



DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT

# Towards safer swimming – Terrigal region

Outcomes of the community engagement program for the Terrigal and Coastal Lagoons Audit



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## Background

Central Coast Council, in partnership with Beachwatch, monitors and reports on recreational water quality along the NSW Central Coast in accordance with the National Health and Medical Research Council's *Guidelines for Managing Risks in Recreational Waters* (NHMRC 2008). Waters are tested for enterococci bacteria as an indicator of faecal contamination and graded to provide a guide to potential risk to human health from swimming.

During the past decade, Terrigal Beach has been routinely graded as Poor in the annual NSW State of the Beaches Report (DPIE 2019). This has led to considerable concern by local and state governments as well as beach goers, recreational swimmers, surfers, fishers and the broader community.

In January 2019, Central Coast Council commenced a water quality audit that expanded upon the existing Beachwatch enterococci sampling at Terrigal Surf Club, to include 10 additional sites along Terrigal Beach from the Terrigal Lagoon mouth to the Haven as well as sites at Forresters Beach to the north and North Avoca Beach to the south. The audit also included enterococci sampling at the major stormwater drain outlets discharging into Terrigal Beach and the Haven.

In February 2019, the NSW Government committed \$500,000 to address water quality issues at Terrigal Beach and the Central Coast lagoons by undertaking a detailed, scientific audit and analysis of the microbial pollution sources to find solutions to improve water quality.

In April 2019, scientists from NSW Department of Planning, Industry and Environment (DPIE) and Central Coast Council developed a detailed work program to expand council's water quality audit. Specific objectives of the NSW Government and council's joint water quality audit were to:

- determine if microbial contamination in nearshore waters and stormwater outlets along Terrigal Beach, the Haven and Terrigal Lagoon was from human sewage or other animal (e.g. bird, dog) faeces
- determine if microbial contamination of Terrigal Beach and the Haven nearshore waters extended into deeper waters of Terrigal Bay
- determine how long contaminated stormwater remained in the bay
- assess pollutants in sediments at Terrigal Beach and the Haven
- assess the spatial extent and temporal persistence of water quality issues in Central Coast lagoons
- identify and prioritise major microbial source locations in Terrigal Beach, the Haven, Terrigal Lagoon and Avoca Lagoon catchments.

Extensive field work has been done by the NSW Government and council in conjunction with University of Technology Sydney. This report describes the results of the NSW Government's Terrigal water quality audit research.

This research has led to the identification of major biological sources of faecal bacteria and points in the sewage/stormwater drainage system where cross contamination occurs. Council will now focus on remediation of these priority areas and works have already commenced in Terrigal Beach, the Haven and lagoon catchments to improve water quality.

The entire work program could take up to six years to complete due to the size and complexity of the task. If routine monitoring continues to detect unacceptable contamination, further investigation and remediation works may be required.

## Introduction

The Terrigal and Coastal Lagoons Audit is a comprehensive water quality monitoring project being undertaken as a partnership between Central Coast Council and the NSW Government's Department of Planning, Industry and Environment (DPIE). The project kicked off in January 2019 with an initial audit at Terrigal Beach, and continued at Terrigal and the coastal lagoons until June 2020. The audit was a collaboration between council and the NSW Government.

The audit investigated water quality at Terrigal Beach, Terrigal Haven, Terrigal Lagoon, Wamberal Lagoon, Avoca Lagoon and Cockrone Lagoon in response water quality concerns raised though the Beachwatch program and the State of the Beaches report (DPIE 2019). A team of scientists from DPIE and council worked with technical experts and operational staff to assess possible sources of pollution in each catchment and determine the impact on long-term water quality.

The water quality audit was completed in two parts – an initial audit, and a main, more comprehensive audit.

In July 2019 council released a [report on the findings of the initial audit \(PDF 3.8MB\)](#) (Central Coast Council 2019a). The release of that report was supported by a [fact sheet \(PDF 2.7MB\)](#) that answers common community questions (Central Coast Council 2019b).

To support the catchment audit, a community engagement program was developed and delivered by council, DPIE and GEMS Pty Ltd. The results of this engagement program are the subject of this report.

## Objectives of the consultation

The purpose of the consultation for the Terrigal and Coastal Lagoons Audit was to:

- demonstrate that council is proactive with water quality monitoring and improvement by informing the community of the audit process
- demonstrate that council is listening to the community by gathering information from them about potential sources of pollution via interactive mapping and an online form
- demonstrate that local and state government agencies are working collaboratively to achieve positive outcomes for the community
- inform the community of the audit's purpose:

*To gather information and data that will assist in establishing short-, medium- and long-term priorities for water quality improvement programs.*

## How we consulted

Consultation was designed in accordance with Central Coast Council's [Engagement Framework \(PDF 429KB\)](#) (Central Coast Council 2017).

Extensive promotion of the consultation period was carried out to ensure the community were aware of the opportunity to get involved and given enough notice to provide feedback.

Description	Detail
Media	<ul style="list-style-type: none"> <li>Specialised media briefing – 12 December 2020</li> <li>Media release issued on 17 February 2020</li> </ul> <p><i>Distributed to 187 media contacts and council stakeholders</i></p>
Print advertising	<ul style="list-style-type: none"> <li>Advertising featured in <i>Coast community News</i> 7 February 2020 – readership: 12,000</li> <li>Advertising featured in <i>Central Coast Express Advocate</i> 12 February 2020</li> <li><i>Coast Connect</i> article – <i>Central Coast Express Advocate</i> 5 February 2020</li> </ul>
Your Voice Our Coast website	<ul style="list-style-type: none"> <li>Project page launched on 1 December 2019 <a href="http://yourvoiceourcoast.com/Terrigal-and-coastal-lagoons-audit">yourvoiceourcoast.com/Terrigal-and-coastal-lagoons-audit</a> <i>1,100 visits during the consultation period</i></li> </ul>
Social Pinpoint interactive map page	<ul style="list-style-type: none"> <li>Interactive map launched on 1 December 2019 <a href="http://centralcoastcouncil.mysocialpinpoint.com/terrigan-catchment-audit#/">centralcoastcouncil.mysocialpinpoint.com/terrigan-catchment-audit#</a> <i>1,450 visits during the consultation period</i></li> </ul>
Social media – Central Coast Council	<ul style="list-style-type: none"> <li>Facebook posts:                             <ul style="list-style-type: none"> <li>14 December 2019</li> <li>8 January 2020</li> <li>6 February 2020</li> </ul> <p><i>Total reach 42,822 during consultation period</i></p> </li> <li>Twitter posts:                             <ul style="list-style-type: none"> <li>6 February 2020</li> <li>8 February 2020</li> <li>12 February 2020</li> <li>13 February 2020</li> <li>13 February 2020</li> <li>17 February 2020</li> <li>18 February 2020</li> <li>18 February 2020</li> <li>24 February 2020</li> </ul> <p><i>Total reach 6346 during consultation period</i></p> </li> <li>Instagram posts:                             <ul style="list-style-type: none"> <li>14 December 2019</li> <li>6 February 2020</li> <li>8 February 2020</li> </ul> <p><i>Total reach 6777 during consultation period</i></p> </li> <li>LinkedIn post:                             <ul style="list-style-type: none"> <li>14 December 2019</li> </ul> <p><i>Total reach 1407 during consultation period</i></p> </li> </ul>

Description	Detail
Drop-in information sessions	<ul style="list-style-type: none"> <li>• Four drop-in information sessions:                             <ul style="list-style-type: none"> <li>○ Copacabana Surf Life Saving Club, 13 February 2020</li> <li>○ The Erina Centre, 13 February 2020</li> <li>○ Wamberal Surf Life Saving Club, 18 February 2020</li> <li>○ Terrigal Surf Life Saving Club, 18 February 2020</li> </ul> </li> </ul> <p><i>70 people participated</i></p>
Pop-up information sessions	<ul style="list-style-type: none"> <li>• Six pop-up information sessions were hosted at various locations within the catchment during the consultation period</li> </ul>
Inclusion in council's eNews	<ul style="list-style-type: none"> <li>• 17 Dec 2019</li> <li>• 21 Jan 2020</li> <li>• 28 Jan 2020</li> <li>• 4 February 2020</li> <li>• 11 February 2020</li> </ul>
News article – council website	<ul style="list-style-type: none"> <li>• 22 July 2019 (updated throughout)</li> </ul>

## What we heard

During the consultation period we provided the community with:

- details on audit maps, processes and timeframes for Terrigal Beach and the four coastal lagoons
- fact sheets
- reports
- answers to frequently asked questions.

We also provided the opportunity for the community to have direct discussions with NSW Government and council staff. During these face-to-face opportunities, participants were also able to view:

- televised modelling of ocean currents
- auto sampling devices
- interactive maps detailing the works completed, underway and planned (this was also made available online to all participants).

During the consultation we involved the community by encouraging them to provide feedback on potential pollution sources; this could be done via an interactive Social Pinpoint map, an online webform as well as at various face-to-face opportunities between 1 December 2019 and 15 March 2020.

The results of this process were that of the pins dropped by members of the community:

- 22% related to council infrastructure
- 8% related to private infrastructure
- 27% related to pump station smell
- 30% related to gross pollutant traps and sediment
- 5% related to bush generation
- 5% related to dogs in open spaces
- 3% related to flooding.

## Outcomes of the consultation

Investigations based on the information provided by the community are being incorporated into the broader audit process.

Current actions that have come as a direct result of the engagement program include:

- Private infrastructure reported as a concern is currently under investigation as part of the audit program.
- Public infrastructure concerns related to overflow points in wet weather are currently under investigation as part of the manhole reveal and seal program.
- Pump stations with smells were investigated and the smell originated from airing vents. Pump stations are scheduled for retrofitting with carbon filters to reduce the impact of smells on residents and visitors.
- The southern end of Terrigal Beach has been noted as having a sewage-like smell. Investigations have determined that the smell comes from seaweed rotting on the beach, below the mean high-water mark, as well as within stormwater pipes. Seaweed is transported up into the stormwater drains during large high tides and storm surges. Seaweed may become smelly as it naturally breaks down but does not affect swimming safety.
- Three erosion sites have been identified in the Terrigal Basin area, and rehabilitation is being investigated to reduce cloudy water entering Terrigal Beach.
- Additional signs for dog owners were added to Terrigal Haven in 2019.
- For strategic weed management, all public land surrounding our four intermittently closed and open lakes and lagoons (ICOLLs): Cockrone, Avoca, Terrigal and Wamberal lagoons were mapped for weeds and encroachments from May to June 2020. Sites will be prioritised for future rehabilitation funding based on habitat connectivity, site size, catchment attributes, soils, access and protection status.
- Weed removal and planting programs have been undertaken at Avoca Lagoon near Saltwater Creek and at Terrigal Lagoon near Florida Road. This program has removed invasive trees and shrubs as well as historically dumped spoil and construction material. The project is restoring habitat to natural levels via mulching and will reintroduce over 1700 native plants.
- Council will continue water quality monitoring for both swim safety and ecological health for our lagoons and estuaries. Details can be found for council and NSW Government water quality monitoring and swim safety forecasting programs at:
  - ecological health – council’s [Estuaries, lagoons and wetlands](#) webpage
  - swim safety – council’s [Beachwatch](#) webpage and DPIE’s [Central Coast ocean beaches](#) bulletin.

## Next steps

The Terrigal and Coastal Lagoons Audit is an ongoing project, and the community will continue to be updated via the [Your Voice Our Coast](#) website and the [interactive map](#).



## References

Central Coast Council 2017, *Engagement Framework*, Central Coast Council, Gosford NSW, available at [cdn.centralcoast.nsw.gov.au/sites/default/files/documents/policies-register/community-engagement/engagement-framework/engagementframework.pdf](https://cdn.centralcoast.nsw.gov.au/sites/default/files/documents/policies-register/community-engagement/engagement-framework/engagementframework.pdf) (PDF 429KB).

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