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ENVIRONMENT PROTECTION AUTHORITY

15 April 2025

Christine Coughanowr
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Dear Christine Coughanowr

RESPONSE REGARDING FOLLOW UP ON LONG BAY POLLUTION BY SALMON FARM

Thank you for your letter dated 18 January 2025 regarding your request for an update and summary of conditions in Long Bay and information/documentation and monitoring data associated with MF55 Long Bay. I appreciate your patience in the time it has taken to respond to your letter.

The Broadscale Environmental Monitoring Program report for the 2022-2023 monitoring period has now been published on the Turrakana/Tasman Peninsula and Norfolk Bay EPA webpage. The BEMP report for the 2023-2024 monitoring period is currently under review by EPA and will be released in due course.

In summary, the 2022/23 BEMP report found there were no exceedances against indicator limits for ammonia, dissolved oxygen or chlorophyll *a* recorded at the compliance site PA2 for the 2022-2023 monitoring period. However, the comparison of four years of seagrass monitoring (2019 to 2023) found that seagrass had declined on all survey transects. This decline has been observed at the control site in Carnarvon Bay, in a similar and comparable way to the Stingaree Bay sites, indicating a region-wide trend. Furthermore, epiphyte growth on seagrass has been observed to be periodically high at all sites. Because of this, it is difficult to partition out the relative effects of the Long Bay fish farm from the myriad other factors influencing seagrass beds. Particularly given that in Tasmania, seagrass beds have been shown to be highly dynamic ecosystems at decadal and annual scales. Across Tasmania, Rees (1993) suggests that seagrass beds declined by 25% between the 1950s and 1990s. The Storm Bay BEMP (IMAS 2021) has documented significant changes in seagrass beds since 2019 including (a) significant variability in seagrass cover across survey sites; and (b) complete replacement of seagrass beds by macroalgae at Wedge Bay. In Mercury Passage there have been fluctuations in seagrass cover between 2018 and 2021 (Aquenal 2022). In Northwest Bay there was a long-term decline, characterised by frequent short-term irregular fluctuations in seagrass distributions between 1948 and 2009 (Mount and Otera 2011).

The biology of the species occurring in the survey area, *Zostera tasmanica,* is characterised by low biomass, rapid turnover and an ephemeral nature (Larkum et al. 2018). The low rhizome biomass of *Zostera* provides fewer storage reserves which are needed during low light and nutrient availability, meaning growth and resilience is highly variable (Crawford et al. 2006; Larkum et al. 2018).

On 21 January 2025, EPA officers were in Long Bay and Port Arthur to undertake routine water quality monitoring. Considering your letter, and other enquiries the EPA had received, observations were made of the fringing reef in Stingaree Bay and north around the point further into Long Bay. While observations were made by boat, conditions were calm and water clarity was greater than 5 m and very little epiphytic or filamentous algae was present. The vessel could not be taken into very shallow water, but observations from McManus Road at the head of the bay showed clear water and no or minimal epiphytic or filamentous algal growth present in the shallows. Extensive green algae growth in intertidal areas were observed in late January/ early February 2025 by EPA staff further afield at Eaglehawk Neck and Bicheno signalling more widespread occurrences of similar algae that you have described.

The EPA has undertaken independent water quality monitoring in the Port Arthur and Long Bay areas since 2019. As requested, data from January 2022 to November 2024 (the most recent results from the lab) is attached to this letter.

The rapid visual reef assessment report for 2024, as required under the Director's 7 July 2023 Direction to conduct inshore reef and water quality monitoring, has been reviewed and published on the Turrakana/Tasman Peninsula and Norfolk Bay EPA webpage. In summary, the monitoring found that there was a higher abundance of nuisance algae recorded at sites directly adjacent to the fish farm. This report aligns with nitrogen isotope data from the 2022 IMAS report that showed the fish farm is a nutrient source for the macroalgal communities directly adjacent at 100m from the lease. The report found that the presence of nuisance algae had not increased in abundance since reef monitoring began. Further north into Long Bay, the effects of exposure and other nutrient sources are more difficult to discern from fish farm derived nutrients (White et al. 2022).

The 2024 Edgar-Barrett biodiversity surveys were delayed due to operational constraints. Under advice provided to the EPA by IMAS the surveys were rescheduled and completed in early March 2025 to ensure surveys were done during comparable environmental conditions to other biodiversity surveys undertaken by IMAS. The report is due within two months of the completion of these surveys and is to be made available following review by the EPA.

Under section 23AA of *Environmental Management and Pollution Control Act 1994* (the Act) the publishing of environmental monitoring information required under environmental licence conditions will occur through the REMI portal, which can be found here. This webpage can also be used to submit requests for environmental monitoring information. You are encouraged to use this function for future requests for information required under an environmental licence.

Dissolved nitrogen output is calculated based on data provided by the companies. I can confirm that since its introduction in 2023, the total permissible dissolved nitrogen output (TPDNO) of 48 tonnes at Long Bay has not been breached. The total dissolved nitrogen output for the 2023/2024 production cycle was less than 44 tonnes. Exceeding the TPDNO carries maximum penalties as specified under section 96U(4) of the Act. The July 2024 amendment of the TPDNO at Long Bay related to production cycle timing and fallow periods. This review found that it was more suitable to impose a TPDNO based on a fixed 12-month period. This locks Tassal into a clear growing period and a clear fallow period. A review of the TPDNO determination is next due in August 2026, and will be based on findings of the BEMP, reef monitoring and EPA's independent monitoring program.

Regarding mortality events, antibiotic use and escapes since 1 November 2023, MF55 has had very few reportable cases. There was one reportable mortality event at one pen in mid-November 2023. Since receiving your correspondence there has been a further 4 notifications of mortality greater than 0.25% over three days in individual pens. There has been no reportable antibiotic treatment at the lease since recommissioning in 2017, and there have been no reports of fish escapes over the same period. Periodic freshwater bathing and oxygen augmentation/aeration of the pens are part of routine aquaculture operations for fish welfare and disease mitigation purposes. The only regions that do not require freshwater bathing is where a significant halocline is present, such as Macquarie Harbour.

I trust that the information included in this letter is of value.

Yours sincerely

Darryl Cook
DIRECTOR, FINFISH COMPLIANCE
Delegate of the Director, Environmental Protection Authority

Enc. EPA PA data Jan22 to Nov24

References

Aquenal 2022. MF236 Okehampton Bay Annual Seagrass Monitoring Report 2021.

Crawford, C., Thompson, P., Jordan, A., Foster, S., Mitchell, I., Bonham, P. and Wilcox, S., 2006. Development of broadscale environmental monitoring and baseline surveys in relation to sustainable salmon aquaculture in the D'Entrecasteaux Channel region, October 2006, Aquafin CRC Project 4.41, 115 pp.

IMAS 2021. Annual Broadscale Environmental Monitoring Program 2020/2021 for Environmental License 10180/1 Marine Farming Lease No. 281 at Yellow Bluff 2020/2021 & Environmental License 10211/1 Marine Farming Lease No. 279 at West of Wedge Island, Report to Huon Aquaculture Company Pty Ltd & Tassal Operations Pty Ltd.

White, C., Hartog, M., Brasier, M. and Ross, J., 2022. IMAS Rapid visual assessment of rocky reef assemblages in Port Arthur February 2022.

Larkum, A.W.D., Kendrick, G.A., and Ralph, P. (eds), 2018. *Seagrasses of Australia: Structure, Ecology and Conservation.* Springer International Publishing.

Mount, R.E. and Otega, K., 2011. The status of seagrass extent in North West Bay. A technical report for the Kingborough Council by the Blue Wren Group, School of Geography and Environmental Studies, University of Tasmania, Hobart, Tasmania.

Rees, C.G., 1993. Tasmanian Seagrass Communities, Masters Thesis, Centre for Environmental Studies, Department of Geography and Environmental Studies, University of Tasmania. Department of Geography and Environmental Studies, University of Tasmania 1994.