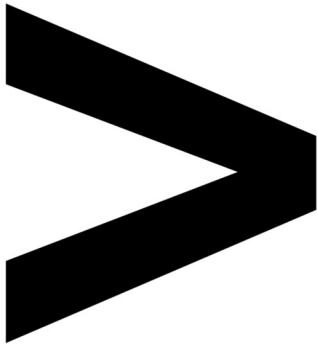




HUNTER VALLEY OPERATIONS

EPL 640 MONITORING DATA – NOVEMBER 2025

DOCUMENT NUMBER

HVOOC-1797567310-5458

STATUS

Approved

VERSION

1.0

EFFECTIVE

22/01/2026

REVIEW

[Planned Review Date]

OWNER

Superintendent - Environment and Community



1	Overview	3
2	Definitions.....	3
3	Air Quality	5
4	Surface Water Monitoring Data	7
5	Blast Monitoring Data	8
6	Sewage Treatment Plant Monitoring Data.....	16
7	Noise Monitoring Data	17

1 | OVERVIEW

Environmental Protection Licence Number:	640
Licence Holder:	HV Operations Pty Ltd (HVO)
Address of Premises:	Hunter Valley Operations, Lemington Road, Singleton, NSW, 2330
Licence Holder Postal Address:	PO Box 315, Singleton, NSW, 2330
EPA Public Register Link:	https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=640&id=640&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Issued

The locations of each sampling or monitoring point number identified in EPL 640 are displayed in Figure 1.

2 | DEFINITIONS

Abbreviation	Explanation
DNR	Data Not Received
mm/s	Millimetres per Second
dB	Decibels
g/m ² /month	Grams per Metre Square per Month
µg/m ³	Micrograms per Cubic Meter of Air
µS/cm	Microsiemens per Centimetre
pH	A measure of the acidity or alkalinity of a solution
mg/L	Milligrams per Litre
NTU	Nephelometric Turbidity Units
ML/day	Megalitres per Day (1ML = 1,000,000L)
KL/day	Kilolitres per Day
PM10	Particulate Matter of 10 Microns in diameter or smaller
HVAS	High Volume Air Sampler
TEOM	Tapered Element Oscillating Microbalance
TSP	Total Suspended Particles
TSS	Total Suspended Solids
t	tonnes
YTD	Year To Date - rolling 12 month average

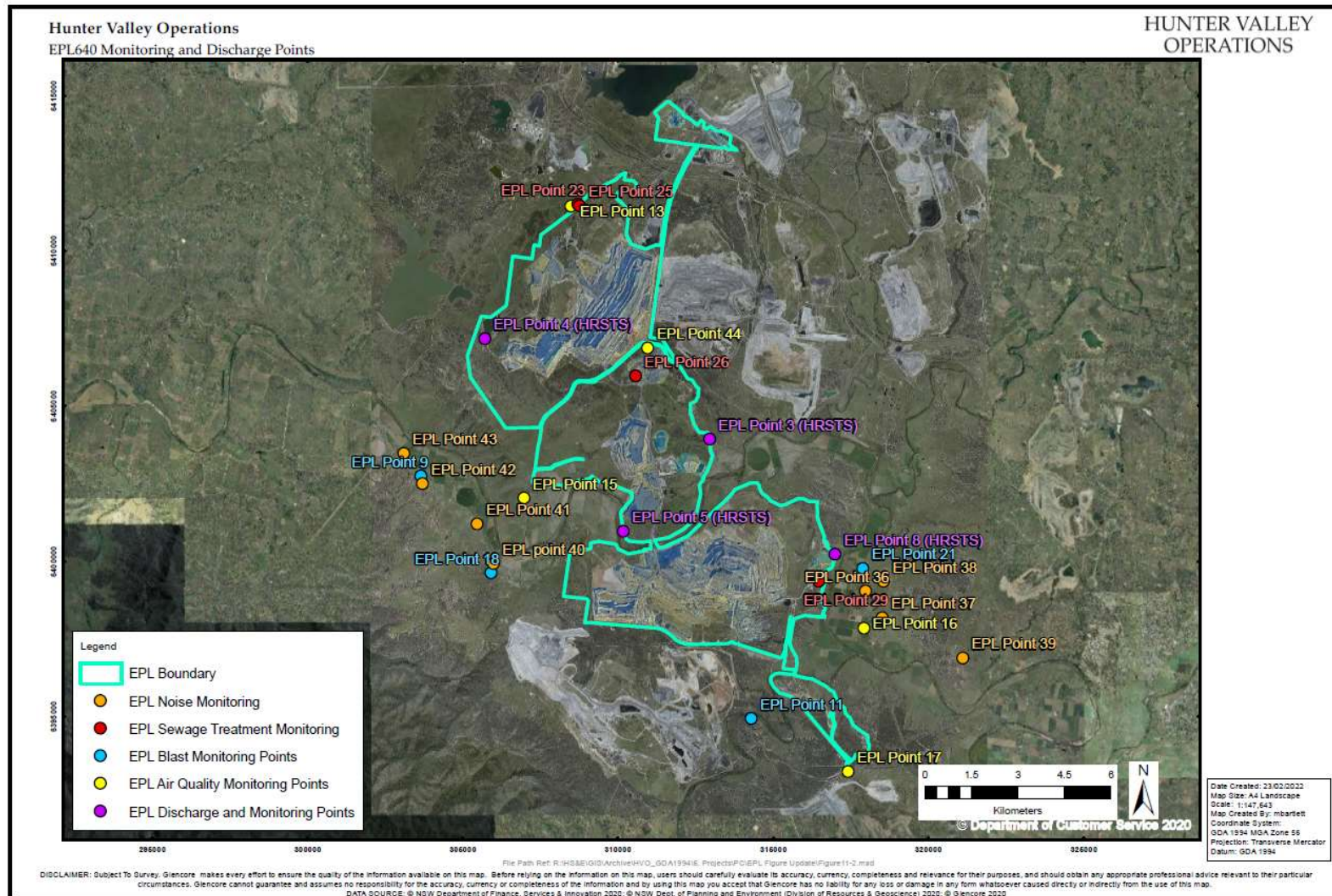


Figure 1: EPL 640 Monitoring Location

3 | AIR QUALITY

Date Last Sampled: 31/11/2025

Date Obtained: 16/01/2026

Table 1 - Particulate Matter Monitoring (<10µm)

Date	Unit of Measure	Monitoring Frequency & Capture	Monitoring Point				
			EPL ID 13 (Howick)	EPL ID 15 (Wandewoi)	EPL ID 16 (Knodlers Lane)	EPL ID 17 (Golden Highway)	EPL ID 44 (West Pit)
1/11/2025	µg/m ³	Continuous	23.1	14.7	10.7	16.4	25.7
2/11/2025	µg/m ³		28.0	21.0	17.1	24.0	22.0
3/11/2025	µg/m ³		29.2	24.0	29.8	33.6	113.7
4/11/2025	µg/m ³		13.0	8.2	29.1	22.1	101.0
5/11/2025	µg/m ³		24.7	17.5	22.9	22.9	99.9
6/11/2025	µg/m ³		35.8	29.1	22.2	33.5	66.7
7/11/2025	µg/m ³		23.3	30.6	26.5	33.9	77.3
8/11/2025	µg/m ³		32.2	26.5	32.1	36.7	98.5
9/11/2025	µg/m ³		25.9	19.0	23.2	20.3	61.0
10/11/2025	µg/m ³		36.4	30.5	28.8	31.7	38.8
11/11/2025	µg/m ³		24.9	14.7	39.4	35.9	89.0
12/11/2025	µg/m ³		35.7	24.7	33.5	22.9	45.3
13/11/2025	µg/m ³		44.6	17.3	41.3	52.0	121.4
14/11/2025	µg/m ³		63.9	42.9	78.1	89.3	128.5
15/11/2025	µg/m ³		24.5	25.6	29.7	40.0	70.7

Number: HVOOC-1797567310-5458

Status: Approved

Effective: 22/01/2026

Page 5 of 17

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Uncontrolled when printed

16/11/2025	µg/m ³		17.3	6.1	28.8	29.9	83.0
17/11/2025	µg/m ³		16.9	10.1	27.3	41.7	119.2
18/11/2025	µg/m ³		43.1	27.5	44.8	61.6	89.0
19/11/2025	µg/m ³		46.5	46.7	52.0	45.1	133.0
20/11/2025	µg/m ³		41.8	34.1	41.7	54.4	136.7
21/11/2025	µg/m ³		18.9	11.2	22.2	22.7	25.5
22/11/2025	µg/m ³		27.8	20.0	22.8	23.9	26.9
23/11/2025	µg/m ³		24.3	16.0	13.4	13.2	35.7
24/11/2025	µg/m ³		29.4	25.2	16.9	12.9	15.1
25/11/2025	µg/m ³		27.0	16.9	28.3	31.9	*
26/11/2025	µg/m ³		20.0	11.6	*	23.0	*
27/11/2025	µg/m ³		32.0	24.3	*	42.1	*
28/11/2025	µg/m ³		45.6	44.3	29.1	48.1	72.1
29/11/2025	µg/m ³		27.9	23.2	28.2	42.8	105.7
30/11/2025	µg/m ³		22.1	17.6	25.9	27.0	75.5
Monthly Meaningful Data							
November	µg/m ³	Minimum	13.0	6.1	10.7	12.9	15.1
	µg/m ³	Mean	30.2	22.7	30.2	34.5	76.9
	µg/m ³	Maximum	63.9	46.7	78.1	89.3	136.7
	µg/m ³	Median	27.9	22.1	28.6	32.7	77.3

* Less than 75% 24-hour data capture



4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during November

Table 2 - HRSTS Discharge Monitoring

Discharge Point	Pollutant	Unit of Measure	Licence Limits	No. Samples Required by Licence	No. Samples Collected and Analysed
EPL ID 3 (Dam 11N)	pH	pH	6.5-9.5	0	0
	Total Suspended Solids	Milligrams per Litre	120	0	0
EPL ID 4 (Dam 9W)	pH	pH	6.5-9.5	0	0
	Total Suspended Solids	Milligrams per Litre	120	0	0
EPL ID 8 (Dam 15S)	pH	pH	6.5-9.5	0	0
	Total Suspended Solids	Milligrams per Litre	120	0	0

5 | BLAST MONITORING DATA

Date Last Sampled: 30/11/2025

Date Obtained: 29/12/2025

Table 3 – Blast Monitoring (Air Blast Overpressure)

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P102WKW1004A	1/11/2025 16:05	dB(L)	All Blasts 100%	115	120	99.30	97.44	102.12	99.59
WT12BAY01A	3/11/2025 12:41	dB(L)		115	120	96.83	94.06	99.35	97.45
P210BRN103A	3/11/2025 14:22	dB(L)		115	120	93.77	98.63	95.66	96.27
P210VAX103C	3/11/2025 14:23	dB(L)		115	120	92.33	99.74	91.60	90.88
WS49PGL08A	5/11/2025 13:32	dB(L)		115	120	107.08	104.08	102.31	101.32
WT12BAY02A	7/11/2025 13:02	dB(L)		115	120	94.48	96.77	96.56	99.48

Number: HVOOC-1797567310-5458

Status: Approved

Effective: 22/01/2026

Page 8 of 17

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Uncontrolled when printed

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
M1B3BP802A	8/11/2025 10:05	dB(L)	All Blasts 100%	115	120	99.48	102.45	102.63	94.84
P101BRN602A_P101B6P01B	8/11/2025 17:20	dB(L)		115	120	100.21	92.49	94.78	103.63
P210MTA309A	8/11/2025 17:21	dB(L)		115	120	104.62	81.89	99.65	97.86
P102W10P03A	10/11/2025 13:18	dB(L)		115	120	84.87	94.97	87.31	86.91
P210BRN302A	10/11/2025 13:19	dB(L)		115	120	74.54	89.48	81.18	77.38
WT12BAY03A	11/11/2025 13:04	dB(L)		115	120	85.78	103.83	105.00	105.00
P101BRN506A_B5P01D_P102M3P02A	12/11/2025 13:03	dB(L)		115	120	87.39	82.23	95.19	93.60
WS49ARL02A	13/11/2025 12:59	dB(L)		115	120	87.19	114.23	101.21	98.76
P102WKW1005A	13/11/2025 14:57	dB(L)		115	120	94.10	100.64	105.69	93.94

Number: HVOOC-1797567310-5458

Status: Approved

Effective: 22/01/2026

Page 9 of 17
Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Uncontrolled when printed



Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
WS49LDL06A	14/11/2025 13:20	dB(L)	All Blasts 100%	115	120	87.70	87.92	86.54	92.87
WS49PGL09A	17/11/2025 12:26	dB(L)		115	120	93.23	107.75	109.13	107.02
P210MTA309B_P210PCF104A	18/11/2025 11:10	dB(L)		115	120	93.47	89.76	94.77	95.18
WS49BARP01A_WS49LDL03A	18/11/2025 13:14	dB(L)		115	120	97.03	81.38	88.53	92.09
M1B1BP603A	19/11/2025 11:42	dB(L)		115	120	104.46	103.15	88.15	86.19
P102M3P02B	19/11/2025 13:17	dB(L)		115	120	106.91	104.13	108.09	96.50
P210PCF105A	21/11/2025 15:14	dB(L)		115	120	102.46	89.63	101.12	93.22
P210N1006A	21/11/2025 15:17	dB(L)		115	120	96.52	95.21	103.70	96.41
WS49ARU306A	22/11/2025 13:12	dB(L)		115	120	95.67	96.56	92.37	80.75

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P210PCF303A	24/11/2025 12:56	dB(L)	All Blasts 100%	115	120	100.51	95.12	83.68	86.66
P210B5P02A	27/11/2025 15:26	dB(L)		115	120	97.08	95.65	112.66	80.83
P102WKW1006A	28/11/2025 12:58	dB(L)		115	120	97.22	98.30	105.43	96.37
WS49ARU307A	28/11/2025 14:19	dB(L)		115	120	97.91	93.65	101.49	101.77
WT11ARU301A	28/11/2025 14:20	dB(L)		115	120	95.48	97.88	102.84	102.44
WS49LDL04A	29/11/2025 9:55	dB(L)		115	120	88.78	107.64	107.86	101.10
Monthly Meaningful Data									
November		dB(L)	Minimum	115	120	74.54	81.38	81.18	77.38
		dB(L)	Mean	115	120	95.44	96.17	98.28	95.38
		dB(L)	Maximum	115	120	107.08	114.23	116.31	125.68
		dB(L)	Median	115	120	96.10	96.67	100.39	96.32

Table 4 – Blast Monitoring (Ground Vibration)

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P102WKW1004A	1/11/2025 16:05	mm/s	All Blasts 100%	5	10	0.16	0.10	0.16	0.21
WT12BAY01A	3/11/2025 12:41	mm/s		5	10	0.12	0.14	0.09	0.38
P210BRN103A	3/11/2025 14:22	mm/s		5	10	0.17	0.12	0.21	0.41
P210VAX103C	3/11/2025 14:23	mm/s		5	10	0.09	0.11	0.10	0.07
WS49PGL08A	5/11/2025 13:32	mm/s		5	10	0.12	0.12	0.11	0.50
WT12BAY02A	7/11/2025 13:02	mm/s		5	10	0.15	0.16	0.10	0.44
M1B3BP802A	8/11/2025 10:05	mm/s		5	10	0.20	0.26	0.12	0.08
P101BRN602A_P101B6P01B	8/11/2025 17:20	mm/s		5	10	0.35	0.13	0.34	0.51
P210MTA309A	8/11/2025 17:21	mm/s		5	10	0.12	0.09	0.14	0.29

Number: HVOOC-1797567310-5458

Status: Approved

Effective: 22/01/2026

Page 12 of 17

Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Uncontrolled when printed

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P102W10P03A	10/11/2025 13:18	mm/s	All Blasts 100%	5	10	0.12	0.12	0.24	0.37
P210BRN302A	10/11/2025 13:19	mm/s		5	10	0.27	0.20	0.32	0.33
WT12BAY03A	11/11/2025 13:04	mm/s		5	10	0.22	0.17	0.13	0.21
P101BRN506A_B5P01D_P102M3P02A	12/11/2025 13:03	mm/s		5	10	0.33	0.16	0.28	0.70
WS49ARL02A	13/11/2025 12:59	mm/s		5	10	0.12	0.13	0.10	0.11
P102WKW1005A	13/11/2025 14:57	mm/s		5	10	0.19	0.15	0.16	0.44
WS49LDL06A	14/11/2025 13:20	mm/s		5	10	0.14	0.15	0.16	0.50
WS49PGL09A	17/11/2025 12:26	mm/s		5	10	0.12	0.11	0.09	0.74
P210MTA309B_P210PCF104A	18/11/2025 11:10	mm/s		5	10	0.11	0.10	0.10	0.35

Number: HVOOC-1797567310-5458

Status: Approved

Effective: 22/01/2026

Page 13 of 17
Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Uncontrolled when printed

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
WS49BARP01A_WS49LDL03A	18/11/2025 13:14	mm/s	All Blasts 100%	5	10	0.27	0.27	0.14	0.10
M1B1BP603A	19/11/2025 11:42	mm/s		5	10	0.14	0.29	0.09	0.14
P102M3P02B	19/11/2025 13:17	mm/s		5	10	0.27	0.18	0.13	0.33
P210PCF105A	21/11/2025 15:14	mm/s		5	10	0.09	0.07	0.11	0.44
P210N1006A	21/11/2025 15:17	mm/s		5	10	0.09	0.07	0.10	0.32
WS49ARU306A	22/11/2025 13:12	mm/s		5	10	0.11	0.11	0.11	0.08
P210PCF303A	24/11/2025 12:56	mm/s	All Blasts 100%	5	10	0.10	0.10	0.08	0.18
P210B5P02A	27/11/2025 15:26	mm/s		5	10	0.15	0.14	0.34	0.40
P102WKW1006A	28/11/2025 12:58	mm/s		5	10	0.15	0.12	0.10	0.23

Number: HVOOC-1797567310-5458

Status: Approved

Effective: 22/01/2026

Page 14 of 17
Owner: Superintendent - Environment and Community

Version: 1.0

Review: [Planned Review Date]

Uncontrolled when printed



Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Monitoring Point			
				95% of Blasts	100% of Blasts	Moses Crossing EPL ID 18	Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
WS49ARU307A	28/11/2025 14:19	mm/s		5	10	0.11	0.11	0.08	0.06
WT11ARU301A	28/11/2025 14:20	mm/s		5	10	0.29	0.2	0.23	0.12
WS49LDL04A	29/11/2025 9:55	mm/s		5	10	0.18	0.17	0.13	0.07
Monthly Meaningful Data									
November		mm/s	Minimum	5	10	0.09	0.07	0.08	0.06
		mm/s	Mean	5	10	0.17	0.14	0.15	0.31
		mm/s	Maximum	5	10	0.35	0.29	0.34	0.74
		mm/s	Median	5	10	0.15	0.13	0.13	0.33



6 | SEWAGE TREATMENT PLANT MONITORING DATA

Sewage treatment plant monitoring results are provided on a quarterly basis. Results will be provided in the December 2025 report.

7 | NOISE MONITORING DATA

Date Sampled: 17/11/2025

Date Obtained: 27/11/2025

Table 6 – Night $L_{Aeq,15minute}$ and 1minute Generated by HVO Against EPL Criteria

Location	Start date and time	Wind		Stability class	Very enhancing? ¹	EPL limits, dB ¹		HVO levels, dB ^{2,3}		Exceedances, dB	
		Speed m/s	Direction ⁴			$L_{Aeq,15minute}$	$L_{A1,1min}$	$L_{Aeq,15minute}$ ²	$L_{A1,1min}$	$L_{Aeq,15minute}$	$L_{A1,1min}$
Shearers Lane	17/11/2025 22:00	2.9	248	D	No	41	46	<25	29	Nil	Nil
Knodlers Lane	17/11/2025 22:45	1.2	257	F	No	40	46	<25	<25	Nil	Nil
Maison Dieu	17/11/2025 22:22	2.3	246	E	No	39	46	<25	<25	Nil	Nil
Long Point (Dights Crossing)	17/11/2025 23:34	1.4	250	D	No	37	46	IA	IA	Nil	Nil
Moses Crossing	17/11/2025 23:52	1.2	229	F	No	39	46	IA	IA	Nil	Nil
Jerrys Plains East	17/11/2025 23:32	1.4	250	D	No	39	46	IA	IA	Nil	Nil
Jerrys Plains Village	17/11/2025 22:19	2.3	246	E	No	40	46	IA	IA	Nil	Nil
Jerrys Plains West	17/11/2025 22:00	2.9	248	D	No	40	46	IA	IA	Nil	Nil

Notes:

- Noise limits are adjusted by +5 dB during 'very noise-enhancing meteorological conditions' in accordance with the NPfl.
- Site-only $L_{Aeq,15minute}$, includes modifying factor penalties if applicable.
- Site-only $L_{A1,1minute}$ based on measured site-only L_{Amax} as detailed in Section 3.2.
- Degrees magnetic north, "-" indicates calm conditions.

Number: HVOOC-1797567310-5458

Owner: Superintendent - Environment and Community

Status: Approved

Version: 1.0

Effective: 22/01/2026

Review: [Planned Review Date]

Page 17 of 17

Uncontrolled when printed