

CWTP Odour Mitigation Plan 2026

Please note, this is a live document. It will be updated as required.

Odour Source

Odour monitoring at the Christchurch Wastewater Treatment Plant (CWTP) has strongly indicated that the current source of odour is Oxidation Ponds 1, 2a and 2b. While short-term, intermittent odours have occurred during past seasonal transitions between summer to winter, this current event has occurred at the height of summer. Whilst the cause for the current event is being investigated, our main focus is getting the current event under control. However preliminary data suggests the event has occurred following a prolonged period of wet weather and higher loading from the CWTP.

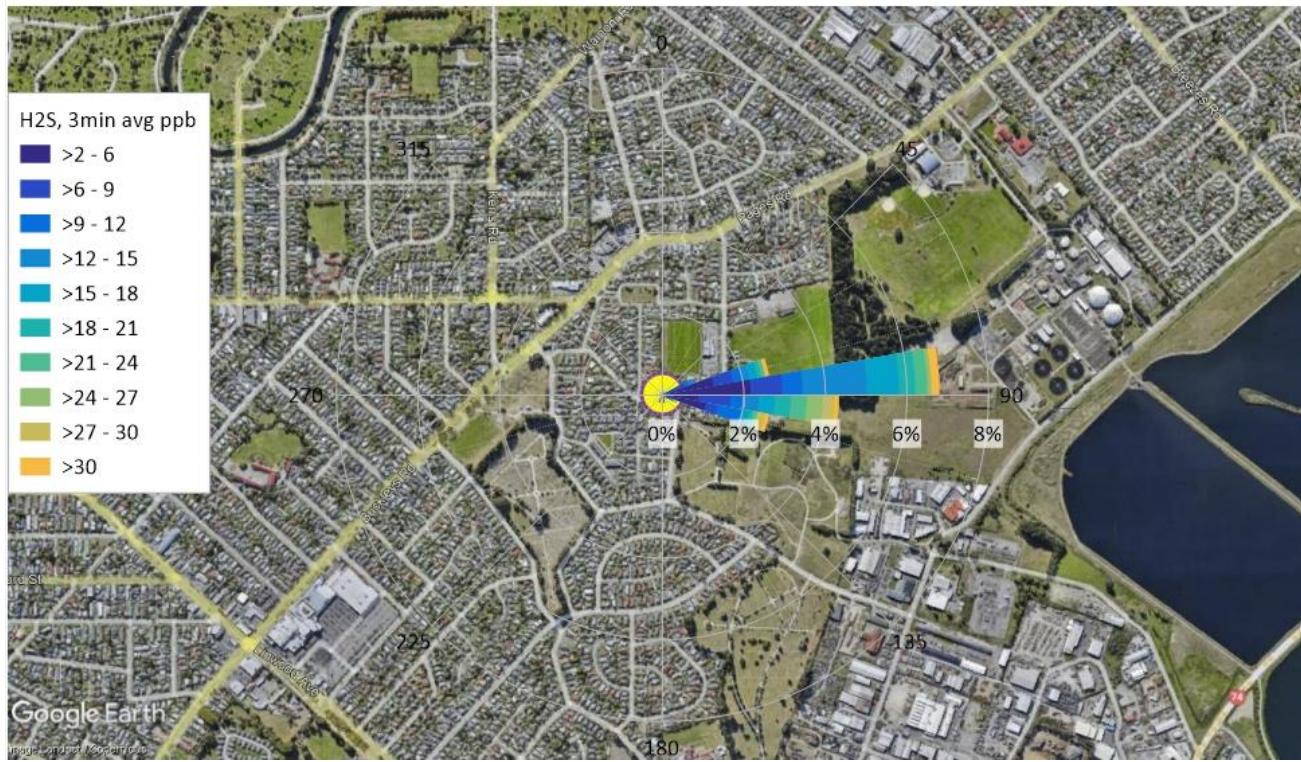
Pond 1, with the aerators, is generating some odour, with the majority of the odour coming from Ponds 2A & 2B. All these ponds have recorded low dissolved oxygen results.



Aerial photo showing the pond labels

*Odour source graphs
showing the
predominant source
of the odour as
coming from Ponds
2A & 2B.*

Rudds Rd Pollution Rose 25 January - 1 February 2026



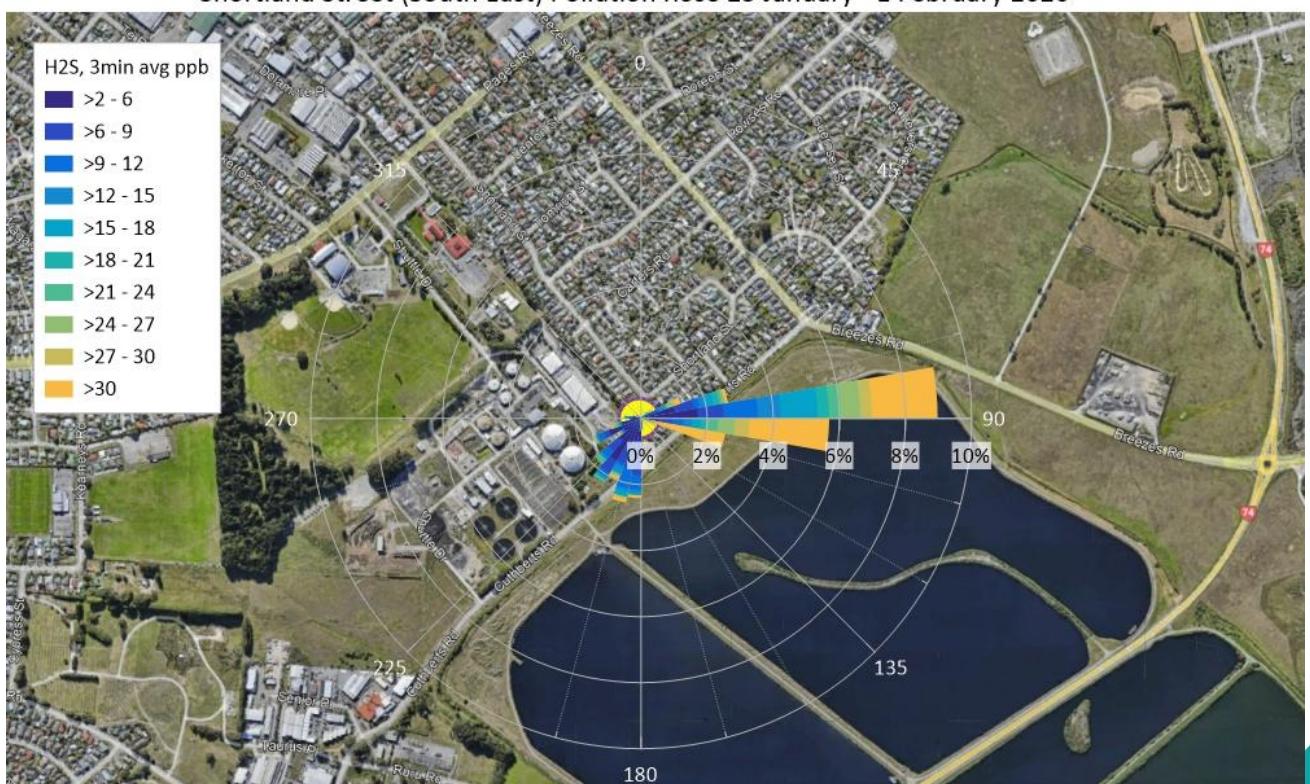
SNB School Pollution Rose 25 January - 1 February 2026



Shortland Street (North) Pollution Rose 25 January - 1 February 2026



Shortland Street (South East) Pollution Rose 25 January - 1 February 2026



Mecca PI Pollution Rose 25 January - 1 February 2026



Action Plan

<p><i>This action plan outlines measures that have been implemented or are being progressed in response to current odour conditions at the Christchurch Wastewater Treatment Plant. Actions and indicative timeframes may be refined as further information becomes available and do not represent guarantees of outcome. Location</i></p>				
	Problem / Issues	Actions	Progress	Estimated timeframe
Oxidation Ponds	Low dissolved oxygen (DO) levels, particularly in Ponds 2A and 2B, contributing to increased odour risk.	Flow balancing between ponds to redistribute loading and support pond recovery.	Underway. Flow balancing actively being managed by operations staff.	Ongoing
		Use of jet boat to introduce additional oxygen into affected ponds.	Implemented. Jet boat oxygenation undertaken.	Immediate / as required
		Increased monitoring of pond health indicators, including dissolved oxygen, drone aerial imagery, and laboratory sampling (including algae counts).	Underway. Sampling and aerial monitoring ongoing.	Ongoing
		Hydrogen peroxide has been delivered to site and will be dosing before the end of 4th Feb 2026.	Chemical dosing is underway, and will be used on an as-required basis.	Underway
	Limited understanding of algae species variation and contribution to oxygen recovery.	Algae samples to be sent to Hamilton laboratory for detailed analysis, including development of sampling, storage, transport, and payment processes.	Samples sent by courier on the 02/02/2026.	Short term
	Odour data not being reviewed frequently enough during active events.	Increase frequency of odour data assessment by external contractor from weekly to twice weekly.	Implemented. Contractor frequency increased.	Ongoing

	Delay in public visibility of air quality and odour data.	Work with Communications team to enable quicker updates to air quality and odour data, including uploading of back-catalogue data to the website.	In progress. Coordination with Comms underway.	Short term (weeks)
	Increased odour risk during forecast cold, wet weather events.	Monitor weather forecasts and proactively manage pond flows ahead of significant cold/wet events.	Ongoing. Forecasts actively monitored by staff.	Ongoing
Whole Site (CWTP)	Complexity of odour generation mechanisms across the site under current operating and loading conditions.	International odour expertise for a site-wide technical review of odour sources on the CWTP.	Site work has been completed in December 2025, awaiting draft report from consultant, this will then be reviewed by CCC staff before a FINAL report is issued.	Ongoing (estimated March 2026)
Whole Site (CWTP)		Proactive communication and updates to the public via newsletters and social media.	Continue to provide updates to the public on monitoring and progress.	Ongoing
Whole Site (CWTP)	Limited spatial coverage of community odour monitoring data.	Progressive expansion of community odour monitoring network (two sites in 2022, four sites from 2023–2025, now five sites), with further expansion under investigation including procurement of an additional logger.	Implemented and ongoing. Additional monitoring under consideration.	Ongoing
Whole Site (CWTP)	Limited meteorological data to support odour source attribution.	Install an on-site weather station to improve understanding of wind direction and meteorological influences on odour dispersion.	In progress. Installation being progressed.	Short term
Oxidation Ponds	Limited oxygen transfer capacity under sustained loading conditions in Ponds 2a & 2B.	Three additional aerators have been procured and delivered to site, 2 aerators have been installed to Pond	Two aerators installed; one additional unit planned subject to infrastructure completion.	Ongoing, (forecast completion late February 2026)

		2A, with the third to be installed on Pond 2B mid-Feb.		
SCT / Temporary Activated Sludge Plant	Risk of low oxygen conditions contributing to downstream odour.	Sodium Per-carbonate has been ordered and is scheduled to be delivered to site next week (w/c 9th February 2026). Trial to be undertaken to assess effectiveness and process suitability.	Trial to be undertaken.	Ongoing
Whole Site (CWTP)	Interaction between operational performance and major capital works.	Work closely with on-site projects (clarifier refurbishment, dryer refurbishment, activated sludge project) to ensure appropriate operational support during delivery and to support future process resilience.	Ongoing. Active coordination in place.	Ongoing
Oxidation Ponds (Long-term)	Limited resilience of pond system to seasonal and loading shocks.	Develop and scope long-term options to improve pond resilience and odour performance.	Meeting organised with consultant, with regular proactive updates to Environment Canterbury in progress.	Ongoing - Short term
Activated Sludge Plant		Our contractor HEB Construction is now active on site. Bulk earthworks are now underway, which involve site material being removed and gravel being brought on site, with commissioning targeted for 2028.	In progress.	Medium to Long Term (2028)

Odour generation can be influenced by a combination of operational and environmental factors. CCC continues to monitor conditions across the site and surrounding environment and will adapt management actions as understanding evolves.