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Seaham Quarry

Environmental Monitoring Report

Surface Water Monitoring Data

June 2024



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

The monitoring of pollutants provided in this report is undertaken as per the requirements of Environment Protection Licence 3956 (EPL: 3956 – Boral Seaham Quarry)

Seaham Quarry Information	
Premise Details	Boral – Seaham Quarry
Address	Italia Road, Seaham NSW 2324
Licensee	Boral Resources (NSW) Pty Ltd
EPL No	3956
EPL Location	ViewPOEOLicence.aspx (nsw.gov.au)
Date of dataset update	27/06/2024

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

- Surface Water



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Surface Water Monitoring

Water quality monitoring is conducted as per condition M2 of EPL 3956.

Qualifications related to Surface Water

Extracted from EPL: 3956

EPA Identification No.	Type of Monitoring Point	Location Description
1	Discharge to Waters Discharge Quality Monitoring	Discharge from Dam A2
2	Discharge to Waters Discharge Quality Monitoring	Discharge from Sediment Basin B4
3	Discharge to Waters Discharge Quality Monitoring	Discharge from Sediment Basin C2
4	Discharge to Waters Discharge Quality Monitoring	Discharge from Sediment Basin E1
5	Discharge to Waters Discharge Quality Monitoring	Discharge from Sediment Basin E2

Water Concentration Limits:

Points 1,2,3,4,5

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Oil and Grease	milligrams per litre				10 &/or none visible
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre				30

Note: Points 2, 3, 4 and 5 were included in the concentration limits table in a variation to the licence in September 2023.



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Water monitoring requirements:

POINT 1,2,3,4,5

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen (ammonia)	milligrams per litre	Daily during any discharge	Grab sample
Nitrogen (nitrate)	milligrams per litre	Daily during any discharge	Grab sample
Nitrogen (nitrite)	milligrams per litre	Daily during any discharge	Grab sample
Nitrogen (total)	milligrams per litre	Daily during any discharge	Grab sample
Oil and Grease	Visible	Daily during any discharge	Visual Inspection
pH	pH	Daily during any discharge	Probe
TKN-N	milligrams per litre	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample

Note, Nitrogen was added to the water monitoring requirements in a variation to the licence in April 2024.

Where no results are displayed, no discharges from the monitoring point occurred.

TABLE 1: Seaham Quarry – Surface Water Monitoring Results

Monitoring data in **Tables 1 to 5** display the surface water quality data from 19 April 2024 to current with the increased monitoring requirements included in EPL 3956. Data prior to 19 April 2024 is provided in **Table 6**.

Table 1: EPL ID Point 1 – Discharge from Dam A2

Date	EPL ID 1 – Dam A2								Comments
	pH	TSS (mg/L)	O&G	Ammonia as N (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	TKN-N (mg/L)	Nitrogen (Total) (mg/L)	
10/05/2024	7.7	62	NV	<0.02	4.6	<0.005	1.1	5.7	217 mm of rainfall was received between 1 and 10 May 2024
09/05/2024	7.8	73	NV	<0.02	4.4	<0.005	0.7	5.1	
08/05/2024	7.7	70	NV	<0.02	3.7	<0.005	0.4	4.1	
07/05/2024	7.7	84	NV	<0.02	3.8	<0.005	0.5	4.3	
06/05/2024	7.6	70	NV	<0.02	3.3	0.60	<0.1	3.9	
05/05/2024	7.7	66	NV	<0.02	2.8	1.0	<0.1	3.8	
04/05/2024	7.7	84	NV	<0.02	3.5	0.30	<0.1	3.8	
03/05/2024	7.9	77	NV	<0.02	5.0	<0.005	0.4	5.3	
02/05/2024	7.8	47	NV	<0.02	5.3	0.005	0.2	5.5	



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Table 2: EPL ID Point 2 – Discharge from Sediment Basin B4

Date	EPL ID 2 – Sediment Basin B4								Comments
	pH	TSS (mg/L)	O&G	Ammonia as N (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	TKN-N (mg/L)	Nitrogen (Total) (mg/L)	
10/05/2024	7.8	84	NV	<0.02	0.82	0.012	0.1	0.9	217 mm of rainfall was received between 1 and 10 May 2024
09/05/2024	7.4	20	NV	<0.02	0.061	<0.005	0.5	0.6	
08/05/2024	7.4	31	NV	0.02	0.12	<0.005	0.5	0.6	
07/05/2024	7.5	58	NV	<0.02	0.23	<0.005	0.4	0.6	
06/05/2024	7.3	21	NV	<0.02	0.067	0.60	<0.1	0.6	
05/05/2024	7.0	84	NV	<0.02	2.0	<0.005	<0.1	2.0	
04/05/2024	7.8	44	NV	<0.02	1.8	0.40	<0.1	2.2	
03/05/2024	7.9	140	NV	<0.02	0.56	0.009	0.1	0.7	
02/05/2024	7.9	76	NV	<0.02	0.38	0.009	0.1	0.5	

Table 3: EPL ID Point 3 – Discharge from Sediment Basin C2

Date	EPL ID 3 – Sediment Basin C2								Comments
	pH	TSS (mg/L)	O&G	Ammonia as N (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	TKN-N (mg/L)	Nitrogen (Total) (mg/L)	
10/05/2024	7.7	54	NV	<0.02	3.9	0.005	0.4	4.4	217 mm of rainfall was received between 1 and 10 May 2024
09/05/2024	7.7	12	NV	<0.02	4.1	<0.005	1.1	5.3	
08/05/2024	7.5	25	NV	<0.02	3.4	0.005	<0.1	3.5	
07/05/2024	7.6	22	NV	<0.02	3.8	0.005	0.3	4.1	
06/05/2024	7.6	41	NV	<0.02	2.1	<0.005	<0.1	2.1	
05/05/2024	7.5	28	NV	<0.02	1.5	0.30	<0.1	1.8	
03/05/2024	7.7	70	NV	<0.02	2.3	0.01	<0.1	2.1	
02/05/2024	7.7	94	NV	<0.02	1.8	0.008	<0.1	1.5	



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Table 4: EPL ID Point 4 – Discharge from Sediment Basin E1

Date	EPL ID 4 – Sediment Basin E1								Comments
	pH	TSS (mg/L)	O&G	Ammonia as N (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	TKN-N (mg/L)	Nitrogen (Total) (mg/L)	
10/05/2024	7.9	21	NV	<0.02	1.7	0.014	0.3	2.0	217 mm of rainfall was received between 1 and 10 May 2024
09/05/2024	8.0	16	NV	<0.02	2.3	0.014	0.6	2.9	
08/05/2024	7.9	73	NV	<0.20	0.20	<0.005	0.2	0.4	
07/05/2024	7.9	98	NV	<0.02	0.21	0.005	0.2	0.4	
06/05/2024	8.1	66	NV	<0.02	0.81	0.30	<0.1	1.1	
05/05/2024	7.9	72	NV	<0.02	0.24	0.30	<0.1	0.5	
03/05/2024	7.9	42	NV	<0.02	0.98	<0.005	<0.1	1.0	
02/05/2024	7.7	58	NV	<0.02	0.44	<0.005	0.1	0.6	

Table 5: EPL ID Point 5 – Discharge from Sediment Basin E2

Date	EPL ID 5 – Sediment Basin E2								Comments
	pH	TSS (mg/L)	O&G	Nitrogen (ammonia)	Nitrogen (Nitrate)	Nitrogen (Nitrite)	TKN-N	Nitrogen (Total)	
10/05/2024	7.8	68	NV	0.04	0.13	0.006	0.5	0.6	217 mm of rainfall was received between 1 and 10 May 2024
09/05/2024	7.9	110	NV	<0.02	0.14	0.007	0.2	0.4	
08/05/2024	7.9	33	NV	<0.02	1.8	0.007	0.2	2.0	
07/05/2024	8.0	32	NO	<0.02	1.8	0.01	0.2	2.0	
06/05/2024	8.0	52	NV	<0.02	0.93	0.40	<0.1	1.4	
05/05/2024	7.9	28	NV	<0.02	1.4	0.70	<0.1	2.0	
03/05/2024	7.9	160	NV	0.02	0.52	0.02	0.1	0.7	
02/05/2024	8.0	160	NV	<0.02	0.74	0.02	<0.1	0.7	

Table 6: Surface Water Monitoring Results Prior to 19 April 2024

Date	EPL ID 1			EPL ID 2			EPL ID 3			EPL ID 4			EPL ID 5			Comments
	pH	TSS (mg/L)	O&G	pH	TSS (mg/L)	O&G	pH	TSS (mg/L)	O&G	pH	TSS (mg/L)	O&G	pH	TSS (mg/L)	O&G	
10/04/2024	7.7	44	NV	7.6	27	NV	7.7	29	NV	8.1	39	NV	7.9	22	NV	
09/04/2024	7.8	60	NV	7.7	28	NV	7.6	53	NV	8.0	31	NV	7.7	35	NV	
07/04/2024	7.8	72	NV	7.9	84	NV	7.7	23	NV	7.9	22	NV	7.7	42	NV	
06/04/2024	7.8	45	NV	8.1	350	NV	7.7	67	NV	7.8	19	NV	8.0	120	NV	
22/02/2024				7.7	50	NV	7.6	35	NV	7.7	19	NV	7.7	25	NV	
21/02/2024	7.8	46	NV	7.8	66	NV	7.7	58	NV	7.8	34	NV	7.8	32	NV	
20/02/2024	7.9	56	NV	7.9	76	NV	7.7	87	NV	8.0	140	NV	7.9	97	NV	
22/12/2023	7.7	47	NV				7.7	90	NV	7.8	150	NV	7.7	98	NV	
21/12/2023	7.7	71	NV				7.6	230	NV	7.9	220	NV	7.9	240	NV	
20/12/2023							7.6	310	NV	8.0	1,120	NV	8.1	790	NV	
07/12/2023							7.7	5	NV							
17/11/2023				7.5	22	NV	7.7	16	NV	8.0	22	NV	8.0	21	NV	
09/11/2023				7.6	7	NV	7.6	25	NV	8.0	46	NV	7.9	44	NV	
12/10/2023							8.0	6	NV							
21/4/2023	7.8	78	NV													
25/10/2022	7.5	40	NV													
24/10/2022	7.6	8	NV													
21/10/2022	7.2	13	NV													



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Date	EPL ID 1			EPL ID 2			EPL ID 3			EPL ID 4			EPL ID 5			Comments
20/10/2022	7.7	14	NV													
12/10/2022	7.6	11	NV													
10/10/2022	7.6	35	NV													
15/7/2022	NPH	22	NV													312mm of rainfall 2/7/23 to 15/07/23
14/7/2022	NPH	38	NV													312mm of rainfall 2/7/23 to 15/07/23
13/7/2022	NPH	49	NV													312mm of rainfall 2/7/23 to 15/07/24
11/7/2022	NPH	60	NV													312mm of rainfall 2/7/23 to 15/07/25
9/7/2022	NPH	92	NV													312mm of rainfall 2/7/23 to 15/07/26
8/7/2022	NPH	120	NV													312mm of rainfall 2/7/23 to 15/07/26
7/7/2022	NPH	124	NV													312mm of rainfall 2/7/23 to 15/07/26
6/7/2022	NPH	104	NV													312mm of rainfall 2/7/23 to 15/07/26
12/4/2022	NPH	13	NV													
11/4/2022	NPH	12	NV													
8/4/2022	NPH	29	NV													
31/3/2022	7.9	66	NV													
30/3/2022	7.8	56	NV													



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Date	EPL ID 1			EPL ID 2			EPL ID 3			EPL ID 4			EPL ID 5			Comments
25/3/2022	7.8	27	NV													
11/3/2022	7.5	37	NV													
10/3/2022	7.0	41	NV													
9/3/2022	7.5	7.6	NV													
8/3/2022	7.8	47	NV													
7/3/2022	6.9	43	NV													
4/3/2022	7.5	51	NV													
3/3/2022	NPH	135	NV													
2/3/2022	6.7	32	NV													
21/1/2022	6.9	9	NV													
20/1/2022	6.8	13	NV													
2/11/2021	NPH	14	NV													
30/3/2021	7.5	17	NV													
29/03/2021	7.6	22	NV													
26/03/2021	7.5	26	NV													
25/03/2021	7.5	18	NV													
24/03/2021	7.8	92	NV													
23/03/2021	7.9	85	NV													
22/03/2021	7.4	61	NV													
21/03/2021	7.3	46	NV													
20/03/2021	7.3	32	NV													



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Date	EPL ID 1			EPL ID 2			EPL ID 3			EPL ID 4			EPL ID 5			Comments
19/03/2021	7.3	39	NV													
18/03/2021	7	25	NV													
17/03/2021	7.0	32	NV													
16/03/2021	6.8	20	NV													
15/03/2021	7.4	6	NV													
29/07/2020	7	8	NV													
28/07/2020	7.3	9.5	NV													
27/07/2020	8.3	10	NV													
17/07/2020	7.5	11	NV													
16/07/2020	7.5	18	NV													
15/07/2020	8.3	10	NV													
28/02/2020	7.1	20	NV													
27/02/2020	7.0	18	NV													
26/02/2020	7.2	17	NV													
25/02/2020	7.1	16	NV													
24/02/2020	7.1	17	NV													
21/02/2020	7.9	11	NV													
20/02/2020	7.9	10	NV													
19/02/2020	7.9	12	NV													
18/02/2020	8	5	NV													
17/02/2020	7.9	14	NV													



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Date	EPL ID 1			EPL ID 2			EPL ID 3			EPL ID 4			EPL ID 5			Comments
14/02/2020	8.0	10	NV													
13/02/2020	8.0	12	NV													
12/02/2020	8.1	22	NV													
11/02/2020	7.7	17	NV													

Notes:

NV = Not Visible

TABLE 2: Surface Water Monitoring Results – Corrections Log

Date of Data (sample Date)	Old Published Data	Corrected Data	Reason for Update / Correction	Update Person	Date corrected Data Published	Comments

Note: The table above details the corrections made to published data due to incorrect reporting or misleading published data



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FIGURE 1 Seaham Quarry- Surface Water Monitoring Locations

Seaham Quarry – Water Discharge Monitoring Locations



Water Discharge 1 (A2 Dam)	EPA ID 1	-32.681245	151.789430
Water Discharge 2 (Basin B4)	EPA ID 2	-32.676472	151.794833
Water Discharge 3 (Basin C2)	EPA ID 3	-32.680100	151.798745
Water Discharge 4 (Basin E1)	EPA ID 4	-32.680455	151.791851
Water Discharge 5 (Basin E2)	EPA ID 5	-32.679933	151.792793