

# Brooklands Lagoon

*Brooklands Lagoon, north of Spencer Park, is protected from the sea by Brooklands Spit and coastal sand dunes. It is an important wildlife area with countless insects, invertebrates, fish, native plants and over 74 species of birds recorded. The lagoon is one of the few remaining natural wetlands in New Zealand, now that more than 90% of natural wetlands have been drained or destroyed.*

## Natural History

The Brooklands Lagoon is an important link in a chain of wetlands that runs along the central Canterbury coast. These wetlands are used by migrating birds. The lagoon provides a breeding habitat, wintering site and a feeding stop for birds migrating between the North and South Islands.

The lagoon covers 270 hectares, is 4.5km long and 0.8km at its widest point.

The lagoon is comprised of three areas:

## The Southern Lagoon

The southern lagoon is a wildlife refuge where the high tide only covers the mudflats between two and four hours a day. Extensive areas of saltmarsh, consisting of rushes, sedges and salt tolerant grasses, surround shallow ponds. This vegetation provides protection for insects and coastal skinks. The salt concentration in the water is usually very low offering suitable conditions for invertebrates such as tunnelling mud crabs, mudflat snails and rag worms. An observation platform, at the southern end of the lagoon, provides a place for observing birdlife, including Canadian geese, shoveler, grey teal and white-faced heron.



*Looking across part of Brooklands lagoon from an observation platform.*

Credit: Mark Pickering.

## The Mid-Lagoon

The mid-lagoon area is a mixture of reed beds and open mudflats which, at low tide, form the main feeding ground for birds such as godwits, South Island pied oystercatcher (torea), caspian tern (taranui) and the banded dotterel (tuturiwhatu).

## The Northern Lagoon

The main channel forms the northern lagoon. Shellfish, such as pipi and cockles, can be found in sandy patches close to the lagoon mouth. Eels (tuna), brown trout and yellow-eyed mullet, which can tolerate the higher concentration of salt water, feed around the mouth of the Styx River. The Styx River mouth is an important location for whitebaiting and an inanga spawning area.

Shy and reclusive birds, such as the Australasian Bittern and Marsh Crane, live in the raupo wetland that forms a dense and impassable mat at the mouth of the Styx River. Unfortunately they are rarely seen due to their excellent camouflage colouring.

## Flora

The vegetation on Brooklands Spit contains an example of a natural dune-land plant community in Christchurch. Cottonwood, flax, manuka, sand convolvulus and a couple of huge akeake and ngaio trees (with canopies nearly 10m across) can be found on the spit.

Native plants, including ferns, grasses, rushes, sedges, herbs, trees and shrubs grow along the margins of the lagoon. The mudflats support various native sedges, rushes, grasses, salt-tolerant herbs and occasional shrubs, such as the saltmarsh ribbonwood.



*Ribbonwood* Credit: Kate McCombs



## Human History

Brooklands Lagoon and the Waimakariri River mouth were an important Maori food-gathering site until the mid-1880s when game fishing legislation was introduced. The legislation banned everyone, including Maori, from taking fish from the river.

In the 1850s early European settlers divided the land surrounding the lower Waimakariri into large pastoral runs. George Leach, a Scottish ex-bank manager, owned the area now known as Brooklands Lagoon. The vegetation was soon stripped away by over grazing and the light sandy soils were blown inland. Farming was later abandoned in the lagoon area. The river mouth was shifted 300m north from its natural course because of frequent flooding of the surrounding land.

## Recreation

### Walks

Brooklands Lagoon Walk, along the western edge of the lagoon, will lead you to a bird hide and then to the lagoon itself. Continuing along the walk you will have good views of the lagoon, with plenty of opportunities to see wildlife. This walk will take you to Brooklands settlement. 3–4 hours return.

The Waimakariri Walk will lead you through sand dunes to the east of the lagoon to the mouth of the Waimakariri River. At several locations along the walk you can wander down to the beach and back up through the sand dunes to the lagoon. The Waimakariri River mouth is an important whitebaiting area and is popular for salmon fishing. The return walk takes 3–4 hours.

### Bird watching

The Lagoon is a feeding and resting place for 74 species of birds. At the height of the season more than 3000 birds may be at the lagoon. Resident birds include; white-faced heron, oystercatcher, banded dotterel, red-billed gull, spotted shag and pied cormorant.



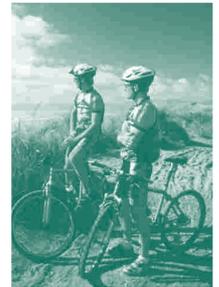
*South Island pied oystercatcher.*

Credit: Andrew Crossland.

A bird hide on the western bank of the lagoon can be reached on the Brooklands Lagoon walk. At the southern end of the lagoon, wildlife observation platforms are located with views across the ponds and saltmarsh. The return walk to the hide is 40 minutes.

### Mountain biking

A variety of mountain bike trails in Bottle Lake Forest can be accessed from the picnic area in Spencer Park. The Southern Pegasus Bay track is ideal for mountain bikers along the shoreline and can also be accessed from Spencer Park.



## Management Issues

One of the management challenges of Brooklands Lagoon is balancing recreational activities with the wildlife of the lagoon. Wading birds, such as godwit and pied oystercatcher, are often frightened off their high-tide roosts during the day by four-wheel drive vehicles, motorcycles and dune buggies using the shoreline of the lagoon.

Low-lying areas at the north of the lagoon used as high-tide roosts by wading birds are often flooded by spring tides and bow waves from jet-skis and power boats. The natural high-tide roosts at the end of the spit are also popular fishing spots, accessed by four-wheel drive vehicles. All of these activities can cause disturbance to wading birds.

The lagoon is slowly silting up as sand and mud is carried into the lagoon when the Waimakariri floods or sand is blown into the lagoon off the sand dunes. As the lagoon becomes shallower, clumps of rushes trap the sediment and spread outward, reducing the amount of open water. Salt-tolerant plants become established, initially on the edges of the lagoon and later on the built-up islands formed by the rushes.

Pollution from nutrients and effluent are contaminating the lagoon. Nitrates, phosphates and animal faeces are being washed into the lagoon from the Styx and Waimakariri Rivers.

Pine trees that were planted to stabilise the sand dunes are spreading into the lagoon, smothering native salt marsh species.

## Sand Dunes

When walking through the sand dunes please keep to the tracks. The sand dunes are very susceptible to erosion and many areas have been planted to stabilise the area. It is important to keep to the tracks to avoid damaging the plants that protect the sand dunes.

**References:** Owen, S J (Ed.). (1992). *The estuary: where our rivers meet the sea.* Parks Unit Christchurch City Council: Christchurch [NZ].

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