

ponds

Centennial Parklands ponds form the upper catchment of the Botany Wetlands, which lie six kilometres downstream and are the largest freshwater wetland system in inner-metropolitan Sydney. These water bodies, covering an area of approximately 26 ha, provide important habitat for water birds and aquatic life and are a significant feature of the formal design of Centennial Park. The ponds also play an important role in flood mitigation, acting as a detention basin. Ten of the eleven interconnected ponds in Centennial Park, and single pond in Moore Park, are fed by stormwater runoff from the surrounding catchment area. This includes the suburbs of Paddington, Woollahra, Bondi, Waverley and Randwick. Only one pond, Lily Pond, is fed by a natural artesian spring.

How the ponds were formed

Prior to its establishment in 1888, the area now known as Centennial Park was known as the Lachlan Swamp. Water from this natural freshwater drainage area was channelled via Busby's Bore to the settlement of Sydney. This water was Sydney's main source of drinking water between 1837 and 1859, until mismanagement and poor maintenance of the bore compromised the water supply. Industry and the use of the Lachlan Swamp for livestock grazing gradually polluted the water supply. Seven new dams, constructed to replace existing ones that were destroyed by large scale flooding in 1874, further worsened pollution. When Centennial Park was established these most recently constructed dams were remodelled into the ornamental ponds seen today. They are an integral part of the park's Victorian design. Each pond has unique features and provides habitat for an array of aquatic wildlife.

Model Yacht Pond

Stormwater enters Centennial Parklands' pond system at the eastern side of Centennial Park via Model Yacht Pond. Sailing model yachts was once a familiar pastime for park visitors, giving this pond its name. A Gross Pollutant Trap (GPT) is installed adjacent to Model Yacht Pond to prevent pollution carried through the stormwater from entering the pond environment. The GPT acts as a giant sieve to catch and remove from the stormwater any solid rubbish greater than 1mm in diameter. This includes cigarette butts, polystyrene cups and organic material such as leaves. During high flow periods, following heavy rains, the GPT may be bypassed causing pollutants flow directly into the pond. An artificial island has been constructed to prevent water stagnating in this pond and reed beds around the island act as natural filters to remove dissolved pollutants. Together these features provide excellent habitat for nesting water birds including ducks and swans.

Fly Casting Pond

Fly Casting Pond is fed from the water flowing through from Model Yacht Pond. Extensive reed beds have been planted on the eastern side of this pond to provide habitat for aquatic fauna and to further absorb further dissolved nutrients from the system. These reed beds also help to trap sediments by slowing the flow of water as it moves from Fly Casting Pond into the larger Willow Pond. During the summer you may be lucky enough to spot a turtle in this pond.

Musgrave Pond

This small pond on the eastern most side of Centennial Park is fed by water flowing in from suburbs surrounding Queens Park. A GPT, similar to the one at Model Yacht Pond, filters rubbish from the stormwater to prevent it polluting the pond. Occasional visitors to Musgrave Pond include royal spoonbills and white faced herons, which wade in the shallow water looking for invertebrates to eat.

One More Shot Pond

This tiny pond fringed with willow trees is fed by water from Musgrave Pond. An underwater bank encourages a continuous flow within the pond to minimise stagnation. This pond gets its name from one of the 31 statues that were located throughout the park – a larger than life hunter with a dog at his heels.



Centennial Parklands is managed by the Centennial Park and Moore Park Trust
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Willow Pond

Fly Casting, Musgrave, One More Shot and Model Yacht Ponds all feed into Willow Pond. An accessible beach area provides for excellent viewing of this pond. Black cormorants can often be seen drying their wings, balancing on the stags emerging from this pond.

Duck Pond

Duck Pond has abundant bird life and is a popular spot for bird watching. The Wetlands Interpretive Maze is located along the northern edge of Duck Pond. This short, interpretive walk uses signage and artwork to provide information about our ponds system and the issues faced by stormwater pollution. The boardwalk over Duck Pond is a perfect vantage point for looking for eels, ducks and other waterfowl.

Randwick Pond

Water flows directly from Duck Pond into Randwick Pond. Unlike Duck Pond, Randwick Pond has a large area of reeds and lily pads that attract purple swamphens and dusky moorhens. Swans and cygnets are a common sight on this pond, especially in spring.

Lily Pond

Lily Pond is fed by a natural, underground spring in Lachlan Swamp. The water in this pond is usually clearer than other ponds in the Parklands for two reasons. Iron pyrites present in the soil oxidise, releasing sulfur dioxide and causing the spring water to be slightly acidic and therefore clearer. The water is also filtered up to the surface through sand, contributing to its clearer appearance. Its small islands, vegetated with papyrus, provides important habitat for purple swamphens, black swans and the clamorous reed warbler. Its water brims with aquatic invertebrates such as dragonfly nymphs, water boatmen and aquatic earthworms during warmer months.

Busby's Pond

A reed-fringed shore, tiny beaches and large nesting islands make Busby's Pond one of the most beautiful in the Parklands. Many waterfowl live on the pond's islands and large numbers of little pied cormorants can be seen nesting on the northern most island in the early evenings. Paperbarks cover the other small island and provide excellent breeding and nesting habitat for coots, dusky moorhens and purple swamphens.

The largest pond in the system, this expansive, sometimes lily-covered pond was named after John Busby, Chief Surveyor, who in 1824 was responsible for finding an alternative water supply for Sydney after the Tank Stream had become too polluted to supply the fast-growing population. Busby suggested a tunnel running from the Lachlan Swamps in Centennial Park to Hyde Park. The scheme was adopted and the starting point of the tunnel, which became known as Busby's Bore, was near the present Robertson Road entrance to Centennial Park.

It took convict labour 10 years to complete Busby's Bore, which was hand dug, mainly through rock. It was 3.6 kilometres long, 1.2 metres high and up to 25 metres deep. The bore supplied nearly two million litres of water per day, sufficient for Sydney's then population of 20,000. It was the town's main water supply from 1837 to 1859.

Water drains into Busby's Pond from Lily Pond and Randwick Pond in the south; and via a large culvert from Fox Studios and the Equestrian Centre in the Moore Park area. Historic sandstone drains transport water from Lang Road through to Busby's Pond.

Kensington Ponds

A large open drain transports water from Busby's Pond across the Mission Fields and the Learners' Cycleway into Kensington Ponds. The larger of the two ponds has well-vegetated banks making it excellent for bird life, especially the purple swamphen



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and dusky moorhen. When water levels are low, large areas of mudflats attract white faced herons and egrets. Water hyacinth, an invasive aquatic weed, is common in this pond and is managed through the application of an environmental friendly herbicide. A culvert feeds the smaller of the Kensington Ponds from Darley Road. Despite the proximity to a stormwater inlet, this pond is one of the few places where tadpoles can be found in Centennial Park. This pond is used for supplying irrigation water for the playing fields and flowerbeds of Centennial and Queens Parks.

Botany Wetlands

The water leaving Centennial Parklands is carried through underground stormwater drains to the Botany Wetlands, adjacent to Sydney Airport. These drain to Botany Bay. Centennial Parklands has a commitment to ensure that a good level of water quality is maintained in its ponds to provide the best possible water quality for downstream waterbodies.

Kippax Lake

Named after a former city alderman and mayor, Kippax Lake in Moore Park is frequented by the Australasian grebe and Pacific black duck. A statue dedicated to Australian Sportswomen stands in the centre of the Lake. This area was once known as Billy Goat Swamp. The original swamp was converted into a pond and lined with concrete to ensure the water would not drain away. The pond's stone finish gives it an urban quality.

Pond restoration program

Centennial Parklands Pond restoration program is almost complete after 6 years of remedial works. The restoration program aimed to minimise the impact of stormwater pollution, upgrade several of the ponds and improve water quality. GPTs were installed at stormwater entry points to reduce the amount of pollutants entering the system. Such pollutants can cause blue green algae blooms and contribute to unsightly litter. Macrophytes (aquatic plants) were planted to provide improved habitat and to filter dissolved pollutants such as phosphorus in the water. Plantings and improvement works around the ponds' edges have been carried out to assist with bank stabilisation. European carp has been removed and a native fish called Australian bass has been introduced. Islands and underwater beams were constructed to ensure that water movement around the pond is maximised to prevent areas from becoming stagnant. Adjustable weirs allow better control of water levels within and between the ponds in the system.

Water quality monitoring

Rangers conduct ongoing water quality analysis to monitor the health of the ponds. Testing is done quarterly for parameters including nutrient analysis, pH, dissolved oxygen, turbidity and temperature. Blue green algae analysis is done bi-monthly. Since the restoration of the ponds, Rangers have noted an improvement in the water quality and amenity.

Preventing pond pollution

A number of measures have been introduced to prevent pond pollution. Gutters and streets are swept regularly to minimise the amount of leaf litter and sediment washed into the ponds. Many of the drains in the Parklands are painted with yellow messages to warn people that rubbish in the streets contribute to pond pollution. Everybody living in the Centennial Parklands catchments can assist in reducing pond pollution, and can make sure that our waterways are kept clean and healthy by doing the following:

- Always sweep your gutters and driveways with a broom rather than hosing rubbish down the drain.
- Always wash your car on the grass. Putting soapy water down the drain encourages the growth of algae and can sometimes poison our aquatic wildlife.
- Always pick up your dog's poo.



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