


Native Wildlife of the Wetland


An additional benefit of the wetland rehabilitation and construction has been to improve the area's biodiversity. Water-loving animals have reclaimed the valley, including eels, long-necked turtles, water dragons, frogs and numerous insect species. At least 18 species of water birds have been recorded, some using the ponds on a casual basis, others on a semi-permanent basis.

Birds Recorded


Purple Swamp Hen	V – occasional visitor
Dusky Moorhen	Chestnut Teal
Australasian Grebe	Black Duck
Australian Wood Duck	Grey Teal
White Ibis	White-faced Heron
Buff-banded Rail (V)	Coot (V)
Narkeean Night Heron (V)	Sitiated Heron (V)
Intermediate Egret (V)	Royal Spoonbill (V)
White-eyed Duck (V)	Great Egret (V)
	Bailion's Crane (V)




White-faced Heron




White-eyed Duck




Chestnut Teal



White Ibis



Royal Spoonbill



Bailion's Crane

**KEEP IT CLEAN
DRAINS TO
WETLAND**

OFF is a community-based organisation which aims at stimulating interest in the natural environment and fostering an understanding of the need to conserve that natural environment.

Other brochures produced by OFF include:
 Birds of Oatley Park
 Native Plants of Oatley Park
 Walking Tracks of Oatley Park


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YOUR Guide

LIME KILN BAY WETLAND



Catchment

Any substance entering street drains from within the marked catchment outline will eventually find its way into the wetland. This catchment covers a sizeable area of about 2 square kilometres (200 hectares) from Forest Road to Ocean Street, Illawarra rail line and across to Mulga Road and Lloyd Street. This is a dense urban area containing about 4000 homes and up to 10,000 residents. It also includes the shopping centre at Mortdale and other commercial properties.

Because much of the catchment is covered with hard surfaces, e.g., houses, roads, concrete driveways and footpaths, water runs off rather than soaking into the ground. In doing so, it flows quickly carrying pollutants with it.


If we stop pollution entering gutters and drains in the first place, we can help keep our waterways clean and healthy. That way, they will provide a better environment for us and for native animals and plants.

What you can do

- wash your car on the grass
- recycle your cans and plastic bottles and bags
- pick up your dog's droppings
- put cigarette butts and other litter in the bin
- place your grass clippings and other garden waste in the compost or green recycle bin
- keep paints, turps, solvents and oils clear of gutters and drains
- report stormwater pollution to Hurstville City Council

Guide

LIME KILN BAY WETLAND



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Sewage Overflow

At the upper end of the wetland, the North Georges River Sub Main (NGRS) sewer viaduct crosses Dairy Creek. On the north western side of the creek there is an emergency relief structure (ERS), commonly known as a sewer overflow from the sewer main. This ERS and many others on the NGRS are designed to allow excess wet weather flows in the main to flow into the creek rather than backup in the main and into residential properties. Note that these flows are of highly diluted sewage.

In 2012, this ERS malfunctioned and raw sewage was released into the wetland. Following an extensive cleanup Sydney Water Corporation rectified this ERS and installed monitoring equipment at this ERS and others on the NGRS.

Following community consultation, Sydney Water has also modified the ERS to store more sewage in the main to reduce the number of wet weather overflows from this point and into the wetland.



Sewage overflow



Rockcrete flow catchment

Water Quality Testing

After the 2012 event, Sydney Water commenced water quality testing in the wetland so they could measure the effect of the changes to the ERS and the consequent reduction in overflows into Dairy Creek and the wetland.

In addition a group of volunteer citizen scientists have been sampling and testing a number of water quality parameters in the creek and wetland on a bi-monthly basis. This Streamwatch program is sponsored by the Australian Museum and is part of a state wide plan to monitor water quality in our waterways. Results generally show the Creek waters to be fair.

In addition, a River Health Monitoring Program coordinated and funded by the Georges River Combined Councils Committee is undertaken by volunteer citizen scientists who sample for macro-invertebrates (water bugs) in Dairy Creek bi-annually to determine the health of the tributaries and River. Results of this program generally show the historical health rating of Dairy Creek as D- -. However recent testing results revealed an E rating.



Collecting water sample



Streamwatch at Dairy Creek

Vegetation

On completion of the wetland's engineering works, the margins of the ponds were planted with native sedges and rushes and other water-loving plants. Common are species of *Cyperus*, *Carex*, *Isoplepis*, *Lomandra*, *Schoenoglossus* and *Bulrush* (*Typha*). Other small plants include clumps of pink-flowered *Genium homeanum*, the salt bush *Eurotia hastata* and various species of knotweed (*Pericaria*). Extensive stands of Common Reed (*Phragmites australis*) occur downstream from the ponds and some of these plants have colonised the margins of the wetland.

Taller shrubs in the pond area include Swamp Oak (*Casuarina glauca*), Willow-leaf Bottlebrush (*Callistemon salignus*), Common Bottlebrush (*Callistemon citrinus*), *Melaleuca nodosa*, Snow-in-Summer (*Melaleuca leucadale*), Pickle-leaved Paperbark (*Melaleuca styphaleoides*), Sandpaper Fig (*Ficus coronata*) Cheese Tree (*Glochidion fastigiatum*) and Bleeding Heart (*Hemodorum populifolium*). Large Tree Ferns grow on the shaded banks of the bypass creek with the purple-flowered Kangaroo Apple (*Solanum aviculare*). A number of small Grey Gums (*Eucalyptus punctata*) occur on drier areas of the wetland.

The wetland area is cared for by a team of bush-care volunteers who work on a regular basis with support from a Hurstville Council supervisor removing weeds and rejuvenating the native vegetation.



Sandpaper Fig



Bottlebrush



Swamp Oak



Bleeding Heart



Knotweed



Common Reed

Lime Kiln Bay Wetland

Lime Kiln Bay Wetland is located in Oatley and is bordered by Oatley Park, Bay Road, Riley Street, Waterfall Road and Oatley Heights Park. It is a constructed pond system built by Hurstville City Council in 1999/2000 at a cost of \$12 million and was opened in September 2001.

The system was designed to firstly stop gross pollutants such as plastic, paper and organic matter, then settle out the sediment and remove nutrients. Thus, preventing pollution from flowing into Lime Kiln Bay and eventually the Georges River.

The construction aimed at:

- enhancing water quality within the wetland and the Georges River
- rehabilitating the wetland ecosystem which was badly degraded
- providing increased recreational and educational value for the local community.

An additional result was improved habitat for native wildlife, especially water birds.



1. Dairy Creek

Typical of many urban areas, stormwater runoff enters the natural creek system via road drainage, backyards, road drains and pipe systems, potentially introducing weeds, nutrients and other pollutants.

2. Sewer Submain

The North Georges River Submain (NGRS) sewer viaduct crosses Dairy Creek incorporating an emergency relief structure (ERS) to release excess wet weather flows. It also acts as part of the Lime Kiln Bay Great Track.

3. Gross Pollutant Trap

To remove large pieces of debris and rubbish washed down the creek from surrounding urban catchment, this trap has been constructed with easy access to facilitate regular clearing.

4. Bypass Flow

Although almost 100% of the creek flow is directed through the wetland, during times of flood the excess flow bypasses the wetland to avoid damaging reeds and other infrastructure.

5. Sediment Pond

Downstream from the Gross Pollutant Trap, this pond has been created to allow sediment particles to settle out prior to entering the wetland.

6. Waterfall Creek

This creek is fed by road drains and a pipe system. It enters the wetland at the southern end of the sediment pond.

7. Easton Ridge Wetland

A more recent addition to the wetland, this now provides a longer flow path through the pond system.

8. Constructed Wetland

This man-made wetland completed in 2000 has a catchment in sloping urban off-filling urban lots and other pollutants, as well as providing native fauna habitat.

9. Natural Reeds

The *Phragmites* reeds provide a final shallow wetland which slows stormwater flows and catches pollutants before entering the mangroves and waters of Lime Kiln Bay.

10. Mangrove Community

Naturally occurring native mangroves line the bay and provide many valuable ecological functions.

11. Sandstone Escarpment

Offering views over the wetland, these wooded slopes illustrate the original vegetation which surrounds the catchment of Lime Kiln Bay.

