

Annual Truck Noise Measurements

Clyde Transfer Terminal

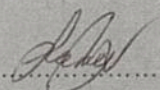
October 2019



Annual Truck Noise Measurements

Quality Information

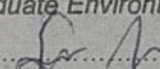
Completed by:


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Mary Wong

Graduate Environmental Engineer – Resource Recovery

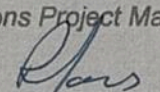
Reviewed by:


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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

Date:

October 2019

Reference:

CTT_TRUCK_1019

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Contents

1. Introduction	6
2. Noise Limit Criteria	7
3. Measurement Methodology	8
4. Noise Measurements Results	9
5. Discussion	10
6. Conclusions	11
7. References	12
Appendix A Truck Noise Monitoring Location	13
Appendix B Sound Level Meter Calibration Certificates	14
Appendix C Weighbridge Records	15
Appendix D Truck Noise Measurement Field Sheets.....	16

List of Figures

Figure 1: Noise level distribution from Truck Noise Monitoring – 22 October 2019	9
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List of Tables

Table 1: LAmax Noise Limits (dBA) – ADR 28/01	7
Table 2: NB class vehicle noise measurements.....	10

Introduction

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 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 fourteenth round of heavy vehicle noise monitoring at the Terminal. Monitoring was completed by Veolia on the 22 October 2019 between 8:12 AM and 11:59 AM, in accordance with the Proposed Test Management Plan (PTMP) developed by Heggies. This is the tenth sampling event and report prepared by Veolia under Condition 112 since assuming the responsibility of monitoring from Heggies.

Noise Limit Criteria

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: LMax 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, LMax noise limits are based on the Gross Vehicle Mass (GVM) and the Net 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 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. This is consistent with the assessment criteria applied by Heggies in previous monitoring rounds.

Measurement Methodology

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 TSI Quest SoundPro SE/DL 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 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 22 October 2019, 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.

Noise Measurement Results

4. Noise Measurements Results

A total of 119 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. Four (4) 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 38.76% of all truck movements (307) 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 64dBA to 83dBA with the highest frequency occurring between 75dBA to 80dBA. Impaired acceleration readings due to the impeded traffic conditions ranged from 71dBA to 75dBA, with the highest frequency occurring 75dBA. Impaired acceleration readings were plotted separately from the normal accelerating vehicles on Figure 1.

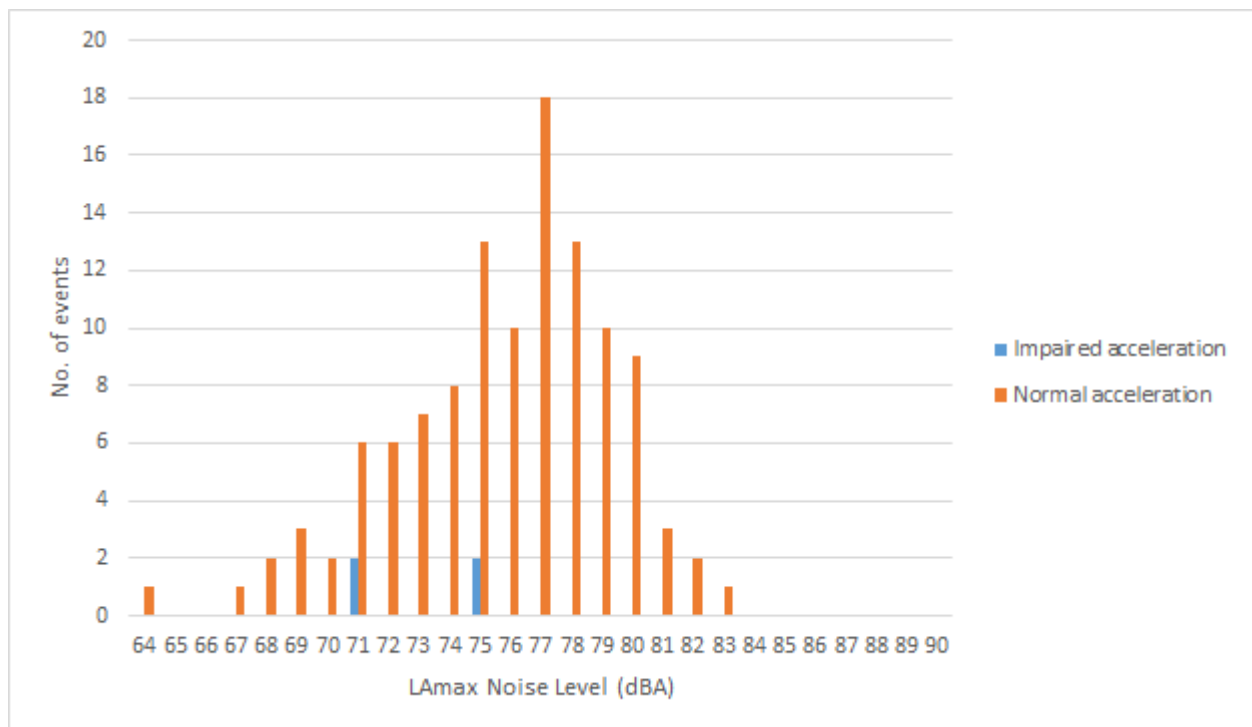


Figure 1: Noise level distribution from Truck Noise Monitoring – 22 October 2019

Discussion

5. Discussion

Comparison of the heavy vehicle noise measurement results against the limits specified in ADR 28/01 (refer to Table 1) indicates that all trucks entering the Terminal in this monitoring round were within the acceptable noise criteria for the NC category vehicles (<87dBA).

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	Cleanaway Pty Ltd	SCANIA		XN09FM	73.4	NO
10:37	Enfield Bulk	ISUZU		4HOOKN	73.1	NO

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 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.

Conclusions

6. Conclusions

Truck noise monitoring was conducted on 22 October 2019 8:12 AM and 11:59 AM. The results indicated:

- Noise from 119 truck movements was measured;
- A total of 38.76% 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.
- All 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.

References

7. References

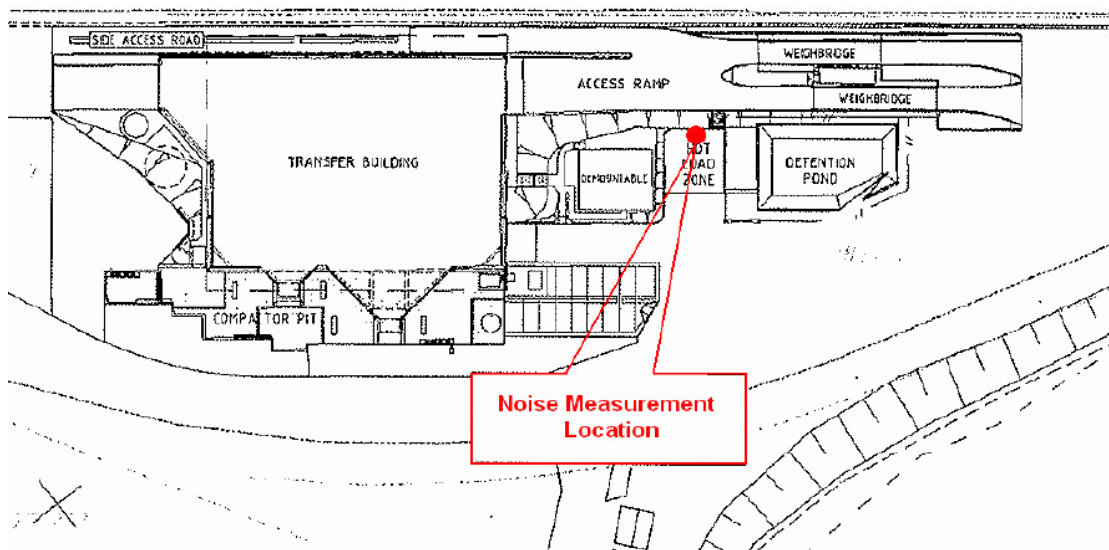
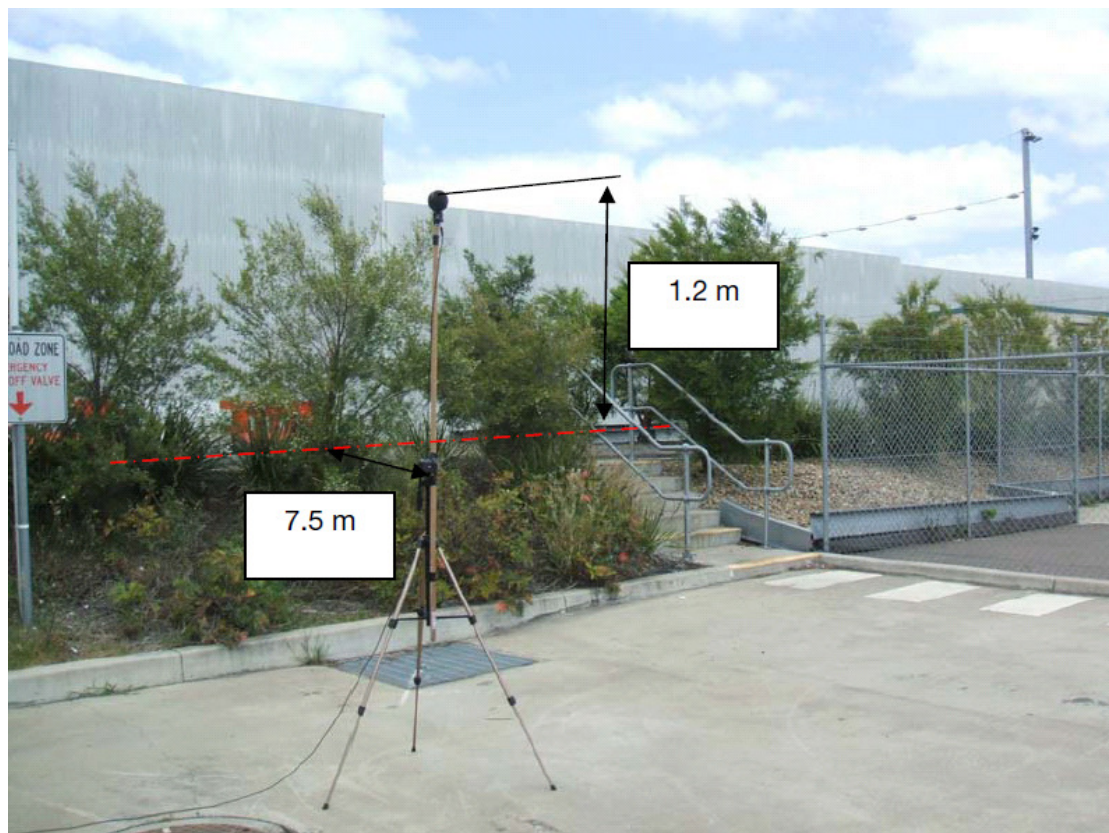
- ADR 28/01 Vehicle Standard Australian Design Rule 28/01 – External Noise of Motor Vehicles), 2006. Federal Register of Legislative Instruments F2006L01279. Australian Government.
- PTMP (2008) Clyde Waste Transfer Facility – Truck Noise Monitoring Proposed Test and Management Plan, 2008. Heggies Pty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

Appendices

Appendix A Truck Noise Monitoring Location



Truck Noise Monitoring Location



Appendices

Appendix B Sound Level Meter Calibration Certificates

Calibration Certificate

AirMet Scientific P/L

135 Sydney Street
Mackay
QLD 4740, Australia
Tel: 07 4951 7500
Fax: 07 4951 7575

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

Certificate Print Date: 9-May-2019

Call ID / Order No: 236882

Calibration Date: 07-May-2019

Job No / Pack No: S2368820001

Next Calibration Due: 7-May-2020

Customer: AMS VIC Rental-ID 399981

Serial No: BLJ090020

Description: Sound Level Meter

Calibration Summary

Frequency: 1 Years Temp: 22°C As Found: Out of Tolerance Result: Pass
Humidity: 45% Certificate: S2368820001

<u>Desc</u>	<u>As Found</u>		<u>As Left (Cal Status)</u>	
	<u>Actual</u>	<u>Result</u>	<u>Actual</u>	<u>Result</u>
114dB	114.2	Pass	114.0	Pass
94dB	94.3	Fail	94.1	Pass

Standard Used			
<u>Equip ID</u>	<u>Description</u>	<u>Valid Until</u>	<u>Cert</u>
901663	GenRad 1986 Omnical Sound Level Calibrator	05/10/2019	20181005-61562

Completed By: Lance Hodda

Signed: 

Sound Level Meter

Instrument **Sound Pro**
Serial No. **BLJ090020**



Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Battery Holder	✓	
	Alkaline Battery	✓	
	Cover	✓	
	Output	✓	
Switch/Keypad	Operation	✓	
Display	Intensity	✓	
	Operation	✓	
Microphone	Type	✓	
	Socket	✓	
	Plug	✓	
PCB	Condition	✓	
Calibrator	Condition	✓	
	Battery Holder	✓	
	IVAC Output	✓	
	Frequency	✓	
A Weighting	Operation	✓	
C Weighting	Operation	✓	
Software	Version		
Datalogger	Operation	✓	
Download	Operation	✓	
Other Tests			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Frequency	dB	Volts AC	Certified	Calibration Equipment	Instrument Reading	
					Before	After
1Khz	114dB	1 Vac		QC10 QIH120145	114.4dB	114.0dB

Calibrated by: Sarah Lian

Calibration date: **21/10/2019**

Next calibration due: **18/04/2020**

Appendices

Appendix C Weighbridge Record

Facility	Date	Time In	Rego No	Customer name
Clyde	22-10-19	00:21	CD69KW	External Bulk - No Jobs Available
Clyde	22-10-19	00:37	BR21TB	External Bulk - No Jobs Available
Clyde	22-10-19	00:46	BL63SB	Enfield Bulk
Clyde	22-10-19	01:02	XN39HQ	Canterbury-Bankstown Council
Clyde	22-10-19	01:04	CK24KZ	Enfield FrontLift
Clyde	22-10-19	01:22	CE66LP	Enfield FrontLift
Clyde	22-10-19	01:23	BIN752	Bingo Recycling Pty Ltd
Clyde	22-10-19	01:29	CL98LU	Sydney Waste Pty Ltd
Clyde	22-10-19	01:30	CQ07CK	Veolia Newcastle Frontlift
Clyde	22-10-19	01:43	XN61FN	Enfield FrontLift
Clyde	22-10-19	01:45	BQ33AB	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	02:00	BIN722	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:02	XN83AX	External Bulk - No Jobs Available
Clyde	22-10-19	02:05	BIN734	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:07	CL91UL	Cleanaway Pty Ltd
Clyde	22-10-19	02:16	BIN635	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:17	CP08NQ	Enfield Bulk
Clyde	22-10-19	02:26	CN73MI	Ku-ring-gai Council
Clyde	22-10-19	02:26	5URM	URM Environmental Services Pty Limi
Clyde	22-10-19	02:27	AO24JO	External Bulk - No Jobs Available
Clyde	22-10-19	02:28	CN76MI	Ku-ring-gai Council
Clyde	22-10-19	02:39	CI01DZ	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	02:47	CD69KW	Enfield FrontLift
Clyde	22-10-19	02:48	BIN762	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:49	BIN724	Bingo Recycling Pty Ltd
Clyde	22-10-19	02:56	CL85CO	Enfield Bulk
Clyde	22-10-19	02:59	CN79MI	Ku-ring-gai Council
Clyde	22-10-19	03:13	BL63SB	Enfield Bulk
Clyde	22-10-19	03:16	CAL068	Enfield RearLift
Clyde	22-10-19	03:23	BK19BD	Enfield Bulk
Clyde	22-10-19	03:36	GOTOG8	VES/Greenacre
Clyde	22-10-19	03:36	URM406	URM Environmental Services Pty Limi
Clyde	22-10-19	03:48	CM18AV	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	03:54	AF38AL	Capital City Waste Services Pty Ltd
Clyde	22-10-19	04:00	BD95ZZ	Enfield RearLift
Clyde	22-10-19	04:08	CN76MI	Ku-ring-gai Council
Clyde	22-10-19	04:21	URM660	URM Environmental Services Pty Limi
Clyde	22-10-19	04:29	CH22SK	Sydney Waste Pty Ltd
Clyde	22-10-19	04:33	URM817	Cumberland Council - Auburn
Clyde	22-10-19	04:39	URM811	Cumberland Council - Auburn
Clyde	22-10-19	04:45	CN73MI	Ku-ring-gai Council
Clyde	22-10-19	04:47	CJ65PS	Sydney Waste Pty Ltd
Clyde	22-10-19	04:48	CP44NP	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	04:53	XN42CY	Enfield RearLift
Clyde	22-10-19	05:05	XN14AS	Loumbos Exports Pty Ltd

Clyde	22-10-19	05:08	BL82AG	Sydney Waste Pty Ltd
Clyde	22-10-19	05:08	CL85CO	Enfield Bulk
Clyde	22-10-19	05:09	XN15BC	Enfield FrontLift
Clyde	22-10-19	05:11	CL78JV	Enfield RearLift
Clyde	22-10-19	05:15	GOTOG8	VES/Greenacre
Clyde	22-10-19	05:16	XN49CY	Enfield RearLift
Clyde	22-10-19	05:26	BIN814	Bingo Recycling Pty Ltd
Clyde	22-10-19	05:27	BIN727	Bingo Recycling Pty Ltd
Clyde	22-10-19	05:29	BIN784	Bingo Recycling Pty Ltd
Clyde	22-10-19	05:30	CC23RU	Sydney Waste Pty Ltd
Clyde	22-10-19	05:36	ISTINK	Remondis Australia Pty Ltd
Clyde	22-10-19	05:45	CO84BV	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	05:50	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	06:07	CP03AT	Canterbury-Bankstown Council
Clyde	22-10-19	06:08	XN72BC	Canterbury-Bankstown Council
Clyde	22-10-19	06:09	CC18DN	Canterbury-Bankstown Council
Clyde	22-10-19	06:14	CP80RB	Canterbury-Bankstown Council
Clyde	22-10-19	06:18	STINKS	External Bulk - No Jobs Available
Clyde	22-10-19	06:21	XN44ML	Canterbury-Bankstown Council
Clyde	22-10-19	06:22	URM811	Cumberland Council - Auburn
Clyde	22-10-19	06:29	XN23JX	Canterbury-Bankstown Council
Clyde	22-10-19	06:31	CP02AT	Canterbury-Bankstown Council
Clyde	22-10-19	06:32	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	06:32	XQ93EY	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	06:33	CK24KZ	Enfield FrontLift
Clyde	22-10-19	06:34	CB10ZY	Canterbury-Bankstown Council
Clyde	22-10-19	06:35	XN15KU	Canterbury-Bankstown Council
Clyde	22-10-19	06:41	URM827	Cumberland Council - Auburn
Clyde	22-10-19	06:57	CH89NS	Canterbury-Bankstown Council
Clyde	22-10-19	07:04	URM406	URM Environmental Services Pty Limi
Clyde	22-10-19	07:07	URM840	Cumberland Council - Auburn
Clyde	22-10-19	07:09	URM821	Cumberland Council - Auburn
Clyde	22-10-19	07:16	CN79MI	Ku-ring-gai Council
Clyde	22-10-19	07:16	URM814	Cumberland Council - Auburn
Clyde	22-10-19	07:22	XQ93AE	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	07:25	BIN849	Bingo Recycling Pty Ltd
Clyde	22-10-19	07:28	URM819	Cumberland Council - Auburn
Clyde	22-10-19	07:32	XN69LJ	Hornsby Council
Clyde	22-10-19	07:35	CI69WY	Enfield FrontLift
Clyde	22-10-19	07:37	YRT604	Viking Waste Services Pty Ltd
Clyde	22-10-19	07:39	CF33PN	City of Canada Bay Council - Domestic
Clyde	22-10-19	07:43	CH53RO	Canterbury-Bankstown Council
Clyde	22-10-19	07:46	URM841	Cumberland Council - Auburn
Clyde	22-10-19	07:47	XN35EB	Burwood Council
Clyde	22-10-19	07:52	XN00KT	Hornsby Council
Clyde	22-10-19	07:53	CN76MI	Ku-ring-gai Council

Clyde	22-10-19	07:54	CG47SH	Hornsby Council
Clyde	22-10-19	07:57	URM811	Cumberland Council - Auburn
Clyde	22-10-19	08:12	URM805	Cumberland Council - Auburn
Clyde	22-10-19	08:12	XN75MK	City of Ryde
Clyde	22-10-19	08:14	CN73MI	Ku-ring-gai Council
Clyde	22-10-19	08:15	CN65YN	City of Ryde
Clyde	22-10-19	08:16	XQ81GB	Burwood Council
Clyde	22-10-19	08:23	BH97MA	City of Canada Bay Council - Domestic
Clyde	22-10-19	08:26	BP01LI	Canterbury-Bankstown Council
Clyde	22-10-19	08:27	CQ49QR	Enfield RearLift
Clyde	22-10-19	08:28	CB46UN	City of Ryde
Clyde	22-10-19	08:28	CL51CZ	Strathfield Municipal Council
Clyde	22-10-19	08:31	4HOOKN	Enfield Bulk
Clyde	22-10-19	08:34	XN26KZ	External Bulk - No Jobs Available
Clyde	22-10-19	08:37	CK69TO	Ku-ring-gai Council
Clyde	22-10-19	08:38	URM808	Cumberland Council - Auburn
Clyde	22-10-19	08:39	CD28PG	City of Ryde
Clyde	22-10-19	08:44	CP70DL	Strathfield Municipal Council
Clyde	22-10-19	08:44	XN72BC	Canterbury-Bankstown Council
Clyde	22-10-19	08:47	CP19KQ	Ku-ring-gai Council
Clyde	22-10-19	08:48	CP03AT	Canterbury-Bankstown Council
Clyde	22-10-19	08:49	CF65GX	Cumberland Council - Auburn
Clyde	22-10-19	08:50	CE72ZF	City of Canada Bay Council - Domestic
Clyde	22-10-19	08:51	CO41MK	Leichhardt Municipal Council
Clyde	22-10-19	08:52	CD29PG	City of Ryde
Clyde	22-10-19	08:52	VMU428	Sydney Waste Pty Ltd
Clyde	22-10-19	08:53	CM18AV	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	08:56	CD26PG	City of Ryde
Clyde	22-10-19	08:58	BL54KN	Leichhardt Municipal Council
Clyde	22-10-19	09:00	URM827	Cumberland Council - Auburn
Clyde	22-10-19	09:00	CN92MI	Ku-ring-gai Council
Clyde	22-10-19	09:01	XQ82GB	Burwood Council
Clyde	22-10-19	09:01	BF40CG	Ashfield Council
Clyde	22-10-19	09:02	URM823	Cumberland Council - Auburn
Clyde	22-10-19	09:02	CK52AL	Canterbury-Bankstown Council
Clyde	22-10-19	09:03	XN44ML	Canterbury-Bankstown Council
Clyde	22-10-19	09:05	CD64NX	Leichhardt Municipal Council
Clyde	22-10-19	09:05	CK96VW	Fairfield City Council-waste
Clyde	22-10-19	09:10	URM841	Cumberland Council - Auburn
Clyde	22-10-19	09:10	CC18DN	Canterbury-Bankstown Council
Clyde	22-10-19	09:13	CE65RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	09:13	CM57DM	Strathfield Municipal Council
Clyde	22-10-19	09:13	XN49HD	City of Canada Bay Council - TS&O
Clyde	22-10-19	09:17	CE58RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	09:21	CP80RB	Canterbury-Bankstown Council
Clyde	22-10-19	09:22	BX97ZK	Sydney Waste Pty Ltd

Clyde	22-10-19	09:22	XN23JX	Canterbury-Bankstown Council
Clyde	22-10-19	09:23	XN72LJ	Hornsby Council
Clyde	22-10-19	09:27	URM989	URM Environmental Services Pty Limi
Clyde	22-10-19	09:28	XN15KU	Canterbury-Bankstown Council
Clyde	22-10-19	09:29	CD85SC	City of Ryde
Clyde	22-10-19	09:29	CK27AL	Ashfield Council
Clyde	22-10-19	09:33	CN26MD	Leichhardt Municipal Council
Clyde	22-10-19	09:34	AP71YU	Hornsby Council
Clyde	22-10-19	09:34	CP02AT	Canterbury-Bankstown Council
Clyde	22-10-19	09:35	CL43KU	Enfield RearLift
Clyde	22-10-19	09:40	CN79MI	Ku-ring-gai Council
Clyde	22-10-19	09:40	XQ83GB	Burwood Council
Clyde	22-10-19	09:42	XN09FM	Cleanaway Pty Ltd
Clyde	22-10-19	09:45	CB10ZY	Canterbury-Bankstown Council
Clyde	22-10-19	09:45	CK10EJ	Enfield RearLift
Clyde	22-10-19	09:48	CF33PN	City of Canada Bay Council - Domestic
Clyde	22-10-19	09:53	CH53RO	Canterbury-Bankstown Council
Clyde	22-10-19	09:54	CM75VP	URM Environmental Services Pty Limi
Clyde	22-10-19	09:55	XN62FN	Enfield FrontLift
Clyde	22-10-19	09:59	CQ59LV	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	10:02	CK68TO	Ku-ring-gai Council
Clyde	22-10-19	10:04	CK41CQ	Cumberland Council - Auburn
Clyde	22-10-19	10:06	CQ64LO	Fairfield City Council-waste
Clyde	22-10-19	10:07	CF71JM	Sydney Waste Pty Ltd
Clyde	22-10-19	10:08	CL42KU	Enfield RearLift
Clyde	22-10-19	10:13	XN60GO	Enfield FrontLift
Clyde	22-10-19	10:15	CM72SQ	Ku-ring-gai Council
Clyde	22-10-19	10:15	CK72UK	Ku-ring-gai Council
Clyde	22-10-19	10:17	5URM	URM Environmental Services Pty Limi
Clyde	22-10-19	10:17	XN90LJ	Hornsby Council
Clyde	22-10-19	10:18	URM049	URM Environmental Services Pty Limi
Clyde	22-10-19	10:18	1HA3AK	Hornsby Council
Clyde	22-10-19	10:22	URM840	Cumberland Council - Auburn
Clyde	22-10-19	10:23	CC23RU	Sydney Waste Pty Ltd
Clyde	22-10-19	10:24	XN07KT	Hornsby Council
Clyde	22-10-19	10:24	XN70LJ	Hornsby Council
Clyde	22-10-19	10:26	XN25GD	Sydney Waste Pty Ltd
Clyde	22-10-19	10:29	CH89NS	Canterbury-Bankstown Council
Clyde	22-10-19	10:30	XN16KT	Hornsby Council
Clyde	22-10-19	10:30	CP61YV	Strathfield Municipal Council
Clyde	22-10-19	10:31	CJ32RX	Fairfield City Council-waste
Clyde	22-10-19	10:36	4HOOKN	Enfield Bulk
Clyde	22-10-19	10:37	CF47UC	Enfield RearLift
Clyde	22-10-19	10:43	CN99LG	Ku-ring-gai Council
Clyde	22-10-19	10:43	CN98LG	Ku-ring-gai Council
Clyde	22-10-19	10:44	CM73SQ	Ku-ring-gai Council

Clyde	22-10-19	10:47	XN32FK	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	10:49	CD04PE	City of Ryde
Clyde	22-10-19	10:50	3URM	URM Environmental Services Pty Limi
Clyde	22-10-19	10:50	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	10:52	CL51CZ	Strathfield Municipal Council
Clyde	22-10-19	10:55	BU62QK	Cumberland Council - Auburn
Clyde	22-10-19	10:57	URM819	Cumberland Council - Auburn
Clyde	22-10-19	10:58	4URM	URM Environmental Services Pty Limi
Clyde	22-10-19	10:59	CG47SH	Hornsby Council
Clyde	22-10-19	11:02	CK24KZ	Enfield FrontLift
Clyde	22-10-19	11:04	URM327	Hunter's Hill Council
Clyde	22-10-19	11:07	CBB804	Sydney Waste Pty Ltd
Clyde	22-10-19	11:08	BV96PW	Fairfield City Council-waste
Clyde	22-10-19	11:11	XN29EW	Loumbos Exports Pty Ltd
Clyde	22-10-19	11:11	URM808	Cumberland Council - Auburn
Clyde	22-10-19	11:14	URM906	URM Environmental Services Pty Limi
Clyde	22-10-19	11:25	CI01DZ	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	11:27	CK34SQ	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	11:30	URM427	URM Environmental Services Pty Limi
Clyde	22-10-19	11:30	CM16SR	Strathfield Municipal Council
Clyde	22-10-19	11:37	CL98LU	Sydney Waste Pty Ltd
Clyde	22-10-19	11:37	CE28GN	Cumberland Council - Auburn
Clyde	22-10-19	11:39	BI82JD	Hunter's Hill Council
Clyde	22-10-19	11:39	AP70YU	Hornsby Council
Clyde	22-10-19	11:44	URM393	Hunter's Hill Council
Clyde	22-10-19	11:45	URM814	Cumberland Council - Auburn
Clyde	22-10-19	11:46	XN13KR	Sydney Waste Pty Ltd
Clyde	22-10-19	11:53	BIN766	Bingo Recycling Pty Ltd
Clyde	22-10-19	11:53	XN75CW	Wanless Waste Management Pty Ltd
Clyde	22-10-19	11:59	XN35EB	Burwood Council
Clyde	22-10-19	12:02	CD28PG	City of Ryde
Clyde	22-10-19	12:02	CD26PG	City of Ryde
Clyde	22-10-19	12:03	CL02TB	Sydney Waste Pty Ltd
Clyde	22-10-19	12:03	CD29PG	City of Ryde
Clyde	22-10-19	12:07	ISTINK	Remondis Australia Pty Ltd
Clyde	22-10-19	12:09	XN19IN	Sydney Waste Pty Ltd
Clyde	22-10-19	12:10	CN05CG	Enfield FrontLift
Clyde	22-10-19	12:11	BQ26AB	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	12:15	BIN762	Bingo Recycling Pty Ltd
Clyde	22-10-19	12:17	BIN813	Bingo Recycling Pty Ltd
Clyde	22-10-19	12:19	CN41XN	Sydney Waste Pty Ltd
Clyde	22-10-19	12:20	BP01LI	Canterbury-Bankstown Council
Clyde	22-10-19	12:23	XN34EB	JJ Richards & Sons Pty Ltd
Clyde	22-10-19	12:24	BH97MA	City of Canada Bay Council - Domest
Clyde	22-10-19	12:25	CL78JV	Enfield RearLift
Clyde	22-10-19	12:26	BIN850	Bingo Recycling Pty Ltd

Clyde	22-10-19	12:31	URM814	Cumberland Council - Auburn
Clyde	22-10-19	12:36	CD85SC	City of Ryde
Clyde	22-10-19	12:38	BIN699	Bingo Recycling Pty Ltd
Clyde	22-10-19	12:39	4HOOKN	Enfield Bulk
Clyde	22-10-19	12:44	URM474	URM Environmental Services Pty Limi
Clyde	22-10-19	12:52	CP70DL	Strathfield Municipal Council
Clyde	22-10-19	12:53	CL51CZ	Strathfield Municipal Council
Clyde	22-10-19	13:01	CM57DM	Strathfield Municipal Council
Clyde	22-10-19	13:02	CM16SR	Strathfield Municipal Council
Clyde	22-10-19	13:07	ZJH325	Hornsby Council
Clyde	22-10-19	13:13	CK72UK	Ku-ring-gai Council
Clyde	22-10-19	13:14	BIN849	Bingo Recycling Pty Ltd
Clyde	22-10-19	13:14	XN35EB	Burwood Council
Clyde	22-10-19	13:15	XN00KT	Hornsby Council
Clyde	22-10-19	13:18	CK68TO	Ku-ring-gai Council
Clyde	22-10-19	13:18	BJB386	Enfield Bulk
Clyde	22-10-19	13:21	CE72ZF	City of Canada Bay Council - Domestic
Clyde	22-10-19	13:23	BA98FZ	Enfield FrontLift
Clyde	22-10-19	13:24	URM823	Cumberland Council - Auburn
Clyde	22-10-19	13:29	CE58RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	13:31	CD04PE	City of Ryde
Clyde	22-10-19	13:37	URM827	Cumberland Council - Auburn
Clyde	22-10-19	13:41	CM72SQ	Ku-ring-gai Council
Clyde	22-10-19	13:49	CN99LG	Ku-ring-gai Council
Clyde	22-10-19	13:51	CK29AL	Ashfield Council
Clyde	22-10-19	13:51	CE46AG	Enfield FrontLift
Clyde	22-10-19	13:54	URM041	Hunter's Hill Council
Clyde	22-10-19	13:55	XN96LU	Enfield Bulk
Clyde	22-10-19	14:00	GTG004	VES/Greenacre
Clyde	22-10-19	14:02	CE65RY	City of Canada Bay Council - Domestic
Clyde	22-10-19	14:03	CN98LG	Ku-ring-gai Council
Clyde	22-10-19	14:04	CG47SH	Hornsby Council
Clyde	22-10-19	14:14	CE66LP	Enfield FrontLift
Clyde	22-10-19	14:16	CK27AL	Ashfield Council
Clyde	22-10-19	14:29	XN69LA	Wanless Waste Management Pty Ltd
Clyde	22-10-19	14:39	URM820	Cumberland Council - Auburn
Clyde	22-10-19	14:41	URM819	Cumberland Council - Auburn
Clyde	22-10-19	14:52	AP70YU	Hornsby Council
Clyde	22-10-19	14:52	BT80CL	Cumberland Council - Auburn
Clyde	22-10-19	14:54	BP01LI	Canterbury-Bankstown Council
Clyde	22-10-19	14:55	BP02LI	Canterbury-Bankstown Council
Clyde	22-10-19	15:10	XN72LJ	Hornsby Council
Clyde	22-10-19	15:12	BX77NO	Enfield FrontLift
Clyde	22-10-19	15:21	XN90LJ	Hornsby Council
Clyde	22-10-19	15:24	URM823	Cumberland Council - Auburn
Clyde	22-10-19	15:26	XN70LJ	Hornsby Council

Clyde	22-10-19	15:29	BV22EK	Enfield Bulk
Clyde	22-10-19	15:35	XN16KT	Hornsby Council
Clyde	22-10-19	15:45	CM46GT	URM Environmental Services Pty Limi
Clyde	22-10-19	15:53	BIN671	Bingo Recycling Pty Ltd
Clyde	22-10-19	16:07	1HA3AK	Hornsby Council
Clyde	22-10-19	17:36	BA98FZ	External Bulk - No Jobs Available
Clyde	22-10-19	17:57	XN96LU	Enfield Bulk
Clyde	22-10-19	18:46	BV22EK	Enfield Bulk
Clyde	22-10-19	19:15	BL63SB	Enfield Bulk
Clyde	22-10-19	19:16	BIN725	Bingo Recycling Pty Ltd
Clyde	22-10-19	19:16	XN96LU	Enfield Bulk
Clyde	22-10-19	19:42	CD64NX	Leichhardt Municipal Council
Clyde	22-10-19	19:46	CO41MK	Leichhardt Municipal Council
Clyde	22-10-19	19:49	XN83AX	External Bulk - No Jobs Available
Clyde	22-10-19	19:51	BIN796	Bingo Recycling Pty Ltd
Clyde	22-10-19	20:15	CD69KW	Enfield FrontLift
Clyde	22-10-19	20:28	BL63SB	Enfield Bulk
Clyde	22-10-19	20:37	CN26MD	Leichhardt Municipal Council
Clyde	22-10-19	20:57	CK24KZ	Enfield FrontLift
Clyde	22-10-19	21:45	XN96LU	Enfield Bulk
Clyde	22-10-19	21:49	XN42CY	Enfield RearLift
Clyde	22-10-19	21:57	BL63SB	Enfield Bulk
Clyde	22-10-19	22:02	BIN727	Bingo Recycling Pty Ltd
Clyde	22-10-19	22:09	BV22EK	Enfield Bulk
Clyde	22-10-19	22:16	BQ33AB	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	22:17	XN49CY	Enfield RearLift
Clyde	22-10-19	22:27	BY56EK	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	22:40	CE66LP	Enfield FrontLift
Clyde	22-10-19	22:46	XN51GJ	Doyle Bros t/a Faralga Pty Ltd
Clyde	22-10-19	23:21	XN96LU	Enfield Bulk
Clyde	22-10-19	23:39	AZ19NY	Zero Waste Management Pty Ltd
Clyde	22-10-19	23:48	BV22EK	Enfield Bulk

Appendices

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)	Comments
8:12	Cumberland council	IVECO	Side	URM 805	Front Right	78.9	No	
8:14	City of Ryde	IVECO	Side	XN75MK		78.7	No	
8:15	Ku-ring-gai Council	FUSO	Rear	CN73MI		68.9	No	
8:16	City of Ryde	IVECO	Side	CN65YN	Front Right	78.9	No	
8:23	Burwood Council		Side	XQ81GB	Front Right	71.1	No	
8:26	City of Canada Bay Council - Domestic	IVECO	Side	BH97MA	Front Right	80	No	
8:27	Canterbury - Bankstown Council	DENNIS	Rear	BP01LI	Front Right	75	No	
8:28	Enfield RearLift	ISUZU	Rear	CQ49QR	Side	68.2	No	
8:28	City of Ryde	ISUZU	Rear	CB46UN		75.6	No	
8:31	Strathfield Municipal Council	HINO	Rear	CL51CZ	Side	74.6	No	
8:34	Enfield Bulk	ISUZU		4HOOKN		68.3	No	
8:37	External Bulk	ISUZU	Rear	XN26KZ	Side	76.9	No	
8:38	Ku-ring-gai Council	IVECO	Side	CK69TO	Front Right	76.7	No	
8:39	Cumberland council - Auburn	IVECO	Side	URM808	Front Right	81.4	No	
8:44	City of Ryde	IVECO	Side	CD28PG	Front Right	75.3	No	
8:44	Strathfield Municipal Council	HINO	Side	CP70DL		82.9	No	
8:47	Canterbury - Bankstown Council	IVECO	Rear	XN72BC		79.2	No	
8:48	Ku-ring-gai Council	ISUZU	Rear	CP19KQ		77.4	No	
8:49	Canterbury - Bankstown Council	IVECO	Rear	CP03AT	Front Right	79.2	No	
8:50	Cumberland council - Auburn	ISUZU	Rear	CF65GX		71.7	No	
8:51	City of Canada Bay Council - Domestic	DENNIS	Rear	CE72ZF	Side	75.1	No	
8:52	Leichhardt Municipal Council	HINO	Rear	CO41MK	Side	71.8	No	
8:52	City of Ryde	IVECO	Side	CD29PG	Front Right	76.9	No	
8:53	Sydney Waste Pty Ltd		Rear	VMU428	Front Right	77	No	
8:56	JJ Richards & Sons Pty Ltd	DENNIS	Rear	CM18AV		78.1	No	
8:58	City of Ryde	IVECO	Side	CD26PG	Front Right	78.7	No	
9:00	Leichhardt Municipal Council	HINO	Rear	BL54KN		75	No	
9:00	Cumberland council - Auburn	IVECO	Rear	URM827	Front Right	78	No	
9:01	Ku-ring-gai Council	FUSO	Rear	CN92MI		74	No	
9:01	Burwood Council	VOLVO	Side	XQ82GB		75.1	No	

9:02	Ashfield Council			BF40CG		75	No	
9:02	Cumberland Council - Auburn	IVECO	Side	URM823	Front Right	72.3	No	
9:03	Canterbury-Bankstown Council	IVECO	Rear	CK52AL	Front Center	74.8	Yes	
9:05	Canterbury-Bankstown Council	IVECO	Rear	XN44ML	Front Center	75.1	Yes	
9:05	Leichhardt Municipal Council	HINO	Rear	CD64NX		70.5	Yes	
9:10	Fairfield City Council-waste	FUSO	Rear	CK96VW	Front Right	64.1	No	
9:10	Cumberland Council - Auburn	IVECO	Side	URM841	Front Right	75.5	No	
9:13	Canterbury-Bankstown Council	IVECO	Side	CC18DN	Front Right	81.2	No	
9:13	City of Canada Bay Council - Domestic	IVECO	Rear	CE65RY	Front Right	80.2	No	
9:13	Strathfield Municipal Council			CM57DM		73.3	No	
9:17	City of Canada Bay Council - TS&O	HINO	Rear	XN49HD		73.6	No	
9:21	City of Canada Bay Council - Domestic	IVECO	Side	CE58RY	Front Right	73.5	No	
9:22	Canterbury-Bankstown Council	IVECO	Side	CP80RB	Front Right	79.8	No	
9:22	Sydney Waste Pty Ltd	IVECO	Rear	BX97ZK		77.1	No	
9:23	Canterbury-Bankstown Council		Rear	XN23JX	Front Right	78.3	No	
9:27	Hornsby Council			XN72LJ	Front Right	74.8	No	
9:28	URM Environmental Services Pty Limi	ISUZU	Rear	URM989	Side	71.9	No	
9:29	Canterbury-Bankstown Council	IVECO		XN15KU	Front Right	80.1	No	
9:29	City of Ryde	DENNIS	Rear	CD85SC	Side	73.8	No	
9:33	Ashfield Council	IVECO	Side	CK27AL		74.9	No	
9:34	Leichhardt Municipal Council	HINO	Rear	CN26MD		79.6	No	
9:34	Hornsby Council	IVECO	Rear	AP71YU	Front Right	74.9	No	
9:35	Canterbury-Bankstown Council	IVECO	Side	CP02AT	Front Right	80.2	No	
9:40	Enfield RearLift	ISUZU	Rear	CL43KU		73.9	No	
9:40	Ku-ring-gai Council	FUSO	Rear	CN79MI		70	No	
9:42	Burwood Council	VOLVO	Side	XQ83GB	Side	75.9	No	
9:45	Cleanaway Pty Ltd	SCANIA		XN09FM		73.4	No	Small Truck with skip bin
9:45	Canterbury-Bankstown Council	IVECO	Side	CB10ZY	Front Right	81.5	No	
9:48	Enfield RearLift	ISUZU	Rear	CK10EJ		72.9	No	
9:53	City of Canada Bay Council - Domestic	DENNIS	Rear	CF33PN		80.4	No	
9:54	Canterbury-Bankstown Council	IVECO	Side	CH53RO	Front Right	73.5	No	
9:55	URM Environmental Services Pty Limi	ISUZU	Rear	CM75VP		70.2	No	

9:59	Enfield FrontLift	VOLVO	Front	XN62FN		75	No	
10:02	JJ Richards & Sons Pty Ltd	DENNIS	Front	CQ59LV		77.9	No	
10:04	Ku-ring-gai Council	IVECO	Side	CK68TO	Front Right	78.4	No	
10:06	Cumberland Council - Auburn	ISUZU	Rear	CK41CQ	Center	70.5	No	
10:07	Fairfield City Council-waste	FUSO	Rear	CQ64LO	Center	68.9	No	
10:08	Sydney Waste Pty Ltd	ACCO	Rear	CF71JM	Front Right	79.7	No	
10:13	Enfield RearLift	ISUZU	Rear	CL42KU		76.9	No	
10:15	Enfield FrontLift	VOLVO	Front	XN60GO		75.7	No	
10:15	Ku-ring-gai Council	IVECO	Side	CM72SQ	Front Right	77	No	
10:17	Ku-ring-gai Council	IVECO	Side	CK72UK		67.4	No	
10:17	URM Environmental Services Pty Limi	VOLVO	Front	5URM		76.3	No	
10:18	Hornsby Council	IVECO	Side	XN90LJ	Front Right	77	No	
10:18	URM Environmental Services Pty Limi	HINO	Rear	URM049		70.6	Yes	
10:22	Hornsby Council	IVECO	Side	1HA3AK	Center	75.2	No	
10:23	Cumberland Council - Auburn	IVECO	Side	URM840	Front Center	78.8	No	
10:24	Sydney Waste Pty Ltd	ACCO	Rear	CC23RU	Front Right	76.7	No	
10:24	Hornsby Council	IVECO	Side	XN07KT	Front Right	77.8	No	
10:26	Hornsby Council	IVECO	Side	XN70LJ		79.6	No	
10:29	Sydney Waste Pty Ltd	ISUZU	Front	XN25GD		75.2	No	
10:30	Canterbury-Bankstown Council	IVECO	Side	CH89NS	Front Right	81.7	No	
10:30	Hornsby Council	IVECO	Side	XN16KT	Front Right	78.6	No	
10:31	Strathfield Municipal Council		Rear	CP61YV		70.6	No	
10:36	Fairfield City Council-waste	ISUZU	Side	CJ32RX		71.2	No	
10:37	Enfield Bulk	ISUZU		4HOOKN		73.1	No	Small Truck
10:43	Enfield RearLift	ISUZU	Rear	CF47UC		73.2	No	
10:43	Ku-ring-gai Council	IVECO	Side	CN99LG	Front Right	78.5	No	
10:44	Ku-ring-gai Council	IVECO	Side	CN98LG	Front Right	77.6	No	
10:47	Ku-ring-gai Council	IVECO	Side	CM73SQ	Front Right	78.1	No	
10:49	JJ Richards & Sons Pty Ltd	DENNIS	Rear	XN32FK	Front Right	71.1	No	
10:50	City of Ryde	IVECO	Side	CD04PE	Front Right	76.5	No	
10:50	URM Environmental Services Pty Limi	IVECO	Front	3URM		78.2	No	
10:52	URM Environmental Services Pty Limi	VOLVO		CM46GT	Front Right	76.3	No	

10:55	Strathfield Municipal Council	HINO	Rear	CL51CZ		77.3	No	
10:57	Cumberland Council - Auburn	HINO	Rear	BU62QK		71.7	No	
10:58	Cumberland Council - Auburn	IVECO	Side	URM819	Front Right	80.7	No	
10:59	URM Environmental Services Pty Limi	IVECO	Front	4URM		75.6	No	
11:02	Hornsby Council		Rear	CG47SH		69.3	No	
11:04	Enfield FrontLift	IVECO	Front	CK24KZ		74.4	No	
11:07	Hunter's Hill Council	ACCO	Side	URM327	Front Right	73.1	No	
11:08	Sydney Waste Pty Ltd		Rear	CBB804	Front Right	77.8	No	
11:11	Fairfield City Council-waste	IVECO	Rear	BV96PW	Front Right	76	No	
11:11	Loumbos Exports Pty Ltd	SCANIA	Front	XN29EW		77.1	No	
11:14	Cumberland Council - Auburn			URM808		78.3	No	
11:25	Doyle Bros t/a Faralga Pty Ltd	IVECO	Front	CI01DZ		78.4	No	
11:27	JJ Richards & Sons Pty Ltd	DENNIS	Rear	CK34SQ		77.2	No	
11:30	URM Environmental Services Pty Limi	SCANIA	Rear	URM427		76.7	No	
11:30	Strathfield Municipal Council	IVECO	Side	CM16SR		73.8	No	
11:37	Sydney Waste Pty Ltd	IVECO	Rear	CL98LU	Front Right	76.6	No	
11:37	Cumberland Council - Auburn	IVECO	Rear	CE28GN	Side	72.2	No	
11:39	Hunter's Hill Council	ISUZU		BI82JD	Rear	75.7	No	
11:39	Hornsby Council		Rear	AP70YU	Front Right	77.1	No	
11:44	Hunter's Hill Council	IVECO	Side	URM393	Front Right	72.7	No	
11:45	Cumberland Council - Auburn	IVECO	Side	URM814	Front Right	78.7	No	
11:46	Sydney Waste Pty Ltd	IVECO	Rear	XN13KR	Front Right	77.1	No	
11:53	Bingo Recycling Pty Ltd		Rear	BIN766		77.9	No	
11:53	Wanless Waste Management Pty Ltd		Rear	XN75CW	Side	71.4	No	
11:59	Burwood Council		Rear	XN35EB	Front Right	75.7	No	

Measured Truck Movements

119

Total Truck Movements (22/10/19)

307

Percent of Truck Movements Measured (22/10/19)

38.76%

Total Impeded Truck Movements

4

Unimpeded Measurements

115

Total Small Truck Measurements

2