



Asset Risks – wastewater system integrity and environmental risk

West Gosford Major and Sewer Rising Main – Case study

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Water and Sewer

Date: October 2025



Acknowledgement of country

We acknowledge the Traditional Custodians of the land on which we live, work and play.

We pay our respects to Darkinjung country, and Elders past and present.

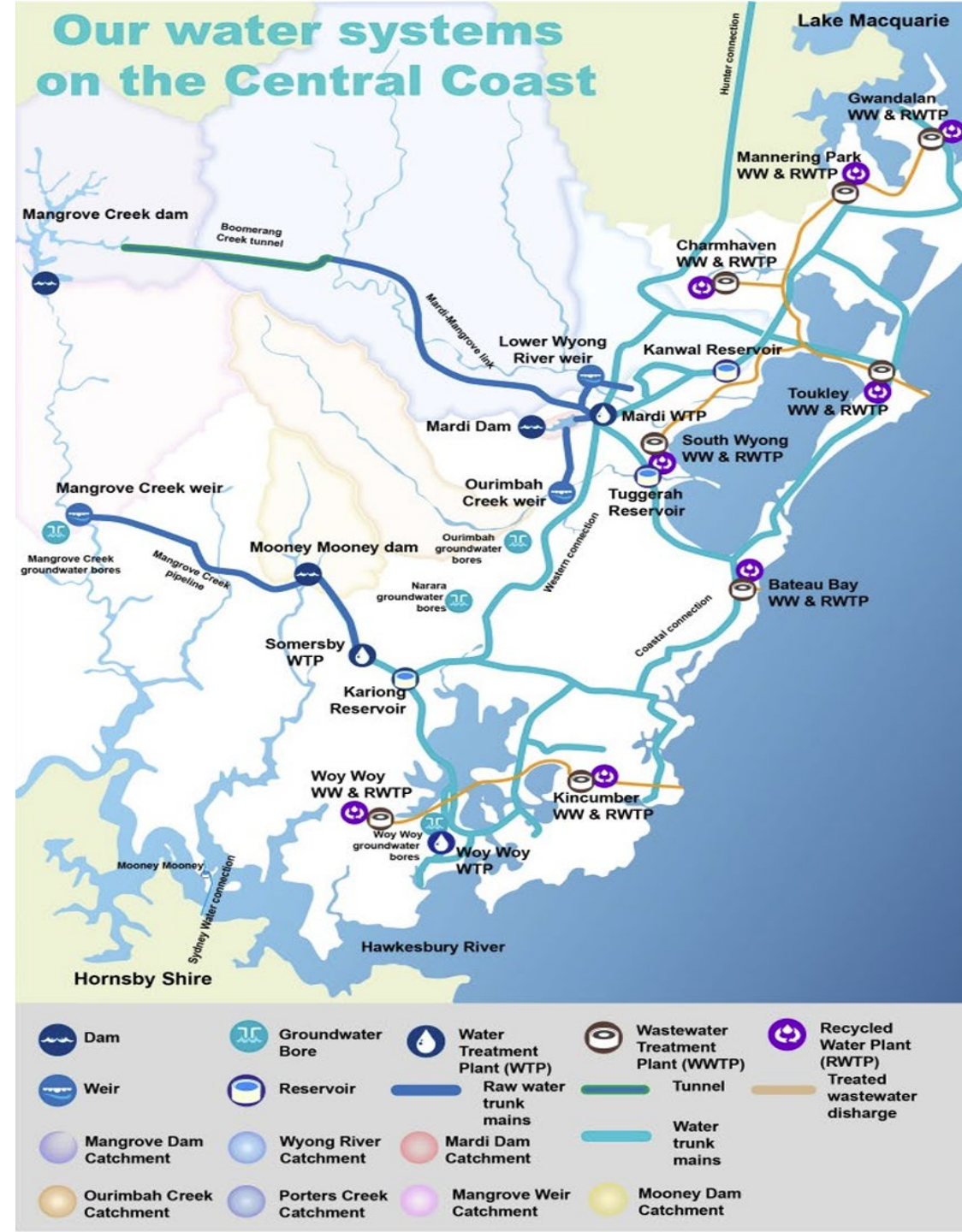
We recognise the continued connection to these lands and waterways and extend this acknowledgement to the homelands and stories of those who also call this place home.

We recognise our future leaders and the shared responsibility to care for and protect our place and people.



Who are we?

- Largest LWU in NSW
- Three water supply dams, seven drinking water catchments
- Three water treatment plants
- Over 50 reservoirs
- 2,264kms of water mains
- 2,686km sewer mains
- Eight sewage treatment plants
- Three ocean outfalls



Risk Hierarchy - Asset Risk and Wastewater System Integrity

Central
Coast
Council



Central Coast Council

Audit, Risk and Improvement Committee

Water and Sewer Directorate

Security of Critical Infrastructure

Water Investment Review Committee

Asset Management Framework

Operational Risk Management

Project, Program and Operations

Environmental Management System

- Environmental management is a core value of Central Coast Council
- Risked based environmental licensing management (for example EPL's)

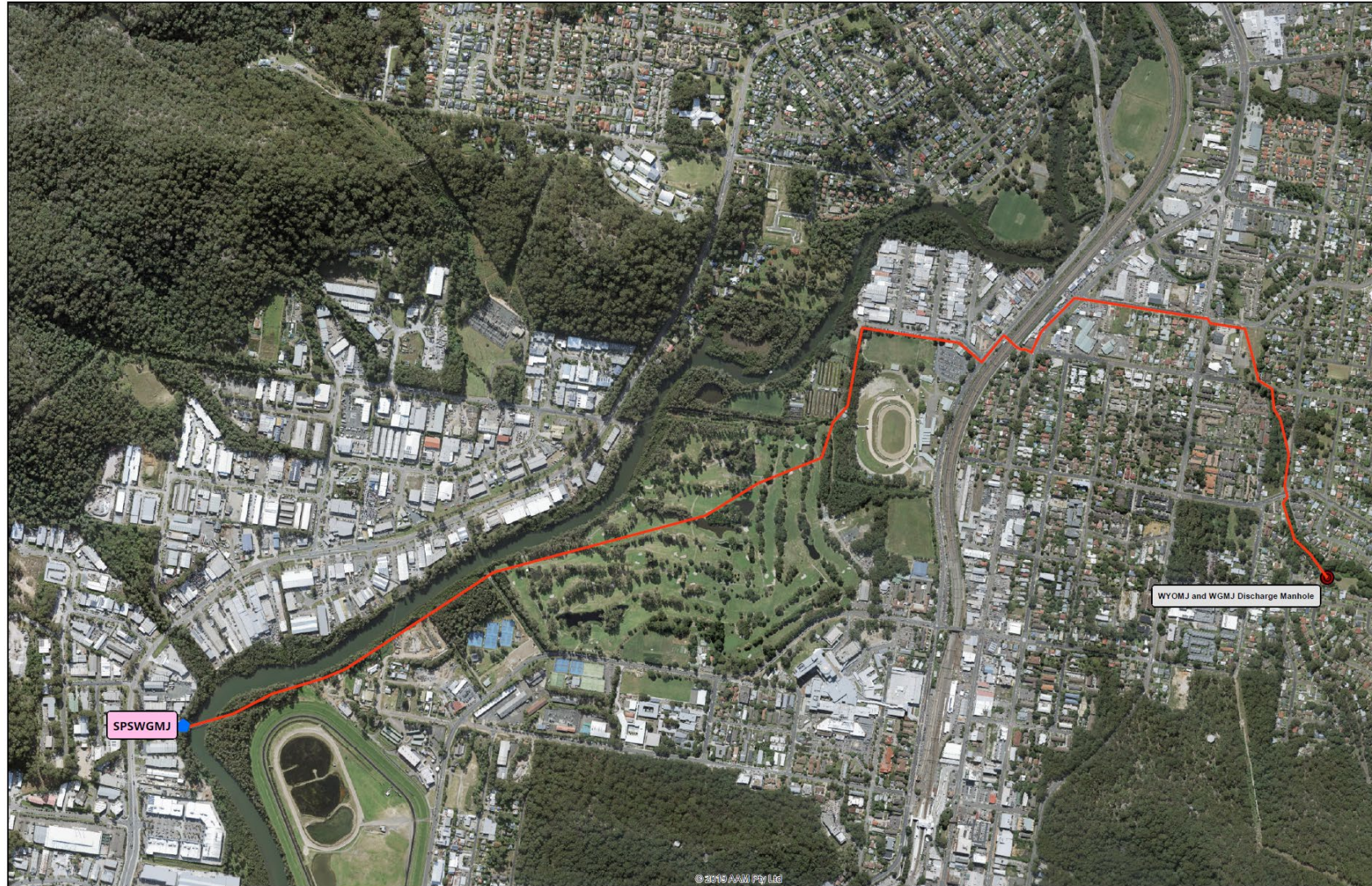
W&S Quality Management System (QMS)

- A structured system that documents processes, procedures and responsibilities to meet regulatory, operations and customer requirements
- Consistent approach through structured risk based approach to water resource management



West Gosford Major and Sewer Rising Main - Background

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*Aerial view of
complete
alignment of
WGMJ SRM*

West Gosford Major Rising Main



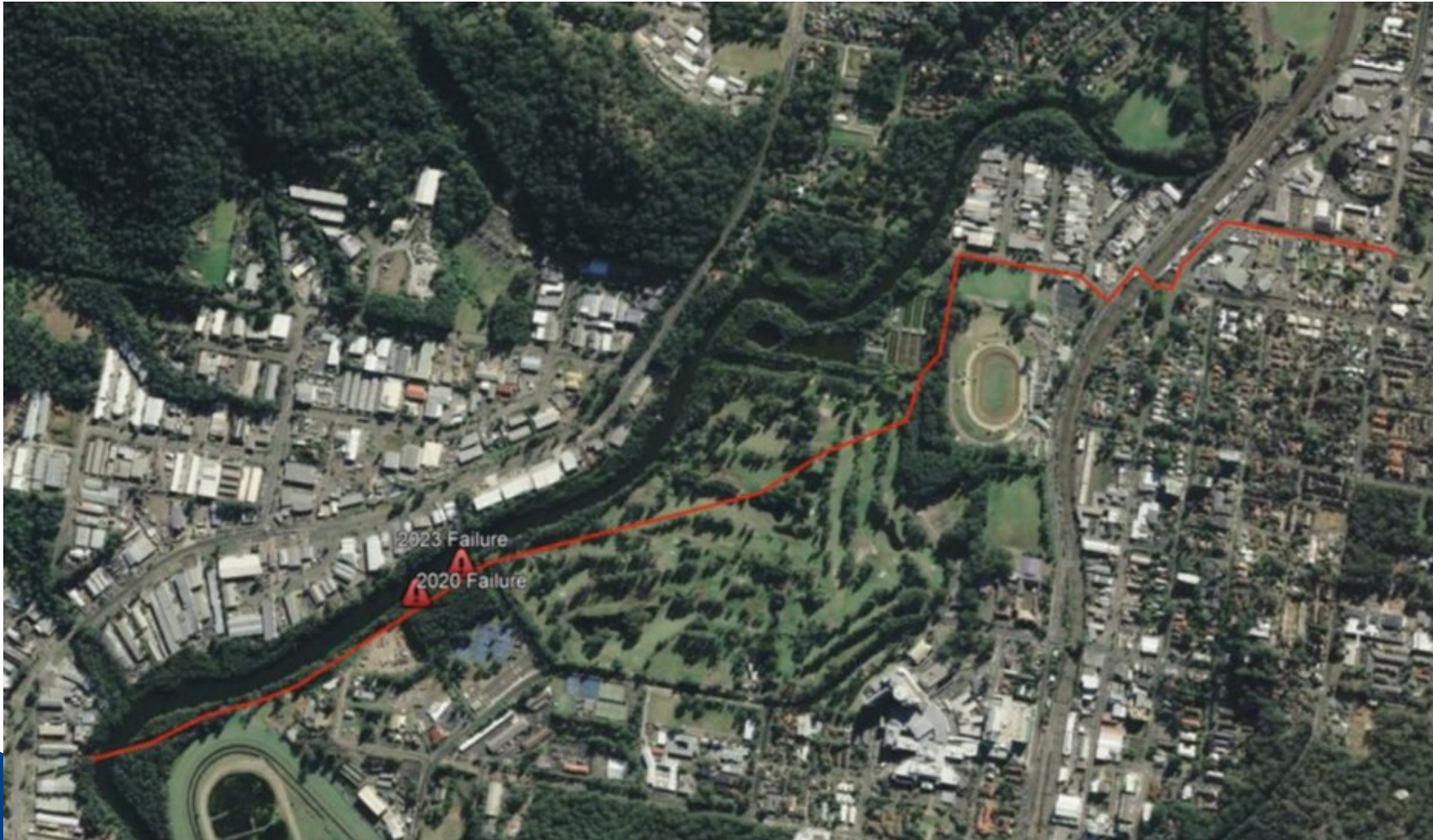
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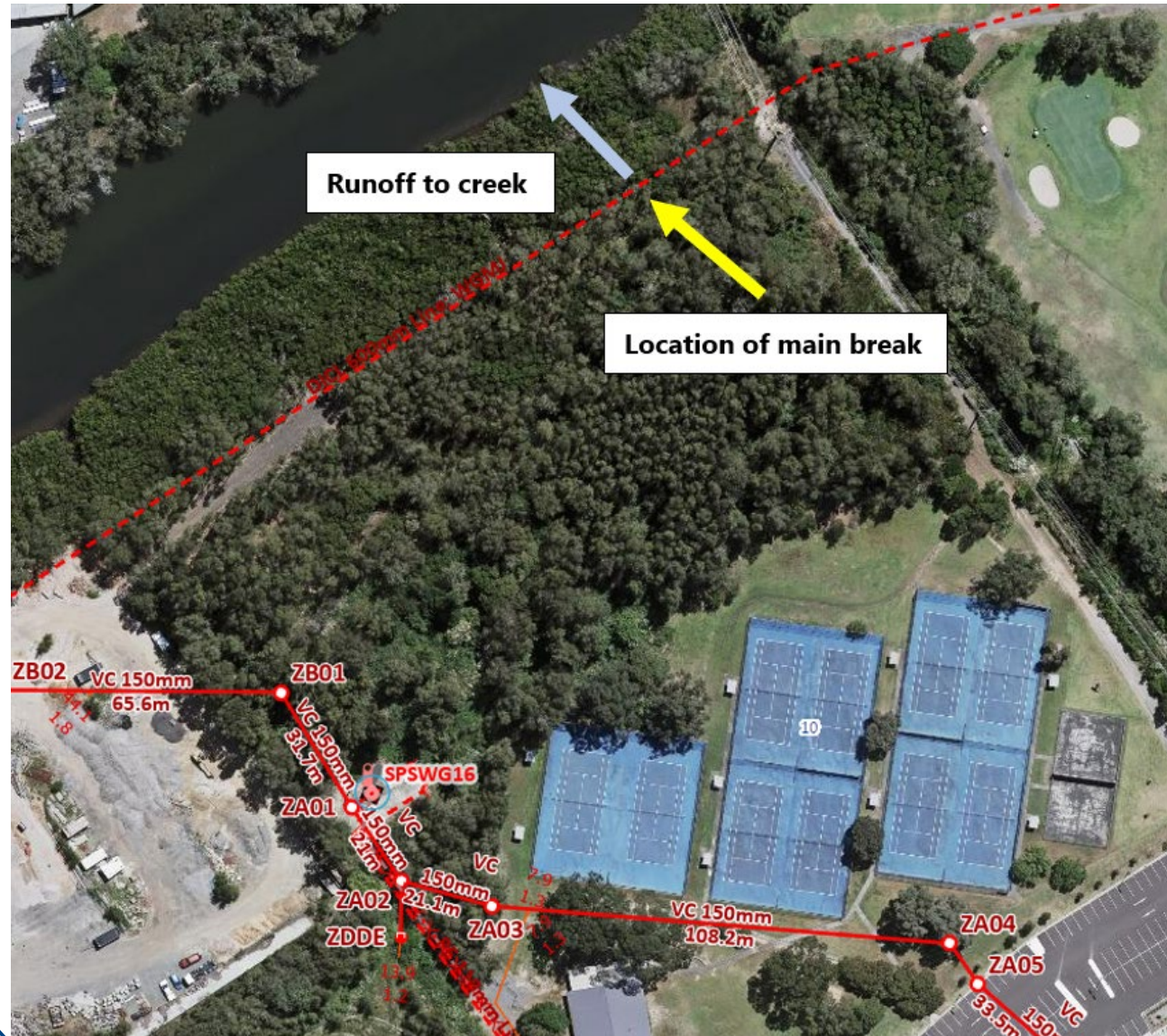
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West Gosford Sewer Rising Main – Failures



*Existing WGMJ
SRM with
approximate
locations of main
break*

West Gosford Sewer Rising Main – Break



2019

Jan 19 – Sewer rising main break at Wamberal Lagoon

2021

Sept 21 – WGMJ re-classified as high risk, condition assessment engaged & funding for replacement included in IPART Submission

2023

13-15 Apr 23 – Charge period - Council reports major sewage discharge to EPA and undertakes clean up and mitigation

15 Apr 23 - Repairs completed and RM returned to service (water quality sampling continued)

July 23 - Final WSP Condition Assessment Report received for WGMJ Rising Main

2020

Jan 20 – Council entered Enforceable Undertaking (EU) with EPA – Wamberal Lagoon sewerage discharge.

Mar 20 – First WGMJ break

Sept 20 – Pressure Main Criticality Analysis (final report)

2022

Feb 22 - Work approved for condition assessment of the WGMJ pipeline

April 22 - WSP Commence onsite soil testing to inform WGMJ condition assessment

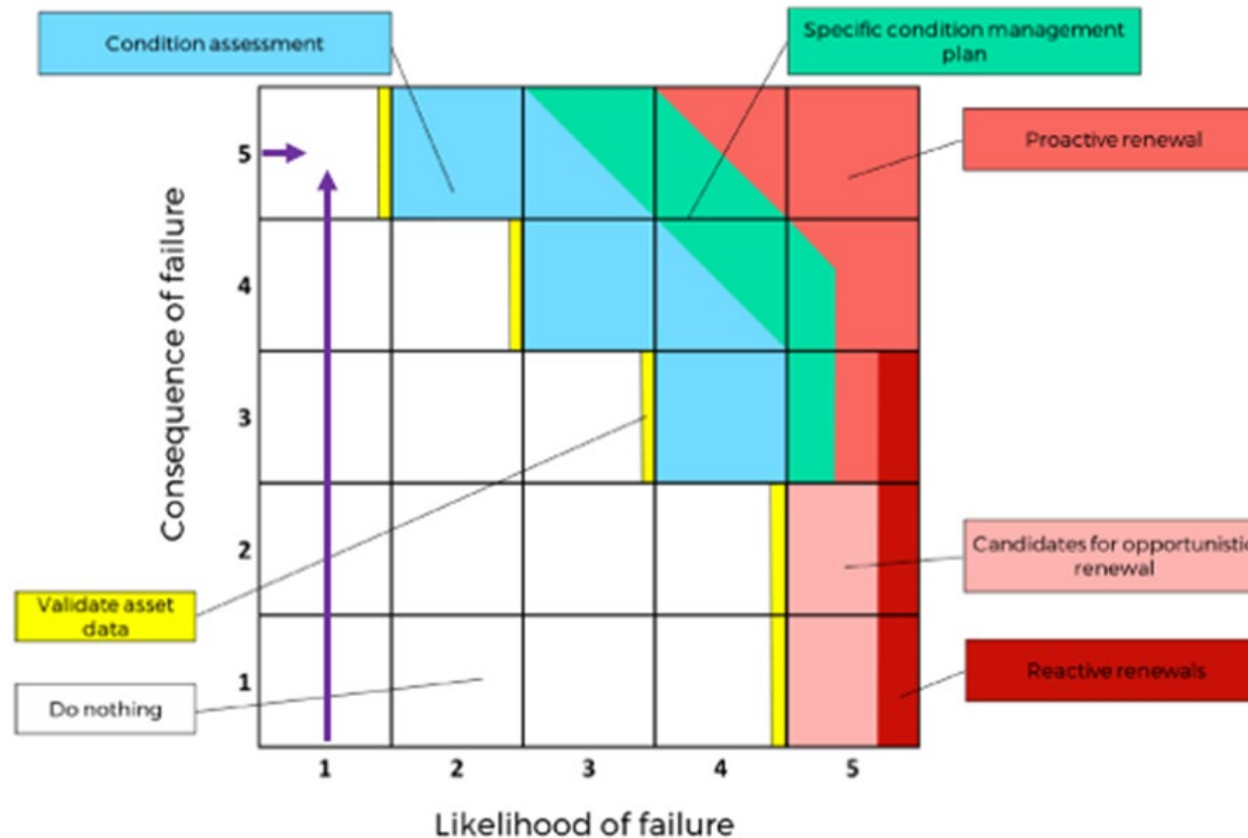
2024

Nov 24 – EPA Prosecution

Dec 24 – Judgement Delivered

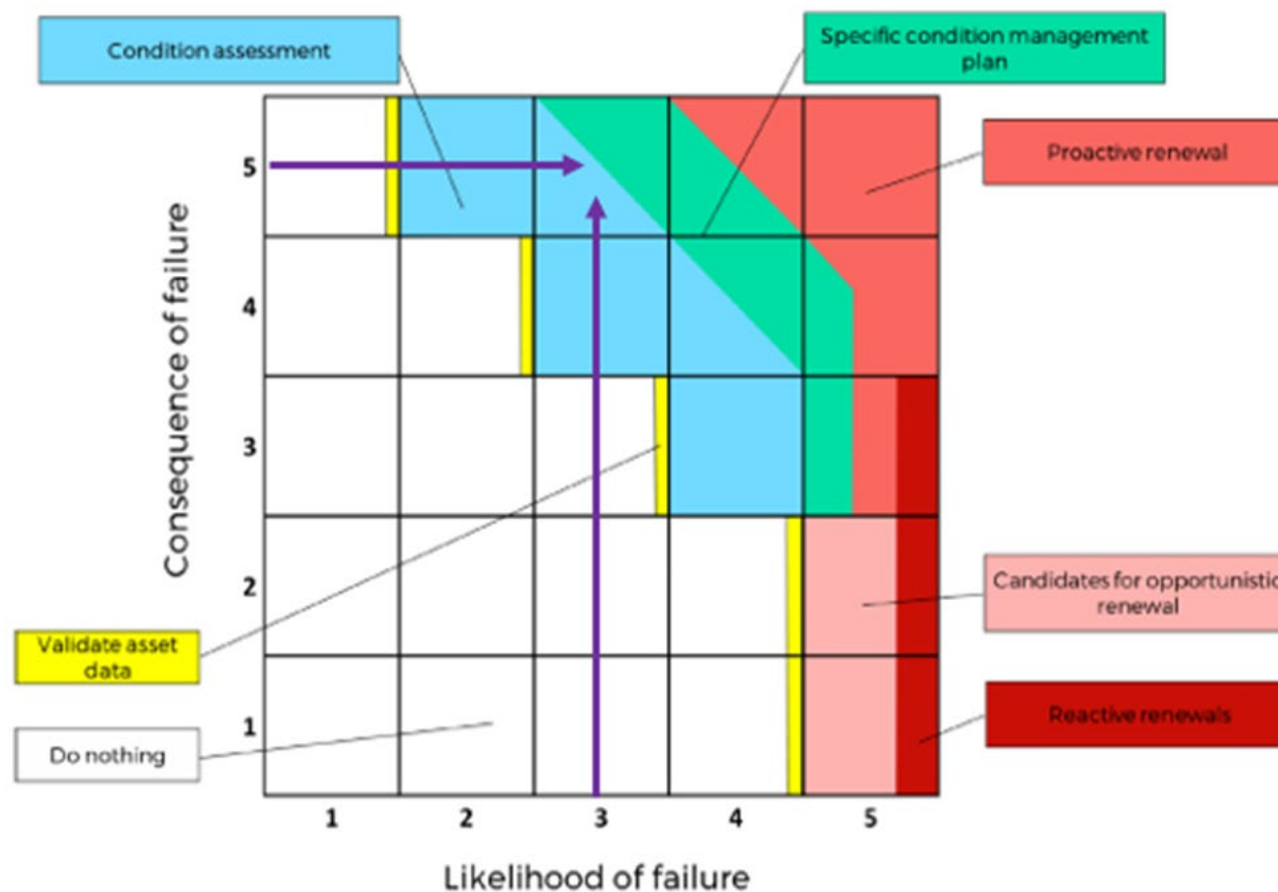
Criticality score prior to 2020 failure

Initial criticality score prior to 2020 failure
(1st iteration of CCC PMCA noting that 'do nothing' signifies continue to monitor performance and update risk scores as relevant)



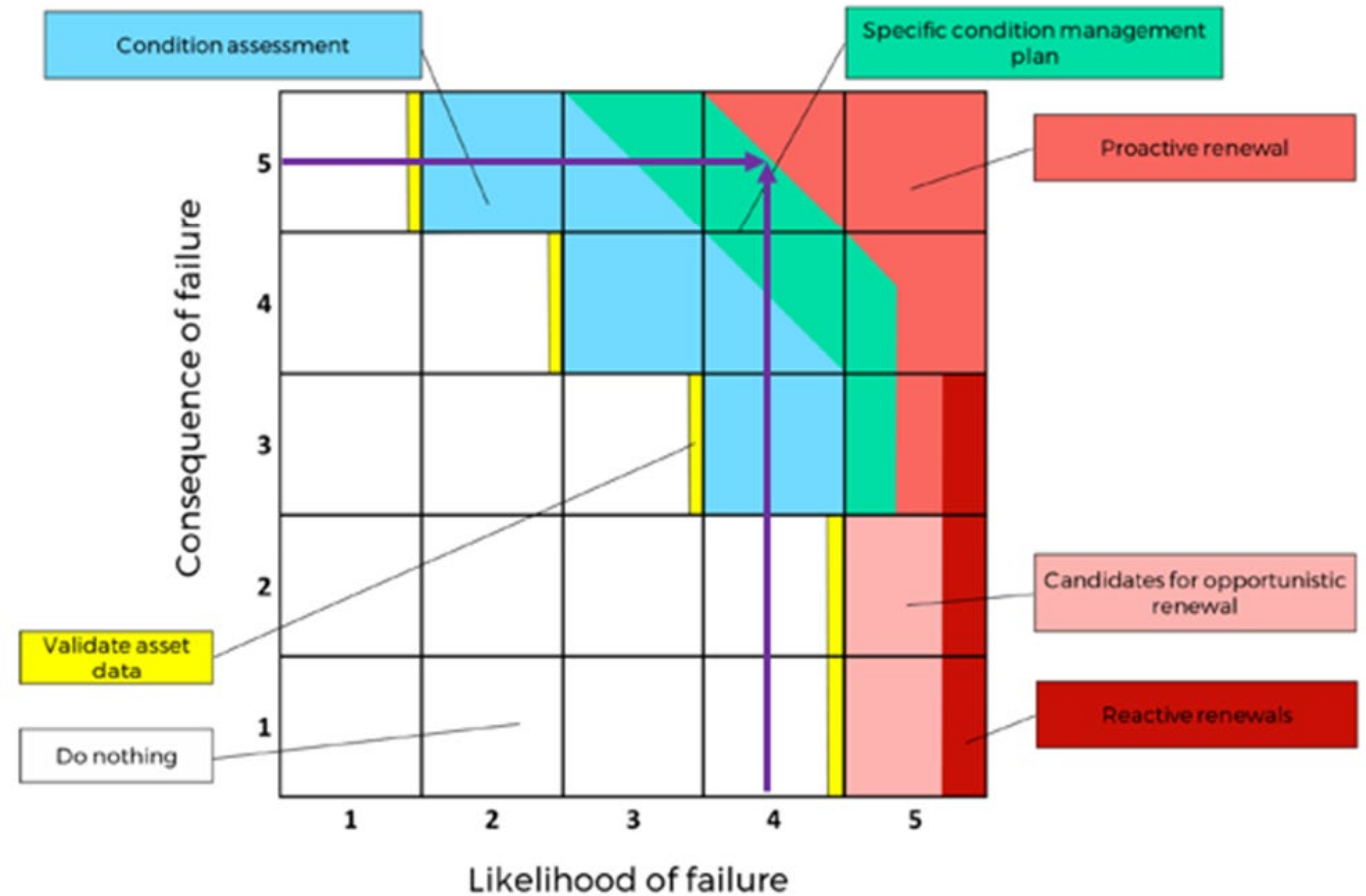
Criticality score following 2020 failure

Criticality score following 2020 failure
(condition assessment triggered to further understand risk of failure along whole of pipeline)



Criticality score following 2023 failure

Criticality score following 2023 failure (proactive renewal planning commenced and increased pipeline monitoring implemented while options/design/construction is undertaken). Condition assessment estimates remaining useful life of less than five years for highest risk pipe segments and less than 8 years for adjoining pipe segments



EPA judgement and outcomes

- Dec 2024 - Two offences - breach of Environmental Protection License and water pollution
- \$105,600 fine
- Wetland restoration to improve water quality along Narara Creek catchment
- WGMJ repair project

Narara Creek Wetland Restoration Project

Deliverable 1

Floating Landcare and Clean4Shore Trips

Floating Landcare Trips

The team have completed 6 Floating Landcare trips, which included 55 volunteers, 24 hours of volunteered time, and total vegetation removal of 1,950m².

Clean4Shore Trips

The team have completed 3 Clean4Shore trips, which included 23 volunteers, 65 hours of volunteered time, and total litter removal of 980kgs.



Narara Creek Wetland Restoration Project Deliverable 2

Bush Regeneration

CEN have currently completed a total of 376.5 hours of work and rehabilitated 17,640m² of land to date, per the scope of works. This includes primary weed control, mulching and native planting to rehabilitate areas of vegetation loss and encroachment. Works are due to be completed by end of November 2025.



Lantana, Cassia and Asparagus Fern Control



Narara Creek Wetland Restoration Project

Deliverable 3

Fencing Works

Fencing works were undertaken and completed in July 2025.

As part of this process, several encroachments were identified for removal and were successfully removed by either the adjoining landowner or Council.



Narara Creek Wetland Restoration Project Aerial photos



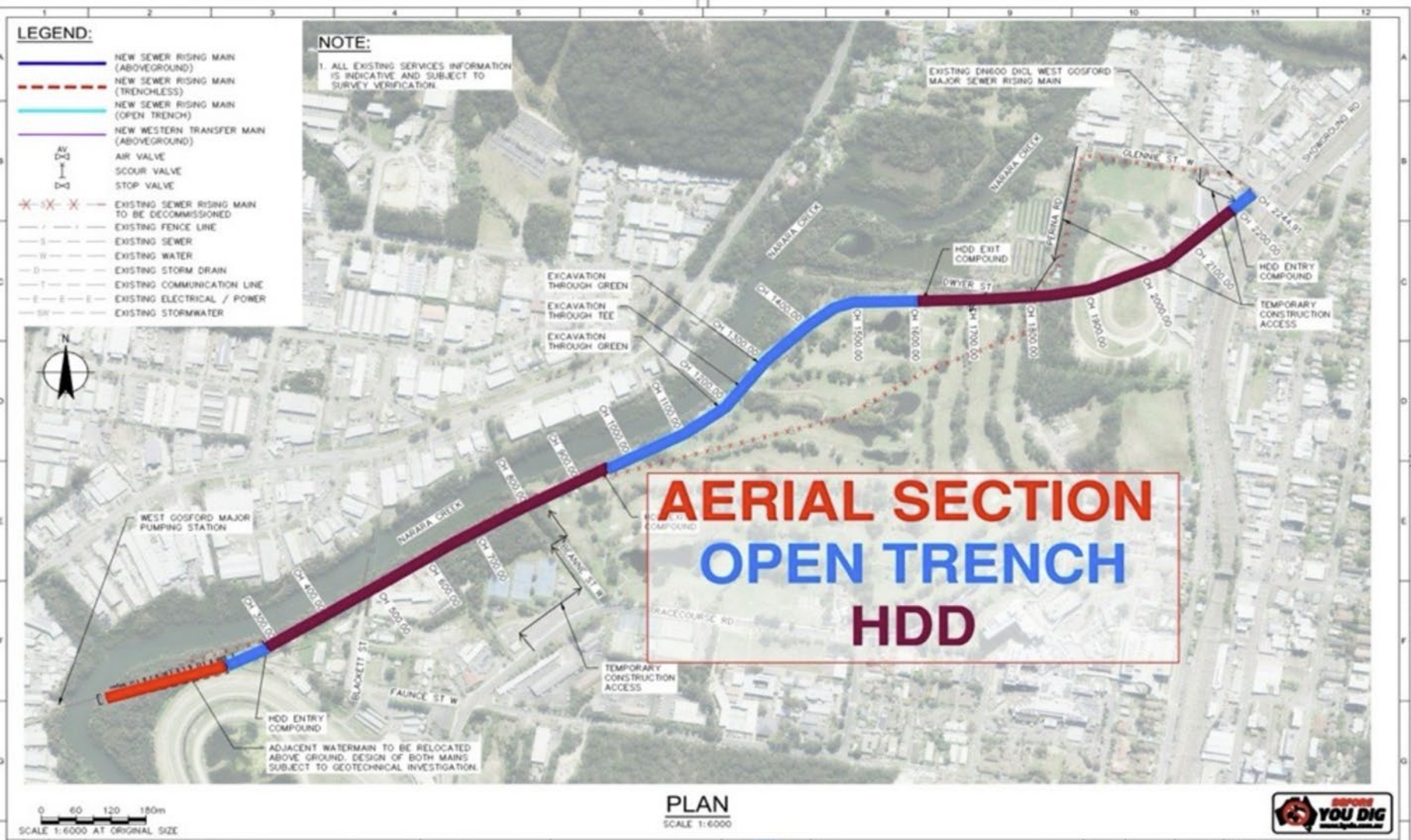
West Gosford Major Sewer Rising Main project overview

- Replacement and renewal 2,250m of new pipework
- Construction early 2026 – mid 2027

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West Gosford Major Sewer Rising Main – concept plan



West Gosford Major Sewer Rising Main

Project Status

- Early work at golf course for smooth construction handover
- Project design complete; issued for Tender
- Specification, Review of Environmental Factors, Geotechnical Report finalised
- Construction to start early 2026

Award and Completion

- Project split; 3 separable portions to manage approval risks and commissioning

Environmental Challenges

- Aboriginal Heritage Impact Permit (AHIP)
- Environmental risks: coastal wetlands, acidic soils, dewatering

Risk mitigation

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Questions

