

# Swan Lake

## Estuary Ecosystem Health Report Card 2022-23

### Estuary Health

Monthly water quality monitoring was undertaken by Council at two sites between September 2022 and April 2023. The overall estuary health grade for Swan Lake was fair, based on microscopic algae and water clarity as key indicators. Microscopic algae levels were consistently good with water clarity consistently fair across the period.

These estuary health grades provide an insight into the water quality of Swan Lake for the year 2022-23. Council will continue water quality monitoring to assess estuarine ecosystem health and public health.

#### Algae

**Chlorophyll a** indicates the amount of microscopic algae, called phytoplankton, growing in the waterway. Algae can grow quickly when high levels of nutrients are present. Nutrients can enter an estuary through urban stormwater, agricultural runoff, sewage and sediment runoff from the land. An increase in chlorophyll a can lead to algal blooms and detrimental impacts on aquatic plants and animals.

#### Water clarity

Water clarity is determined by **turbidity**, a measure of how much material, such as sediment or organic matter, is suspended in water. Turbidity can increase from sediments in catchment runoff, shoreline erosion, increased microscopic algae, and resuspension driven by wind (in shallow systems). High levels of turbidity may indicate poor water quality, which can have negative impacts on aquatic ecosystems.

Grades:

**A**

Very Good

**B**

Good

**C**

Fair

**D**

Poor

**E**

Very Poor

**C**

Overall Grade

### Estuary Information

Catchment area (km<sup>2</sup>): 26.4

Estuary area (km<sup>2</sup>): 4.7

Estuary volume (ML): 10997.7

Entrance: Intermittently open

Major tributaries: Mondayong & Teatree Creeks

Avg Yearly Rainfall: 1207.3mm

(Stn No:68229) 2022: 2588mm (total)

Mondayong Creek

Swan Lake

Estuary Mouth

Swan Lake Inlet

