Flower  
 Guinea Flower  
 Narrow-leaved Hovea  
 Broad-leaved Drumsticks  
 Tick Bush  
 Mountain Devil  
 Native currant  
 Spidery Tea-tree  
 Prickly Tea-tree  
 Woolly Tea-tree  
 Lemon Scented Tea-tree  
 Paperbark Tea-tree  
 Bearded Heath  
 Bearded Heath  
 Lance Beard-heath  
 Small Leave White-beard  
 Bearded Heath  
 Native cranberry  
 Crinkle Bush  
 Maytenus  
 Micromyrtus  
 Mirbelia  
 Bridal Daisy Bush  
 Everlasting  
 Hairy Geebung  
 Lance-leaved Geebung  
 Broad-leaved Geebung  
 Narrow-leaved Geebung  
 Comesticks  
 Spurge  
 Phyllotta  
 Rice Flower  
 Rough-fruit Pittosporum



- Platylobium formosum **14**  
 Platysace ericoides  
 Platysace linearifolia  
 Polyscias sambucifolia **15**  
 Pomaderris ferruginea  
 Pomaderris spp?  
 Pultenaea elliptica (p 37)  
 Pultenaea flexilis **16**  
 V Pultenaea retusa  
 V Pultenaea scabra ssp. biloba (p 40)  
 Pultenaea villosa  
 Styphelia laeta ssp. laeta **17**  
 Tetratheca thymifolia  
 Xanthosia pilosa  
 Xanthosia tridentata  
 Zieria smithii

- Trees**  
 Acacia binervia  
 Acacia decurrens **18**  
 Acacia implexa  
 Acacia parramattensis  
 Acacia parvipinnula  
 Acmena smithii  
 Allocasuarina littoralis  
 Allocasuarina torulosa  
 Angophora bakeri (p 40)  
 Angophora costata **21**  
 Angophora floribunda  
 Backhousia myrtifolia  
 Banksia serrata  
 Callicoma serratifolia **19**  
 Ceratopetalum gummiferum **20**  
 Corymbia gummifera  
 Elaeocarpus reticulatus  
 E Eucalyptus cattai **22**  
 Eucalyptus eugenioides  
 Eucalyptus fibrosa  
 Eucalyptus globoidea  
 Eucalyptus paniculata  
 Eucalyptus pilularis  
 Eucalyptus piperita  
 Eucalyptus punctata **23**  
 Eucalyptus resinifera  
 Eucalyptus saligna  
 Eucalyptus sclerophylla (p 39)  
 Eucalyptus sparsifolia  
 Exocarpus cupressiformis  
 Glochidion ferdinandi  
 V Hakea salicifolia  
 Melaleuca decora  
 Melaleuca linariifolia  
 Melia azedarach  
 Notelaea longifolia  
 V Notelaea ovata  
 Omalanthus populifolius  
 Pittosporum undulatum  
 Rapanea variabilis  
 V Schizomeria ovata  
 Syncarpia glomulifera  
 Trema tomentosa

- Handsome Flat-pea  
 Heathy Platysace  
 Carrot Tops  
 Elderberry Panax  
 Rusty Pomaderis
- Bush Pea  
 Bush Pea  
 Bush Pea  
 Bush Pea  
 Bush Pea  
 Five Corners  
 Black-eyed Susans  
 Woolly Xanthosia  
 Rock Xanthosia  
 Sandfly Zieria
- Coastal Myall  
 Green Wattle  
 Hickory  
 Parramatta Wattle
- Lilly Pilly  
 Black She-oak  
 Forest Oak  
 Narrow-leaved Apple  
 Sydney Red Gum  
 Rough Barked Apple  
 Grey Myrtle  
 Old Man Banksia  
 Black Wattle  
 Christmas Bush  
 Red Bloodwood  
 Blueberry Ash  
 Cattai Mahogany  
 Thin-leaved Stringybark  
 Broad-leaved Ironbark  
 White Stringybark  
 Grey Ironbark  
 Blackbutt  
 Sydney Peppermint  
 Grey Gum  
 Red Mahogany  
 Sydney Blue Gum  
 Hard Leaved Scribbly Gum  
 Narrow-leaved Stringybark  
 Cherry Ballart  
 Cheese Tree  
 Willow-leaved Hakea  
 White-feather Honeymyrtle  
 Snow-in-summer  
 White Cedar  
 Mock Olive  
 Mock Olive  
 Bleeding Heart  
 Sweet Pittosporum  
 Muttonwood  
 Crab Apple  
 Turpentine  
 Native Peach



Recorded in Fred Caterson Reserve/Castle Hill Cemetery 2001-7  
 E = nationally endangered, V = nationally vulnerable,  
 V = vulnerable in the local region (Western Sydney)

The Bushland of Fred Caterson Reserve

The Bushland of Fred Caterson Reserve

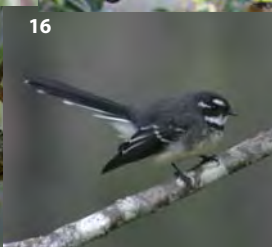
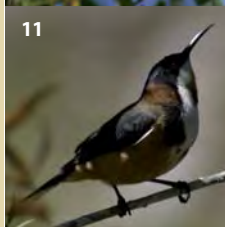
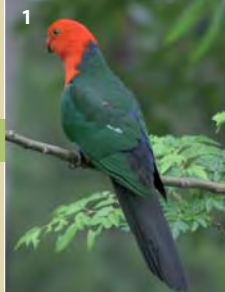
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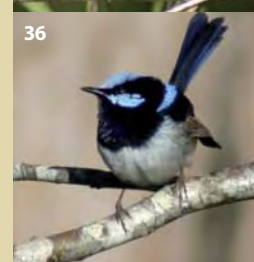
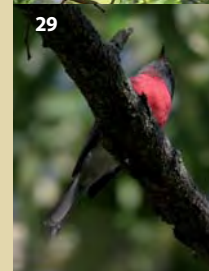
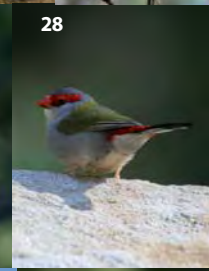
# Animal list

## Birds

Australian King-parrot **1**  
 Australian Magpie **2**  
 Australian Raven  
 Australian White Ibis  
 Australian Wood Duck  
 Azure Kingfisher  
 Black-Faced Cuckoo Shrike  
 Black-shouldered Kite  
 Brown Songlark  
 Boobook Owl  
 Brown Cuckoo-dove **3**  
 Brown Greygone **4**  
 Brown Goshawk  
 Brown Thornbill **5**  
 Buff-rumped Thornbill  
 Cattle Egret  
 Channel-billed Cuckoo  
 Common Blackbird\*  
 Common Bronzewing  
 Common Koel  
 Common Myna\*  
 Common Starling\*  
 Crested Pigeon **6**  
 Crested Shrike-tit **7**  
 Crimson Rosella **8**  
 Dollarbird **9**  
 Dusky Moorhen  
 Eastern Rosella **10**  
 Eastern Spinebill **11**  
 Eastern Whipbird **12**  
 Eastern Yellow Robin (p 41)  
 Fan-tailed Cuckoo  
 Galah **13**  
 Glossy Black-cockatoo  
 Golden Whistler **14**  
 Grey Butcherbird **15**  
 Grey Fantail **16**  
 Grey Shrike-thrush **17**  
 Horsfields Bronze-cuckoo  
 House Sparrow\*  
 Laughing Kookaburra **18**  
 Leaden Flycatcher **19**  
 Lewins Honeyeater **20**  
 Little Eagle



Little Lorikeet  
 Little Wattlebird **22**  
 Long-billed Corella  
 Magpie-lark **23**  
 Masked Lapwing  
 Musk Lorikeet  
 New Holland Honeyeater  
 Noisy Miner **24**  
 Olive-backed Oriole **25**  
 Pacific Baza  
 Pacific Black Duck  
 Pallid Cuckoo  
 Peregrine Falcon  
 Pied Currawong **26**  
 Rainbow Lorikeet **27**  
 Red-browed Finch **28**  
 Red-rumped Parrot  
 Red-whiskered Bulbul\*  
 Rock Dove\*  
 Rose Robin **29**  
 Rufous Fantail **30**  
 Rufous Whistler **31**  
 Sacred Kingfisher **32**  
 Scaly-breasted Lorikeet  
 Silvereye **33**  
 Spotted Pardalote **34**  
 Straw-necked Ibis  
 Striated Pardalote  
 Striated Thornbill  
 Sulphur-crested Cockatoo **35**  
 Superb Fairy-wren **36**  
 Swamp Harrier  
 Tawny Frogmouth **37**  
 Variegated Fairy-wren **38**  
 Welcome Swallow  
 White-bellied Sea Eagle  
 White-cheeked Honeyeater **39**  
 White-browed Treecreeper **40**  
 White-faced Heron  
 White-headed Pigeon  
 White-naped Honeyeater  
 White-plumed Honeyeater  
 White-throated Gerygone  
 Willie Wagtail **41**  
 Yellow Thornbill **42**  
 Yellow-faced Honeyeater **43**  
 Yellow-rumped Thornbill  
 Yellow-tailed Black-cockatoo





Reptiles and Frogs

- Common Eastern Froglet 1
- Striped Marsh Frog 2
- Copper-tailed Skink (p 41)
- Eastern Blue-tonuged Lizard
- Eastern Water Dragon 5
- Eastern Water Skink 3
- Garden Sun-skink 4
- Grass Sun-skink 6
- Greater Bar-sided Skink 7
- Jacky Lizard 8
- Leaf-tailed Gecko 9
- Red-bellied Black nake 10

- Crinia signifera
- Limnodynastes peronii
- Ctenotus taeniolatus
- Tiliqua scincoides
- Physignathus lesuerii
- Eulamprus quoyii
- Lampropholis delicata
- Lampropholis guichenoti
- Eulamprus tenuis
- Amphibolurus muricatus
- Phyllurus platurus
- Pseudechis porphyriacus

Fish

- \*Mosquito Fish 11
- Gambusia holbrooki

Mammals

- Chocolate Wattled Bat
- Grey-headed Flying-fox
- Gould's Wattled Bat
- Large Bentwing Bat
- Large Forest Bat (p 42)
- Little Forest Bat
- Southern Forest Bat
- White-striped Freetail Bat
- Common Brushtail Possum 12
- Common Ringtail Possum 13
- Short-beaked Echidna 14
- Sugar Glider
- \*Dog, \*Black Rat, \*Rabbit, \*Fox, \*Cat

- Chalinolobus morio
- Pteropus poliocephalus
- Chalinolobus gouldi
- Miniopterus blepotis
- Vespadelus darlingtoni
- Vespadelus vulturinus
- Vesperdelus regulus
- Nyctinomus australis
- Trichosurus vulpecula
- Pseudocheirus peregrinus
- Tachyglossus aculeatus
- Petaurus breviceps

Invertebrates

- Butterflies**
- Brown Ringlet 15
- Common Brown 16
- Common Imperial Blue (p 43)
- Splendid Ochre 17
- Bees**
- Blue-banded Bee 18
- Neon Cuckoo Bee 19
- Teddy Bear Bee 20
- Wasps**
- Blue Ant 21
- Blue Flower Wasp 22
- Sand Wasp 28
- Ants**
- Golden Ant (p 43)
- Jumping Ant 23
- Dragonflies**
- Blue Skimmer 24
- Fiery Skimmer 25
- Tau Emerald 26
- Wandering Percher 27
- Spiders**
- Golden Orb-weaving Spider 29
- Wolf Spider 30
- Moluscs**
- Land Snail
- Red Triangle Slug 31

- Hypocysta metirius
- Heteronympha merope
- Jalmenus evagoras evagoras
- Trapezites Symmomous
- Amegilla cingulata
- Thyreus nitidulus
- Amegilla bombiformis
- Diana bicolour
- Scolia soror
- Polyrhachis ammon
- Myrmecia nigrocincta
- Orthetrum caledonium
- Orthetrum villosovitatum
- Hemicordulia tau
- Diplacodes bipunctata
- Nephila ornata
- Lucosa Simsoni
- Meridolum sp.
- Tribonophorus graeffei



Animals listed were found in Fred Caterson Reserve between 1997 and 2006.  
\*= introduced species.  
Insects, ants spiders, worms, slugs etc make up the largest number of individual animals and different species of animals in the reserve. No specific invertebrate surveys have been done. Those shown here represent a tiny fraction of the local invertebrates.  
Council is interested to hear of other reliable fauna records from members of the public.

The Bushland of Fred Caterson Reserve



# Plant and animal profiles



## Slender Rice Flower, *Pimelia linifolia*

Common throughout Fred Caterson Reserve, this shrub can be eye catching in spring when its white flowers decorate the bush understorey—although it can flower through the year.

Flowers are pollinated by moths, butterflies, bees and flies who visit to feed on the nectar and pollen provided. Each flower produces a small (3-5mm) green seed which falls to the ground—usually to be added to the bank of seeds stored in the soil. The seeds sprout in great numbers after a bushfire, replacing the adult plants that have been killed, but seedlings may appear at other times. Ants assist to distribute the seeds. Each seed has an attached food parcel that ants collect along with the seed, carrying it down into their burrows. This is a safe place for the seeds to wait until conditions are right for them to grow.

The caterpillar of the Yellow-spotted Blue butterfly *Candalides xanthospilos* relies on the leaves for food: it feeds at night and shelters under a leaf during the day.

*Pimelia* grows to 1.5m high, and probably lives between 5 and 20 years.



## Downy Wattle *Acacia pubescens*

This colourful shrub attracted the attention of Australia's early European settlers, and it became one of the first local plants to be grown in Europe—appearing in an English garden catalogue in 1809. It is now an endangered species because the Western Sydney clay soil bush, where it was once plentiful, is now mostly houses. The patches that remain are often damaged by weeds, rubbish dumping and frequent fires.

Although it has masses of flowers, pollinated by birds and insects, very little seed is produced, and few seedlings are ever seen. Downy Wattle reproduces by sprouting from the roots, mainly after fire or soil disturbance. There are around 10,500 known plants, but genetic testing is needed before we know if they are 10,500 different individuals or just 140—each with multiple clones.

Its presence on the Pony Club lease reminds us that the Cumberland Plain is close by, and that the reserve has a unique mix of plants.



## Hairy Geebung *Persoonia hirsuta*

The reserve is a stronghold for this endangered shrub found only in the Sydney region—usually in small, widely scattered groups (1 to 3 plants). Many of the bush patches they lived in have been cleared. Although new seedlings will grow after a bushfire to replace adults that have been killed, the population can be wiped out if burned again too soon—before the next generation is mature.

The group at Fred Caterson Reserve is unusually large: in the late 1990s there were 20 plants. Most have now died, but seeds stored in the soil are still sprouting, often in soft soil dug up by rabbits. No seedlings have survived to adulthood in recent years. It's possible some of the present crop will, with wetter conditions and tree guards to protect them from rabbits.

They flower mainly in spring and early summer. Native bees visit and are important pollinators for all species of *Persoonia*. Some bees species are known as *Persoonia* Bees because they rarely feed from any other plants. The flower forms a fleshy fruit with a hard seed inside. They drop to the ground and are apparently eaten and moved to new locations by animals, such as Currawongs or Kangaroos, who digest the fruit but not the seed. The seeds last for many years in the soil.

## Hard-leaved Scribbly Gum *Eucalyptus schlerophylla*

This is one of the "signature" plants of Fred Caterson Reserve. Unlike the smaller, more common Scribbly Gum of Sydney's sandstone country (*Eucalyptus haemastoma*), they are capable of growing into a 20m, straight-trunked tree with a huge girth. Their age is unknown but they are likely to live for over 200 years.

Substantial habitat hollows form in old trees, and Koalas will feed on the leaves. Like other large gum trees, they host a huge population of insects and spiders: eating the leaves and each other, as well as the birds and bats that feed on them. Large quantities of nectar and pollen are available when they flower between January and April. The hard, 4 to 6mm fruits hold masses of tiny seeds which are eaten by Rosellas. Those that escape are dropped and sometimes dispersed a short distance on the wind.

They are one of about 20 tree species that are scribbled on by tiny moth larvae (caterpillars), including *Ogmograptis scribula*. During winter, these larvae chew a tunnel, widening as they grow, between the old and new layers of bark. When the old bark is shed the tunnel is revealed.

Sometimes vertical splits appear on the trunk, due to rapid growth after wet weather.







### Narrow-leaved Apple *Angophra bakeri*

One of the features giving Fred Caterson Reserve bushland its unique character is the abundance of Narrow-leaved Apple. This small (10m) tree has a rough, dark trunk and curvy branches. It flowers December–January. In a good season such as 2006–7, the trees become covered in clusters of white flowers, scenting the air with nectar. The floral feast attracts large numbers of beetles, birds, butterflies and bees who feed on the nectar and pollen, and a variety of birds and bats who feed on them.

The fruit is a woody capsule with 3 round flat brown seeds that drop to the ground in February–March and, if enough rain falls, germinate and grow.

Established trees can re-sprout from the base after fire. They are able to flower quickly, providing important food for hungry insects trying to re-colonise burned areas.

The small leaves are arranged opposite each other along the stem.

### Eggs and Bacon, Bush Pea *Pultenaea scabra*

This shrub develops a mass of yellow and red flowers in spring—peaking in September. It is in the pea family and produces a small (5–7mm) seed pod with a row of tiny hard seeds. They support a population of Bruchids: specialised seed beetles which lay their eggs in the pods. Seeds that escape being devoured by beetle larvae fall to the ground in November when the pod splits open. Some are carried away by ants. The seeds can wait in the soil for many years. They will be needed after a bushfire, because the adult plants are killed, but the heat and smoke triggers mass germination of seedlings.

Like most peas and wattles, they are helped by specially adapted bacteria to thrive in the nitrogen poor soils. The bacteria live in nodules in the roots and convert atmospheric nitrogen to a form that the plant can use.

*Pultenaea scabra* grows where shale and sandstone soils mix—e.g. between field 1 and the cemetery, and at the back of the cemetery grounds. Very little of this habitat is left in the Sydney area so *Pultenaea scabra* has become quite rare. Those in Fred Caterson Reserve are even rarer. They are a distinct variety called *biloba* with short, deeply notched leaves, growing in only a few areas of western Sydney, mostly in Baulkham Hills and Hawkesbury Shires.



### Eastern Yellow Robin *Eopsaltria australis*

These robins are often the first bird to start calling in the morning, with their repetitive “chop chop” call, and one of the last to finish at night.

They eat insects, spiders and other small arthropods—often waiting perched sideways on a tree trunk before diving at them on the ground, gleaning them from leaves, and sometimes grabbing them in the air.

Yellow Robins from the reserve will visit neighbouring gardens. They often wait around if someone is digging the soil, waiting until worms are uncovered.

They breed up to 3 times a year from July to January but most commonly between August and November. The female builds a nest in a tree fork, with dry grass, bark and spider web, usually decorated with hanging

bark and lichen. She usually lays 2 eggs, and sits on them until they hatch in 15 days. Both parents feed the chicks, sometimes helped by their offspring from the previous brood. The chicks leave the nest in another 10–14 days. They are brown and speckled for the first month, then start to turn yellow.

Yellow Robins need a reasonably large area of bush to sustain a breeding population, with a shrub layer up to 5m high, and a good supply of insects to eat.

### Copper-tailed Skink *Ctenotus taeniolatus*

These handsome skinks are active during the day in warmer weather. The first sign that one is nearby is usually rustling of the leaf litter as it searches for insects, or hastily retreats from your path.

Their agility and speed helps them catch flies, worms and other small creatures, and to escape from Kookaburras cats, and snakes. If threatened, a Copper-tail will dive under a rock or log or into a patch of dense grass or shrubs. Fortunately, the reserve has rocks and logs in a range of sizes, providing shelter and hunting positions. As a last resort they are able to sever their tail from their body. The tail wriggles around and hopefully catches the attacker’s attention, giving the skink the chance to escape—it eventually grows a new tail.

The female lays up to 5 eggs in spring. She digs her burrow in soft sandy soil under a rock. The babies hatch about a week later at about 6cm, eventually growing to about 20cm.







### Sugar Glider *Petaurus breviceps*

This nocturnal animal is more often heard than seen, with its repetitive, somewhat dog like, "yip yip" call. They have "cute appeal" and captive bred gliders are popular as household pets in the U.S.A. Their body grows to 200mm and their tail to 210mm.

They feed on eucalypt and wattle gum, nectar and invertebrates. Cats, foxes, owls, Kookaburras, and goannas feed on them.

They move through the tree canopy, by leaping from tree to tree, gliding up to 50 metres, helped to glide by a membrane that stretches between their fingers and toes. They can sometimes adapt to bush that has been fragmented into small patches or strips.

A family group of up to 7 spends the day in a leaf lined tree hollow. The loss of suitable trees (at least 50–100 years old with hollows) threatens their local survival: old dead trees are particularly important. Group members recognise each other by their smell.

Females usually have 2 babies each August. They spend the first 70 days in the mother's pouch, and the next 30 in the nest with an adult guard, or riding on mum's back while she forages. After 7–10 months, unless there is a vacancy in the family group, they leave to find their own territory or join another group.

### Large Forest Bat *Vespadelus darlingtoni*

These may be large for a microbat but their head and body is no more than 44mm long and they weigh only 6 to 8 grams. They have distinctive long dark brown to rusty brown fur. These nocturnal mammals are most likely to be seen at dusk as they swoop and glide about, grabbing insects in the air and foraging among the vegetation.

Most small bats hibernate in cold weather, but the Large Forest Bat stays out longer and may be active on mild winter nights.

They eat a variety of invertebrates including moths, flies, termites, ants and spiders.

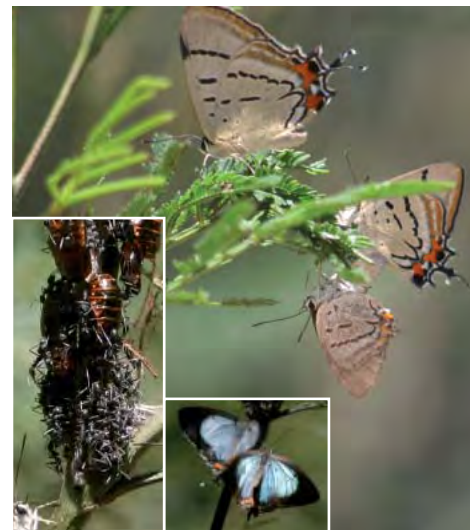
Large Forest Bats live in colonies of up to 60—usually in a tree hollow, but sometimes a small colony will make a roost in a roof or other part of a building.

Females give birth to a single baby each year around November–December. It stays in the roost until it is old enough to fly about January–February.

They depend on healthy bush with tree hollows and plenty of insects.



BARRY BAKER / ANTPHOTO.COM



### Common Imperial Blue butterfly *Jalmenus evagoras evagoras*

This 4cm butterfly is sometimes seen on a sunny day hovering around patches of young wattle.

Adults feed on nectar from flowers, such as Bursaria. They are very particular about where they lay their eggs, and will move between patches of bush looking for wattles (such as Green Wattle and Sydney Golden Wattle, up to 1 or 2m high) because this is all their larvae will eat.

The larvae (caterpillars) have developed a partnership with certain species of ants. (pictured above). The ants feed on nectar produced by the larvae: secreted from glands and a nectary organ on their backs. The ants stroke the nectary organ causing it to release a drop of nectar. The ants' job is to protect the larvae from predators.

When fully grown, the larvae cling to the wattle stem, and their outer skin forms a hard case to protect them while their bodies rearrange themselves and they become butterflies. Male butterflies cluster around just before the young females emerge, ready to mate and begin the cycle again.

### Golden Ant, Golden-spined Ant *Polyrhachis ammon*

This quite large (8 to 11mm) ant is stingless, and one of the most distinctive of the many ants in Fred Caterson Reserve. Their bodies have a metallic sheen, and are covered in golden hairs. They have spines on their back.

They often build their underground nest in sand at the base of shrubs and trees. Like most ants, they live in a colony of many hundreds of individuals including a queen, her eggs, grub like larva hatched from the eggs, pupa in the process of becoming adults, and workers who tend the young, forage for food and defend the nest.

Workers are out foraging all year, although they may shelter in their nest in very hot or wet weather. The workers will climb trees and shrubs to collect nectar and pollen, and they scavenge for dead insects and other protein. They also collect dew from plants. Most of what they collect is for the larvae and other ants back at their nest. They can store fluids in their digestive system, and feed it directly to other ants. Adults only eat liquids, but larvae will eat solid food.





## Life on the ground

Some members of the bush community are tiny and only appear after rain.

Lichens, mosses and liverworts protect the soil from the eroding power of rain. They survive dry times, becoming hard and shrivelled, then start to soften and unfurl when rain touches them again. In Fred Caterson Reserve they sometimes form thick carpets. This is something the Reserve has in common with the woodlands of the Cumberland Plain. They are fragile and disappear if trampled too much by sheep, cattle, humans or bikes.

Colourful fungi can appear at any time of year but most commonly in autumn, after good rain. The parts we see are the fruits of a larger organism made up of networks of fine threads in the soil. Fungi help run the whole bush system. They work all year, decomposing timber and other organic matter, and enriching the soil. Most local bush plants have roots that connect directly with fungi to access the nutrients.

### Lichens

*Cladonia* sp. **1**

*Cladia aggregata* **2**

*Cladia corallaizon* **3**

### Liverworts

*Heterodea muelleri* **4**

### Fungi

*Hygrocybe* sp. **5**

*Pisolithus arhizus* (Horse Dung Fungus) **6**

*Russula purpureoflava* **7**

Unknown fleshy pore fungus **8**

*Cortinarius australiensis* **9**

*Clavaria alboglobospora* **10**

*Dermocybe austroveneta* **11**

*Clavulina cinerea* **12**

*Boletellus ananas* **13**

*Omphalotus nidiformis* (Luminous Fungus) **14, 15**







## Fred Catterson 1919-2000

Fred Catterson served for 23 years on Baulkham Hills Council. He was Member of Parliament for the Hills for 14 years, and founding President of Castle Hill Historical Society. In 1981 Shire President Bernie Mullane argued that the Gilbert Road Reserve should be named after him; stating that “no-one could question the dedication, effort and service given to this shire by Fred Catterson. Councillor Catterson, the Deputy Shire President, has been closely associated with every aspect of the fine development which has taken place in this area. He has always been a keen advocate of proper recreation and sporting facilities for the people of Castle Hill and indeed for the Shire of Baulkham Hills”

## Elizabeth Chaffey 1962-1973

Elizabeth Chaffey was a young local girl who died from cancer. Part of Fred Catterson Reserve was renamed after her in 1998.

## Mario Vargas Died 2001

Mario Vargas was a keen cyclist who devoted many voluntary hours to the development of cycleways in the shire. The cycleway in Fred Catterson Reserve was named after him in 2002

## References

Ardley D (1993) **Kellyville The Pleasant Village** Self Published

Attenbrow, V (2002) **Sydney's Aboriginal Past** University of NSW Press, Sydney  
Australian Museum **Wildlife of Sydney** [www.faunnet.gov.au](http://www.faunnet.gov.au)

Commonwealth Government Bureau of Meteorology **Climate Education** Website [www.bom.gov.au](http://www.bom.gov.au)

Baulkham Hills Shire Council (1981) Presidential Minute no. 81/11 **Fred Catterson Recreation Reserve**

Baulkham Hills Shire Council (2002) **Bushland Management Strategy for Fred Catterson Reserve Castle Hill**

Benson, D & Howell, J (1995) **Taken for Granted: the Bushland of Sydney and its Suburbs** Kangaroo Press, Kenthurst

Benson D & Howell J (1994) **The Natural Vegetation of the Sydney 1:100 000 map sheet**. Cunninghamia 3(4): 677-1004

Benson D & McDougall L (1993-2005) **Ecology of the Sydney Plant Species** 10 Part series Cunninghamia

Blombery A & Maloney B (1992) **The Proteaceae of the Sydney Region** Kangaroo Press, Kenthurst

Boles W (1988) **Robins and Flycatchers of Australia** Angus and Robertson

Carolyn R & Tindale M (1994) **Flora of the Sydney Region** Reed

Carr H, Wilson P, Pullen N and McCluskey L (1997) **Settlement of Baulkham Hills and Castle Hill Townships 1791-1997** Hills District Historical Society

Churchill S (1998) **Australian Bats** Reed New Holland

Cogger H (2000) **Reptiles and Amphibians of Australia** Reed New Holland

Eldridge D & Tozer M (1997) **A practical guide to Soil Lichens and Bryophytes of Australia's Dry Country** Department of Land and Water Conservation

Fairly A & Moore P (1989) **Native Plants of the Sydney District** Kangaroo Press and The Society for Growing Australian Plants, NSW

Freimanis E & Hafey J (2001) **Fred Catterson Reserve Bushland Management Survey** Report for Baulkham Hills Shire Council

Fuhrer B (2005) **A Field Guide to Australian Fungi** Blooming Books

Gilmore M (1934 [1986] **Old Days Old Ways A Book of Recollections** Angus and Robertson

Harden G (1992-2000) **Flora of New South Wales** Volumes 1-4 University of NSW Press

Hawkins R, Pullen N & Wilson P (2004) **Castle Hill and its Government Farm** The Hills District Historical Society

Herbet C & Helby R (Editors) (1980) **A Guide to the Sydney Basin** Department of Mineral Resource Bulletin no 26

Ian Perkins Consultancy Services and Aquila Ecological Surveys (2004) **Flora and Fauna Survey - Fred Catterson Reserve - Tennis Center and Hills Sports Stadium** Report For Baulkham Hills Council

James T (Principal author) (1997) **Urban Bushland Biodiversity Survey of Western Sydney** NSW National Parks and Wildlife Service

James T (2002) **Ecological Survey of Castle Hill Cemetery** Report for Baulkham Hills Shire Council

James T, McDougal L & Benson D (1999) **Rare Bushland Plants of Western Sydney** Royal Botanic Gardens, Sydney

Kohen J & Downing (1992) **A Aboriginal Plant Use on the Western Cumberland Plain** Sydney Basin Naturalist 1 1-8

LesryK Environmental Consultants (1997) **Fauna and Flora Assessment for a Proposed Playing Field Fred Catterson Reserve** Report for Baulkham Hills Shire Council

NSW Legislative assembly (2000) p 4066 **Death Of Frederick Douglas Claude Catterson, A Former Member Of The Legislative Assembly**

Pullen N (2002) **Fred Catterson Reserve** Baulkham Hills Shire Council Brochure

Tozer M (2002) **Interpretation Guidelines for the Native Vegetation Maps of the Cumberland Plain, Western Sydney** NSW National Parks and Wildlife Service

NSW Scientific Committee (1998) **Persoonia hirsuta (a spreading to decumbent shrub) - Endangered species determination - final DEC (NSW)**

Roberts P (1993) **Birdwatchers Guide to Sydney Region** Kangaroo Press, Kenthurst  
Shattuck S (1999) **Australian Ants Their Biology and Identification** CSIRO Publishing

Strahan R (1983) **The Australian Museum Complete Book of Australian Mammals** Cornstalk Publishing

Theischinger G & Hawking J (2006) **The Complete Field Guide to Dragonflies of Australia** CSIRO Publishing

White M (1986) **The Greening of Gondwana** Reed

White M (1994) **After the Greening The Browning of Australia** Kangaroo Press

Zborowski P & Storey R (2003) **A Field Guide to Insects in Australia** Reed New Holland



Fred  
Caterson



The big, old Scribbly Gums of Fred Caterson Reserve have seen much change: the indigenous Darug people collecting food, teaching their children about the plants and animals; cycles of drought, bushfire and rain; the building of fields, roads and car parks; the regular arrival of huge numbers of visitors to play and watch sport.

The Scribbly Gums are part of a unique patch of bush, on the banks of Cattai Creek, where wildflowers bloom all year round. The undergrowth is alive with small birds and lizards, parrots move through the canopy, and Sugar Gliders and bats forage at night.

With the help of photographs and maps, this booklet tells the story of the plants and animals of the reserve. A series of historic aerial photographs show the changes that the last 50 years have brought.

