Annual Truck Noise Measurements

Clyde Transfer Terminal

October 2025

Quality Information

Completed by:	Teri Te Whiu *Environmental Advisor*
Authorised by:	Bob Manevski *Clyde Manager*

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Contents

Quality Information **2**
Contents 3
List of Figures 3
List of Tables 3
Introduction **3**
Noise Limit Criteria **4**
Table 1: LAmax Noise Limits (dBA) – ADR 28/01 5
Measurement Methodology **5**
Noise Measurement Results **6**
Discussion **7**
Conclusions **8**
References **8**
Appendix A - Truck Noise Monitoring Location **9**
Appendix B - Sound Level Meter Calibration Certificate 9
Appendix C - Truck Noise Measurement Results 11

List of Figures

Figure 1: Noise level distribution from Truck Noise Monitoring – 7 September 2023 9

List of Tables

Table 1: LAmax Noise Limits (dBA) – ADR 28/01 **7**
Table 2: NB class vehicle noise measurements **11**

Introduction

The Clyde Transfer Terminal was issued with Conditions of Development Consent (Conditions) by the Department of Planning, Housing and Infrastructure (The Department), which are

attached to the Development Consent. The Conditions include a requirement to assess heavy vehicle noise limits specified in Australian Design Rule 28/01 (ADR 28/01).

The requirements of Condition 112 are as follows:

The Applicant shall implement a Heavy Vehicle Noise Monitoring Management Program for the development to the satisfaction of the Director-General. This program must:

(a) monitor heavy vehicle noise on site, in accordance with the methods outlined in the "Truck Noise Monitoring – Proposed Test and Management Plan" prepared by Heggies and dated 26 May 2008;

(b) be undertaken quarterly for a year starting in October 2008, and annually thereafter, unless otherwise agreed by the Director-General;

(c) measure at least 25% of the heavy vehicles visiting the site;

(d) identify heavy vehicles exceeding the relevant noise criteria specified in the Australian Design Rule 28/01, or its successor, and ensure that the owners of these subsequently comply with the relevant noise criteria;

(e) report the number of non-compliant heavy vehicles identified and the actions undertaken to address these non-compliances in the Annual Environmental Monitoring Report; and

(f) be amended, should the monitoring activities not achieve the aim of the program to the satisfaction of the Director-General.

This Annual Truck Noise Measurements report (this Report) presents the results of heavy vehicle noise monitoring at the Terminal. Monitoring was completed by Veolia on 3 October 2025 between 7:07 AM and 10:08 AM, in accordance with the Proposed Test Management Plan (PTMP) developed by Heggies. This report is prepared by Veolia under Condition 112.

Noise Limit Criteria

The noise limit criteria for maximum allowable noise levels for Goods Vehicles described in the PTMP (2008) are provided in Table 1 below.

Table 1: LAmax Noise Limits (dBA) – ADR 28/01

Vehicle Category Code	Vehicle Type	Vehicles In Motion	Stationary Vehicles			
		Direct Injection & Spark Ignition Diesel Engines	Spark Ignition Engines Exhaust Outlet Height		Direct Injection Engines Exhaust Outlet Height	
			<1500mm	≤1500mm	<1500mm	≤1500mm
NA	**Light Goods Vehicles GVM ≤3.5t on road use**	78 to 80	89	85	99	95
NB	**Medium Goods Vehicles GVM >3.5t ≤12t on road use**	81 to 84	95	91	101	97
NC	**Heavy Goods Vehicles GVM >12t on road use**	81 to 87	95	91	103	99

Note: For vehicles in motion test, LAmax noise limits are based on the Gross Vehicle Mass (GVM) and the Nett Engine Power (NEP). The noise limits in the table are expressed as a range where the lower noise level refers to the minimum GVM and NEP in each category and the upper noise level refers to the maximum GVM and NEP in each category.

Waste collection trucks entering the Terminal are loaded vehicles with a Gross Vehicle Mass (GVM) over 12 tonnes, based on tare weights of incoming vehicles on the site weighbridge. For the purpose of conducting a vehicle noise assessment at the Terminal, Vehicle Category Code “NC”, for heavy goods vehicles with a GVM of 12 tonnes or more on the road, a Net Engine Power (NEP) of greater than 150 kilowatts (kW) has been applied. The upper limit (87dBA) of the NC range provided in Table 1 will be used to assess truck noise measurements.

Measurement Methodology

The monitoring location from which the truck noise was measured was consistent with previous monitoring rounds conducted. Measurements were taken at a distance of approximately 7.5 metres from the centre of the vehicle travel path and a height of 1.2 metres above the vehicle entrance ramp from the weighbridge to the Terminal building, which was the test site surface.

Trucks accelerating at this location, which is shown in **Appendix A**, were measured where the vehicle was accelerating in line with the microphone of the sound level meter.

Measurements were taken with a Casella CEL 63X Sound Level Meter, using an A-weighted (LA) filter network and fast response time constant as required under ADR 28/01. The (LA) filter ensured that the sound level meter was less sensitive to very high and very low frequencies which would be outside the range of noise emitted by the heavy vehicles entering and exiting the Terminal, while the fast response time constant enabled a more accurate reading of noise from each vehicle movement. Calibration of the Sound Level Meter was completed by Airmet. Refer to **Appendix B** for calibration certificate.

For each truck movement a LA maximum noise level measurement was recorded. Additional information on each truck movement was noted (where possible) to assist in identification of any trucks which exceeded the noise criteria, including:

- Company;
- Vehicle Make and Type;
- Registration; and
- Exhaust Location.

The collected data was cross referenced with the Terminal's weighbridge records for vehicles entering the facility on 3 October 2025, to identify trucks measured during this sampling period and to calculate the percentage of trucks sampled.

Noise Measurement Results

A total of 125 truck movements were recorded entering the Terminal and a measurement for each vehicle movement past the monitoring location was taken as the trucks accelerated on the entrance ramp. Ten (10) of these measurements were under impeded traffic conditions causing distorted noise emissions, caused by queuing of waste trucks waiting to enter the Terminal building during busy periods or idling of engines past the testing zone. Impeded traffic conditions affected the representative quality of the noise measurements. The measured sound levels of each pass-by event were recorded on field sheets, which have been tabulated in **Appendix C**.

A total measurement of ~33.24% of all truck movements (376 total) was achieved during this monitoring round, which satisfies the minimum requirements of Condition 112 (25% of daily

truck movements). **Figure 1** presents the distribution of recorded sound level frequencies which were measured in A-weighted decibels (dBA).

Measurements of 'normal' truck acceleration ranged from 63.4dBA to 86.0dBA with the highest frequency occurring between 69 - 78dBA, which is an improvement (lower range) from the previous year. Impaired acceleration readings due to the impeded traffic conditions ranged from 69dBA to 74dBA. Impaired acceleration readings were plotted separately from the normal accelerating vehicles on **Appendix C**.

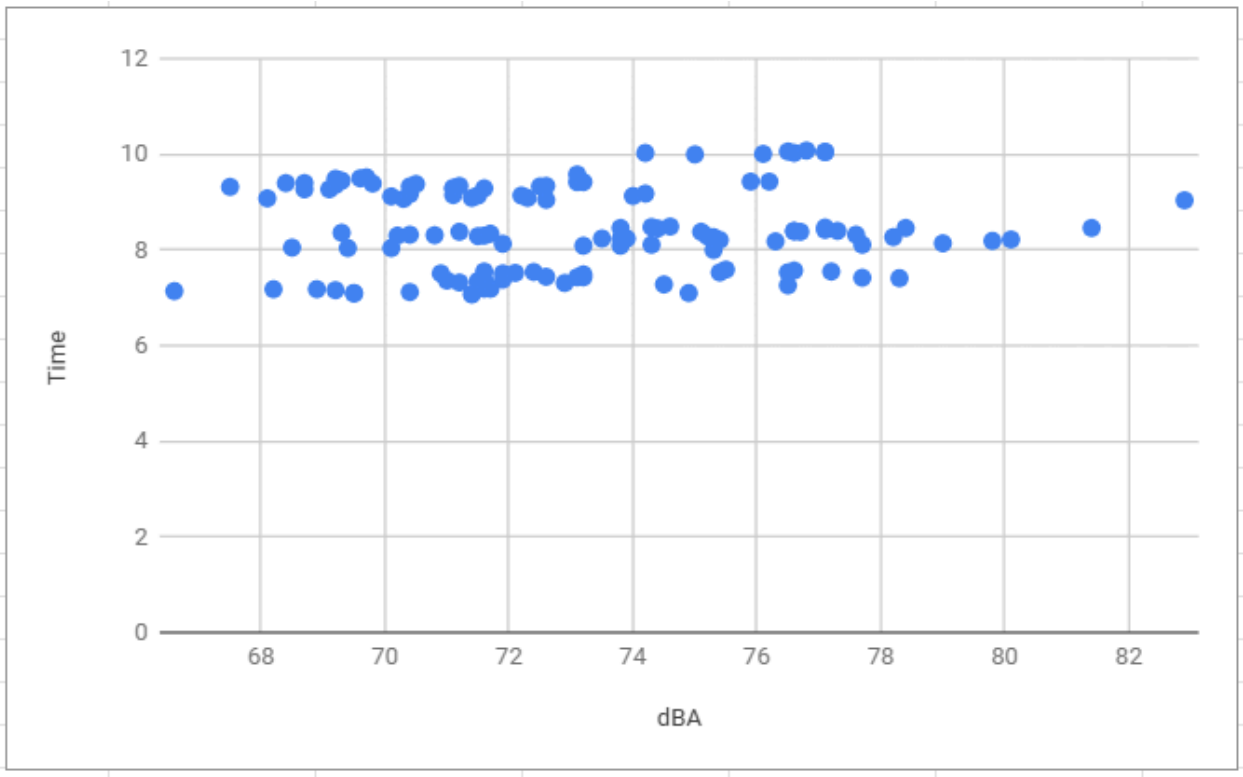


Figure 1: Noise level distribution from Truck Noise Monitoring – 3 October 2025

Discussion

Comparison of the heavy vehicle noise measurement results against the limits specified in ADR 28/01 (refer to Table 1) indicates that all 125 heavy vehicle trucks entering the Terminal in this monitoring round were within the acceptable noise criteria for the NC category vehicles.

There were no exceedances to the 87 dBA upper noise limit. The highest noise reading detected was 82.9 dBA, by one vehicle.

Noise from the Terminal's operations such as plant noise (forklift, compactor, front end loader and road sweeper) and surrounding areas (Parramatta Road, train tracks) were not significant enough to influence waste truck noise measurements at this location. The noise wall located adjacent to the exit ramp, on the North-western boundary of the Terminal, also assisted in focusing noise measurements on truck movements into the facility by limiting interference noise sources.

No noise complaints pertaining to the Terminal's operations were received in the year between the previous annual truck noise monitoring round. This is consistent with previous years of no noise complaints received at the site and demonstrates that noise impacts from waste truck movements at the Terminal boundary are contained within the Terminal and remain below surrounding area background noise levels.

Conclusions

Truck noise monitoring was conducted on 3 October 2025 between 7:07 AM and 10:08 AM. The results indicated:

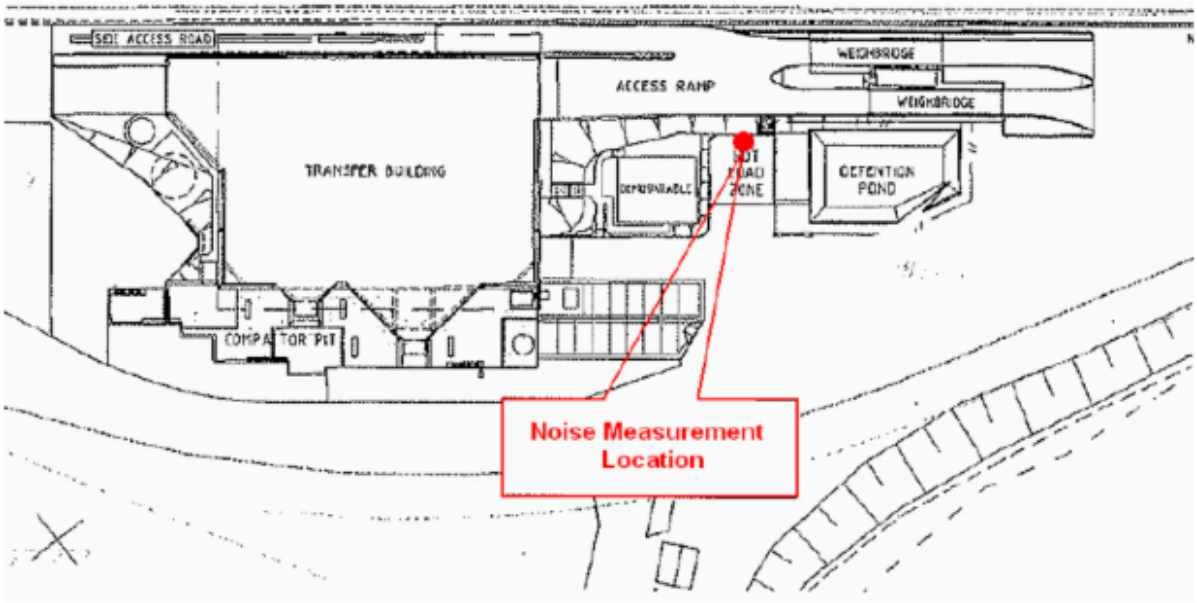
- Noise from 125 truck movements was measured;
- A total of 125 truck movements were measured, which satisfies the minimum 25%, (being 94 trucks) required under Condition 112;
- All measured trucks were identified against weighbridge records to verify the accuracy of field data for reporting.
- All truck movements were below the 87dBA upper limit of ADR 28/01, with the maximum recorded measurement of 82.9dBA by one vehicle. All other truck noise measurements were well below the noise criteria of ADR 28/01 and hence did not exceed the trigger limits.
- Noise from the Terminal's operations was not significant enough to influence the truck noise assessment.
- No noise complaints pertaining to the Terminal's operations have been received since the previous truck noise monitoring round, which is consistent with previous years.
- Overall, truck noise impacts at the Terminal boundary are considered to be minimal, and remain below surrounding area background noise levels.

References

- ADR 28/01 Vehicle Standard Australian Design Rule 28/01 – External Noise of Motor Vehicles), 2006. Federal Register of Legislative Instruments F2006L01279. Australian Government.

- PTMP (2008) Clyde Waste Transfer Facility – Truck Noise Monitoring Proposed Test and Management Plan, 2008. Heggies Pty Ltd.

Appendix A - Truck Noise Monitoring Location



Appendix B - Sound Level Meter Calibration Certificate

Calibration Certificate

AirMet Scientific P/L
36 Punch Street
Artarmon
NSW 2064, Australia
Tel: 02 8425 8300
Fax: 02 8425 8399

This document certifies that the instrument detailed has been calibrated to the parameters

Certificate Print Date: 23-Oct-2025
Calibration Date: 16-Sep-2024
Next Calibration Due: 16-Sep-2025

Call ID / Order No: 272225
Job No / Pack No: S2722250001

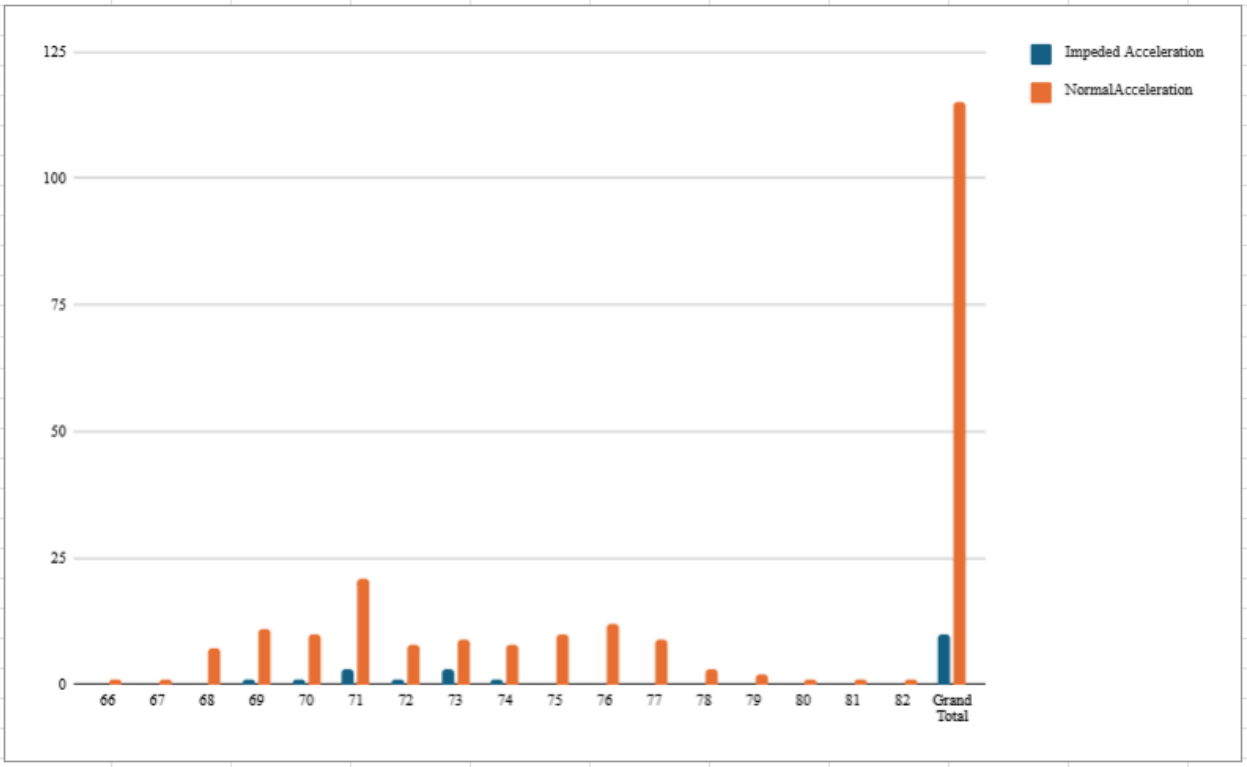
Customer: Veolia Environmental Services (Aust) Pty Ltd-ID 202853 **Serial No:** 2425321
Description: Casella CEL 63X Sound Level Meters

Calibration Summary

Frequency: Yearly **Temp:** 22°C **As Found:** Out of Tolerance **Result:** Pass
Humidity: 45% **Certificate:** S2722250001

Desc	As Found		As Left (Cal Status)	
	Actual	Result	Actual	Result
114dB	113.3	Fail	114.0	Pass

Standard Used			
Equip ID	Description	Valid Until	Cert
900804	QC-10 Calibrator	18/01/2025	ACU-VIB C33905

Completed By: Micael Rebelo **Signed:** MRebelo

Appendix C - Truck Noise Measurement Results