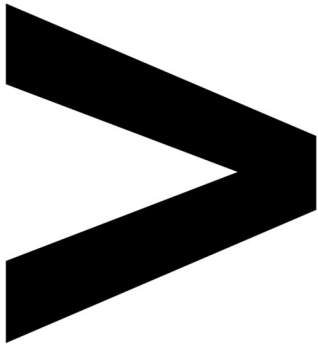




**HUNTER VALLEY
OPERATIONS**

EPL 640 MONITORING DATA – JUNE 2025

DOCUMENT NUMBER

HVOOC-1797567310-5340

STATUS

Approved

VERSION

1.0

EFFECTIVE

11/08/2025

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

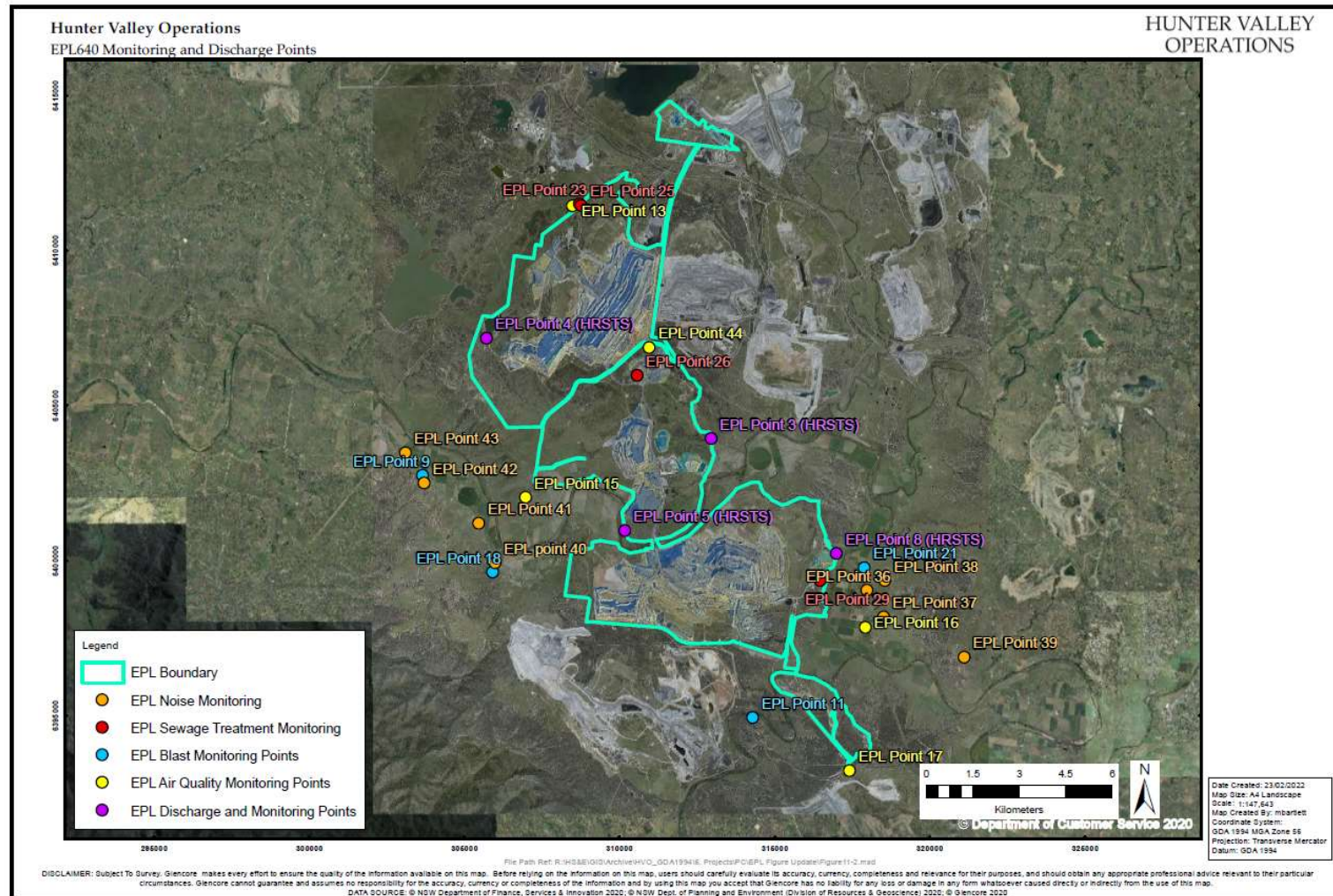


Figure 1: EPL 640 Monitoring Location

3 | AIR QUALITY

Date Last Sampled: 30/06/2025

Date Obtained: 21/07/2025

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)
1/06/2025	µg/m ³	Continuous	28.2	15.5	22.4	36.9	36.1
2/06/2025	µg/m ³		21.4	13.2	20.1	30.9	36.1
3/06/2025	µg/m ³		21.3	10.5	10.8	45.1	56.6
4/06/2025	µg/m ³		15.8	8.9	15.6	31.5	30.4
5/06/2025	µg/m ³		12.5	12.3	15.3	26.8	32.2
6/06/2025	µg/m ³		13.6	6.7	11.2	18.3	24.7
7/06/2025	µg/m ³		16.8	9.1	26.6	17.0	*
8/06/2025	µg/m ³		13.0	9.6	30.3	18.1	79.1
9/06/2025	µg/m ³		12.4	7.6	14.5	11.9	83.5
10/06/2025	µg/m ³		10.7	5.6	17.6	7.7	48.9
11/06/2025	µg/m ³		11.8	*	16.5	8.8	44.9
12/06/2025	µg/m ³		12.3	*	17.3	21.3	45.6
13/06/2025	µg/m ³		17.1	6.1	18.4	23.9	42.5
14/06/2025	µg/m ³		26.0	10.0	17.3	33.4	41.2
15/06/2025	µg/m ³		21.9	8.3	13.4	30.0	58.5

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16/06/2025	µg/m ³		20.4	7.3	14.0	25.7	76.7
17/06/2025	µg/m ³		17.7	8.9	23.0	18.6	83.1
18/06/2025	µg/m ³		27.4	13.5	20.4	31.6	52.8
19/06/2025	µg/m ³		33.3	11.8	18.0	32.9	74.7
20/06/2025	µg/m ³		44.2	13.1	19.9	34.4	91.9
21/06/2025	µg/m ³		36.5	12.6	19.6	34.2	89.6
22/06/2025	µg/m ³		21.2	7.8	16.1	34.3	89.8
23/06/2025	µg/m ³		20.4	12.7	20.1	26.5	78.9
24/06/2025	µg/m ³		11.2	10.1	17.3	19.4	*
25/06/2025	µg/m ³		18.3	13.1	17.2	17.3	*
26/06/2025	µg/m ³		16.2	7.8	14.3	21.6	51.2
27/06/2025	µg/m ³		22.2	11.6	17.6	22.6	62.7
28/06/2025	µg/m ³		14.7	14.5	11.4	25.5	33.5
29/06/2025	µg/m ³		16.7	9.7	16.2	25.6	74.7
30/06/2025	µg/m ³		27.3	13.7	17.5	33.5	26.8
Monthly Meaningful Data							
June	µg/m ³	Minimum	10.7	5.3	10.8	7.7	24.7
	µg/m ³	Mean	20.1	10.4	17.7	25.5	57.3
	µg/m ³	Maximum	44.2	15.5	30.3	45.1	91.9
	µg/m ³	Median	18.0	10.1	17.3	25.7	52.8

* Less than 75% 24-hour data capture



4 | SURFACE WATER MONITORING DATA

Date/s Sampled:

EPL ID 8: 01-04/06/2025 and 12-15/06/2025

EPL ID 3: 04-07/06/2025

EPL ID 4: N/A

Date Obtained: 03-06/06/2025, 06-12/06/2025 and 14-18/06/2025

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	4	4
	Total Suspended Solids	Milligrams per Litre	120	4	4
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	8	8
	Total Suspended Solids	Milligrams per Litre	120	8	8

5 | BLAST MONITORING DATA

Date Last Sampled: 30/06/2025

Date Obtained: 25/07/2025

Table 3 – Blast Monitoring (Air Blast Overpressure)

Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Moses Crossing EPL ID 18	Monitoring Point		Warkworth EPL ID 11
				95% of Blasts	100% of Blasts		Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	
P101VAX107A	2/06/2025 13:05	dB(L)	All blasts 100%	115	120	89.54	91.76	94.99	97.55
M1T408001B	3/06/2025 12:01	dB(L)		115	120	95.22	98.48	88.40	87.47
P210WKW906A_P210BP0201A	4/06/2025 13:20	dB(L)		115	120	99.54	99.09	99.77	102.40
P101BRN102B	5/06/2025 13:18	dB(L)		115	120	88.43	92.78	99.22	100.23
P102WKW201B	5/06/2025 13:21	dB(L)		115	120	96.17	85.47	99.84	96.31
P210B5P01A	7/06/2025 8:06	dB(L)		115	120	80.36	79.92	98.02	89.64

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Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Moses Crossing EPL ID 18	Monitoring Point		
				95% of Blasts	100% of Blasts		Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
WS49PGM05E_WS49PGL05A_WN49LDU102A	7/06/2025 15:07	dB(L)	All Blasts 100%	115	120	96.57	96.64	112.31	113.97
WS80BAY01A	11/06/2025 13:05	dB(L)		115	120	89.51	112.89	107.16	95.80
P210VAX102A_P210B5P01B	13/06/2025 13:11	dB(L)		115	120	93.36	87.03	92.82	98.10
WS49ARL102E_WS49ARL103A	14/06/2025 13:08	dB(L)		115	120	90.92	82.80	81.45	88.37
WN49LDU701A	14/06/2025 13:11	dB(L)		115	120	89.54	84.62	87.43	84.06
P210N1002A	14/06/2025 15:08	dB(L)		115	120	89.87	83.23	92.92	100.44
P102WKW201A_P102WKW202D	14/06/2025 15:52	dB(L)		115	120	100.39	88.56	95.19	99.47
WS49LED11A	16/06/2025 13:13	dB(L)		115	120	90.77	98.35	91.74	92.68
P101VAX107B	17/06/2025 13:12	dB(L)		115	120	84.49	80.28	97.98	102.46

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Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Moses Crossing EPL ID 18	Monitoring Point		
				95% of Blasts	100% of Blasts		Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
P210V3P02A	17/06/2025 13:14	dB(L)	All Blasts 100%	115	120	82.69	87.28	102.78	97.40
P102WKW202C	18/06/2025 13:02	dB(L)		115	120	96.30	89.68	87.68	98.20
P210VAX102B	21/06/2025 14:40	dB(L)		115	120	90.66	78.45	92.50	98.34
M2TB11502A	21/06/2025 16:45	dB(L)		115	120	100.92	104.75	102.56	107.05
M1T408001C_M1T408001D	21/06/2025 16:47	dB(L)		115	120	93.70	98.37	95.50	99.20
WS49PGL06A	23/06/2025 13:17	dB(L)		115	120	96.67	86.49	99.78	86.02
M1B1BP601A	24/06/2025 13:10	dB(L)		115	120	99.61	98.17	91.95	99.23
M2TB13501A	24/06/2025 13:12	dB(L)		115	120	106.71	104.42	101.67	107.43
M2TB11503A	26/06/2025 12:50	dB(L)		115	120	90.35	92.78	91.61	85.89



Blast ID	Date & Time	Unit of Measure	Monitoring Frequency & Capture	EPL Limits		Moses Crossing EPL ID 18	Monitoring Point		
				95% of Blasts	100% of Blasts		Jerrys Plains EPL ID 9	Maison Dieu EPL ID 21	Warkworth EPL ID 11
WN49LDU702B	28/06/2025 13:08	dB(L)	All Blasts 100%	115	120	94.65	90.73	82.90	82.46
P210WKW907A_P210PCF102A	30/06/2025 16:25	dB(L)		115	120	108.43	105.79	100.17	104.58
Monthly Meaningful Data									
June		dB(L)	Minimum	115	120	80.36	78.45	81.45	82.46
		dB(L)	Mean	115	120	93.67	92.26	95.71	96.72
		dB(L)	Maximum	115	120	108.43	112.89	112.31	113.97
		dB(L)	Median	115	120	93.53	91.25	95.35	98.15



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
P101VAX107A	2/06/2025 13:05	mm/s	All Blasts 100%	5	10	0.22	0.07	0.11	0.14
M1T408001B	3/06/2025 12:01	mm/s		5	10	0.10	0.21	0.11	0.08
P210WKW906A_P210BP0201A	4/06/2025 13:20	mm/s		5	10	0.07	0.06	0.15	0.57
P101BRN102B	5/06/2025 13:18	mm/s		5	10	0.08	0.09	0.14	0.28
P102WKW201B	5/06/2025 13:21	mm/s		5	10	0.06	0.09	0.12	0.15
P210B5P01A	7/06/2025 8:06	mm/s		5	10	0.07	0.09	0.23	0.40
WS49PGM05E_WS49PGL05A_WN49LDU102A	7/06/2025 15:07	mm/s		5	10	0.09	0.12	0.12	0.11
WS80BAY01A	11/06/2025 13:05	mm/s		5	10	0.14	0.12	0.11	0.56
P210VAX102A_P210B5P01B	13/06/2025 13:11	mm/s		5	10	0.06	0.10	0.21	0.32
WS49ARL102E_WS49ARL103A	14/06/2025 13:08	mm/s		5	10	0.07	0.12	0.10	0.12
WN49LDU701A	14/06/2025 13:11	mm/s		5	10	0.04	0.09	0.09	0.06
P210N1002A	14/06/2025 15:08	mm/s		5	10	0.15	0.10	0.20	0.53
P102WKW201A_P102WKW202D	14/06/2025 15:52	mm/s		5	10	0.03	0.09	0.09	0.10

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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
WS49LED11A	16/06/2025 13:13	mm/s		5	10	0.13	0.12	0.15	0.16
P101VAX107B	17/06/2025 13:12	mm/s		5	10	0.05	0.09	0.10	0.11
P210V3P02A	17/06/2025 13:14	mm/s		5	10	0.11	0.10	0.15	0.37
P102WKW202C	18/06/2025 13:02	mm/s		5	10	0.05	0.09	0.09	0.41
P210VAX102B	21/06/2025 14:40	mm/s		5	10	0.05	0.08	0.12	0.14
M2TB11502A	21/06/2025 16:45	mm/s		5	10	0.07	0.30	0.10	0.13
M1T408001C_M1T408001D	21/06/2025 16:47	mm/s		5	10	0.09	0.22	0.11	0.15
WS49PGL06A	23/06/2025 13:17	mm/s		5	10	0.07	0.11	0.10	0.11
M1B1BP601A	24/06/2025 13:10	mm/s		5	10	0.08	0.28	0.11	0.31
M2TB13501A	24/06/2025 13:12	mm/s		5	10	0.11	0.14	0.12	0.11
M2TB11503A	26/06/2025 12:50	mm/s		5	10	0.09	0.34	0.09	0.13
WN49LDU702B	28/06/2025 13:08	mm/s		5	10	0.04	0.10	0.09	0.08
P210WKW907A_P210PCF102A	30/06/2025 16:25	mm/s		5	10	0.15	0.12	0.34	0.66

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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									
June		mm/s	Minimum	5	10	0.03	0.06	0.09	0.06
		mm/s	Mean	5	10	0.09	0.13	0.13	0.24
		mm/s	Maximum	5	10	0.22	0.34	0.34	0.66
		mm/s	Median	5	10	0.08	0.10	0.11	0.15



6 | SEWAGE TREATMENT PLANT MONITORING DATA

Date Sampled: 04/06/2025

Date Obtained: 25/07/2025

Table 5 – Sewage Treatment Plant Monitoring

Monitoring Site	Date & Time	Pollutant	Unit of Measure	Monitoring Result
EPA ID 23	04/06/2025 12:40:00	Faecal Coliforms	Colony forming units/100ml	460000
		pH	pH	7.16
EPA ID 25	04/06/2025 12:50:00	Faecal Coliforms	Colony forming units/100ml	280
		pH	pH	7.05
EPA ID 26	04/06/2025 11:30:00	Faecal Coliforms	Colony forming units/100ml	2300
		pH	pH	6.39
EPA ID 29	04/06/2025 08:35:00	Faecal Coliforms	Colony forming units/100ml	1300
		pH	pH	7.48

7 | NOISE MONITORING DATA

Date Sampled: 23-24/06/2025

Date Obtained: 08/08/2025

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	24/06/2025 00:38	1.5	270	F	Yes	35	46	IA	IA	Nil	Nil
Knodlers Lane	24/06/2025 01:21	1.1	355	F	Yes	35	46	IA	IA	Nil	Nil
Maison Dieu	24/06/2025 00:58	1.3	359	F	Yes	35	46	IA	IA	Nil	Nil
Long Point (Dights Crossing)	24/06/2025 00:09	1.5	343	F	Yes	35	46	IA	IA	Nil	Nil
Moses Crossing	23/06/2025 23:00	0.3	353	F	Yes	39	46	32	36	Nil	Nil
Jerrys Plains East	23/06/2025 22:40	0.1	24	G	No	39	46	32	35	N/A	N/A
Jerrys Plains Village	23/06/2025 22:19	0.8	297	F	Yes	40	46	35	43	Nil	Nil
Jerrys Plains West	23/06/2025 22:00	1.1	260	E	Yes	40	46	35	42	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.