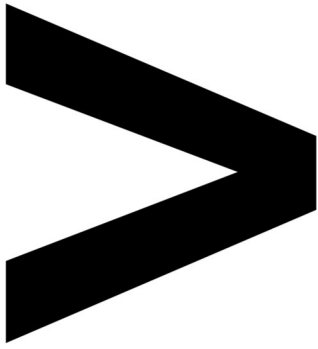




HUNTER VALLEY OPERATIONS

EPL 640 MONITORING DATA – SEPTEMBER 2025

DOCUMENT NUMBER

HVOOC-1797567310-5414

STATUS

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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

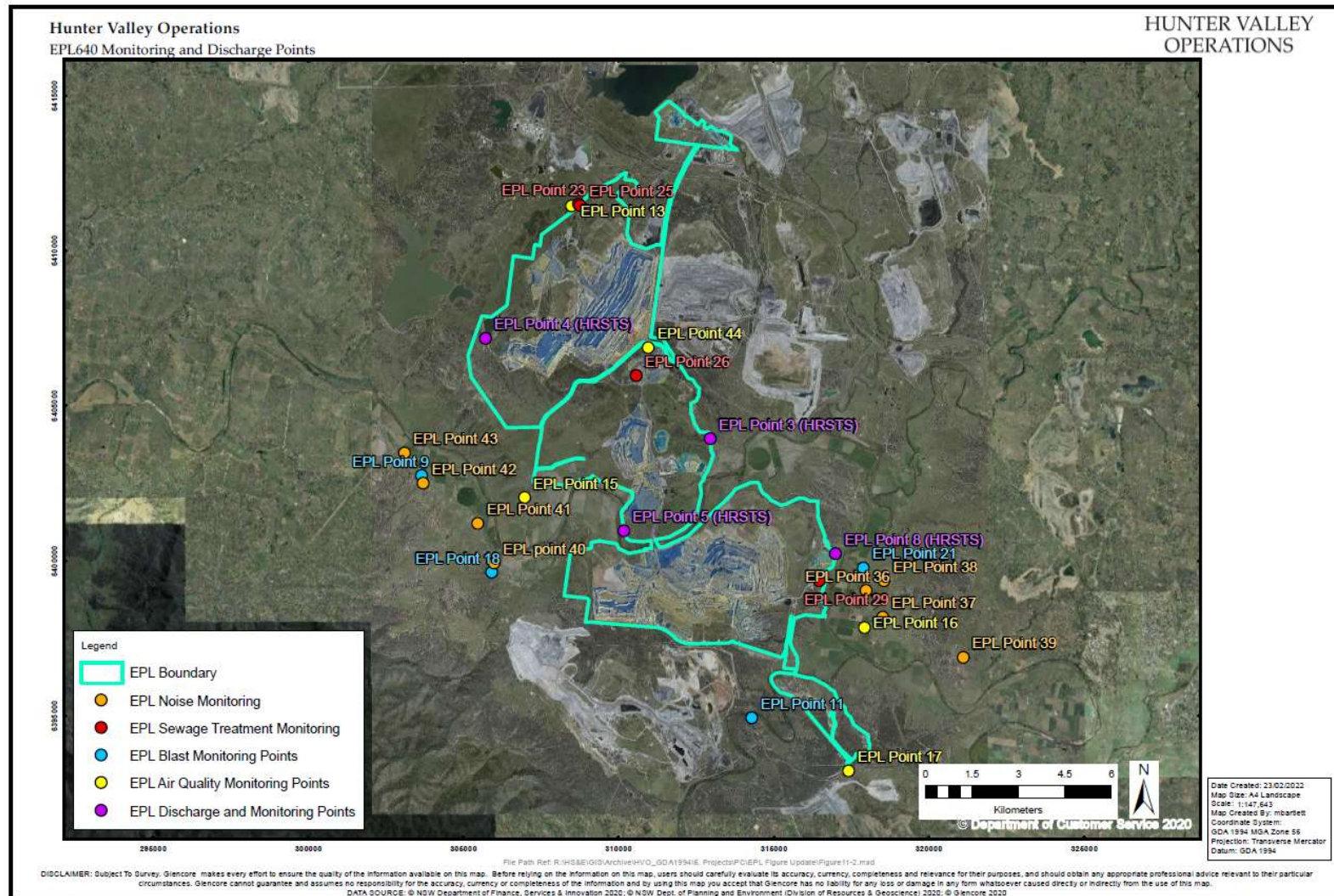


Figure 1: EPL 640 Monitoring Location

3 | AIR QUALITY

Date Last Sampled: 30/09/2025

Date Obtained: 05/11/2025

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)
1/09/2025	µg/m ³	Continuous	33.4	15.1	18.8	26.1	54.6
2/09/2025	µg/m ³		24.2	24.9	24.0	34.1	106.7
3/09/2025	µg/m ³		19.3	9.1	21.2	24.8	100.9
4/09/2025	µg/m ³		27.3	11.4	30.5	25.7	90.8
5/09/2025	µg/m ³		40.3	24.2	42.9	46.9	72.7
6/09/2025	µg/m ³		45.5	27.2	27.8	22.5	36.2
7/09/2025	µg/m ³		31.7	21.0	20.1	*	82.7
8/09/2025	µg/m ³		27.3	8.2	34.8	34.9	134.2
9/09/2025	µg/m ³		26.9	1.9	31.4	26.9	70.6
10/09/2025	µg/m ³		7.6	4.8	6.5	7.1	7.5
11/09/2025	µg/m ³		6.8	5.8	6.7	10.5	17.2
12/09/2025	µg/m ³		11.4	7.1	7.5	14.7	34.9
13/09/2025	µg/m ³		29.9	11.0	14.5	27.3	62.1
14/09/2025	µg/m ³		22.2	12.1	15.4	26.1	112.7
15/09/2025	µg/m ³		18.6	17.5	23.0	24.6	74.9

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16/09/2025	µg/m ³		21.5	22.2	25.9	30.4	65.2
17/09/2025	µg/m ³		19.7	13.0	29.1	26.7	84.4
18/09/2025	µg/m ³		35.2	22.8	18.5	28.2	71.7
19/09/2025	µg/m ³		30.0	11.1	21.4	31.9	72.6
20/09/2025	µg/m ³		10.5	8.2	13.4	14.7	54.5
21/09/2025	µg/m ³		18.4	9.0	16.9	18.7	68.0
22/09/2025	µg/m ³		17.9	14.8	15.3	16.1	*
23/09/2025	µg/m ³		28.4	15.8	20.5	21.4	*
24/09/2025	µg/m ³		18.6	12.5	21.3	26.7	77.4
25/09/2025	µg/m ³		21.8	16.0	29.1	34.1	88.4
26/09/2025	µg/m ³		37.1	21.4	*	47.6	165.9
27/09/2025	µg/m ³		35.1	27.8	*	43.9	111.0
28/09/2025	µg/m ³		48.2	33.9	*	59.3	80.5
29/09/2025	µg/m ³		42.1	28.6	30.7	32.8	39.6
30/09/2025	µg/m ³		22.2	31.3	30.5	40.2	78.7
Monthly Meaningful Data							
September	µg/m ³	Minimum	6.8	1.9	6.5	7.1	7.5
	µg/m ³	Mean	26.0	16.3	22.1	28.4	75.6
	µg/m ³	Maximum	48.2	33.9	42.9	59.3	165.9
	µg/m ³	Median	25.6	15.0	21.3	26.7	73.8

* Less than 75% 24-hour data capture



4 | SURFACE WATER MONITORING DATA

No discharges under the HRSTS occurred during September.

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: 30/09/2025

Date Obtained: 14/10/2025

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
P210N2501A	1/09/2025 15:49	dB(L)	All blasts 100%	115	120	89.13	93.52	96.73	102.80
P101BRN501A	1/09/2025 15:50	dB(L)		115	120	92.70	92.29	93.16	95.41
WS49PGU08A_WS49BP101A_WS49LPP04A	2/09/2025 13:30	dB(L)		115	120	102.4	97.68	97.96	93.43
P210PCF302C	4/09/2025 11:01	dB(L)		115	120	86.76	85.49	90.83	102.03
WS49ARU101C_WS49ARU102C	4/09/2025 14:46	dB(L)		115	120	93.99	94.7	108.01	99.23
P101BRN103A_B4P02A	5/09/2025 13:07	dB(L)		115	120	95.32	84.05	91.02	93.59

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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
P210FCL02	6/09/2025 14:25	dB(L)	All Blasts 100%	115	120	88.64	87.11	86.00	88.04
P101B5P01A	6/09/2025 14:28	dB(L)		115	120	85.37	85.98	84.72	83.95
M1T3BP801B	8/09/2025 10:01	dB(L)		115	120	98.20	94.48	106.01	98.23
WS49PGU08B_WS49BP101B	9/09/2025 13:39	dB(L)		115	120	101.91	100.99	99.06	96.80
P102WKW501C	11/09/2025 16:06	dB(L)		115	120	88.78	85.76	108.81	110.03
P101BRN502A	12/09/2025 16:02	dB(L)		115	120	93.68	93.82	96.35	104.59
M1B1BP602A	15/09/2025 17:12	dB(L)		115	120	105.68	114.52	98.61	102.89
P102FCL01A	16/09/2025 16:24	dB(L)		115	120	106.01	107.83	109.24	111.21
WN49BAR03A_WS49LDU701A	17/09/2025 13:05	dB(L)		115	120	92.47	110.23	107.34	102.21

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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
P102WKW502A	19/09/2025 13:08	dB(L)	All Blasts 100%	115	120	100.31	89.88	97.31	100.12
WS49PGU09A_BP102A	20/09/2025 13:44	dB(L)		115	120	94.77	98.39	119.63	103.50
WN49BAR04A_WS49LDU702A	22/09/2025 14:14	dB(L)		115	120	95.75	96.46	102.39	93.51
P102FCL01B_P102WKW1001D	23/09/2025 16:47	dB(L)		115	120	93.89	84.80	85.94	96.31
P210PCF405A	24/09/2025 17:18	dB(L)		115	120	85.23	95.60	101.94	101.56
P101BRN503A_P101B5P01B	24/09/2025 17:20	dB(L)		115	120	99.49	101.15	106.58	111.95
P102WKW202E	27/09/2025 12:00	dB(L)		115	120	84.06	91.38	102.22	96.87
P210MTA307A	27/09/2025 15:42	dB(L)		115	120	88.92	95.40	98.32	102.50
P101B5P01C	30/09/2025 14:50	dB(L)		115	120	109.28	97.55	79.82	96.63

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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									
September		dB(L)	Minimum	115	120	84.06	84.05	79.82	83.95
		dB(L)	Mean	115	120	94.70	94.96	98.67	99.47
		dB(L)	Maximum	115	120	109.28	114.52	119.63	111.95
		dB(L)	Median	115	120	93.94	94.59	98.47	99.68

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
P210N2501A	1/09/2025 15:49	mm/s	All Blasts 100%	5	10	0.39	0.22	0.29	0.68
P101BRN501A	1/09/2025 15:50	mm/s		5	10	0.35	0.22	0.28	0.70
WS49PGU08A_WS49BP101A_WS49LPP04A	2/09/2025 13:30	mm/s		5	10	0.12	0.14	0.13	0.12
P210PCF302C	4/09/2025 11:01	mm/s		5	10	0.07	0.09	0.10	0.09
WS49ARU101C_WS49ARU102C	4/09/2025 14:46	mm/s		5	10	0.27	0.23	0.32	0.16
P101BRN103A_B4P02A	5/09/2025 13:07	mm/s		5	10	0.15	0.10	0.18	0.34
P210FCL02	6/09/2025 14:25	mm/s		5	10	0.07	0.10	0.09	0.10
P101B5P01A	6/09/2025 14:28	mm/s		5	10	0.12	0.11	0.10	0.10
M1T3BP801B	8/09/2025 10:01	mm/s		5	10	0.10	0.14	0.10	0.08
WS49PGU08B_WS49BP101B	9/09/2025 13:39	mm/s		5	10	0.11	0.11	0.12	0.16
P102WKW501C	11/09/2025 16:06	mm/s		5	10	0.06	0.09	0.10	0.72
P101BRN502A	12/09/2025 16:02	mm/s		5	10	0.28	0.13	0.21	0.35
M1B1BP602A	15/09/2025 17:12	mm/s		5	10	0.22	0.90	0.12	0.54

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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
P102FCL01A	16/09/2025 16:24	mm/s		5	10	0.06	0.09	0.10	0.17
WN49BAR03A_WS49LDU701A	17/09/2025 13:05	mm/s		5	10	0.18	0.22	0.15	0.23
P102WKW502A	19/09/2025 13:08	mm/s		5	10	0.09	0.10	0.10	0.15
WS49PGU09A_BP102A	20/09/2025 13:44	mm/s		5	10	0.09	0.12	0.10	0.04
WN49BAR04A_WS49LDU702A	22/09/2025 14:14	mm/s		5	10	0.14	0.17	0.16	0.34
P102FCL01B_P102WKW1001D	23/09/2025 16:47	mm/s		5	10	0.07	0.11	0.10	0.18
P210PCF405A	24/09/2025 17:18	mm/s		5	10	0.08	0.11	0.09	0.29
P101BRN503A_P101B5P01B	24/09/2025 17:20	mm/s		5	10	0.29	0.22	0.30	0.95
P102WKW202E	27/09/2025 12:00	mm/s		5	10	0.08	0.08	0.09	0.12
P210MTA307A	27/09/2025 15:42	mm/s		5	10	0.10	0.10	0.22	0.31
P101B5P01C	30/09/2025 14:50	mm/s		5	10	0.13	0.12	0.08	0.55
Monthly Meaningful Data									
September		mm/s	Minimum	5	10	0.06	0.08	0.08	0.04
		mm/s	Mean	5	10	0.15	0.17	0.15	0.31
		mm/s	Maximum	5	10	0.39	0.90	0.32	0.95

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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
		mm/s	Median	5	10	0.12	0.12	0.11	0.21



6 | SEWAGE TREATMENT PLANT MONITORING DATA

Date Sampled: 22/09/2025

Date Obtained: 17/10/2025

Table 5 – Sewage Treatment Plant Monitoring

Monitoring Site	Date & Time	Pollutant	Unit of Measure	Monitoring Result
EPA ID 23	22/09/2025 08:50	Faecal Coliforms	Colony forming units/100ml	8800000
		pH	pH	7.24
EPA ID 25	22/09/2025 09:00	Faecal Coliforms	Colony forming units/100ml	Unable to access site
		pH	pH	
EPA ID 26	22/09/2025 10:10	Faecal Coliforms	Colony forming units/100ml	6600
		pH	pH	4.26
EPA ID 29	22/09/2025 12:00	Faecal Coliforms	Colony forming units/100ml	Water level too low to sample
		pH	pH	

7 | NOISE MONITORING DATA

Date Sampled: 23-24/09/2025

Date Obtained: 06/11/2025

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		Exceedances, dB	
		Speed m/s	Direction ³			$L_{Aeq,15minute}$	$L_{A1,1min}$	$L_{Aeq,15minute}$ ²	$L_{A1,1min}$	$L_{Aeq,15minute}$	$L_{A1,1min}$
Shearers Lane	23/09/2025 23:35	0.2	323	D	Yes	35	46	IA	IA	Nil	Nil
Knodlers Lane	24/09/2025 0:31	2.3	258	D	Yes	35	46	IA	IA	Nil	Nil
Maison Dieu	23/09/2025 23:58	1.0	323	F	Yes	35	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	24/09/2025 1:05	2.4	276	D	Yes	35	46	IA	IA	Nil	Nil
Moses Crossing	24/09/2025 0:20	1.3	272	D	Yes	39	46	IA	IA	Nil	Nil
Jerrys Plains East	23/09/2025 23:54	1.0	323	F	Yes	39	46	IA	IA	Nil	Nil
Jerrys Plains Village	23/09/2025 22:24	1.0	168	D	Yes	40	46	<25	<25	Nil	Nil
Jerrys Plains West	23/09/2025 22:00	1.5	179	D	Yes	40	46	IA	IA	Nil	Nil

Notes: 1. Noise limits are adjusted by +5 dB during 'very noise-enhancing meteorological conditions' in accordance with the NPfl.

2. Site-only $L_{Aeq,15minute}$, includes modifying factor penalties if applicable.

3. Degrees magnetic north, "-" indicates calm conditions.

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