

## LUCAS HEIGHTS RESOURCE RECOVERY PARK

LUCAS HEIGHTS, NSW

### ANNUAL COMPLIANCE NOISE MONITORING

RWDI # 2101806

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#### SUBMITTED TO

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## DOCUMENT CONTROL

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RWDI Australia Pty Ltd is committed to and implemented AS/NZS ISO 9001:2015 "Quality Management Systems – Requirements".





# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>2</b>	<b>NOISE COMPLIANCE CONDITIONS</b> .....	<b>2</b>
<b>2.1</b>	<b>Lucas Heights Resource Recovery Park</b> .....	<b>2</b>
<b>3</b>	<b>NOISE MEASUREMENTS</b> .....	<b>4</b>
<b>3.1</b>	<b>Lucas Heights Resource Recovery Park</b> .....	<b>4</b>
<b>4</b>	<b>NOISE ASSESSMENT</b> .....	<b>5</b>
<b>5</b>	<b>CONCLUSIONS</b> .....	<b>5</b>



## LIST OF TABLES

Table 1: Summary of Attended Measurements ..... 4  
Table 2: LHRRP Noise Compliance Summary ..... 5

## LIST OF FIGURES

Figure 1: LHRRP and Surrounding Area ..... 2

## LIST OF APPENDICES

Appendix A: Glossary of Acoustical Terminology

# 1 INTRODUCTION

SUEZ Recycling and Recovery (SUEZ) operates a solid waste landfill at Lucas Heights Resource Recovery Park (LHRRP). LHRRP is licensed to accept solid waste from domestic and commercial sources that are suitable for disposal in a general solid (putrescible) waste landfill.

Activities on the site include:

- Landfill;
- A resource recovery centre and waste collection point;
- GO facility for processing garden organics;
- Truck parking area;

Other facilities/operations located at the LHRRP include:

- Renewable energy operations (operated by Energy Developments Ltd);
- Community use areas in the minibike area at the southern extent of the site run by Police Citizens Youth Club (PCYC) and the Sydney Clay Target Association (SICTA) on the leased land on the north western side of the site.

RWDI has been commissioned by SUEZ to conduct compliance noise monitoring as required by the conditions outlined in Development Consent SSD 6835. The assessment has been conducted in accordance with the NSW EPA Industrial Noise Policy.

LHRRP is located in Lucas Heights, to the north of New Illawarra Road and East of Heathcote Road. To the north, west and south of the site is primarily bushland. Bushland, and the Australian Nuclear Science and Technology Organisation (ANSTO) are located to the east.

The nearest residential receivers, located to the north and east are described below:

- R1 – Engadine, approximately 2 km to the southeast;
- R2 – Barden Ridge, approximately 3 km to the east;
- R3 – Menai, approximately 3.3 km to the northeast.

Two areas marked as potential future residential developments have also been identified. These areas have been named R6 Gandangara and R7 Gandangara North, and are located approximately 1.5 km and 1.6 km respectively from LHRRP.

An overview of the area, including receiver locations, is presented in Figure 1.



Figure 1: LHRRP and Surrounding Area

## 2 NOISE COMPLIANCE CONDITIONS

### 2.1 Lucas Heights Resource Recovery Park

Conditions for compliance have been outlined in Schedule C of Development Consent SSD 6835. Conditions from this consent relevant to noise are presented below:

- C53. *The Applicant shall comply with the hours detailed in Table 2, unless otherwise agreed in writing by the EPA or the Secretary.*

Table 2: Hours of Work

Facility	Activity	Day	Time
Landfill	Construction	Monday – Friday	7 am – 5 pm
		Saturday – Sunday	8 am – 5 pm
	Operation	Monday – Friday	5 am – 5 pm
Saturday		6 am – 5 pm	
Sunday		8 am – 5 pm	
	Other operations	Monday – Sunday	Anytime
GO Facility	Construction	Monday – Friday	7 am – 5 pm
		Saturday – Sunday	8 am – 5 pm
	Operation	Monday – Friday	6 am – 5 pm
Saturday – Sunday		8 am – 5 pm	
	Other operations	Monday – Sunday	Anytime
ARRT Facility	Construction	Monday – Friday	7 am – 5 pm
		Saturday – Sunday	8 am – 5 pm
	Operation	Monday – Sunday	Anytime

C54. The Applicant shall ensure noise from the site does not exceed the noise limits in Table 3.

Table 3: Noise Limits dB(A)

No.	Location	Day L <sub>eq</sub> (15min)	Evening L <sub>eq</sub> (15min)	Night L <sub>eq</sub> (15min)	Night L <sub>1</sub> (1min)
R1	Engadine	35	35	35	45
R2	Barden Ridge	35	35	35	45
R3	Menai	35	35	35	45
R6	Gandangara	37	37	37	45
R7	Gandangara North	35	35	35	45

C56. The Applicant shall monitor noise from the site to demonstrate compliance with the noise limits in Table 3. The monitoring shall be:

- (a) undertaken annually, or to address genuine noise complaints that are related to the site as determined by the EPA or the Secretary;
- (b) in accordance with the NSW Industrial Noise Policy; and
- (c) reported to the EPA and the Secretary within one month of completing the monitoring, including details of management actions taken and the effectiveness of the actions to address any exceedances of the limits in Table 3.

## 3 NOISE MEASUREMENTS

### 3.1 Lucas Heights Resource Recovery Park

Noise measurements were conducted on Monday December 13, 2021 at the five locations outlined in the Development Consent and in Figure 1. A 15-minute measurement was taken at each location. Based on the degree of audibility or likelihood of compliance further measurements would be taken up to a maximum of 1 hour at each site.

The weather during the measurements was sunny with light wind.

All measurements were conducted using a Norsonics 140 Sound Level Meter. This sound level meter conforms to Australian Standard 1259 Acoustics – Sound Level Meters as a Type 1 Precision Sound Level Meter which has an accuracy suitable for field and laboratory use. The A-Weighting filter of the meter was selected and the time weighting was set to “Fast”. The calibration of the meter was checked before and after the measurements with a GRAS 42AG Class 1 sound level calibrator and no significant drift was noted.

The Norsonics 140 sound level meter and GRAS 42AG sound level calibrator have been laboratory calibrated within the previous two years in accordance with our in-house Quality Assurance Procedures.

A summary of the measurements is presented in Table 1. A summary of the observed noise environment for each location is presented in the section below the table. Analysis of the noise contribution from LHRRP at these locations is presented in Section 4.

**Table 1: Summary of Attended Measurements**

Location	Start Time	L <sub>Aeq,15 min</sub>	L <sub>A90,15 min</sub>	Noise audible from LHRRP
R1 – Engadine	10:14 am	57	40	No
R2 – Barden Ridge	11:37 am	45	41	No
R3 – Menai	12:22 pm	42	37	No
R6 – Gandangara	1:30 pm	45	34	No
R7 – Gandangara North	3:03 pm	44	37	No

R1 The measurement was taken near 2 Illuta Place, Engadine. The background level at this location was dominated by road noise from Heathcote Road (A6). The L<sub>Aeq</sub> level was dominated by local birds, intermittent insect noise and aircraft noise. No noise from the LHRRP was audible at this location throughout the measurement period.

R2 This measurement was taken at 67 Thomas Mitchell Drive, Barden Ridge. The background level was dominated by road noise originating from New Illawarra Road (A6). The L<sub>Aeq</sub> level was controlled by local traffic along Thomas Mitchell Drive as well as intermittent noise from birds and insects in the area. No noise from the LHRRP was audible at this location.

R3 This measurement was taken at 23 Windle Place, Menai. The background level at this location was once again dominated by the road noise from New Illawarra Road (A6). The L<sub>Aeq</sub> level was controlled primarily by insect and bird noise in the local area. No noise from the LHRRP was audible throughout the measurement period.





- R6 This measurement was taken at the location specified in Figure 1. The background level was dominated by road noise from the A6 Highway, and the  $L_{Aeq}$  level was controlled by intermittent insect and bird noise. No noise from the LHRRP site was audible throughout the measurement period.
- R7 This measurement was taken at the location specified in Figure 1. The background level at this location was dominated by the constant hum of traffic from Heathcote Road and insect noise. The  $L_{Aeq}$  level was controlled primarily by birds and louder, intermittent insect noise. No noise from the LHRRP site was audible throughout the measurement period.

## 4 NOISE ASSESSMENT

Considering that no noise from the site was audible at any of the measurement locations (as discussed in Section 3.1), noise level contributions from the LHRRP site have been derived based on the measurements taken on Tuesday December 13, 2021. Inaudibility is often defined as being 10dB lower than the minimum noise level recorded, and the site noise contribution in Table 2 has been calculated using this metric.

**Table 2: LHRRP Noise Compliance Summary**

Location	Minimum Recorded Level	Noise limit $L_{Aeq,15min}$	Estimated Site Noise Contribution $L_{Aeq}$	Compliance
R1	38	35	< 28	Yes
R2	39	35	< 29	Yes
R3	34	35	< 24	Yes
R6	33	37	< 23	Yes
R7	35	35	< 25	Yes

Given that no noise from the site was audible at any time at locations R1, R2, R3, R6, or R7, the estimated noise from the LHRRP complies with the conditions at all locations.

## 5 CONCLUSIONS

The Lucas Heights Resource Recovery Park is required to conduct annual compliance noise monitoring as outlined in Development Consent SSD 6835. This report details the annual monitoring that took place on the 13 December, 2021.

Noise contributions from the LHRRP at the surrounding residential receivers have been measured and assessed. The assessment found that all the relevant requirements of the Development Consent have been complied with.