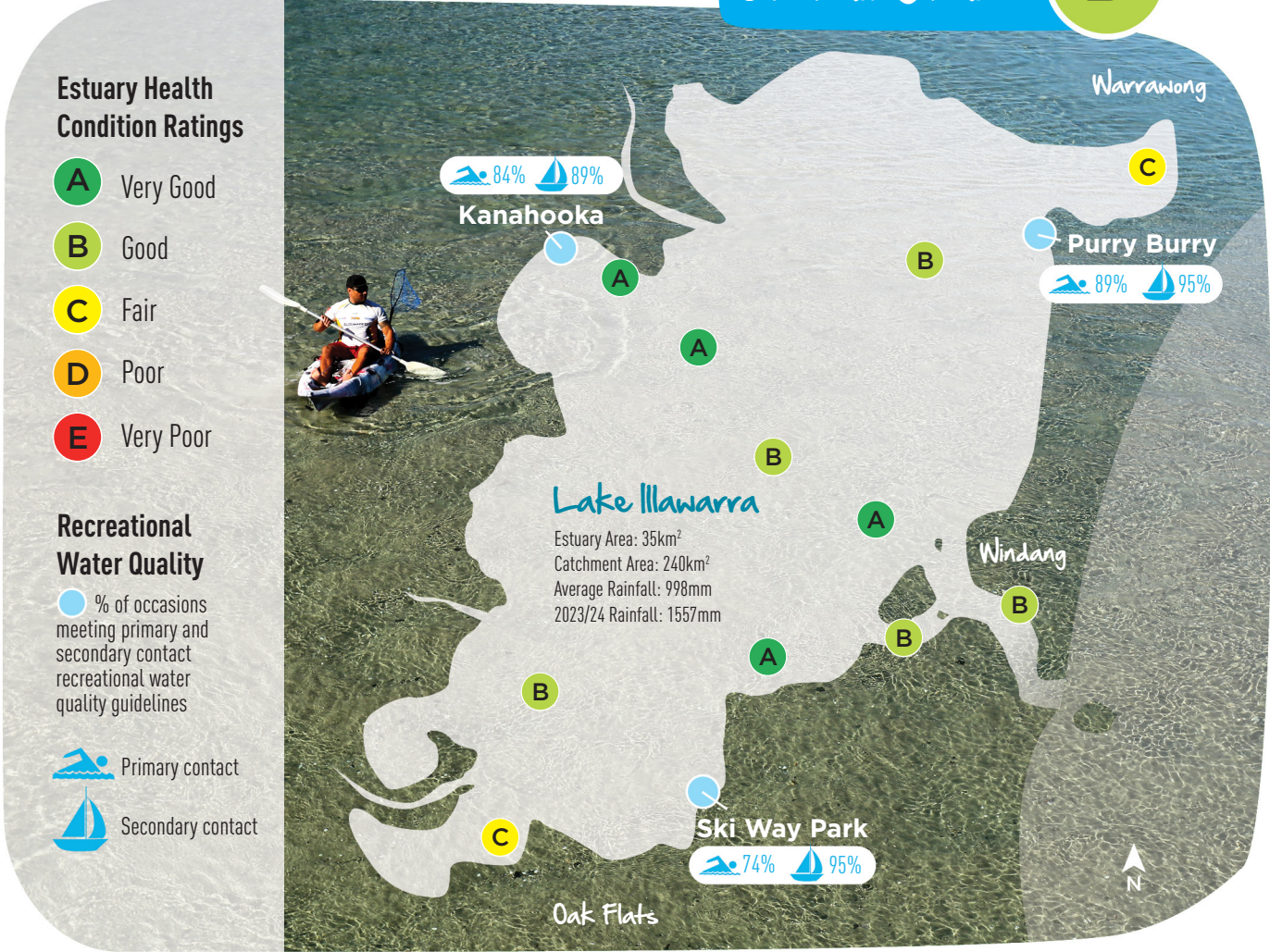


## Estuary Health & Water Quality Report Card 2023-24

Overall Grade **B**



### Estuary Health Condition

Water quality, including nutrients and estuary health indicators are measured every month at 11 sites. The estuary health condition grading is based on chlorophyll a and turbidity levels from November to the end of April.

Results were very similar to last year with four sites earning 'very good' ratings, five 'good' and the remaining two 'fair'. Overall, the lake received a 'good' grade, which was the same as last year. This shows the resilience of the lake, but it is important we keep working to decrease nutrients and sediments coming into the lake for its long-term health.

### Recreational Water Quality

Three sites were sampled over summer for enterococci levels to give an indication of recreational water quality for primary (swimming) and secondary contact (boating and watercraft activities). All sites had a higher compliance in meeting the recreational water quality guidelines than the year before. This is a great result as we had more than 300mm more rain over summer compared to last year and hence more catchment and stormwater runoff into the lake. As always and especially for estuarine sites, it is recommended to avoid swimming for three days after rain.

**For more detailed information on the monitoring program, visit [wollongong.nsw.gov.au/lake-illawarra](http://wollongong.nsw.gov.au/lake-illawarra)**

### Estuary health indicators

Chlorophyll a is a measure of microscopic algae biomass in water. Excessive input of nutrients from catchment runoff can increase chlorophyll a levels, leading to algal blooms and detrimental effects on estuarine plants and animals. Having low turbidity levels means clearer water, where light can reach plants and animals living in deeper water or the lakebed.

# What's Happening?

For more information, and to subscribe for newsletter updates, visit [wollongong.nsw.gov.au/lake-illawarra](http://wollongong.nsw.gov.au/lake-illawarra)

## Funding the Lake Illawarra Coastal Management Program

Wollongong and Shellharbour City Councils were successful in obtaining \$758,236 in grants for the following projects:

- Water quality and ecological health monitoring of Lake Illawarra and its catchment
- Enhancement of Lake Illawarra's banks and habitat
- Integration of the outcomes of the Risk Based Framework Lake Illawarra Study into Wollongong and Shellharbour City Council's Planning Frameworks
- Feasibility of navigational dredging works in Burroo Bay, Koono Bay and Horsley Creek
- Identification and vulnerability assessment of Aboriginal cultural values and assets within the Lake Illawarra catchment

## Fauna Monitoring

Both councils have been working with NSW Department of Primary Industries Fisheries, Illawarra Birders, University of Wollongong and NPWS to understand and monitor biodiversity around the lake. At some point in their various lifecycles, the lake is home to a staggering variety of fish, birds, lizard, frog and invertebrate species, which all play an important role in keeping the ecosystem healthy.

Community members can get involved in helping to protect our wildlife by downloading the free app **inaturalist**, and taking pictures and recording your observations when you are out and about.



## Litter and Pollutant Management

We have continued to work with community groups for regular clean-ups around the lake. In Science Week, we partnered with the Australian Microplastics Assessment Project (AUSMAP) to train 25 new citizen scientists in standardised techniques to collect, sort, identify and report on microplastics in the environment. AUSMAP surveys have since been conducted around Kanahooka and along Reddall Parade to help us understand and manage the sources of these pollutants into the lake.

## Stormwater Management

We are taking action to safeguard the future health of our waterways and improve the look and feel of our urban developments, car parks and open spaces by integrating use of "green infrastructure" and Water Sensitive Urban Design Features in the Lake Illawarra catchment. Wetlands, street trees, rain gardens and native landscaping are replacing the traditional stormwater pipes and drains. These natural features allow water to sink into the ground and filter stormwater runoff, while providing habitat for wildlife and cooler and healthier environments for our community.

## Catchment Monitoring

We have expanded our water quality monitoring to include not only Lake Illawarra itself, but also at 21 sites across the catchment to provide a robust baseline of water quality conditions. For each catchment there was an overall trend of a decrease in water quality moving from the forested- rural - urban environments. However, some sites in the upper reaches had high nutrient values, indicating rural land use and poor land management are also high sources of degraded water quality. Detailed reports on this program are available on our website.



## Natural area restoration

Both councils, along with our Bushcare and Landcare groups, have undertaken considerable vegetation restoration around the foreshore of Lake Illawarra and along creeks in the catchment. In this financial year, we spent \$548,500 improving the condition of 183 hectares of catchment and lake vegetation and reserves. Following the April flooding event, approximately \$60,000 was spent on storm clean-up removing trees, debris and rubbish out of creeks and the lake.