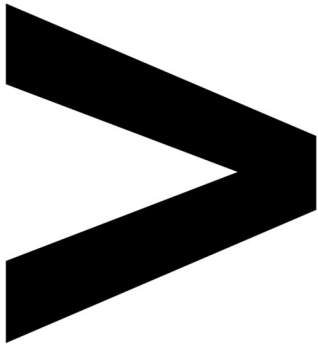




HUNTER VALLEY OPERATIONS

EPL 640 MONITORING DATA – OCTOBER 2025

DOCUMENT NUMBER

HVOOC-1797567310-5454

STATUS

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VERSION

1.0

EFFECTIVE

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REVIEW

[Planned Review Date]

OWNER

Superintendent - Environment and Community



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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

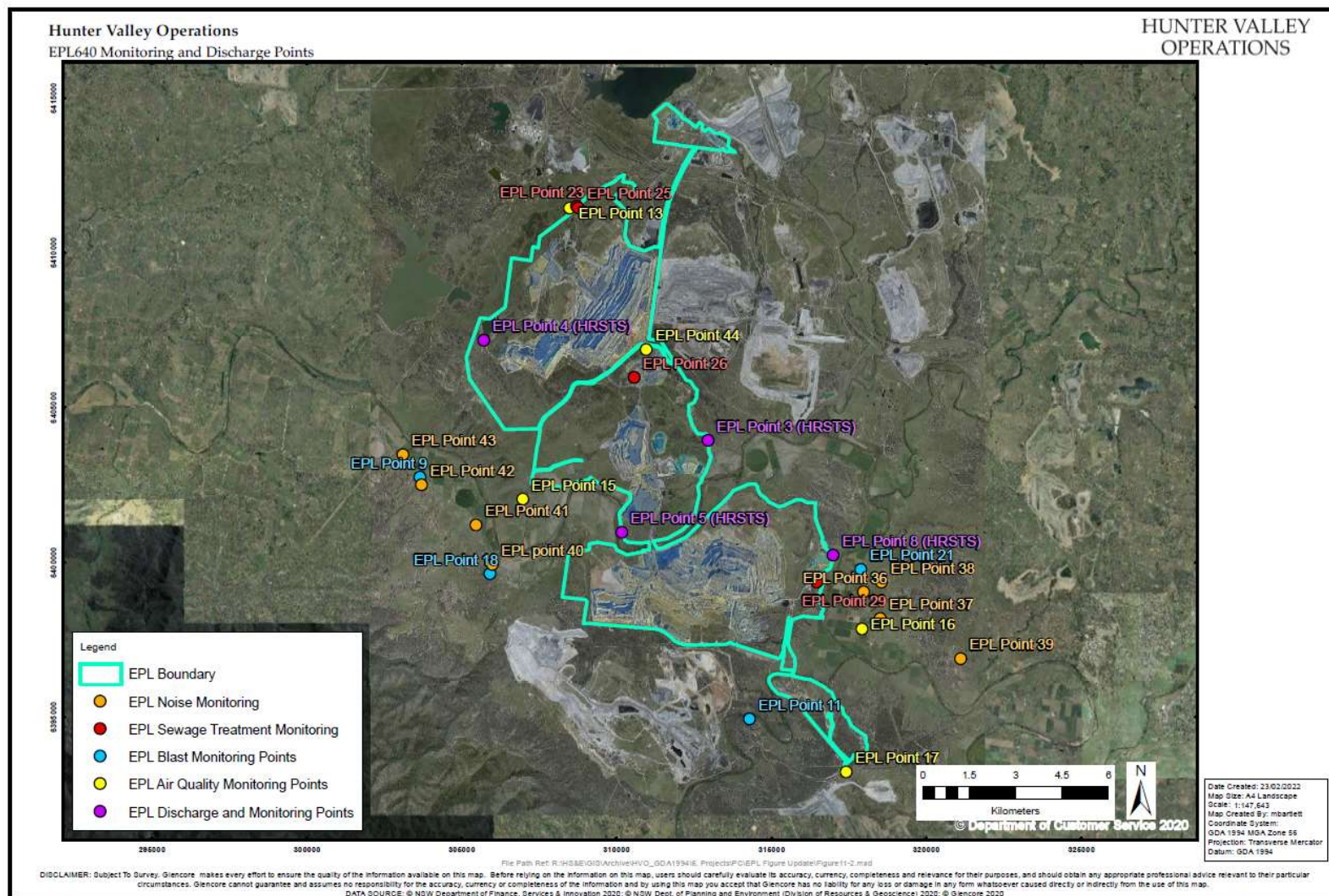


Figure 1: EPL 640 Monitoring Location

3 | AIR QUALITY

Date Last Sampled: 30/09/2025

Date Obtained: 07/01/2026

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)
1/10/2025	µg/m ³	Continuous	22.3	24.7	37.4	37.2	118.3
2/10/2025	µg/m ³		23.7	18.6	31.6	33.3	125.4
3/10/2025	µg/m ³		23.4	12.1	21.7	27.4	60.8
4/10/2025	µg/m ³		35.9	20.9	26.7	21.3	51.6
5/10/2025	µg/m ³		23.5	30.0	30.7	33.2	75.2
6/10/2025	µg/m ³		39.3	27.1	53.4	41.4	111.9
7/10/2025	µg/m ³		34.8	20.0	25.6	24.3	58.4
8/10/2025	µg/m ³		30.6	18.0	47.4	41.0	138.6
9/10/2025	µg/m ³		35.8	20.5	42.1	68.4	133.0
10/10/2025	µg/m ³		17.8	10.3	20.4	26.6	74.2
11/10/2025	µg/m ³		27.7	10.1	40.8	40.1	142.5
12/10/2025	µg/m ³		28.9	13.4	31.5	28.9	94.7
13/10/2025	µg/m ³		19.4	14.7	14.5	14.0	41.6
14/10/2025	µg/m ³		30.4	18.0	25.1	33.1	100.9
15/10/2025	µg/m ³		50.1	35.2	44.4	38.6	94.8

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16/10/2025	µg/m ³		29.9	26.9	44.6	40.2	107.5
17/10/2025	µg/m ³		28.9	18.6	31.9	32.7	106.8
18/10/2025	µg/m ³		22.6	21.8	17.8	19.2	13.1
19/10/2025	µg/m ³		35.5	32.2	25.0	25.6	39.3
20/10/2025	µg/m ³		27.7	30.9	24.6	36.6	94.9
21/10/2025	µg/m ³		*	43.2	36.9	36.8	47.3
22/10/2025	µg/m ³		*	31.2	48.1	42.4	150.0
23/10/2025	µg/m ³		51.9	46.1	47.6	42.8	65.5
24/10/2025	µg/m ³		24.1	26.4	27.1	29.2	101.7
25/10/2025	µg/m ³		31.5	26.4	28.6	40.0	*
26/10/2025	µg/m ³		27.4	17.5	44.7	36.0	*
27/10/2025	µg/m ³		29.5	39.0	36.8	42.0	67.6
28/10/2025	µg/m ³		9.8	13.3	7.3	8.2	6.3
29/10/2025	µg/m ³		12.8	9.9	7.0	1.8	10.9
30/10/2025	µg/m ³		22.5	19.4	12.9	10.9	30.5
31/10/2025	µg/m ³		27.8	26.9	14.2	19.7	30.1
Monthly Meaningful Data							
October	µg/m ³	Minimum	9.8	9.9	7.0	1.8	6.3
	µg/m ³	Mean	28.5	23.3	30.6	31.4	79.1
	µg/m ³	Maximum	51.9	46.1	53.4	68.4	150.0
	µg/m ³	Median	27.8	20.9	30.7	33.2	75.2

* Less than 75% 24-hour data capture



4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during October

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: 31/10/2025

Date Obtained: 23/12/2025

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
WS49LDU102A	1/10/2025 13:10	dB(L)	All Blasts 100%	115	120	98.44	103.54	108.13	112.36
P102W10P02A	1/10/2025 16:03	dB(L)		115	120	93.63	107.80	111.54	105.66
P210VAX103A	2/10/2025 9:03	dB(L)		115	120	101.69	98.26	93.94	97.00
P101BRN504A	3/10/2025 12:08	dB(L)		115	120	89.94	106.62	107.49	98.79
WN49BAR05A	3/10/2025 14:41	dB(L)		115	120	100.39	108.63	110.16	111.32
WT12BRN503A	7/10/2025 12:56	dB(L)		115	120	98.77	96.18	107.97	80.11

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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
P102WKW1002A	7/10/2025 15:17	dB(L)	All Blasts 100%	115	120	95.65	83.72	105.59	105.48
WS49PGM06B	10/10/2025 11:41	dB(L)		115	120	93.31	98.05	104.18	100.52
P210MTA307B	11/10/2025 9:09	dB(L)		115	120	91.65	93.49	105.92	104.55
WN49BAR05B_WS49LDU103A	11/10/2025 14:08	dB(L)		115	120	96.15	104.09	107.26	98.68
P102WKW503A	13/10/2025 14:03	dB(L)		115	120	102.61	96.89	99.84	96.64
WS49LDU103B	14/10/2025 13:11	dB(L)		115	120	96.49	105.42	108.97	87.30
P210VAX103B	15/10/2025 13:08	dB(L)		115	120	86.34	83.67	94.40	95.94
M1T3BP801C	16/10/2025 13:02	dB(L)		115	120	105.04	92.98	104.97	104.31
WS49ARL01A	18/10/2025 14:14	dB(L)		115	120	86.53	114.95	92.08	80.30

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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
P102WKW1002B	18/10/2025 16:14	dB(L)	All Blasts 100%	115	120	91.61	91.32	101.10	90.47
P210BRN301A	18/10/2025 16:16	dB(L)		115	120	91.25	95.90	96.75	88.88
P210MTA101A_P210M3P06A	18/10/2025 16:48	dB(L)		115	120	93.22	101.81	98.74	97.68
P210MTA308A	21/10/2025 13:07	dB(L)		115	120	95.39	98.44	96.09	93.01
P102WKW1002C	24/10/2025 13:42	dB(L)		115	120	97.19	95.53	88.81	96.24
P102WKW1003A	24/10/2025 13:43	dB(L)		115	120	98.79	94.89	93.94	96.84
WS49LDL01A_WS49LDL02A_WS49LDU703A	25/10/2025 13:23	dB(L)		115	120	97.16	87.27	96.86	93.72
P210PCF103A	25/10/2025 14:29	dB(L)		115	120	101.82	90.43	95.05	98.34
WS49LDU704A	29/10/2025 14:29	dB(L)		115	120	92.35	90.02	84.75	77.95

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
P101BRN601A_B6P01A	30/10/2025 13:25	dB(L)	All Blasts 100%	115	120	91.40	89.33	94.19	95.45
P101BRN505A	30/10/2025 13:27	dB(L)		115	120	88.84	86.88	90.41	95.35
WS49ARL01B	31/10/2025 13:39	dB(L)		115	120	96.53	99.92	91.57	92.05
Monthly Meaningful Data									
October		dB(L)	Minimum	115	120	86.34	83.67	84.75	77.95
		dB(L)	Mean	115	120	95.22	96.77	99.97	96.27
		dB(L)	Maximum	115	120	105.04	114.95	111.54	112.36
		dB(L)	Median	115	120	95.65	96.18	98.74	96.64

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
WS49LDU102A	1/10/2025 13:10	mm/s	All Blasts 100%	5	10	0.13	0.20	0.12	0.41
P102W10P02A	1/10/2025 16:03	mm/s		5	10	0.14	0.13	0.08	0.19
P210VAX103A	2/10/2025 9:03	mm/s		5	10	0.07	0.09	0.13	0.30
P101BRN504A	3/10/2025 12:08	mm/s		5	10	0.19	0.14	0.29	0.39
WN49BAR05A	3/10/2025 14:41	mm/s		5	10	0.29	0.25	0.19	0.54
WT12BRN503A	7/10/2025 12:56	mm/s		5	10	0.13	0.15	0.11	0.10
P102WKW1002A	7/10/2025 15:17	mm/s		5	10	0.26	0.14	0.21	0.36
WS49PGM06B	10/10/2025 11:41	mm/s		5	10	0.10	0.11	0.11	0.13
P210MTA307B	11/10/2025 9:09	mm/s		5	10	0.13	0.10	0.26	0.47

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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
WN49BAR05B_WS49LDU103A	11/10/2025 14:08	mm/s	All Blasts 100%	5	10	0.10	0.12	0.09	0.08
P102WKW503A	13/10/2025 14:03	mm/s		5	10	0.12	0.13	0.12	0.44
WS49LDU103B	14/10/2025 13:11	mm/s		5	10	0.08	0.10	0.09	0.08
P210VAX103B	15/10/2025 13:08	mm/s		5	10	0.10	0.13	0.11	0.11
M1T3BP801C	16/10/2025 13:02	mm/s		5	10	0.19	0.27	0.10	0.06
WS49ARL01A	18/10/2025 14:14	mm/s		5	10	0.08	0.10	0.10	0.06
P102WKW1002B	18/10/2025 16:14	mm/s		5	10	0.08	0.10	0.09	0.12
P210BRN301A	18/10/2025 16:16	mm/s		5	10	0.17	0.12	0.59	0.82
P210MTA101A_P210M3P06A	18/10/2025 16:48	mm/s		5	10	0.11	0.11	0.24	0.37

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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
P210MTA308A	21/10/2025 13:07	mm/s	All Blasts 100%	5	10	0.22	0.13	0.30	0.49
P102WKW1002C	24/10/2025 13:42	mm/s		5	10	0.10	0.10	0.09	0.10
P102WKW1003A	24/10/2025 13:43	mm/s		5	10	0.13	0.10	0.13	0.56
WS49LDL01A_WS49LDL02A_WS49LDU703A	25/10/2025 13:23	mm/s		5	10	0.21	0.31	0.23	0.60
P210PCF103A	25/10/2025 14:29	mm/s		5	10	0.08	0.07	0.14	0.13
WS49LDU704A	29/10/2025 14:29	mm/s		5	10	0.07	0.07	0.10	0.11
P101BRN601A_B6P01A	30/10/2025 13:25	mm/s		5	10	0.28	0.11	0.25	0.65
P101BRN505A	30/10/2025 13:27	mm/s		5	10	0.27	0.12	0.24	0.75
WS49ARL01B	31/10/2025 13:39	mm/s		5	10	0.11	0.13	0.11	0.13

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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
Monthly Meaningful Data									
October		mm/s	Minimum	5	10	0.07	0.07	0.08	0.06
		mm/s	Mean	5	10	0.15	0.13	0.17	0.32
		mm/s	Maximum	5	10	0.29	0.31	0.59	0.82
		mm/s	Median	5	10	0.13	0.12	0.12	0.30



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: 14-15/10/2025

Date Obtained: 18/11/2025

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	14/10/2025 22:01	1.2	284	F	No	41	46	IA	IA	Nil	Nil
Knodlers Lane	14/10/2025 22:44	1.6	351	F	No	40	46	<25	26	Nil	Nil
Maison Dieu	14/10/2025 22:21	1.1	300	F	No	39	46	26	28	Nil	Nil
Long Point (Dights Crossing)	14/10/2025 23:13	1.2	350	F	No	37	46	IA	IA	Nil	Nil
Moses Crossing	15/10/2025 00:23	2.0	338	E	No	39	46	IA	IA	Nil	Nil
Jerrys Plains East	15/10/2025 00:01	1.5	339	D	No	39	46	IA	IA	Nil	Nil
Jerrys Plains Village	14/10/2025 22:22	1.1	300	F	No	40	46	IA	IA	Nil	Nil
Jerrys Plains West	14/10/2025 22:00	1.2	284	F	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.
- Limits adjusted to +5 dB due to very noise-enhancing conditions.

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