



HOW PORT WARATAH MANAGES DUST

Where possible we enclose and install dust suppression sprays in our:

- ✓ Rail receipt stations
- ✓ Transfer points
- ✓ Conveyors

We also design our equipment for 'soft flow' transfers and minimal drop heights.

OUR INTELLIGENT DUST MANAGEMENT SYSTEM

Continually assesses onsite conditions and uses detailed weather forecasts and onsite real-time weather station data



Calculates the moisture level on coal stockpile surfaces using the Global Evapotranspiration Algorithm



It then calculates



TIMING OF AUTOMATED SPRAY CYCLES REQUIRED TO MAINTAIN STOCKPILE MOISTURE AND PREVENT LIFT-OFF

We have other **dust management strategies** in our toolbox



- Utilising mobile water carts
- Wetting down hardstand areas
- Delaying, restricting or stopping coal movement
- Sealing, revegetating or rehabilitating disturbed areas
- and more.

All of these systems work together to make sure that we **manage dust before it becomes an issue**



Air quality

Monitoring air quality and acting responsibly is critical to our operations. We understand that if not managed appropriately, the nature and scale of our operations have the potential to generate dust and negatively impact our community. Our control techniques, processes and systems are world class, designed to minimise the potential for dust creation, and where possible, eliminate negative impacts. Port Waratah is committed to delaying, or if required, ceasing operations in adverse conditions. Find out more about our management controls at pwcs.com.au/environment/air-quality.

Seasonal region-based air quality monitoring reports for 2022-23, which are collated by the NSW Department of Climate Change, Energy, the Environment and Water, indicate that air quality in the Newcastle region reported particulate levels within the national benchmarks for the majority of the year. Particulate levels were at times higher in summer, particularly at the monitor located in Stockton where results are heavily influenced by onshore winds and sea salt due to its proximity to the coast.

In addition to the government-operated monitoring stations, Port Waratah maintain a series of air quality monitors in residential areas surrounding the terminals that are operated and maintained in accordance with the requirements of our Air Quality Management Plan. This year, Port Waratah's air quality monitoring results were all within compliance limits and consistent with the results from the government monitoring network.

Dust management improvements

We are committed to the continuous improvement of our dust management capabilities, including evaluating our Intelligent Dust Management System (IDMS) throughout the year and introducing refinements, wherever possible.

In 2023, we continued to review the operational performance of dust management infrastructure across both terminals by auditing our conveyor and stockyard machine spray systems to optimise dust suppression capabilities. We identified several opportunities to enhance the belt cleaning efficiency and dust management by fine tuning maintenance regimes and the operating philosophy for some locations. Implementing these changes will become a focus for improvement of our IDMS in 2024.

A staged programme of drainage improvements and additional sealing of unsealed surfaces at the Kooragang Terminal continued during the year. Approximately 4,500m² of previously unsealed surface was converted

to asphalt at a total investment cost of \$460,000. The effects of this improvement were immediate with increased capabilities in surface drainage, housekeeping and dust prevention. The key challenge in implementing this work was the flat terrain of the site, which is difficult to provide sufficient fall to install working drainage and make surface water flow where required. Significant time was spent grading and preparing the ground pre-asphalting to successfully direct water flow with very small margin for error.

Noise management

To effectively manage noise and ensure we continuously improve our noise emissions over time, we consider potential sources of noise across our operations and apply a long-term strategic focus. We implement effective plant maintenance, conduct ongoing reviews, improve noise control processes, and trial and adopt advancing technologies. A key driver in prioritising noise improvement opportunities is focusing on the areas of site that offer the best noise reduction outcomes for our neighbouring communities and developing an effective plan that delivers sustainable noise improvement over the long term.

Our employees and contractors are integral to our effective noise management. We invest in ongoing workforce training and education to ensure the awareness and management of potential noise impacts remains front of mind during operational activities. Ongoing regulatory compliance is demonstrated through our routine noise monitoring programme, this includes regular assessments of our performance by external consultants, against noise criteria and long-term goals. Throughout 2023, regulatory compliance was maintained in accordance with the noise related conditions specified in our project approvals.

Where regulatory criteria are absent, Port Waratah has developed stringent internal noise goals to measure and monitor our performance. Performance against our internal noise goals continued to improve in 2023, with only one minor elevated result recorded at the Carrington Terminal's closest residential monitoring location. The elevated noise level was recorded at our Tighes Hill receiver over the night period in May 2023, and was influenced by several factors, including proximity to our site and weather that produced conditions that increased noise levels at the Tighes Hill location.

Noise management improvements

Low-noise roller trials have been ongoing at both Kooragang and Carrington terminals. More than 60 rollers have been replaced on a conveyor at the Kooragang Terminal wharf as part of the trial. In early

2023, the ongoing trial was assessed and after 16 months of use, the low-noise rollers demonstrated a sustained 2.7dB reduction in sound power. Following these results, the Kooragang trial will continue to be monitored and assessed for sustained noise reduction and operational performance.

Similar to Kooragang, the Carrington low-noise roller trial has continued to demonstrate sustained reduction in sound power. These results, combined with durability and ergonomic assessment outcomes, will be used to determine long term suitability for implementation at other locations across our operations.

In mid-2023, Port Waratah commenced working collaboratively with a noise specialist to develop and trial a real-time operational noise model aimed to quantify our current and forecast noise levels based on what is or what will be operating onsite, where it is operating, and how weather conditions will impact those noise levels. The trial will determine if the technology will support our teams to proactively manage our operations.

Throughout 2023, Port Waratah developed a new business wide five-year Noise Improvement Strategy. The early focus of the strategy is embedding expanded internal capabilities, new technologies, and re-baselining noise performance at both Carrington and Kooragang terminals.



CASE STUDY

Performance dashboard for community available online

Each quarter, Port Waratah publishes a Community Dashboard on our website to provide regular updates to the community about our operational and environmental performance.

The dashboard highlights a three-month snapshot that focuses on air quality, noise performance and water management. It also includes year-to-date results for water reuse, electricity efficiency, the number of trains and vessels received, and tonnes loaded for export.

Our Community Meeting Group members worked collaboratively with us to develop the dashboard to include information relevant for local residents and of high interest to stakeholders.

The dashboard is published on the website in February, May, August and November each year.