

Annual Truck Noise Measurements

Clyde Transfer Terminal

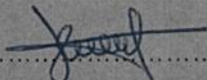
August 2018



Annual Truck Noise Measurements

Quality Information

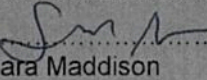
Completed by:


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Constance Georgiou

Graduate Environmental Engineer – Resource Recovery

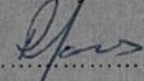
Reviewed by:


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Sara Maddison

Operations Project Manager – Resource Recovery

Authorised by:


.....

Rod Jones

Facility Manager – Resource Recovery

Address:

Veolia Australia & New Zealand
Corner Unwin and Shirley Streets, Rosehill, NSW, 2142

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August 2018

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1. Introduction

The Clyde Transfer Terminal was issued with Conditions of Development Consent (Conditions) by the Department of Planning and Environment (DPE) formerly known as the Department of Planning, which are attached to the Development Consent. The Conditions include a requirement to assess heavy vehicle noise with 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 (the Report) presents the results of the thirteenth round of heavy vehicle noise monitoring at the Terminal. Monitoring was completed by Veolia on the 16 August 2018 between 8:01 am and 12:35 pm, in accordance with the Proposed Test Management Plan (PTMP) developed by Heggies. This is the ninth sampling event and report prepared by Veolia under Condition 112 since assuming the responsibility of monitoring from Heggies.

2. 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. Hence, 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 road, with 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. This is consistent with the assessment criteria applied by Heggies in previous monitoring rounds.

3. Measurement Methodology

The monitoring location from which the truck noise was measured was consistent with previous monitoring rounds conducted by Veolia and Heggies. Measurements were taken at a distance of 7.5 metres from the centre of 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. For further information regarding measurement location and methodology refer to the PTMP prepared by Heggies (Heggies, 2008).

Measurements were taken with a Casella CEL-633 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 ThermoFisher Scientific prior to monitoring. The calibration certificate is included in Appendix B.

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 trucks exceeding 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 16 August 2018, a copy of which is provided in Appendix C, to identify trucks measured during this sampling period and to calculate the percentage of trucks sampled.

4. Noise Measurements Results

A total of 98 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. Forty-four (44) 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 D.

A total measurement of 34.75% of all truck movements (282) 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 67.3dBA to 88.1dBA with the highest frequency occurring between 76dBA to 82dBA. Impaired acceleration readings due to the impeded traffic conditions ranged from 66dBA to 85.4dBA, with the highest frequency occurring between 75dBA to 80dBA. Impaired acceleration readings were plotted separately from the normal accelerating vehicles on Figure 1.

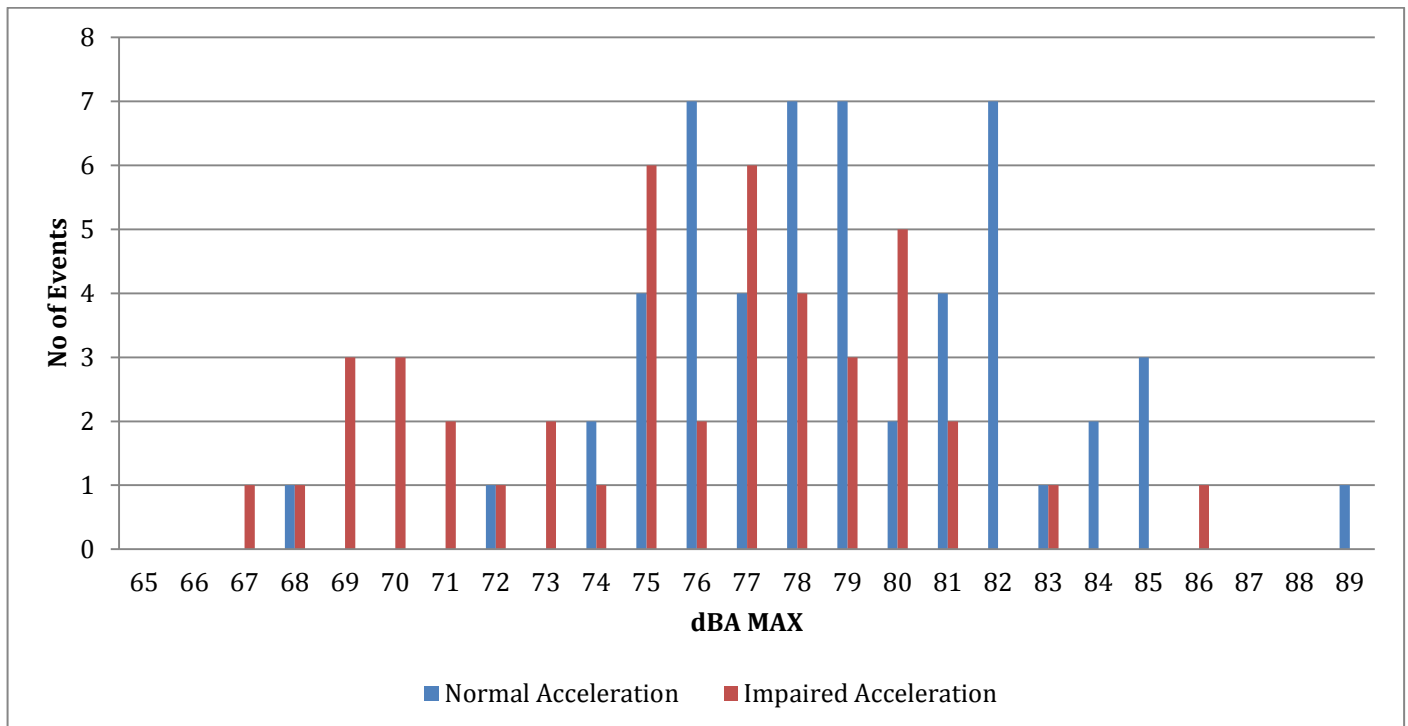


Figure 1: Noise level distribution from Truck Noise Monitoring – 16 August 2018

5. Discussion

Comparison of the heavy vehicle noise measurement results against the limits specified in ADR 28/01 (refer to Table 1) indicates that most trucks entering the Terminal in this monitoring round were within the acceptable noise criteria for the NC category vehicles (<87dBA), with the exception of one truck that exceeded the criteria with a reading of 88.1dBA (Refer to Table 2).

A notification letter was sent out to the customer, informing them that one of their vehicles registered a noise level exceeding the site's truck noise limits (Appendix E). This exceedance has been noted and updated in the truck noise level exceedance register (Appendix F).

Table 2: Truck noise level exceedance

Time	Company	Make	Lift Type	Registration	L _A Max (dBA)	Impeded Movement
8:58	City of Canada Bay Council	IVECO	Side	CE65RY	88.1	N

Two smaller waste vehicles (ranging from approximately 6 – 11 tonnes when loaded) were observed entering the facility during this monitoring event. For the purpose of this assessment it is considered that these vehicles would fall within the NB category with a noise limit of 84dBA. All noise emitted from vehicles assigned to this category was measured below this threshold as indicated in Table 3.

Table 3: NB class vehicle noise measurements

Time	Company	Make	Lift Type	Registration	L _A Max (dBA)	Impeded Movement
9:45	Hunter's Hill Council	ISUZU	Rear	B182JD	75.0	N
11:19	Remondis Australia Pty Ltd	HINO	Rear	CG03XK	74.4	Y

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 focussing noise measurements on truck movements into the facility by limiting interference noise sources.

No noise complaints pertaining to the Terminal's operations were received between the annual truck noise monitoring rounds. This indicates that noise impacts from waste truck movements at the Terminal boundary are within the Terminal and surrounding area background noise levels.

6. Conclusions

Truck noise monitoring was conducted on 16 August 2018 8:01 am and 12:35 pm. The results indicated:

- Noise from 98 truck movements was measured;
- A total of 34.75% of truck movements were measured, which satisfies the minimum 25% requirement of Condition 112;
- All measured trucks were identified against weighbridge records to verify the accuracy of field data for reporting.
- One truck noise measurement exceeded noise criteria of ADR 28/01, with reading of 88.1dBA.
- Remaining truck noise measurements were within 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 were received since the previous truck noise monitoring round.
- Truck noise impacts at the Terminal boundary are considered to be within background levels.

7. References

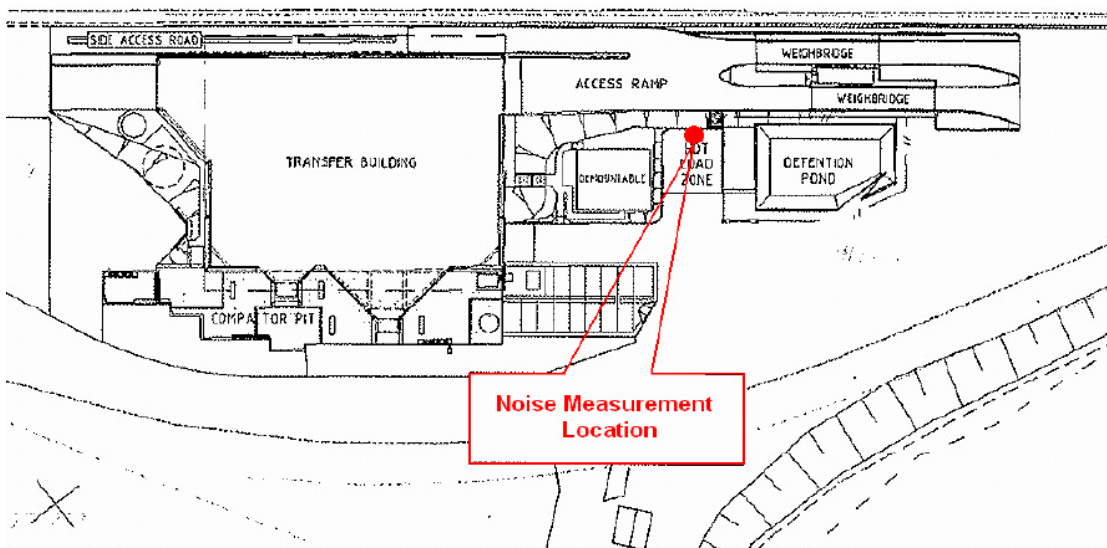
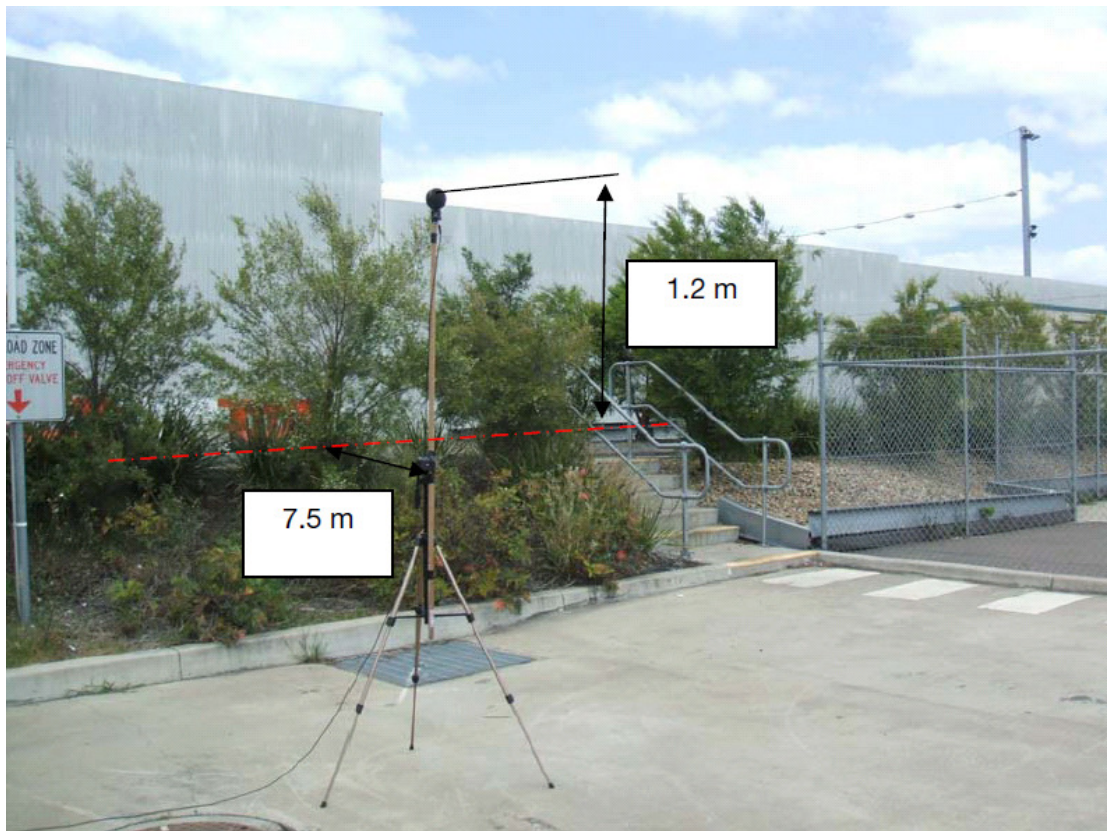
- ADR 28/01 Vehicle Standard Australian Design Rule 28/01 – External Noise of Motor Vehicles), 2006. Federal Register of Legislative Instruments F2006L01279. Australian Government.
- PTMP (2008) Clyde Waste Transfer Facility – Truck Noise Monitoring Proposed Test and Management Plan, 2008. Heggies Pty Ltd.



Appendix A Truck Noise Monitoring Location



Truck Noise Monitoring Location





Appendix B Sound Level Meter Calibration Certificates

RENTALS

Equipment Certification Report – Casella CEL-633 Sound Level Meter

This Sound Level Meter has been checked as follows:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Batteries Installed | <input checked="" type="checkbox"/> Date and Time checked |
| <input checked="" type="checkbox"/> Data cleared | <input checked="" type="checkbox"/> Field Calibration at 114.0dB |
| | <input checked="" type="checkbox"/> Date and Time checked |

Calibration Variation	114dB	Date: 15 / 08 /2018	09 30:h
	<input checked="" type="checkbox"/> OK*		

* Less than ±0.5dB

Date: 12/08/2018

Signed: 

Please check that the following items are received and that all items are cleaned and decontaminated before return. A minimum \$30 cleaning / service / repair charge may be applied to any unclean or damaged items. Items not returned will be billed for at the full replacement cost.

Sent	Returned	Item
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sound Level Meter with fixed lanyard
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Windsock
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Spare AA Alkaline batteries (Qty 3)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Calibration Certificate
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Class 2C Acoustic Calibrator with Calibration Certificate, Serial #: <u>291786</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Spare 9 Volt Battery
<input checked="" type="checkbox"/>	<input type="checkbox"/>	USB download cable
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Casella Insight software CD
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Manual
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Calibrator User Instructions
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Downloading Instruction Guide
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Field Guide
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Carry Case

Date: 15/08/2018

Signed: 

TFS Reference	<u>CS009304</u>	Return Date:	/ /
Customer Reference		Return Time:	
Equipment ID	SLM633MC	Condition on return:	
Equipment Serial No.	1139330		

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<small>Melbourne Branch 5 Caribbean Drive, Scoresby 3179</small>	<small>Sydney Branch Level 1, 4 Talavera Road, North Ryde 2113</small>	<small>Adelaide Branch 27 Beulah Road, Norwood, South Australia 5067</small>	<small>Brisbane Branch Unit 2/5 Ross St Newstead 4006</small>	<small>Perth Branch 121 Beringarra Ave Malaga WA 6090</small>	



Appendix C Weighbridge Record

Date : 16-08-18

Plant: Clyde PWS Report

Facility	Date	Time In	Rego	Customer Name
Clyde	16-08-18	0:09	4DCURE	Bingo Recycling Pty Ltd
Clyde	16-08-18	0:13	BIN749	Bingo Recycling Pty Ltd
Clyde	16-08-18	0:24	4HOOKN	Enfield Bulk
Clyde	16-08-18	0:30	CL91UL	Cleanaway Pty Ltd
Clyde	16-08-18	0:58	CD69KW	Enfield FrontLift
Clyde	16-08-18	1:01	CK24KZ	Enfield FrontLift
Clyde	16-08-18	1:05	BIN734	Bingo Recycling Pty Ltd
Clyde	16-08-18	1:21	CM87VN	Enfield Bulk
Clyde	16-08-18	1:32	CL91UL	Cleanaway Pty Ltd
Clyde	16-08-18	1:41	CJ07WC	Enfield FrontLift
Clyde	16-08-18	1:53	CP08NQ	Enfield Bulk
Clyde	16-08-18	1:53	BIN796	Bingo Recycling Pty Ltd
Clyde	16-08-18	2:01	CL98LU	Sydney Waste Pty Ltd
Clyde	16-08-18	2:04	XN42CY	Enfield RearLift
Clyde	16-08-18	2:05	CN73MI	Ku-ring-gai Council
Clyde	16-08-18	2:18	4URM	URM Environmental Services Pty Limi
Clyde	16-08-18	2:19	CL91UL	Cleanaway Pty Ltd
Clyde	16-08-18	2:28	CQ07CK	Veolia Newcastle Frontlift
Clyde	16-08-18	2:53	CI68HA	Sydney Waste Pty Ltd
Clyde	16-08-18	3:13	BL63SB	Enfield Bulk
Clyde	16-08-18	3:18	BY46TO	Sydney Waste Pty Ltd
Clyde	16-08-18	3:22	CE74GO	Remondis Australia Pty Ltd
Clyde	16-08-18	3:22	BW65VM	Canterbury City Council
Clyde	16-08-18	3:30	CD69KW	Enfield FrontLift
Clyde	16-08-18	3:31	CAL068	External Bulk - No Jobs Available
Clyde	16-08-18	3:36	AT67VJ	Enfield FrontLift
Clyde	16-08-18	3:45	CN73MI	Ku-ring-gai Council
Clyde	16-08-18	3:45	CN76MI	Ku-ring-gai Council
Clyde	16-08-18	4:09	BE48SD	Canterbury City Council
Clyde	16-08-18	4:10	CM87VN	Earthpower Technologies Sydney Pty.
Clyde	16-08-18	4:13	CN79MI	Ku-ring-gai Council
Clyde	16-08-18	4:19	BIN721	Bingo Recycling Pty Ltd
Clyde	16-08-18	4:22	BE94DJ	Hornsby Council
Clyde	16-08-18	4:28	BIN635	Bingo Recycling Pty Ltd
Clyde	16-08-18	4:29	BD49ZB	Hornsby Council
Clyde	16-08-18	4:31	AV17XT	Enfield FrontLift
Clyde	16-08-18	4:35	CP70DL	Strathfield Municipal Council
Clyde	16-08-18	4:39	CG06UT	Sydney Waste Pty Ltd
Clyde	16-08-18	4:47	CP44NP	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	5:03	URM808	Cumberland Council - Auburn
Clyde	16-08-18	5:04	BK19BD	Enfield Bulk
Clyde	16-08-18	5:06	CI69WY	Enfield FrontLift
Clyde	16-08-18	5:07	CM15UA	Remondis Australia Pty Ltd
Clyde	16-08-18	5:08	XN14AS	Loumbos Exports Pty Ltd
Clyde	16-08-18	5:09	CP75SH	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	5:09	BH77MA	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	5:18	CK93DS	Enfield FrontLift
Clyde	16-08-18	5:19	CP02YZ	Enfield FrontLift
Clyde	16-08-18	5:21	CF32CS	Burwood Council - Trade Waste Servi
Clyde	16-08-18	5:30	CE70KP	Burwood Council - Trade Waste Servi

Clyde	16-08-18	5:31	BF40CG	Canterbury City Council
Clyde	16-08-18	5:35	MAV600	Cleanaway Pty Ltd
Clyde	16-08-18	5:52	CQ59LV	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	6:09	BIN766	Bingo Recycling Pty Ltd
Clyde	16-08-18	6:12	BW79MW	ORG Organic Recycling Group Pty Ltd
Clyde	16-08-18	6:16	XN42CY	Enfield RearLift
Clyde	16-08-18	6:18	BU28YX	Cleanaway Pty Ltd
Clyde	16-08-18	6:19	CE74GO	Remondis Australia Pty Ltd
Clyde	16-08-18	6:21	URM811	Cumberland Council - Auburn
Clyde	16-08-18	6:28	URM824	Cumberland Council - Auburn
Clyde	16-08-18	6:33	XN49CY	Enfield RearLift
Clyde	16-08-18	6:37	CO41MK	Leichhardt Municipal Council
Clyde	16-08-18	6:41	BB68AW	Loumbos Exports Pty Ltd
Clyde	16-08-18	6:44	URM826	Cumberland Council - Auburn
Clyde	16-08-18	6:46	CD64NX	Leichhardt Municipal Council
Clyde	16-08-18	6:50	URM839	Cumberland Council - Auburn
Clyde	16-08-18	6:53	CB90MM	Cleanaway Pty Ltd
Clyde	16-08-18	6:58	CL78JV	Enfield RearLift
Clyde	16-08-18	7:01	CO47GS	Leichhardt Municipal Council
Clyde	16-08-18	7:14	URM813	Cumberland Council - Auburn
Clyde	16-08-18	7:17	AB30BI	Capital City Waste Services Pty Ltd
Clyde	16-08-18	7:19	CH03VX	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	7:23	URM825	Cumberland Council - Auburn
Clyde	16-08-18	7:26	URM808	Cumberland Council - Auburn
Clyde	16-08-18	7:28	URM823	Cumberland Council - Auburn
Clyde	16-08-18	7:31	BL54KN	Leichhardt Municipal Council
Clyde	16-08-18	7:36	CN65YN	City of Ryde
Clyde	16-08-18	7:40	CK27AL	Ashfield Council
Clyde	16-08-18	7:45	URM406	URM Environmental Services Pty Limi
Clyde	16-08-18	7:47	CK24KZ	Enfield FrontLift
Clyde	16-08-18	7:48	URM806	Cumberland Council - Auburn
Clyde	16-08-18	7:50	CM18AV	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	7:51	CJ32RX	Fairfield City Council-waste
Clyde	16-08-18	7:58	GG169	Hornsby Council
Clyde	16-08-18	8:00	CF44UC	Enfield RearLift
Clyde	16-08-18	8:01	BIN749	Bingo Recycling Pty Ltd
Clyde	16-08-18	8:05	BJB386	Enfield Bulk
Clyde	16-08-18	8:09	CE72ZF	City of Canada Bay Council - Domest
Clyde	16-08-18	8:09	CD26PG	City of Ryde
Clyde	16-08-18	8:14	CK55KT	Enfield RearLift
Clyde	16-08-18	8:21	CD85SC	City of Ryde
Clyde	16-08-18	8:26	URM803	Cumberland Council - Auburn
Clyde	16-08-18	8:30	BY48EG	Sydney Waste Pty Ltd
Clyde	16-08-18	8:31	CD28PG	City of Ryde
Clyde	16-08-18	8:32	CD29PG	City of Ryde
Clyde	16-08-18	8:37	CE57RY	City of Canada Bay Council - Domest
Clyde	16-08-18	8:38	BE15HT	Hornsby Council
Clyde	16-08-18	8:40	CQ59LV	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	8:43	CF65GX	Cumberland Council - Auburn
Clyde	16-08-18	8:58	CE65RY	City of Canada Bay Council - Domest
Clyde	16-08-18	9:00	BZ93HN	City of Ryde
Clyde	16-08-18	9:00	CI27XY	Leichhardt Municipal Council
Clyde	16-08-18	9:01	CK96VW	Fairfield City Council-waste
Clyde	16-08-18	9:03	CN73MI	Ku-ring-gai Council

Clyde	16-08-18	9:03	CN76MI	Ku-ring-gai Council
Clyde	16-08-18	9:03	CN79MI	Ku-ring-gai Council
Clyde	16-08-18	9:04	URM827	Cumberland Council - Auburn
Clyde	16-08-18	9:07	URM811	Cumberland Council - Auburn
Clyde	16-08-18	9:07	CN26MD	Leichhardt Municipal Council
Clyde	16-08-18	9:09	CK93DS	Enfield FrontLift
Clyde	16-08-18	9:10	CG47SH	Hornsby Council
Clyde	16-08-18	9:10	CA38NE	Burwood Council
Clyde	16-08-18	9:13	URM826	Cumberland Council - Auburn
Clyde	16-08-18	9:14	CK29AL	Ashfield Council
Clyde	16-08-18	9:18	CE58RY	City of Canada Bay Council - Domest
Clyde	16-08-18	9:22	URM813	Cumberland Council - Auburn
Clyde	16-08-18	9:23	BS78PZ	Burwood Council
Clyde	16-08-18	9:24	CI68HA	Sydney Waste Pty Ltd
Clyde	16-08-18	9:27	CE39XP	Enfield FrontLift
Clyde	16-08-18	9:31	CP19KQ	Ku-ring-gai Council
Clyde	16-08-18	9:34	URM577	Hunter's Hill Council
Clyde	16-08-18	9:35	5URM	URM Environmental Services Pty Limi
Clyde	16-08-18	9:37	URM832	Cumberland Council - Auburn
Clyde	16-08-18	9:38	URM327	Hunter's Hill Council
Clyde	16-08-18	9:38	CC23RU	Sydney Waste Pty Ltd
Clyde	16-08-18	9:39	URM808	Cumberland Council - Auburn
Clyde	16-08-18	9:43	CK10EJ	Enfield RearLift
Clyde	16-08-18	9:45	BI82JD	Hunter's Hill Council
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Clyde	16-08-18	9:54	CD64NX	Leichhardt Municipal Council
Clyde	16-08-18	9:56	CK72UK	Ku-ring-gai Council
Clyde	16-08-18	9:56	GG109	Hornsby Council
Clyde	16-08-18	9:57	BD86VW	Cumberland Council - Auburn
Clyde	16-08-18	9:57	CL51CZ	Strathfield Municipal Council
Clyde	16-08-18	9:58	URM803	Cumberland Council - Auburn
Clyde	16-08-18	10:04	CQ49QR	Enfield RearLift
Clyde	16-08-18	10:06	CK69TO	Ku-ring-gai Council
Clyde	16-08-18	10:08	CF33PN	City of Canada Bay Council - Domest
Clyde	16-08-18	10:08	BE21KN	Hornsby Council
Clyde	16-08-18	10:11	URM824	Cumberland Council - Auburn
Clyde	16-08-18	10:13	BR68TD	Strathfield Municipal Council
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Clyde	16-08-18	10:14	BL43UN	City of Canada Bay Council - TS&O
Clyde	16-08-18	10:15	CD34SC	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	10:15	CN92MI	Ku-ring-gai Council
Clyde	16-08-18	10:17	4URM	URM Environmental Services Pty Limi
Clyde	16-08-18	10:18	URM841	Cumberland Council - Auburn
Clyde	16-08-18	10:18	BD49ZB	Hornsby Council
Clyde	16-08-18	10:19	BE94DJ	Hornsby Council
Clyde	16-08-18	10:21	CM73SQ	Ku-ring-gai Council
Clyde	16-08-18	10:22	CBB804	Sydney Waste Pty Ltd
Clyde	16-08-18	10:26	BE57KP	Hornsby Council
Clyde	16-08-18	10:29	CE28CW	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	10:29	CP69DL	Strathfield Municipal Council
Clyde	16-08-18	10:30	CN99LG	Ku-ring-gai Council
Clyde	16-08-18	10:30	BE74KO	Hornsby Council
Clyde	16-08-18	10:32	BH77MA	JJ Richards & Sons Pty Ltd

Clyde	16-08-18	10:34	CN98LG	Ku-ring-gai Council
Clyde	16-08-18	10:36	CQ64LO	Fairfield City Council-waste
Clyde	16-08-18	10:36	BL63RQ	Strathfield Municipal Council
Clyde	16-08-18	10:38	BS98WE	Enfield RearLift
Clyde	16-08-18	10:38	CK68TO	Ku-ring-gai Council
Clyde	16-08-18	10:45	BE73KP	Hornsby Council
Clyde	16-08-18	10:50	CG94KY	Sydney Waste Pty Ltd
Clyde	16-08-18	10:51	AV17XT	Enfield FrontLift
Clyde	16-08-18	10:51	CM72SQ	Ku-ring-gai Council
Clyde	16-08-18	10:54	AZ41AD	Enfield RearLift
Clyde	16-08-18	10:55	URM079	URM Environmental Services Pty Limi
Clyde	16-08-18	11:00	URM823	Cumberland Council - Auburn
Clyde	16-08-18	11:02	URM660	URM Environmental Services Pty Limi
Clyde	16-08-18	11:03	CF47UC	Enfield RearLift
Clyde	16-08-18	11:10	URM825	Cumberland Council - Auburn
Clyde	16-08-18	11:12	CN05CG	Enfield FrontLift
Clyde	16-08-18	11:14	BIN762	Bingo Recycling Pty Ltd
Clyde	16-08-18	11:16	BE93DJ	Hornsby Council
Clyde	16-08-18	11:16	BIN699	Bingo Recycling Pty Ltd
Clyde	16-08-18	11:18	CK72TK	Fairfield City Council-waste
Clyde	16-08-18	11:18	CI69WY	Enfield FrontLift
Clyde	16-08-18	11:19	CG03XK	Remondis Australia Pty Ltd
Clyde	16-08-18	11:19	CA25MI	Ashfield Council
Clyde	16-08-18	11:20	BIN635	Bingo Recycling Pty Ltd
Clyde	16-08-18	11:22	CP32YZ	Enfield FrontLift
Clyde	16-08-18	11:24	CL02TB	Sydney Waste Pty Ltd
Clyde	16-08-18	11:24	CI16WF	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	11:25	CK52AL	Ashfield Council
Clyde	16-08-18	11:28	CJ07WC	Enfield FrontLift
Clyde	16-08-18	11:32	CP41NT	Remondis Australia Pty Ltd
Clyde	16-08-18	11:38	BIN734	Bingo Recycling Pty Ltd
Clyde	16-08-18	11:39	BIN784	Bingo Recycling Pty Ltd
Clyde	16-08-18	11:41	URM839	Cumberland Council - Auburn
Clyde	16-08-18	11:45	CL42KU	Enfield RearLift
Clyde	16-08-18	11:45	CL51CZ	Strathfield Municipal Council
Clyde	16-08-18	11:46	BIN703	Bingo Recycling Pty Ltd
Clyde	16-08-18	11:49	URM806	Cumberland Council - Auburn
Clyde	16-08-18	11:50	CD85SC	City of Ryde
Clyde	16-08-18	11:57	CH03VX	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	11:59	CM18AV	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	12:00	CK54KT	Enfield RearLift
Clyde	16-08-18	12:00	BIN677	Bingo Recycling Pty Ltd
Clyde	16-08-18	12:03	VMU428	Sydney Waste Pty Ltd
Clyde	16-08-18	12:13	AB40PW	Sydney Waste Pty Ltd
Clyde	16-08-18	12:17	CD26PG	City of Ryde
Clyde	16-08-18	12:17	CD28PG	City of Ryde
Clyde	16-08-18	12:21	CK27AL	Ashfield Council
Clyde	16-08-18	12:25	CK82CP	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	12:27	CH44YP	JJ Richards & Sons Pty Ltd
Clyde	16-08-18	12:28	BP02LI	Canterbury City Council
Clyde	16-08-18	12:33	BH66RS	City of Ryde
Clyde	16-08-18	12:34	CD29PG	City of Ryde
Clyde	16-08-18	12:40	CF71JM	Sydney Waste Pty Ltd
Clyde	16-08-18	12:40	CM97HV	Sydney Waste Pty Ltd

Clyde	16-08-18	12:43	HWA027	Hydra-Wash Australia Pty Ltd
Clyde	16-08-18	12:43	BA98FZ	Enfield FrontLift
Clyde	16-08-18	12:44	1URM	URM Environmental Services Pty Limi
Clyde	16-08-18	12:45	BZ93HN	City of Ryde
Clyde	16-08-18	12:48	BJ26CR	Cleanaway Pty Ltd
Clyde	16-08-18	12:53	CK93DS	Enfield FrontLift
Clyde	16-08-18	12:54	CF33PN	City of Canada Bay Council - Domest
Clyde	16-08-18	12:55	URM737	Hunter's Hill Council
Clyde	16-08-18	12:58	BIN722	Bingo Recycling Pty Ltd
Clyde	16-08-18	13:05	CAL068	External Bulk - No Jobs Available
Clyde	16-08-18	13:06	AY03LK	Cleanaway Pty Ltd
Clyde	16-08-18	13:17	CN41XN	Sydney Waste Pty Ltd
Clyde	16-08-18	13:21	BE15HT	Hornsby Council
Clyde	16-08-18	13:28	URM474	URM Environmental Services Pty Limi
Clyde	16-08-18	13:28	CK29AL	Ashfield Council
Clyde	16-08-18	13:37	BIN724	Bingo Recycling Pty Ltd
Clyde	16-08-18	13:38	AU57QJ	Enfield FrontLift
Clyde	16-08-18	13:45	CK69TO	Ku-ring-gai Council
Clyde	16-08-18	13:49	CA70MI	Cleanaway Pty Ltd
Clyde	16-08-18	14:06	CA38NE	Burwood Council
Clyde	16-08-18	14:06	CN42UW	Enfield Bulk
Clyde	16-08-18	14:07	CN99LG	Ku-ring-gai Council
Clyde	16-08-18	14:09	URM848	Cumberland Council - Auburn
Clyde	16-08-18	14:12	CE46AG	Enfield FrontLift
Clyde	16-08-18	14:13	CK68TO	Ku-ring-gai Council
Clyde	16-08-18	14:19	CE57RY	City of Canada Bay Council - Domest
Clyde	16-08-18	14:19	CM73SQ	Ku-ring-gai Council
Clyde	16-08-18	14:20	CN98LG	Ku-ring-gai Council
Clyde	16-08-18	14:25	CE65RY	City of Canada Bay Council - Domest
Clyde	16-08-18	14:40	CE58RY	City of Canada Bay Council - Domest
Clyde	16-08-18	14:41	BE93DJ	Hornsby Council
Clyde	16-08-18	14:46	BE74KO	Ashfield Council
Clyde	16-08-18	14:55	BE73KP	Hornsby Council
Clyde	16-08-18	14:55	BD49ZB	Hornsby Council
Clyde	16-08-18	14:56	CF43YF	Enfield Bulk
Clyde	16-08-18	14:57	CB90MM	Cleanaway Pty Ltd
Clyde	16-08-18	15:02	BE57KP	Hornsby Council
Clyde	16-08-18	15:04	CN05CG	Enfield FrontLift
Clyde	16-08-18	15:05	BE21KN	Hornsby Council
Clyde	16-08-18	16:31	4HOOKN	Enfield Bulk
Clyde	16-08-18	16:54	CF43YF	Enfield Bulk
Clyde	16-08-18	17:14	CJ07WC	Enfield FrontLift
Clyde	16-08-18	17:16	CN42UW	Enfield Bulk
Clyde	16-08-18	17:55	BJB386	Enfield Bulk
Clyde	16-08-18	18:16	CN42UW	Enfield Bulk
Clyde	16-08-18	18:16	BA98FZ	Enfield FrontLift
Clyde	16-08-18	19:00	CN42UW	Enfield Bulk
Clyde	16-08-18	19:10	BJB386	Enfield Bulk
Clyde	16-08-18	19:14	CF43YF	External Bulk - No Jobs Available
Clyde	16-08-18	19:35	CO41MK	Leichhardt Municipal Council
Clyde	16-08-18	19:39	CN26MD	Leichhardt Municipal Council
Clyde	16-08-18	19:44	4HOOKN	Enfield Bulk
Clyde	16-08-18	20:00	CK93DS	Enfield FrontLift
Clyde	16-08-18	20:04	CI27XY	Leichhardt Municipal Council

Clyde	16-08-18	20:30	BL54KN	Leichhardt Municipal Council
Clyde	16-08-18	20:30	CD64NX	Leichhardt Municipal Council
Clyde	16-08-18	20:39	BL63SB	Enfield Bulk
Clyde	16-08-18	20:52	CF43YF	External Bulk - No Jobs Available
Clyde	16-08-18	21:00	CD69KW	Enfield FrontLift
Clyde	16-08-18	21:17	URM906	URM Environmental Services Pty Limi
Clyde	16-08-18	21:18	AZ19NY	Bolivia Street Pty Ltd
Clyde	16-08-18	21:21	BL63SB	Enfield Bulk
Clyde	16-08-18	21:21	CK93DS	Enfield FrontLift
Clyde	16-08-18	21:24	BJB386	Enfield Bulk
Clyde	16-08-18	22:03	XN42CY	Enfield RearLift
Clyde	16-08-18	22:18	BL63SB	Enfield Bulk
Clyde	16-08-18	22:56	CJ07WC	Enfield FrontLift
Clyde	16-08-18	23:11	BIN608	Bingo Recycling Pty Ltd
Clyde	16-08-18	23:39	CM87VN	Enfield Bulk
Clyde	16-08-18	23:50	CK93DS	Enfield FrontLift



Appendix D Truck Noise Measurement Field Sheets

Noise Level Measurement Results							
Time	Company	Make	Lift Type	Registration	Exhaust Location	La Max (dBA)	Movement (Y/N)
8:01	Bingo Recycling Pty Ltd	ISUZU	REAR	BIN749	Center Right	83.7	N
8:05	Enfield Bulk	VOLVO	REAR	BJB386	Front Right	73.6	N
8:09	City of Canada Bay Council - Domest	DENNIS	REAR	CE72ZF	Center Right	79.5	N
8:09	City of Ryde	IVECO	SIDE	CD26PG	Front Center	73.7	Y
8:14	Enfield RearLift	ISUZU	REAR	CK55KT	Center Right	75.2	N
8:21	City of Ryde	DENNIS	REAR	CD85SC	Center Right	80.9	N
8:26	Cumberland Council - Auburn	IVECO	SIDE	URM803	Front Right	77.9	N
8:30	Sydney Waste Pty Ltd	ISUZU	FRONT	BY48EG	Front Right	76.9	N
8:31	City of Ryde	IVECO	REAR	CD28PG	Front Right	75.3	N
8:32	City of Ryde	IVECO	SIDE	CD29PG	Front Right	81.1	N
8:37	City of Canada Bay Council - Domest	IVECO	SIDE	CE57RY	Front Right	81.1	N
8:38	Hornsby Council	IVECO	REAR	BE15HT	Front Right	78.7	Y
8:40	JJ Richards & Sons Pty Ltd	DAF	FRONT	CQ59LV		80.3	Y
8:43	Cumberland Council - Auburn	ISUZU	REAR	CF65GX	Center Right	75.2	N
8:58	City of Canada Bay Council - Domest	IVECO	SIDE	CE65RY	Front Right	88.1	N
9:00	City of Ryde	IVECO	SIDE	BZ93HN	Front Right	79.8	N
9:00	Leichardt Municipal Council	HINO	REAR	CI27XY	Center Middle	69.7	Y
9:01	Fairfield City Council-waste	FUSO	REAR	CK96VW	Front Right	74	Y
9:03	Ku-ring-gai Council	MITSUBISHI	REAR	CN73MI		67.3	N
9:03	Ku-ring-gai Council	MITSUBISHI	REAR	CN76MI		67.4	Y
9:03	Ku-ring-gai Council	MITSUBISHI	REAR	CN79MI		68.5	Y
9:04	Cumberland Council - Auburn	IVECO	SIDE	URM827	Front Right	75.4	Y
9:07	Cumberland Council - Auburn	IVECO	REAR	URM811	Front Right	78	Y
9:07	Leichardt Municipal Council	HINO	REAR	CN26MD		76.8	N
9:09	Enfield Frontlift	VOLVO	FRONT	CK93DS	Center Right	74.4	N
9:10	Hornsby Council	HINO	REAR	CG47SH		72.4	Y
9:10	Burwood Council		SIDE	CA38NE	Front Right	76.9	Y
9:13	Cumberland Council - Auburn	IVECO	SIDE	URM826	Front Right	76.4	Y
9:14	Ashfield Council	IVECO	SIDE	CK29AL	Front Right	78.5	Y
9:18	City of Canada Bay Council - Domest	IVECO	SIDE	CE58RY	Front Right	80	N

9:22	Cumberland Council - Auburn	IVECO	REAR	URM813	Front Right	74.9	N
9:23	Burwood Council	IVECO	SIDE	BS78PZ	Center Right	77.9	N
9:24	Sydney Waste Pty Ltd	ISUZU	REAR	CI68HA	Front Left	74.6	N
9:27	Enfield Frontlift	VOLVO	FRONT	CE39XP	Center Right	73	N
9:31	Ku-ring-gai Council	ISUZU	REAR	CP19KQ	Center Right	74.4	N
9:34	Hunter's Hill Council	IVECO	SIDE	URM577	Front Right	80.6	N
9:35	URM Environmental Services Pty Limi	VOLVO	FRONT	5URM		66	Y
9:37	Cumberland Council - Auburn	IVECO	SIDE	URM832	Front Right	79.5	N
9:38	Hunter's Hill Council	IVECO	SIDE	URM327	Front Right	79.2	Y
9:38	Sydney Waste Pty Ltd	IVECO	REAR	CC23RU	Front Right	76.1	Y
9:39	Cumberland Council - Auburn	IVECO	REAR	URM808	Front Right	77.9	Y
9:43	Enfield RearLift	ISUZU	REAR	CK10EJ	Center Right	75.7	N
9:45	Hunter's Hill Council	ISUZU	SM (REAR)	BI82JD	Center Right	75	N
9:47	Bingo Recycling Pty Ltd	ISUZU	FRONT	BIN691	Center Right	72.3	Y
9:49	Hornsby Council	IVECO	REAR	BE11HT	Front Right	80.6	N
9:54	Leichhardt Municipal Council	HINO	REAR	CD64NX	Front Right	78.1	N
9:56	Ku-ring-gai Council	IVECO	SIDE	CK72UK	Front Right	78.4	N
9:56	Hornsby Council	MITSUBISHI	SIDE	GG109		69.4	Y
9:57	Cumberland Council - Auburn	UP	REAR	BD86VW		70.5	Y
9:57	Strathfield Municipal Council		REAR	CL51CZ	Center Right	80.3	N
9:58	Cumberland Council - Auburn	IVECO	SIDE	URM803	Front Right	76.2	N
10:04	Enfield RearLift	IVECO	REAR	CQ49QR	Center Right	72.5	N
10:06	Ku-ring-gai Council	IVECO	REAR	CK69TO	Front Right	76.7	N
10:08	City of Canada Bay Council - Domest	DENNIS	REAR	CF33PN	Front Right	78.3	N
10:08	Hornsby Council	IVECO	SIDE	BE21KN	Front Right	79.1	N
10:11	Cumberland Council - Auburn	IVECO	SIDE	URM824	Front Right	76.5	N
10:13	Strathfield Municipal Council	HINO	SIDE	BR68TD		77	N
10:13	Remondis Australia Pty Ltd	MERCEDES	FRONT	CE74GO		85.4	Y
10:14	City of Canada Bay Council - TS&O	MVO	REAR	BL43UN		66.7	Y
10:15	JJ Richards & Sons Pty Ltd		REAR	CD34SC		82.1	Y
10:15	Ku-ring-gai Council	MITSUBISHI	REAR	CN92MI		69	Y
10:17	URM Environmental Services Pty Limi	IVECO	FRONT	4URM		78.8	Y

10:18	Cumberland Council - Auburn	IVECO	SIDE	URM841	Front Right	78.2	Y
10:18	Hornsby Council	IVECO	SIDE	BD49ZB	Front Right	75.6	Y
10:19	Hornsby Council	IVECO	SIDE	BE94DJ	Front Right	76.2	Y
10:21	Ku-ring-gai Council	IVECO	SIDE	CM73SQ	Front Right	79.2	Y
10:22	Sydney Waste Pty Ltd	VOLVO	REAR	CBB804	Front Right	79.3	Y
11:00	Cumberland Council - Auburn	IVECO	SIDE	URM823	Front Right	83.9	N
11:02	URM Environmental Services Pty Limi	ISUZU	REAR	URM660	Center Right	76.5	N
11:03	Enfield RearLift	ISUZU	REAR	CF47UC	Center Right	73.2	Y
11:10	Cumberland Council - Auburn	ACCO	REAR	URM825	Front Right	78.1	N
11:12	Enfield FrontLift	VOLVO	FRONT	CN05CG	Center Right	83.1	N
11:14	Bingo Recycling Pty Ltd	ISUZU	REAR	BIN762	Center Right	74.7	N
11:16	Hornsby Council	IVECO	SIDE	BE93DJ	Front Right	77.4	N
11:16	Bingo Recycling Pty Ltd	ISUZU	REAR	BIN699	Center Right	68.1	Y
11:18	Fairfield City Council-waste	IVECO	REAR	CK72TK	Front Right	78.7	N
11:18	Enfield FrontLift	VOLVO	FRONT	CI69WY	Center Right	76.1	Y
11:19	Remondis Australia Pty Ltd	HINO	SM (REAR)	CG03XK	Center Right	74.4	Y
11:19	Ashfield Council	ISUZU	REAR	CA25MI	Center Right	70.1	Y
11:20	Bingo Recycling Pty Ltd	ISUZU	REAR	BIN635	Center Right	76	Y
11:22	Enfield FrontLift	VOLVO	FRONT	CP32YZ	Center Right	74.1	Y
11:24	Sydney Waste Pty Ltd	IVECO	REAR	CL02TB	Front Right	77	Y
11:24	JJ Richards & Sons Pty Ltd	HINO	REAR	CI16WF	Center Right	75.2	Y
11:25	Ashfield Council	IVECO	REAR	CK52AL	Front Right	77.1	Y
11:28	Enfield FrontLift	VOLVO	FRONT	CJ07WC	Center Right	74.1	Y
11:32	Remondis Australia Pty Ltd	MAN	REAR	CP41NT	Center Middle	74.1	Y
11:38	Bingo Recycling Pty Ltd	ISUZU	REAR	BIN734	Center Right	76	N
11:39	Bingo Recycling Pty Ltd	ISUZU	REAR	BIN784	Center Right	70.3	N
11:41	Cumberland Council - Auburn	IVECO	SIDE	URM839	Front Right	77.4	Y
11:45	Enfield RearLift	ISUZU	REAR	CL42KU	Center Right	74.1	N
11:45	Strathfield Municipal Council	HINO	REAR	CL51CZ	Center Middle	75	N
11:46	Bingo Recycling Pty Ltd	ISUZU	FRONT	BIN703	Center Right	68	Y
12:21	Ashfield Council	IVECO	SIDE	CK27AL	Front Right	80.7	N
12:25	JJ Richards & Sons Pty Ltd	IVECO	REAR	CK82CP	Front Right	81.9	N

12:27	JJ Richards & Sons Pty Ltd	IVECO	FRONT	CH44YP	Front Right	76.7	N
12:28	Canterbury City Council	DENNIS	REAR	BP02LI	Center Right	80.6	N

12:36	City of Ryde	IVECO	SIDE	BH66RS	Front Right	84.3	N
12:38	City of Ryde	IVECO	SIDE	CD29PG	Front Right	82.5	N

Measured Truck Movements		Total Impeded Truck Movements
98		44
Total Truck Movements - 16.08.2018		Unimpeded Truck Measurements
282		54
Percentage % of Truck Movements measured - 16.08.2018		Total Small Truck Movements
34.75%		2



Appendix E Truck Noise Notification Letter



20 September 2018

Sharon Faulkner – Waste Contract Coordinator
Canada Bay Council
Civic Centre
1A Marlborough St Locked Bag 1470
Drummoyne, NSW 1470

Dear Sharon Faulkner,

As per Clyde Transfer Terminal's Development Consent conditions, annual truck noise monitoring is conducted at Clyde Transfer Terminal.

During our annual monitoring round carried out on 16th August 2018 an exceedance in the noise level criteria (87 dBA) was detected by a Canada Bay Council waste vehicle which was observed at 88.1 dBA.

We are required to notify any customers of exceedances as part of our site's requirements, please find vehicle details below:

Date: 16/08/2018
Time: 08:58 AM
Registration no: CE65RY
Vehicle make: IVECO

Your cooperation in complying with the above condition would be greatly appreciated.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Rod Jones', is written over a dotted line.

.....
Veolia Australia and New Zealand
Rod Jones
Facilities Manager – Clyde and Greenacre



Appendix F Truck Noise Level Exceedance Register

Clyde Truck Noise Level Exceedance Register

Date	Time	Company	Make	Registration Number	LA Max (dBA)	Impeded Movement	Action taken by Veolia
16-08-18	8:58	City of Canada Bay Council	IVECO	CE65RY	88.1	N	Notification letter was sent to the Council informing them of the exceedance.