	Calga Quarry Information											
Premise Details	Hanson – Calga Quarry											
Address	RMB 1215 PEATS RIDGE ROAD CALGA NSW 2250											
Licensee	Hanson Construction Materials Pty Ltd											
EPL Number	11295											
	https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=134866&SY											
EPL Location	SUID=1&LICID=11295											

The monitoring report is to satisfy the requirements of Section 66 (6) of the *Protection of Environment and Operations Act 1997*, to make available, within 14 days of requiest, any monitoring data that relates to pollution under an Environmental Protection Licence.

The monitoring of pollutants provided in this report is undertaken as per the requirements of Environment Protection Licence 11295 (EPL 11295 – Calga Quarry)

This report provides environmental monitoring data for Calga Quarry for the period **1 January 2017 to 30**December 2021.

Monitoring data in this report relates to the monitoring undertaken in the reporting period for the following environmental pollutants:

- Deposited Dust (monthly monitoring)
- Water Quality (during discharge weekly)
- Noise (quarterly, full reports available at https://www.hanson.com.au/about-us/regulatory-information/calga-quarry/ under 'Noise Monitoring')

#### Discharge at Point 1 requires the following monitoring requirements

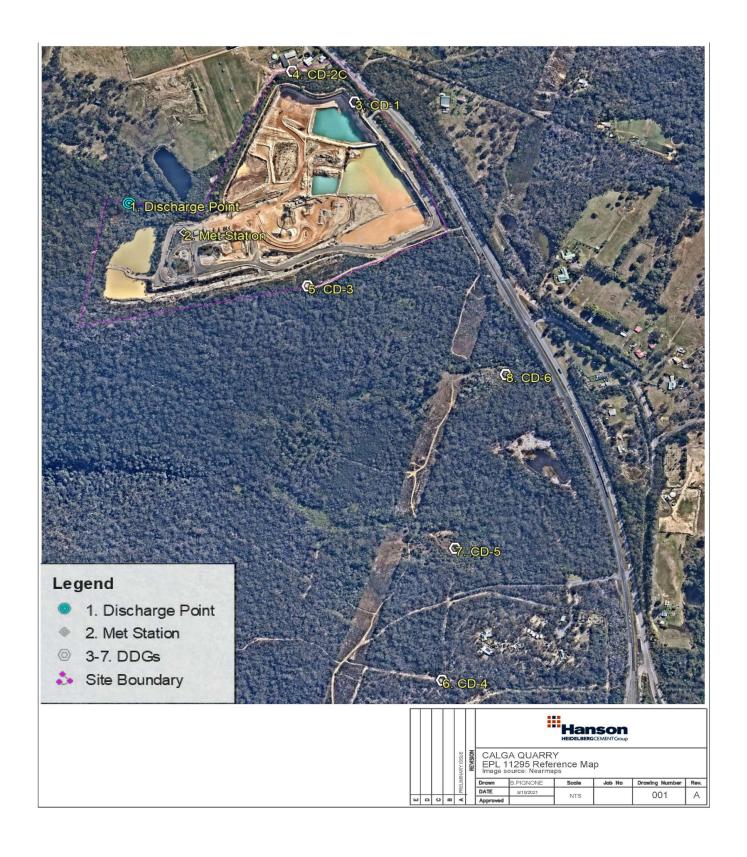
Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	milligrams per litre	Weekly during any	Grab sample
		Weekly during any	
pH	рН	discharge	Grab sample
		Weekly during any	
Total Suspended Solids	milligrams per litre	discharge	Grab sample

#### Discharge at Point 2 requires the following monitoring requirements

Pollutant	Sampling Method	Units of measure	Averaging period	Frequency
Temperature at 10				
metres	AM-4	degrees Celsius	1 hour	Continuous
Wind Direction at 10				
metres	AM-2 & AM-4	Degrees	15 minutes	Continuous
Wind Speed at 10				
metres	AM-2 & AM-4	metres per second	15 minutes	Continuous
Rainfall	AM-4	millimetres	15 minutes	Continuous
Relative humidity	AM-4	percent	1 hour	Continuous

### Discharge at Point 3, 4, 5, 6, 7, 8 require the following monitoring requirements

Pollutant	Units of measure	Frequency	Sampling Method
Insoluble solids	grams per cubic metre	Monthly	AM-19



Sample Location	Sample Collector	Sample Reference No.	Date	Time	рН	EC (μS/cm)	TDS (mg/L)	SS (mg/L)	Oil/grease (mg/L)	Discharge? Number of days	Comments
						Dec-21					
Water Discharge - 1							No Discha	arge			
	1					Nov-21					
Water Discharge - 1							No Discha	arge			
W						Oct-21					
Water Discharge - 1						Con 21	No Discha	arge			
Mater Discharge 1						Sep-21	No Disabe				
Water Discharge - 1						Aug-21	No Discha	arge			
Water Discharge - 1						Aug-21	No Discha	orgo			
Water Discharge 1						Jul-21	NO DISCIN	ar g c			
Water Discharge - 1							No Discha	arge			
Trace I seemage I						Jun-21	110 0 150110	31.60			
Water Discharge - 1							No Discha	arge			
						May-21					
Water Discharge - 1							No Discha	arge			
						Apr-21					
Water Discharge - 1							No Discha	arge			
					ا	Mar-21					
Water Discharge - 1							No Discha	arge			
						Feb-21					
Water Discharge - 1							No Discha	arge			
	1					Jan-21					
Water Discharge - 1						D 20	No Discha	arge			
Mater Discharge 1						Dec-20	No Disabe				
Water Discharge - 1						Nov-20	No Discha	arge			
Water Discharge - 1	1					1107 20	No Discha	arge			
rrace: Bibonai ge 1						Oct-20	140 Discrit	ii bc			
Water Discharge - 1							No Discha	arge			
						Sep-20					
Water Discharge - 1	Paul Slough	ES2032354-001	14-Sep-20	2:00 PM	7.09	125	63	12	<5		
						Aug-20					
Water Discharge - 1							No Discha	arge			
						Jul-20					
Water Discharge - 1							No Discha	arge			
						Jun-20					
Water Discharge - 1						May-20	No Discha	arge			
Water Discharge - 1	Paul Slough	ES2018408-001	27-May-21	12:00 AM		121	103	16	<5		
Water Discharge - 1	Faul Slough	L32018408-001	27-IVIAY-21	12.00 AIVI		Apr-20	103	10			
Water Discharge - 1						р	No Discha	arge			
						Mar-20	Discile				
Water Discharge - 1							No Discha	arge			
						Feb-20					
	Paul Slough	ES2004261-001	10-Feb-20	6:02 AM	5.89	57	56	30	<5		
Water Discharge - 1	Paul Slough	ES2004922-001	13-Feb-20	7:35 AM	7.3	73	51	27	<5		
water pischalge - 1	Paul Slough	ES2005662-001	19-Feb-20	8:15 AM	7.17	73	50	7	<5		
	Paul Slough	ES2006851-001	27-Feb-20	11:45 AM	6.8	57	38	25	<5		
						Jan-20					
Water Discharge - 1	Paul Slough	ES2001418-001	17-Jan-20	9:00 AM			92	7	<5		
						Dec-19					
Water Discharge - 1							No Discha	arge			

						Nov-19					
Water Discharge - 1							No Discha	rge			
						Oct-19					
	Paul Slough	ES1932894-001	9-Oct-19	8:55 AM	7.01	118	62	6	<5		
Water Discharge - 1	Paul Slough	ES1933251-001	11-Oct-19	6:50 AM	7.13	94	66	<5	<5		
	Paul Slough	ES1933589-001	15-Oct-19	6:55 AM	6.19	84	74	<5	<5		
						Sep-19					
	Paul Slough	ES1928899-001	9-Sep-19	10:32 AM	8.53	95	63	15	<5		
	Paul Slough	ES1929257-001	11-Sep-19	9:30 AM	6.18	93	64	17	<5		
Water Discharge - 1	Paul Slough	ES1929967-001	17-Sep-19	10:00 AM	6.35	86	72	6	<5		
	Paul Slough	ES1930691-001	23-Sep-19	6:50 AM	6.54	85	53	28	<5		
	Paul Slough	ES1931791-001	30-Sep-19	7:00 AM	6.42	84	44	18	<5		
						Aug-19					
Water Discharge - 1							No Discha	rge			
						Jul-19					
Water Discharge - 1							No Discha	rge			
						Jun-19					
Water Discharge - 1	Paul Slough	ES1917343-001	5-Jun-19	7:32 AM	7.33	93	73		<5		
Water Disentinge 1	Paul Slough	ES1919612-001	25-Jun-19	11:32 AM	6.9	88	68	21	<5		
						May-19					
Water Discharge - 1	No Discharge										
						Apr-19					
Water Discharge - 1	Paul Slough	ES1911824-001	8-Apr-19	9:00 AM	3.81	155	78	<5	<5		

<b>Dust Deposition</b>	Gauge	Monthly	Monitoring

CD-	·1 (located xx)		CD-2	2c (located xx)		CD-	-3 (located xx)		CD-4	(located xx)		CD-5	(located xx)		CD-6	(located xx)	
Month and Year	Total Insoluble Matter	Rolling Annual Average	Month and Year	Total Insoluble Matter	Rolling Annual Average	Month and Year	Total Insoluble Matter	Rolling Annual Average	Month and Year	Total Insoluble Matter	Rolling Annual Average	Month and Year	Total Insoluble Matter	Rolling Annual Average	Month and Year	Total Insoluble Matter	Rolling Annual Average
								2021									
December 2021		1.3			0.6	December 2021		1.0	December 2021		0.4	December 2021		0.5	December 2021		0.5
November 2021		1.4			0.7	November 2021		1.2	November 2021		0.4	November 2021		0.5	November 2021		0.6
October 2021		1.4		2.0	0.8	October 2021		1.4	October 2021		0.5	October 2021		0.6	October 2021	0.5	0.7
September 2021	0.5	1.4		0.9	0.8	September 2021	2	1.3	September 2021	0.6	0.5	September 2021	0.4	0.6	September 2021	0.5	0.7
August 2021	n/a	1.6		n/a	0.9	August 2021	n/a		August 2021	n/a	0.6	August 2021	n/a	0.6	August 2021	n/a	0.7 0.6
July 2021	n/a 0.5	1.5 1.4		n/a 0.2	0.8	July 2021	n/a 0.4	1.2 1.2	July 2021	n/a 0.2	0.6	July 2021	n/a 0.2	0.5	July 2021	n/a 0.3	0.6
June 2021 May 2021	0.5	1.4		0.2	0.8	June 2021 May 2021	0.4	1.2	June 2021 May 2021	0.2	0.6	June 2021 May 2021	0.2	0.7	June 2021 May 2021	0.3	0.6
April 2021	1	1.4		0.3	0.8	April 2021	0.0		April 2021	0.3	0.7	April 2021	0.1	0.7	April 2021	0.1	
March 2021	2.2	1.5		0.4	0.8	March 2021	0.7	1.2	March 2021	0.3	0.7	March 2021	0.4	0.8	March 2021	0.4	0.7
February 2021	1.9	1.4		1.4	0.9	February 2021	1.1		February 2021	0.6		February 2021	1.7	0.8	February 2021	0.4	
January 2021	1.9	1.3		0.8		January 2021	1.3		January 2021	0.6		January 2021	0.7	0.7	January 2021	0.7	
Junuary 2021	1.5	1.5	Junuary 2021	0.0	0.0	January 2021	1.5	2020	Junuary 2021	0.0	0.0	January 2021	0.7	0.7	January 2021	0.7	0.7
2020	2.2	4.7		4.4	1.1	2020	2.7		D	0.0		2020	0.6	4.4	2020	4.4	4.4
December 2020	2.3 1.8	1.7 1.7		1.4	1.1	December 2020	2.7	1.7 1.9	December 2020	0.6		December 2020	0.6	1.1	December 2020	1.4	
November 2020	1.8	2.0		1.4 1.1	1.3	November 2020	2.8 0.3		November 2020	1.2 0.5	1.2 1.3	November 2020	1.2 0.2	1.3	November 2020	1.6 0.5	
October 2020 September 2020	1.4	2.0		1.1	1.6 1.6	October 2020 September 2020	1.5	2.1	October 2020 September 2020	1.5	1.5	October 2020 September 2020	0.2	1.4 1.5	October 2020 September 2020	0.5	1.3 1.3
August 2020	0.6	2.1		0.5	1.6	August 2020	1.3		August 2020	0.3		August 2020	0.3	1.5	August 2020	0.8	1.4
July 2020	0.6	2.1		0.5	1.6	July 2020	0.6		July 2020	0.8	1.5	July 2020	2.9	1.6	July 2020	0.3	1.4
June 2020	0.7	2.1		0.0	1.6	June 2020	0.0	2.1	June 2020	1.2		June 2020	0.1	1.4	June 2020	0.3	
May 2020	0.4	2.2		0.4	1.6	May 2020	0.4	2.1	May 2020	0.3	1.5	May 2020		1.4	May 2020	0.5	1.5
April 2020	2.2	2.3		0.7	1.6	April 2020	1.1	2.2	April 2020	0.7	1.5	April 2020	0.6	1.4	April 2020	0.9	1.5
March 2020	1.1	2.3		0.7	1.7	March 2020	0.3	2.2	March 2020	0.7	1.5	March 2020	0.2	1.4	March 2020	0.3	1.6
February 2020	1.2	2.4		1	1.8	February 2020	0.8	2.3	February 2020	1.1	1.6	February 2020	0.8	1.6	February 2020	0.8	1.7
January 2020	5.9	2.5		4.5		January 2020	7.6		January 2020	4.5		January 2020	5.5	1.6	January 2020	5.8	
, , ,			, , , , ,			,		2019	,		-				, , ,		
December 2019	2.9	2.1	December 2019	3.5	1.6	December 2019	5.8		December 2019	2.2	1.4	December 2019	1.8	1.3	December 2019	2.6	1.5
November 2019	5.3	2.1		4.9	1.5	November 2019	3.8		November 2019	2.7	1.4	November 2019	3.2	1.4	November 2019	2.0	
October 2019	2.3	2.0		1.2	1.3	October 2019	1.8		October 2019	2.4		October 2019	0.8	1.4	October 2019	1.2	
September 2019	n/a	1.9		1.1	1.4	September 2019	2.2	1.4	September 2019	1.2	1.2	September 2019	0.4	1.2	September 2019	1.2	1.4
August 2019	0.9	1.9	<u> </u>	0.5	1.4	August 2019	1.1	1.3	August 2019	0.6	1.2	August 2019	0.9	1.2	August 2019	0.6	1.3
July 2019	0.8	2.0		0.3	1.5	July 2019	0.8	1.4	July 2019	0.2	1.2	July 2019	0.8	1.2	July 2019	0.5	1.4
June 2019	1.8	2.0		0.2	1.5	June 2019	0.6		June 2019	1.5	1.3	June 2019	0.9	1.2	June 2019	1.4	
May 2019	1	2.1		0.6	1.5	May 2019	1	1.4	May 2019	0.2	1.2	May 2019	0.3	1.2	May 2019	1	1.3
April 2019	2.5	2.6		1.2	1.5	April 2019	1		April 2019	0.9		April 2019	1	1.2	April 2019	1.9	
March 2019	2.4	2.9		2.4	1.5	March 2019	1.8	1.3	March 2019	1.5	1.2	March 2019	2.7	1.1	March 2019	1.8	1.2
February 2019	1.5	3.2		1.5	1.5	February 2019	1		February 2019	1.2	1.1	February 2019	1.2	1.0	February 2019	1.4	
January 2019	1.9	3.6		1.7	1.5	January 2019	1.9	1.3	January 2019	2.4	1.1	January 2019	1.5	1.0	January 2019	2.3	1.1
								2018									
December 2018	3.2	3.7	December 2018	2.2	1.5	December 2018	2.9		December 2018	2.6	1.0	December 2018	2.8	0.9	December 2018	2.7	1.0
November 2018	4.1	3.7		3.1	1.4	November 2018	2.1	1.6	November 2018	1.6		November 2018	1.1	0.7	November 2018	1.3	0.8
October 2018	0.8	3.5		1.8	1.2	October 2018	0.9		October 2018	0.8	0.7	October 2018	0.8	0.7	October 2018	0.3	
September 2018	2.2	3.6		1.2	1.5	September 2018	1	1.6	September 2018	1.2	0.7	September 2018	0.6	0.7	September 2018	0.8	0.9
August 2018	1.8	3.5		1.3	1.4	August 2018	1.5		August 2018	0.7		August 2018	0.6	0.7	August 2018	0.8	0.9
July 2018	1.3	3.4		1	1.4	July 2018	0.8	1.6	July 2018	0.8	0.7	July 2018	1.3	0.7	July 2018	1.2	1.0
June 2018	2.5	3.3		0.4	1.4	June 2018	0.4		June 2018	0.2		June 2018	0.3	0.6	June 2018	0.4	
May 2018	7.1	3.1		0.7	1.3	May 2018	0.8	1.6	May 2018	0.7	0.7	May 2018	0.3	0.6	May 2018	0.6	0.9
April 2018	6.4	2.7		0.6	1.4	April 2018	0.7		April 2018	0.2	0.7	April 2018	0.4	0.6	April 2018	0.6	0.9
March 2018	5.9	2.3	March 2018	2.1	1.4	March 2018	1.5	1.6	March 2018	1.2	0.7	March 2018	0.9	0.7	March 2018	1.3	0.9
February 2018	5.4	1.9	February 2018	1.6	1.3	February 2018	0.8	1.5	February 2018	0.7	0.6	February 2018	1.2	0.6	February 2018	1	0.8
January 2018	3.8	2.2	January 2018	2	1.4	January 2018	1.1	1.6	January 2018	1.1	0.6	January 2018	0.6	0.6	January 2018	0.8	0.8
								2017									
December 2017	2.8	2.9	December 2017	1.3	1.2	December 2017	7.5	1.6	December 2017	0.5	0.6	December 2017	0.6	0.6	December 2017	0.8	0.8
												•=-					

November 2017	1.6	2.9	November 2017	4.6	1.2	November 2017	0.9	1.1	November 2017	0.6	0.6	November 2017	0.9	0.6	November 2017	1.6	0.8
October 2017	2.4	3.0	October 2017	1.2	0.9	October 2017	1.7	1.1	October 2017	0.2	0.6	October 2017	0.5	0.6	October 2017	1	0.7
September 2017	0.6	3.1	September 2017	0.5	0.9	September 2017	1.6	1.0	September 2017	0.9	0.7	September 2017	0.8	0.6	September 2017	1.2	0.7
August 2017	1.2	3.4	August 2017	0.9	0.9	August 2017	1.6	1.0	August 2017	0.8	0.7	August 2017	0.3	0.6	August 2017	0.9	0.7
July 2017	0.3	3.7	July 2017	0.3	0.9	July 2017	0.8	0.9	July 2017	0.5	0.6	July 2017	0.3	0.7	July 2017	0.8	0.6
June 2017	0.2	4.3	June 2017	0.2	1.0	June 2017	0.3	0.9	June 2017	0.4	0.7	June 2017	0.3	0.7	June 2017	0.2	0.6
May 2017	1.5	5.1	May 2017	1.5	1.2	May 2017	0.6	1.0	May 2017	0.7	0.7	May 2017	0.6	0.8	May 2017	0.6	0.7
April 2017	2.3	6.0	April 2017	0.5	1.1	April 2017	1	1.1	April 2017	0.6	0.7	April 2017	1.3	0.9	April 2017	0.4	0.7
March 2017	0.8	7.2	March 2017	0.5	1.3	March 2017	0.4	1.2	March 2017	0.7	0.8	March 2017	0.2	0.7	March 2017	0.4	0.8
February 2017	9	10.5	February 2017	2.7	1.7	February 2017	1.7	1.6	February 2017	0.7	0.8	February 2017	1	1.0	February 2017	1.2	1.0
January 2017	11.9	11.9	January 2017	0.7	0.7	January 2017	1.4	1.4	January 2017	0.9	0.9	January 2017	0.9	0.9	January 2017	0.7	0.7

# 2021 Annual Operational Noise Compliance Monitoring Results (full report available athttps://www.hanson.com.au/about-us/regulatory-information/calga-quarry/ under 'Noise Monitoring')

		Day 1 (1	2/07/21)	Day 2 (13/	(07/2021)	Day 3 (14/07/202	21)	Noise	Limits	Assessment
Monitoring Period	Location	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15mi n (dBA)	LA1,1min (dBA)	
	Res. 3	<30	n/a	<30	n/a	<30	n/a	41	n/a	Complies
Day (7.00am -	Res. 4	<30	n/a	<30	n/a	<30	n/a	40	n/a	Complies
6.00pm)	Res. 8	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	36	n/a	Complies
	Res. 13	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
Forming	Res. 3	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
Evening	Res. 4	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
(6.00pm - 10.00pm)	Res. 8	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
10.0001117	Res. 13	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
	Res.3	<30	44	<30	Inaudible	<30	41-42	35	45	Complies
Night (10.00pm	Res. 4	<30	42	Inaudible	42	<30	43-44	35	45	Complies
- 7.00am)	Res. 8	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	35	45	Complies
	Res. 13	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	35	45	Complies

### 2020 Annual Operational Noise Compliance Monitoring Results (full report available athttps://www.hanson.com.au/about-us/regulatory-information/calga-quarry/ under 'Noise Monitoring')

								Noise	Limits	Assessment
Monitoring Period	Location	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15mi n (dBA)	LA1,1min (dBA)	
	Res. 3	39-41	n/a	31-40	n/a	32-41	n/a	41	n/a	Complies
Day (7.00am -	Res. 4	35-36	n/a	31	n/a	31	n/a	40	n/a	Complies
6.00pm)	Res. 8	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	36	n/a	Complies
	Res. 13	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
	Res. 3	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
Evening	Res. 4	27-28	n/a	Inaudible	n/a	28	n/a	35	n/a	Complies
(6.00pm - 10.00pm)	Res. 8	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
10.00pm)	Res. 13	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
	Res.3	26-28	41	27-28	41-42	25-30	41-42	35	45	Complies

Night (10.00pm	Res. 4	26-27	43-45	25-28	23-25	23-25	43-42	35	45	Complies
- 7.00am)	Res. 8	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	35	45	Complies
	Res. 13	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	35	45	Complies

## 2019 Annual Operational Noise Compliance Monitoring Results (full report available athttps://www.hanson.com.au/about-us/regulatory-information/calga-quarry/ under 'Noise Monitoring')

		Day 1 (29/04/2019)		Day 2 (30/04/2019)		Day 3 (1/05/2019)		Noise Limits		Assessment
Monitoring Period	Location	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15min due to Site Noise (dBA)	LA1,1min due to Site Noise (dBA)	LAeq,15mi n (dBA)	LA1,1min (dBA)	
Day (7.00am - 6.00pm)	Res. 3	39-41	n/a	31-40	n/a	32-41	n/a	41	n/a	Complies
	Res. 4	35-36	n/a	31	n/a	31	n/a	40	n/a	Complies
	Res. 8	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	36	n/a	Complies
	Res. 13	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
Evening (6.00pm - 10.00pm)	Res. 3	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
	Res. 4	27-28	n/a	Inaudible	n/a	28	n/a	35	n/a	Complies
	Res. 8	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
	Res. 13	Inaudible	n/a	Inaudible	n/a	Inaudible	n/a	35	n/a	Complies
Night (10.00pm - 7.00am)	Res.3	26-28	41	27-28	41-42	25-30	41-42	35	45	Complies
	Res. 4	26-27	43-45	25-28	23-25	23-25	43-42	35	45	Complies
	Res. 8	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	35	45	Complies
	Res. 13	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	Inaudible	35	45	Complies