

Licence Information

Environment Protection Licence (EPL) Number	4442
License Holder	Oberon Quarries Pty. Limited
Licensee Address	Licensee: Oberon Quarries Pty. Limited PO Box 3575 Rouse Hill NSW 2155 Premises: "Langley Heights" Hard Rock Quarry Hargraves Quarry Road Oberon NSW 2787
Link to the full licence on the EPA website	https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=139261&SYSUID=1&LICID=4442



Oberon Quarries' EPL Licence (No. 4442) was varied on 2 May 2018 to include the addition of EPL Monitoring Point 7 and associated monitoring requirements. Monitoring Points 5 and 6 and associated EPL monitoring requirements were removed as part of the May 2018 Variation. However, these locations will continue to be monitored in accordance with the approved Water Management Plan.

Sampling for January 2018 was delayed until 1 February 2018, as the technician was absent during this period.

* '<' denotes monitoring results are below detection limit.

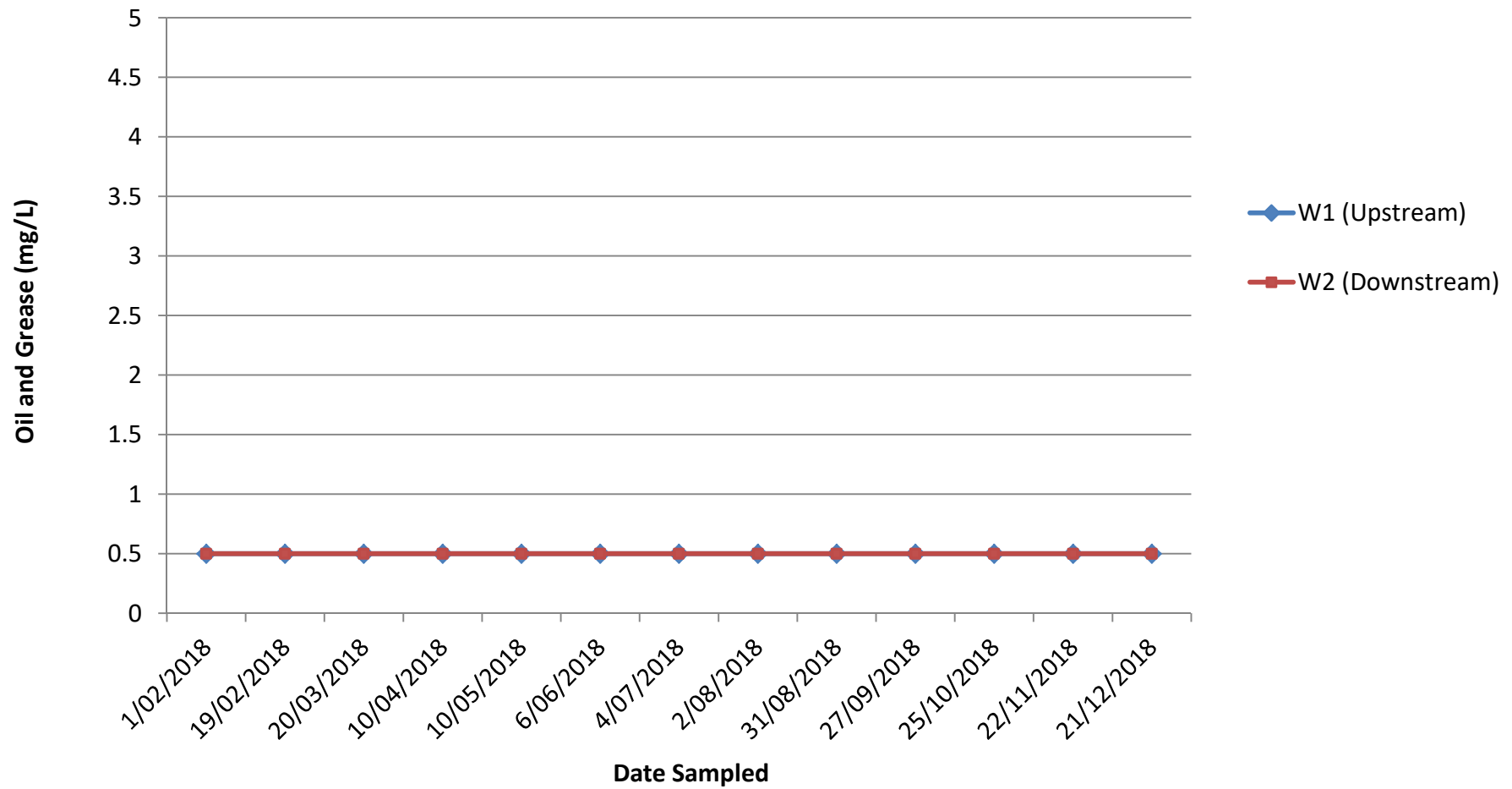
** Not an EPL parameter



Oberon Quarries' EPL Licence (No. 4442) was varied on 2 May 2018 to include the addition of EPL Monitoring Point 7 and associated monitoring requirements. Monitoring Points 5 and 6 and associated EPL monitoring requirements were removed as part of the May 2018 Variation. However, these locations will continue to be monitored in accordance with the approved Water Management Plan.

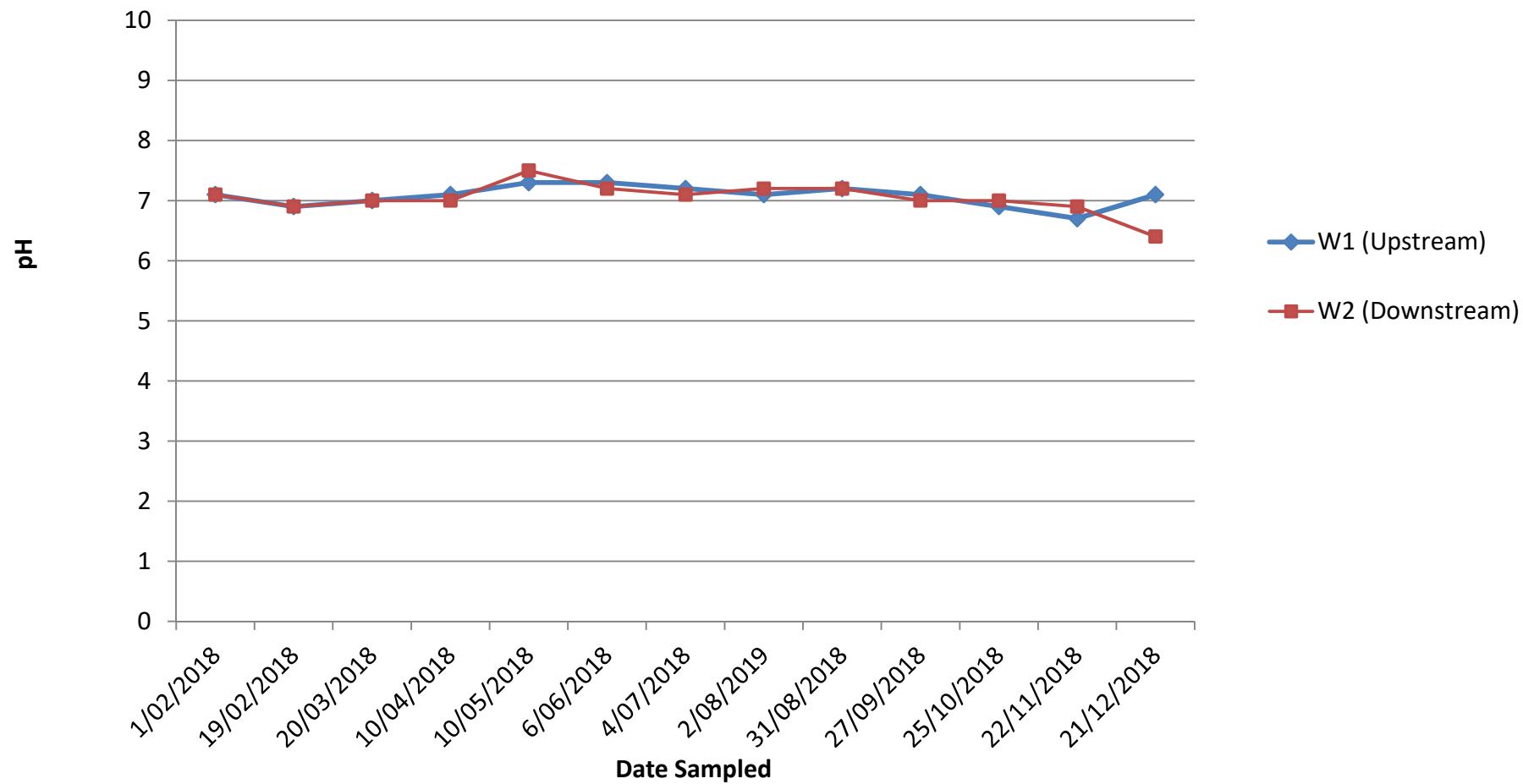
Quarry Location Reference	EPA Identification Number	Sample Reference	Date of Sample	Date Results Recieved from Lab	Monitoring Frequency	Oil and Grease (mg/L)	Oil and Grease EPL Limit	pH (pH Unit)	pH EPL Limit	Total Suspended Solids (mg/L)	Total Suspended Solids EPL Limit	Conductivity (uS/cm)**	Turbidity (NTU)**	Total Kjeldahl Nitrogen (mg/L)**	Total Phosphorus (mg/L)**
W2	Point 6	SAL26661	1/02/2018	5/03/2018	Monthly	<0.5	N/A	7.1	N/A	15	N/A	135	6.5	0.6	0.1
W2	Point 6	SAL26680	19/02/2018	12/03/2018	Monthly	<0.5	N/A	6.9	N/A	23	N/A	150	7.8	0.5	0.2
W2	Point 6	SAL26715	20/03/2018	9/04/2018	Monthly	<0.5	N/A	7.0	N/A	8	N/A	150	5.7	<0.1	<0.1
W2	Point 6	SAL26726	10/04/2018	20/04/2018	Monthly	<0.5	N/A	7.0	N/A	10	N/A	120	5.0	0.4	0.1
W2	Point 6	SAL26773	10/05/2018	6/06/2018	Monthly	<0.5	N/A	7.5	N/A	37	N/A	125	21.0	0.3	<0.1
W2	Point 6	SAL26798	6/06/2018	28/06/2018	Monthly	<0.5	N/A	7.2	N/A	10	N/A	125	31.0	1.2	<0.1
W2	Point 6	SAL26834	4/07/2018	20/07/2018	Monthly	<0.5	N/A	7.1	N/A	16	N/A	100	27.0	0.6	<0.1
W2	Point 6	SAL26865	2/08/2018	15/08/2018	Monthly	<0.5	N/A	7.2	N/A	16	N/A	110	6.8	0.5	<0.1
W2	Point 6	SAL26906	31/08/2018	11/09/2018	Monthly	<0.5	N/A	7.2	N/A	21	N/A	155	14.0	1.2	<0.1
W2	Point 6	SAL26936	27/09/2018	12/10/2018	Monthly	<0.5	N/A	7.0	N/A	5	N/A	95	9.6	0.8	0.1
W2	Point 6	SAL26970	25/10/2018	5/11/2018	Monthly	<0.5	N/A	7.0	N/A	16	N/A	120	9.1	0.6	0.2
W2	Point 6	SAL27018	22/11/2018	5/12/2018	Monthly	<0.5	N/A	6.9	N/A	10	N/A	85	29.0	2.2	0.2
W2	Point 6	SAL27054	21/12/2018	9/01/2019	Monthly	<0.5	N/A	6.4	N/A	6	N/A	160	6.4	1.3	<0.1
Sampling for January 2018 was delayed until 1 February 2018, as the technician was absent during this period. * '<' denotes monitoring results are below detection limit. ** Not an EPL parameter					Min. value	<0.5		6.4		5		85	5.0	<0.1	<0.1
					Mean value	<0.5		7.0		15		125	13.8	0.8	0.1
					Max. value	<0.5		7.5		37		160	31.0	2.2	0.2

Oil and Grease - Surface Water



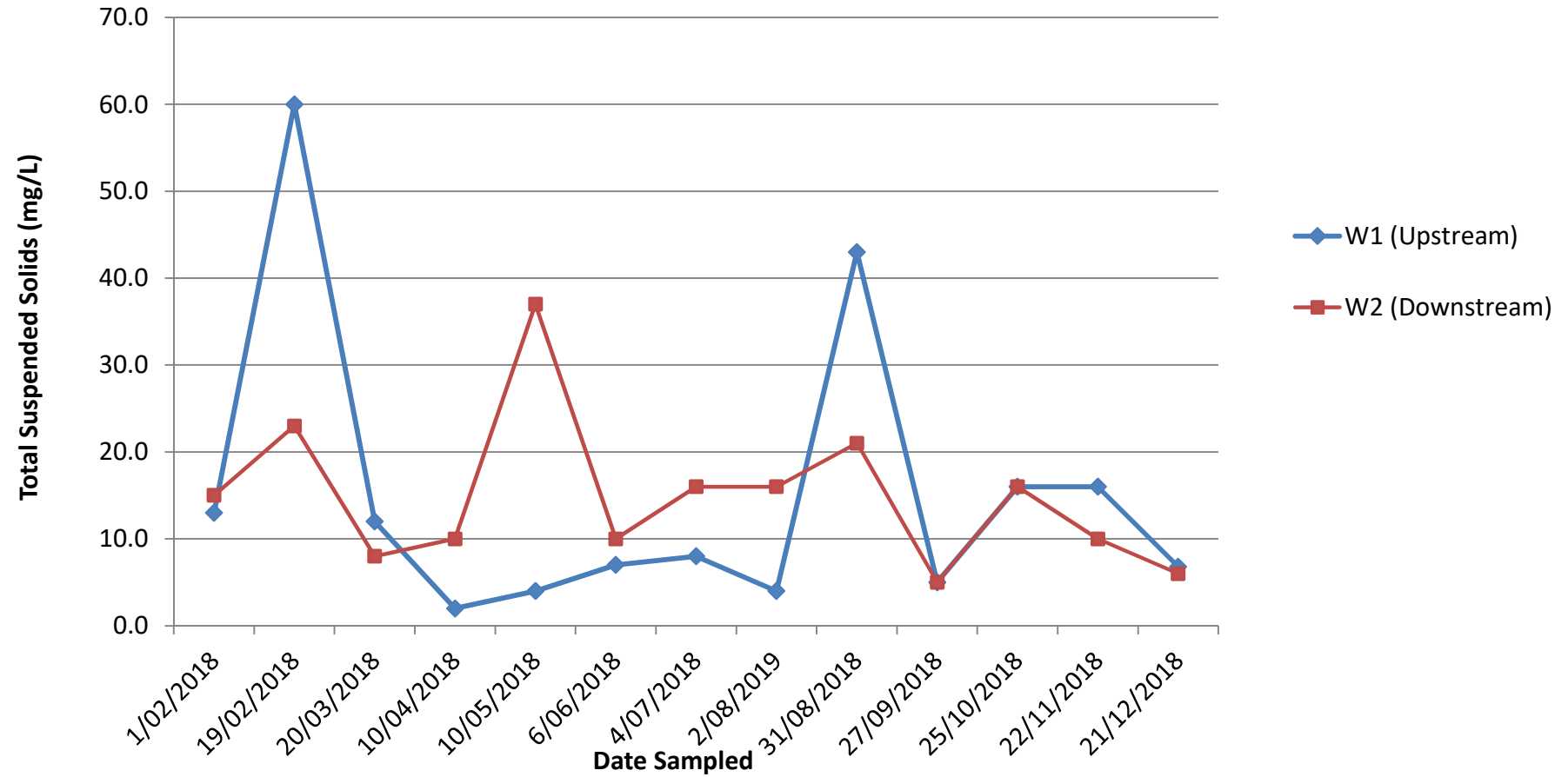
Note: No EPL Limit specified

pH - Surface Water



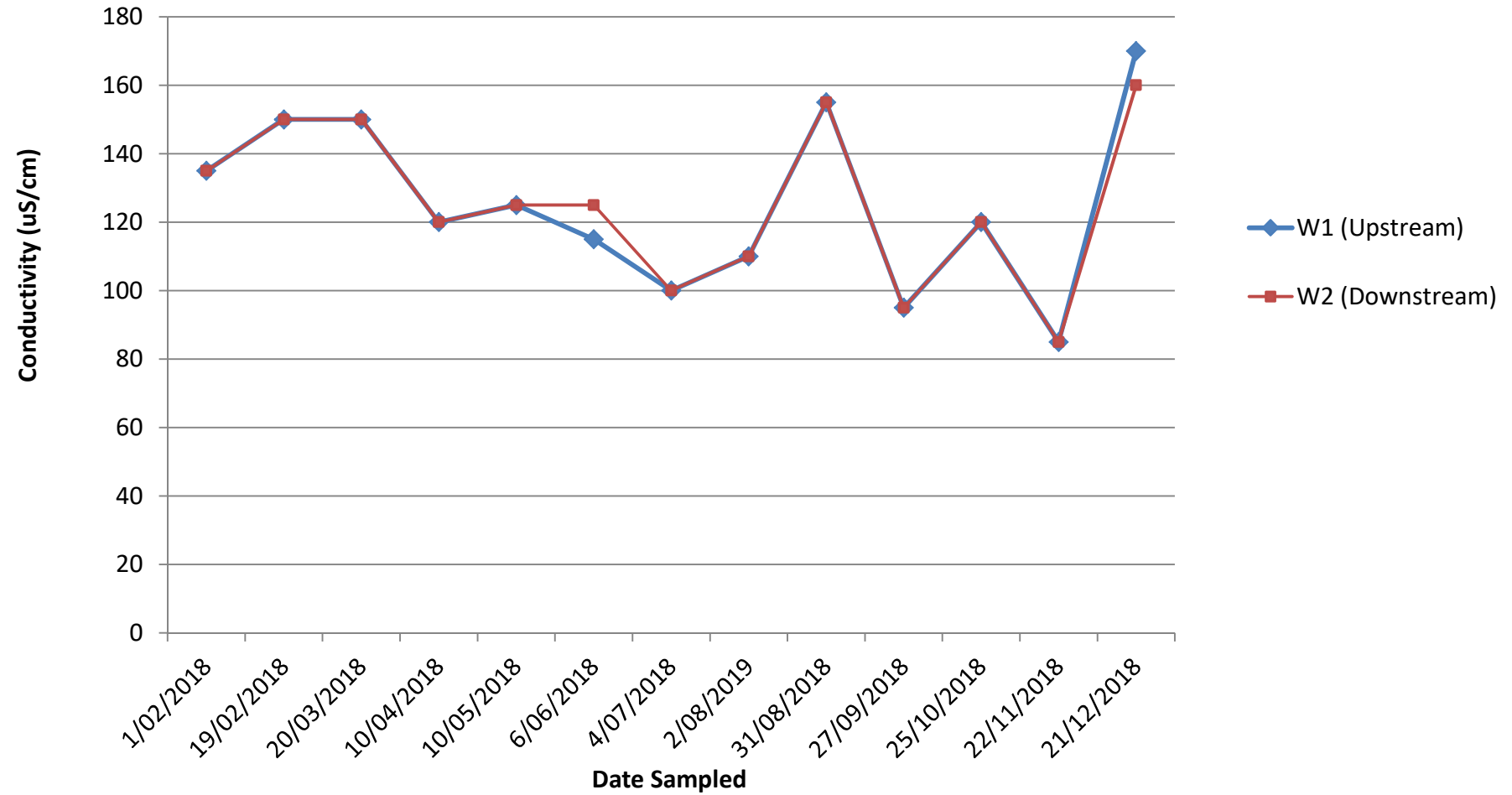
Note: No EPL Limit specified

Total Suspended Solids - Surface Water



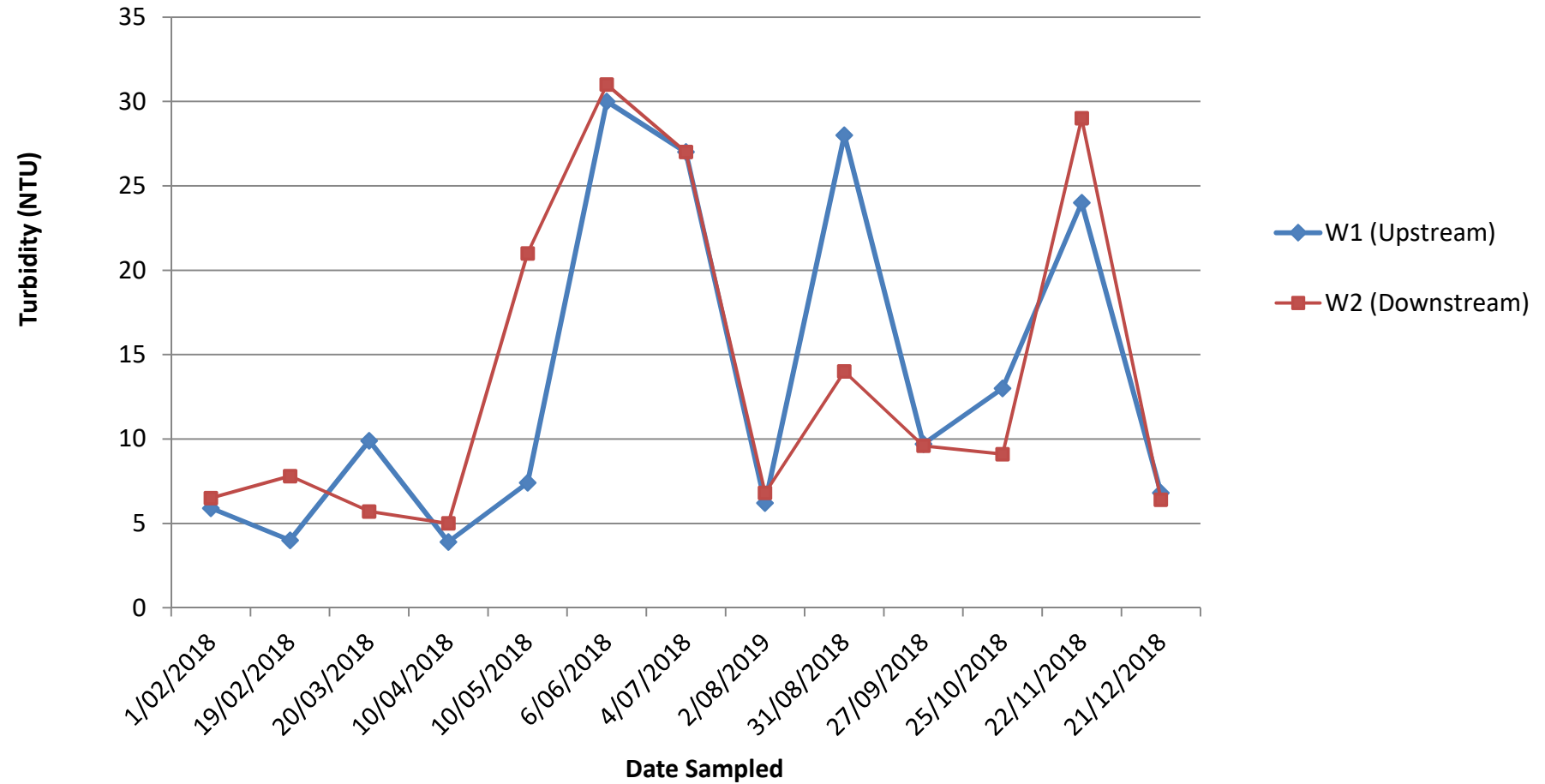
Note: No EPL Limit specified

Conductivity - Surface Water



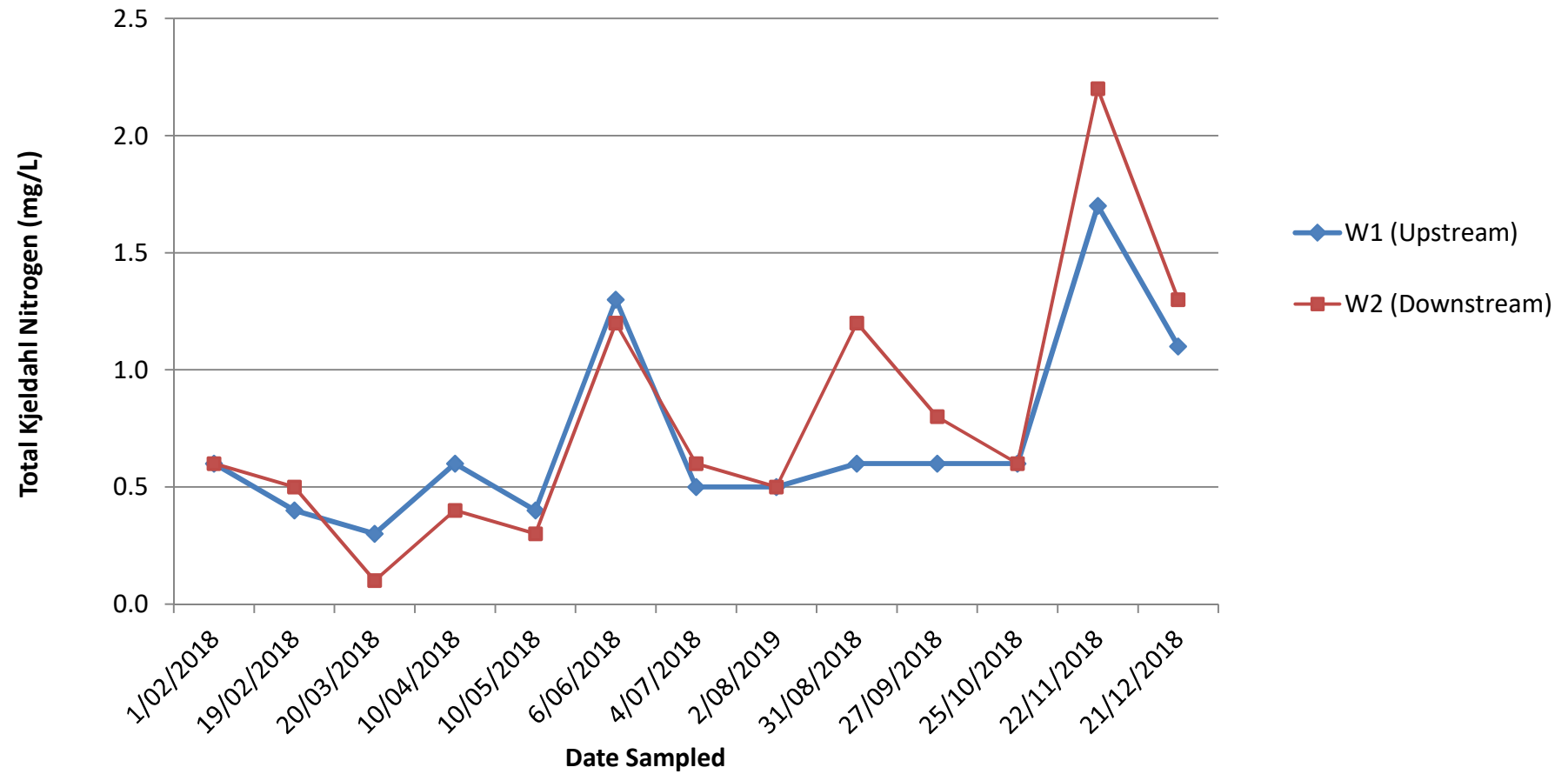
Note: No EPL Limit specified

Turbidity - Surface Water



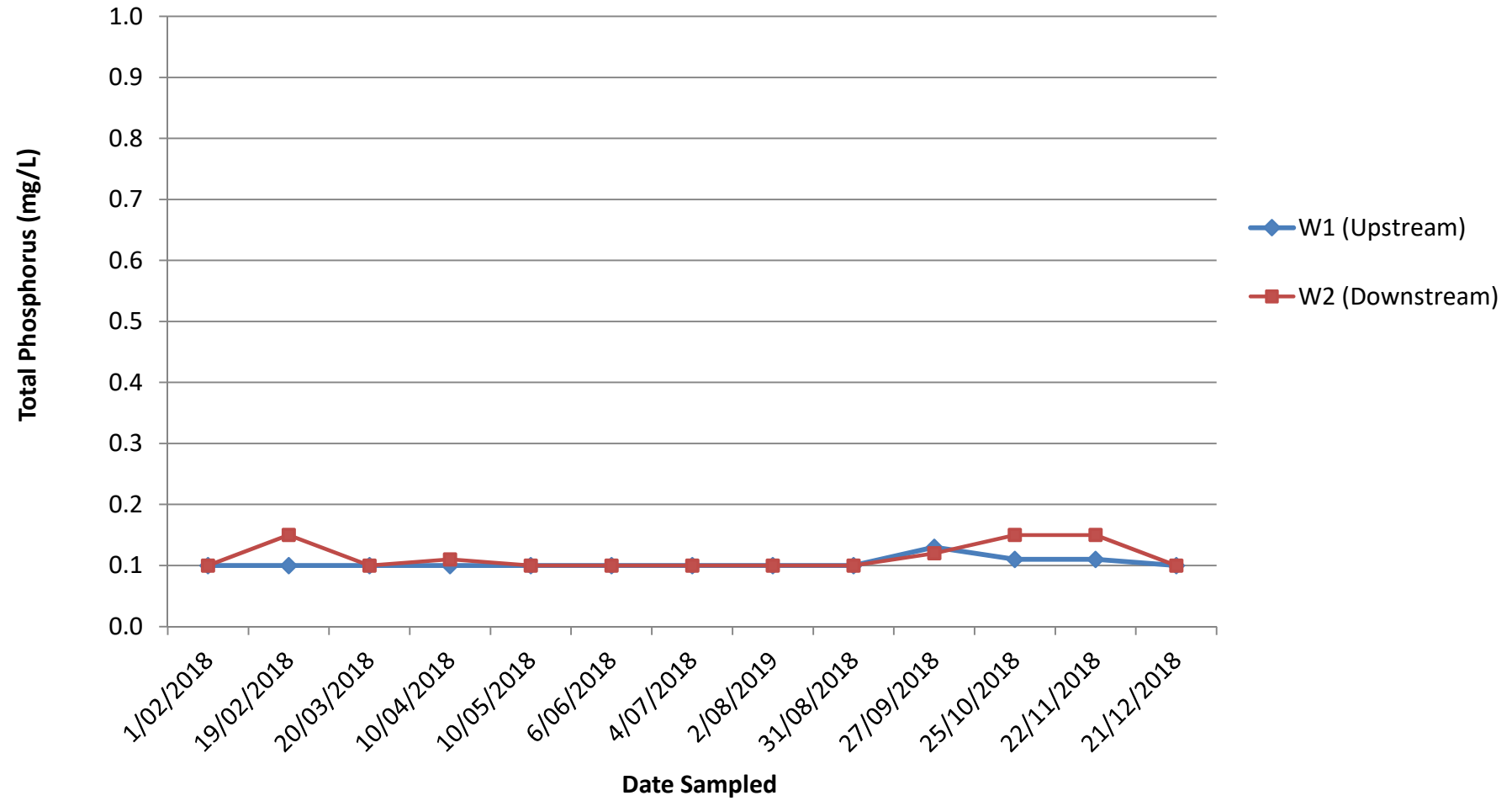
Note: No EPL Limit specified

Total Kjeldahl Nitrogen - Surface Water



Note: No EPL Limit specified

Total Phosphorus - Surface Water



Note: No EPL Limit specified



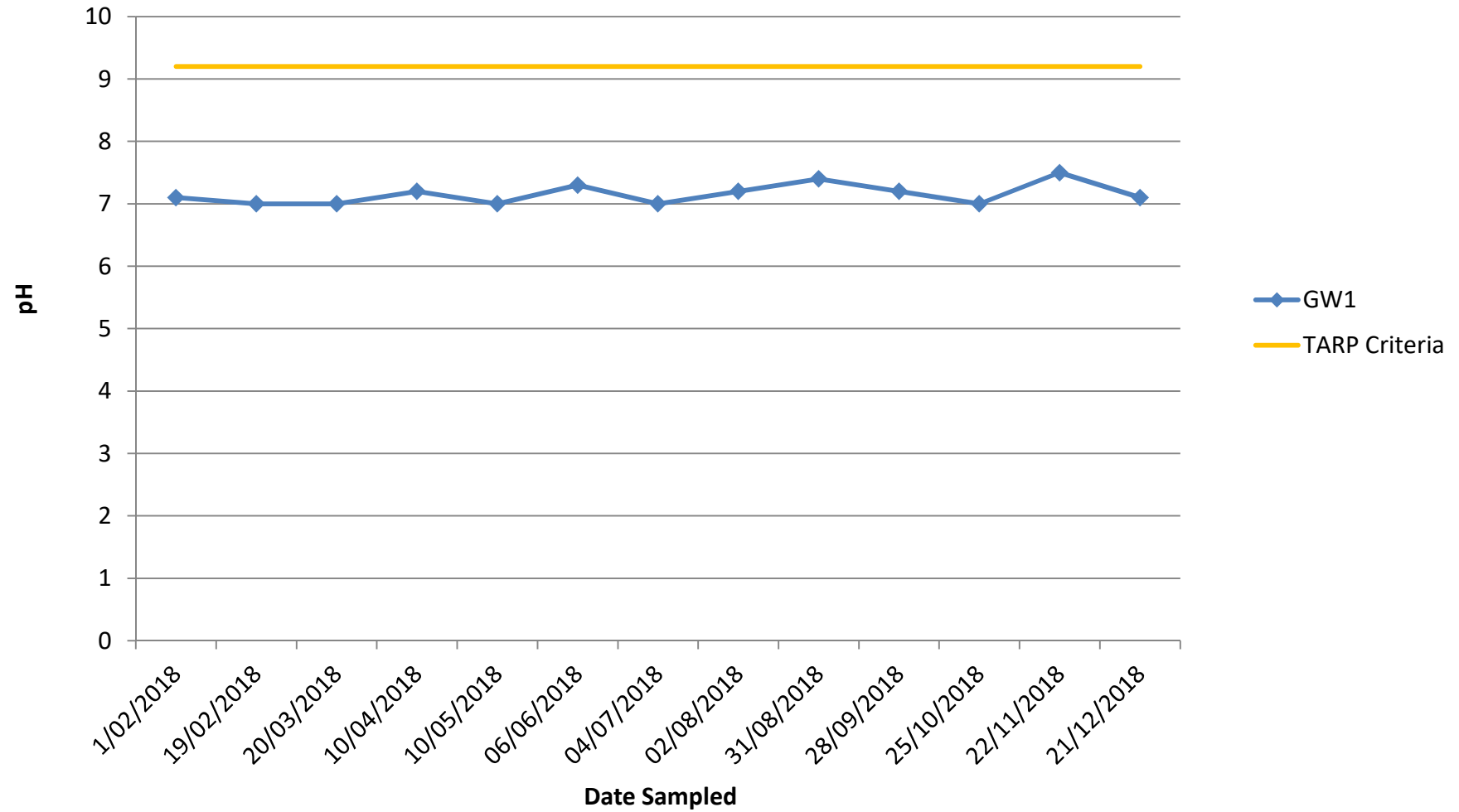
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Groundwater Quality Monitoring

Quarry Location Reference	Sample Reference	Date of Sample	pH	Conductivity (uS/cm)
GW1	SAL26661	1/02/2018	7.1	280
GW1	SAL26680	19/02/2018	7.0	300
GW1	SAL26715	20/03/2018	7.0	280
GW1	SAL26726	10/04/2018	7.2	270
GW1	SAL26773	10/05/2018	7.0	270
GW1	SAL26798	06/06/2018	7.3	240
GW1	SAL26834	04/07/2018	7.0	210
GW1	SAL26865	02/08/2018	7.2	230
GW1	SAL26906	31/08/2018	7.4	215
GW1	SAL26936	28/09/2018	7.2	190
GW1	SAL26970	25/10/2018	7.0	200
GW1	SAL27018	22/11/2018	7.5	200
GW1	SAL27054	21/12/2018	7.1	150
Sampling for January 2018 was delayed until 1 February 2018, as the technician was absent during this period.		Min. value	7.0	150
		Mean value	7.2	233
		Max. value	7.5	300

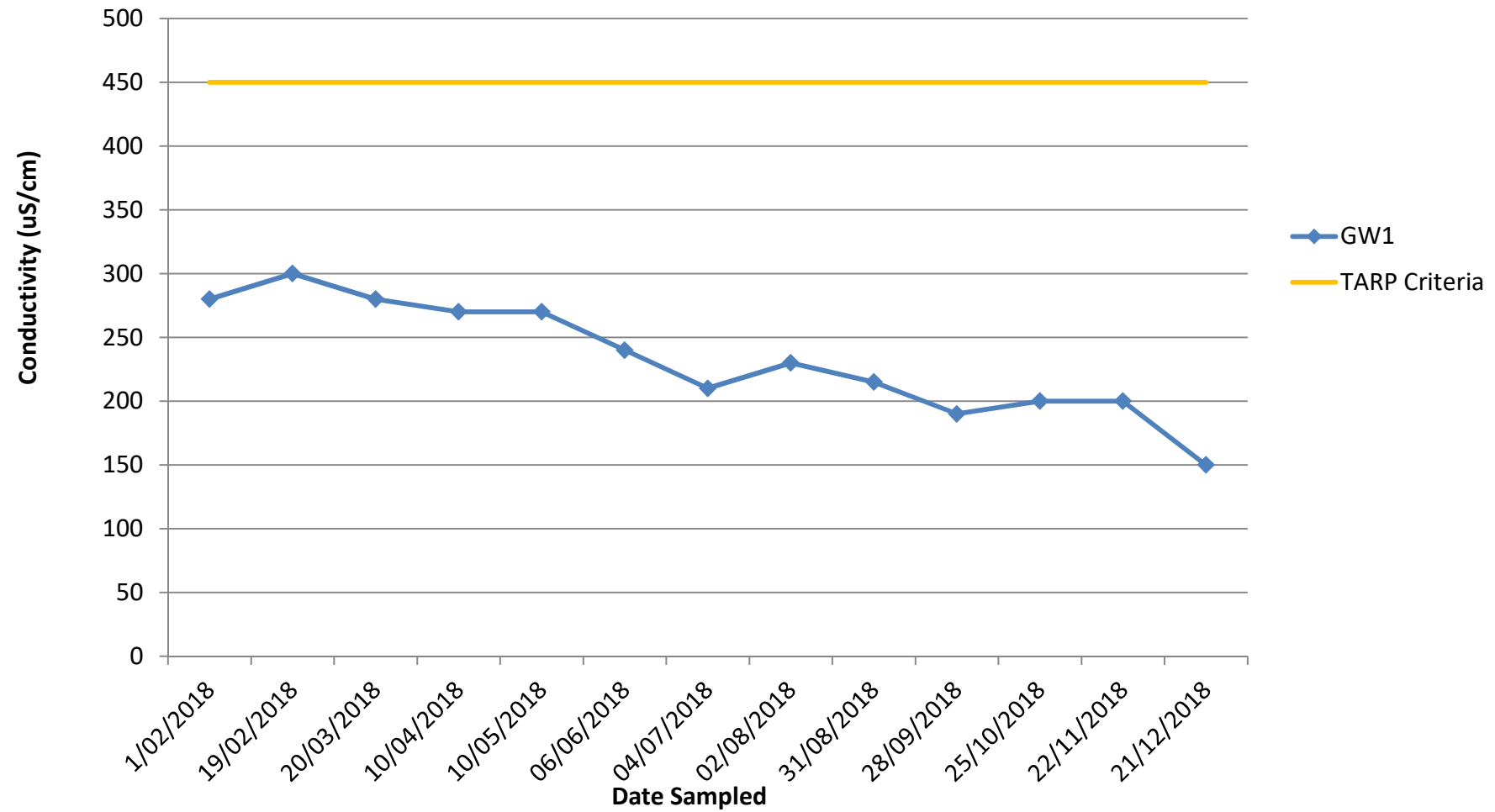
Note: There are no EPL limits specified for groundwater. Monitoring results are assessed against the Water Management Plan Trigger Action Response Plan (TARP) criteria. The TARP is enacted if there are three consecutive results above criteria.

pH - Groundwater



Note: The TARP is enacted if there are three consecutive results above criteria.

Conductivity - Groundwater



Note: The TARP is enacted if there are three consecutive results above criteria.



Air Quality Monitoring

Quarry Location Reference	EPA Identification Number	Sample Reference	Date Collected	Date Results Recieved from Lab	Monitoring Frequency	Month	Deposited Matter (g/m ² /month)	Rolling Average (g/m ² /month)	Deposited Matter SSD_6333 Limit
D1	Point 1	SAL26661B	1/02/2018	15/02/2018	Monthly	Jan-18	1.89	1.58	Air quality criteria is based on an averaging period from January - December in accordance with Table 4: Air Quality Criteria in SSD_6333.
D1	Point 1	SAL26680B	19/02/2018	5/03/2018	Monthly	Feb-18	3.40	1.80	
D1	Point 1	SAL26715B	20/03/2018	29/03/2018	Monthly	Mar-18	3.81	2.06	
D1	Point 1	SAL26726B	10/04/2018	18/04/2018	Monthly	Apr-18	2.41	2.11	
D1	Point 1	SAL26773B	10/05/2018	21/05/2018	Monthly	May-18	3.37	2.21	
D1	Point 1	SAL26798B	6/06/2018	14/06/2018	Monthly	Jun-18	3.68	2.33	
D1	Point 1	SAL26834B	4/07/2018	20/07/2018	Monthly	Jul-18	3.34	2.43	
D1	Point 1	SAL26865	02/08/2018	13/08/2018	Monthly	Aug-18	1.54	2.54	
D1	Point 1	SAL26906	31/08/2018	11/09/2018	Monthly	Aug-18	3.53	2.72	
D1	Point 1	SAL26936	28/09/2018	12/10/2018	Monthly	Sep-18	1.62	2.71	
D1	Point 1	SAL26970	25/10/2018	5/11/2018	Monthly	Oct-18	1.11	2.63	
D1	Point 1	SAL27018	22/11/2018	6/12/2018	Monthly	Nov-18	0.46	2.51	
D1	Point 1	SAL27054B	21/12/2018	08/01/2019	Monthly	Dec-18	3.12	2.61	
Sampling for January 2018 was delayed until 1 February 2018, as the technician was absent during this period.						Min. value	0.46		
						Mean value	2.56		
						Max. value	3.81		

Quarry Location Reference	EPA Identification Number	Sample Reference	Date Collected	Date Results Recieved from Lab	Monitoring Frequency	Month	Deposited Matter (g/m ² /month)	Rolling Average (g/m ² /month)	Deposited Matter SSD_6333 Limit
D2	Point 2	NS*	NS*	NS*	Monthly	Jan-18	NS*	1.03	Air quality criteria is based on an averaging period from January - December in accordance with Table 4: Air Quality Criteria in SSD_6333.
D2	Point 2	SAL26680B	19/02/2018	5/03/2018	Monthly	Feb-18	3.61	1.23	
D2	Point 2	SAL26715B	20/03/2018	29/03/2018	Monthly	Mar-18	1.60	1.29	
D2	Point 2	SAL26726B	10/04/2018	18/04/2018	Monthly	Apr-18	1.99	1.30	
D2	Point 2	SAL26773B	10/05/2018	21/05/2018	Monthly	May-18	2.56	1.49	
D2	Point 2	SAL26798B	6/06/2018	14/06/2018	Monthly	Jun-18	1.22	1.43	
D2	Point 2	SAL26834B	4/07/2018	20/07/2018	Monthly	Jul-18	1.68	1.56	
D2	Point 2	SAL26865	02/08/2018	13/08/2018	Monthly	Aug-18	0.40	1.55	
D2	Point 2	SAL26906	31/08/2018	11/09/2018	Monthly	Aug-18	2.01	1.61	
D2	Point 2	SAL26936	28/09/2018	12/10/2018	Monthly	Sep-18	1.03	1.67	
D2	Point 2	SAL26970	25/10/2018	5/11/2018	Monthly	Oct-18	1.14	1.62	
D2	Point 2	SAL27018	22/11/2018	6/12/2018	Monthly	Nov-18	1.85	1.74	
D2	Point 2	SAL27054B	21/12/2018	08/01/2019	Monthly	Dec-18	1.16	1.69	
NS* - The air quality sample for D2 during January 2018 was unavailable. This was due to the monitoring location being damaged by livestock. Oberon Quarry reinstated the monitoring location prior to the Febuary monitoring period. Sampling for January 2018 was delayed until 1 February 2018, as the technician was absent during this period.						Min. value	0.40		
						Mean value	1.69		
						Max. value	3.61		

Note: The values reported are total solids. Total solids are comprised of soluble and insoluble solids.

Note: The rolling average represents a rolling 12 month average of results up to and inclusive of each sample date



Air Quality Monitoring

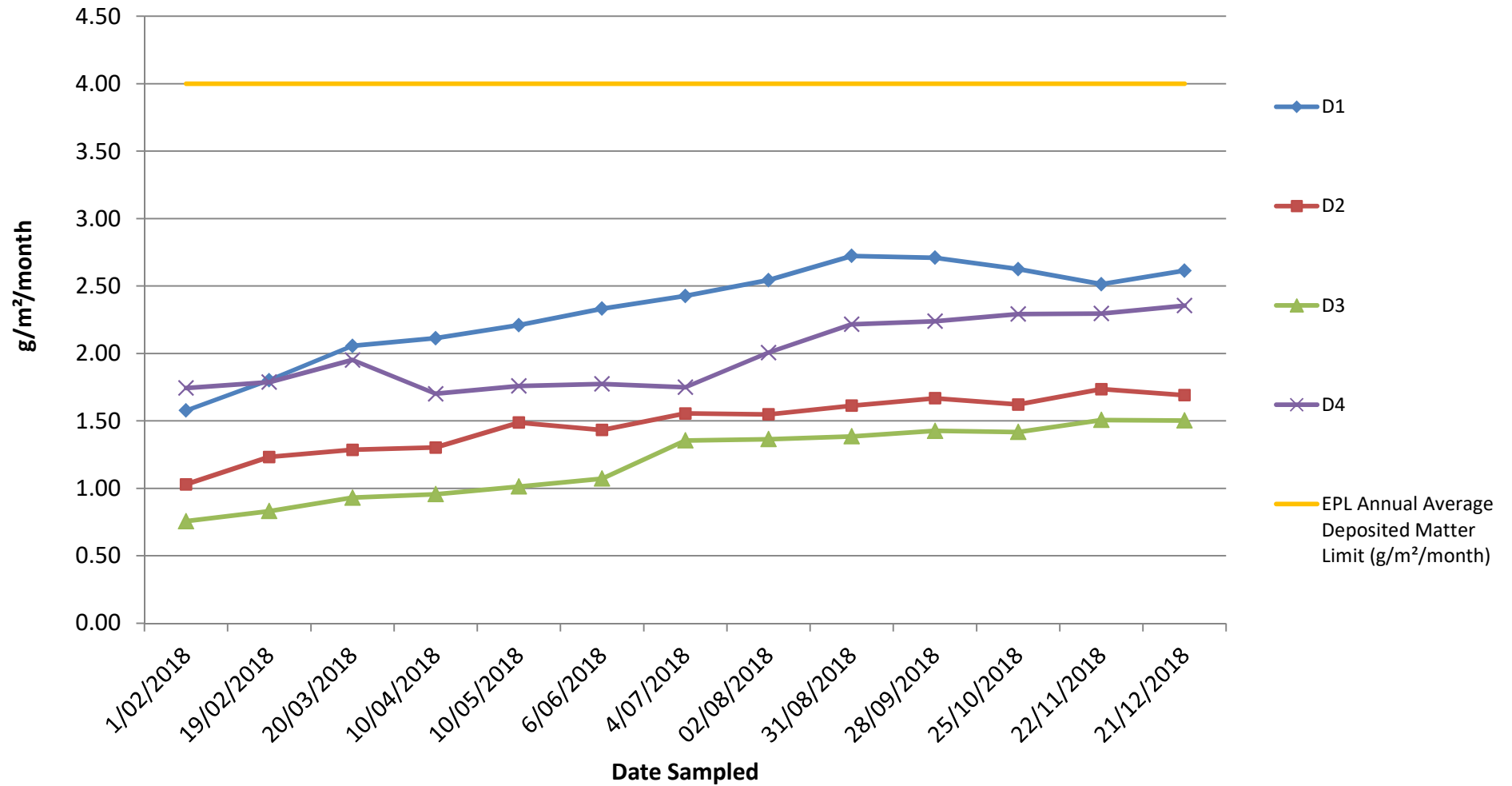
Quarry Location Reference	EPA Identification Number	Sample Reference	Date Collected	Date Results Received from Lab	Monitoring Frequency	Month	Deposited Matter (g/m ² /month)	Rolling Average (g/m ² /month)	Deposited Matter SSD_6333 Limit
D3	Point 3	SAL26661B	1/02/2018	15/02/2018	Monthly	Jan-18	1.34	0.76	Air quality criteria is based on an averaging period from January - December in accordance with <i>Table 4: Air Quality Criteria</i> in SSD_6333.
D3	Point 3	SAL26680B	19/02/2018	5/03/2018	Monthly	Feb-18	1.81	0.83	
D3	Point 3	SAL26715B	20/03/2018	29/03/2018	Monthly	Mar-18	1.32	0.93	
D3	Point 3	SAL26726B	10/04/2018	18/04/2018	Monthly	Apr-18	1.14	0.96	
D3	Point 3	SAL26773B	10/05/2018	21/05/2018	Monthly	May-18	1.62	1.01	
D3	Point 3	SAL26798B	6/06/2018	14/06/2018	Monthly	Jun-18	1.32	1.07	
D3	Point 3	SAL26834B	4/07/2018	20/07/2018	Monthly	Jul-18	3.80	1.36	
D3	Point 3	SAL26865	02/08/2018	13/08/2018	Monthly	Aug-18	0.52	1.36	
D3	Point 3	SAL26906	31/08/2018	11/09/2018	Monthly	Aug-18	1.21	1.39	
D3	Point 3	SAL26936	28/09/2018	12/10/2018	Monthly	Sep-18	1.37	1.43	
D3	Point 3	SAL26970	25/10/2018	5/11/2018	Monthly	Oct-18	0.65	1.42	
D3	Point 3	SAL27018	22/11/2018	6/12/2018	Monthly	Nov-18	1.98	1.51	
D3	Point 3	SAL27054B	21/12/2018	08/01/2019	Monthly	Dec-18	1.25	1.50	
Sampling for January 2018 was delayed until 1 February 2018, as the technician was absent during this period.							Min. value	0.52	
							Mean value	1.49	
							Max. value	3.80	

Quarry Location Reference	EPA Identification Number	Sample Reference	Date Collected	Date Results Received from Lab	Monitoring Frequency	Month	Deposited Matter (g/m ² /month)	Rolling Average (g/m ² /month)	Deposited Matter SSD_6333 Limit
D4	Point 4	SAL26661B	1/02/2018	15/02/2018	Monthly	Jan-18	2.79	1.74	Air quality criteria is based on an averaging period from January - December in accordance with <i>Table 4: Air Quality Criteria</i> in SSD_6333.
D4	Point 4	SAL26680B	19/02/2018	5/03/2018	Monthly	Feb-18	2.04	1.79	
D4	Point 4	SAL26715B	20/03/2018	29/03/2018	Monthly	Mar-18	3.59	1.95	
D4	Point 4	SAL26726B	10/04/2018	18/04/2018	Monthly	Apr-18	1.15	1.70	
D4	Point 4	SAL26773B	10/05/2018	21/05/2018	Monthly	May-18	2.16	1.76	
D4	Point 4	SAL26798B	6/06/2018	14/06/2018	Monthly	Jun-18	1.58	1.77	
D4	Point 4	SAL26834B	4/07/2018	20/07/2018	Monthly	Jul-18	1.17	1.75	
D4	Point 4	SAL26865	02/08/2018	13/08/2018	Monthly	Aug-18	3.65	2.01	
D4	Point 4	SAL26906	31/08/2018	11/09/2018	Monthly	Aug-18	3.86	2.22	
D4	Point 4	SAL26936	28/09/2018	12/10/2018	Monthly	Sep-18	1.59	2.24	
D4	Point 4	SAL26970	25/10/2018	5/11/2018	Monthly	Oct-18	1.64	2.29	
D4	Point 4	SAL27018	22/11/2018	6/12/2018	Monthly	Nov-18	2.33	2.30	
D4	Point 4	SAL27054B	21/12/2018	08/01/2019	Monthly	Dec-18	3.51	2.36	
Sampling for January 2018 was delayed until 1 February 2018, as the technician was absent during this period.							Min. value	1.15	
							Mean value	2.39	
							Max. value	3.86	

Note: The values reported are total solids. Total solids are comprised of soluble and insoluble solids.

Note: The rolling average represents a rolling 12 month average of results up to and inclusive of each sample date

Air Quality - Deposited Matter



Note: Graph shows a 12 month rolling average up to and inclusive of each sample date. Monthly results can be seen in the Air Quality monitoring tables provided.



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Noise Monitoring

Please note: Oberon Quarries has established noise agreements with relevant landowners. The discontinuation of routine noise monitoring was approved by the Secretary on 25 January 2017. Noise monitoring will be undertaken if a noise complaint relating to Quarry operations is unable to be resolved by Oberon Quarries or a landowner requests the DP&E to reinstate more frequent monitoring to assess compliance with relevant criteria.

Oberon Quarry Noise Management Plan can be accessed at:

http://oberonquarries.com.au/wp-content/uploads/2017/03/1296_R68_NMP_FINAL.pdf

Previous noise monitoring reports can be accessed at:

<http://oberonquarries.com.au/environmental-monitoring-results/>



Production Blast Monitoring

Quarry Location Reference	Type	EPA Number	Date of Blast	Time of Blast	Peak Vector Sum Velocity (mm/s)	Peak Overpressure (dBL)	Monitoring Frequency
Residence	Production Blast	N/A	22/01/2018	12:28	3.26	117.90*	No more than 2 blasts per week, unless an additional blast is required following a blast misfire.
Residence	Production Blast	N/A	20/02/2018	12:44	1.15	110.20	
Residence	Production Blast	N/A	9/04/2018	12:39	0.76	107.00	
Residence	Production Blast	N/A	16/07/2018	15:10	0.81	108.00	
Residence	Production Blast	N/A	21/10/2018	12:27	0.65	107.50	

* The overpressure level recorded for the January 2018 is above the lower limit of 115 dBL. Due to the low number of blasts undertaken each calendar year at Oberon Quarries (i.e. approximately 10), this one blast by default may result in an exceedance of the 5% allowance for the number of blasts above 115dBL but below 120 dBL, as detailed in Schedule 3 Condition 6 of the Development Consent (SSD 6333). This status however, can only be confirmed at the completion of the reporting year (December 2018).

Please Note: Oberon Quarries has established a blasting agreement with the nearest private receiver. This agreement removes the formal requirement to monitor each blast and notify the affected receiver(s) and government departments within seven days of an exceedance of the blast criteria. The department was notified of this agreement on 17 April 2018.

Blast Compliance Criteria

Blast Compliance Criteria

L4.1

The airblast overpressure level from blasting must not exceed 115 (dB(Lin Peak)) at any noise sensitive locations for more than 5 % of the total number of blasts during over each reporting period;

L4.2:

The airblast overpressure level from blasting must not exceed 120 (dB(Lin Peak)) at any time at any noise sensitive locations;

L4.3:

Ground vibration peak particle velocity from the blasting must not exceed 5 mm/s at any noise sensitive locations for more than 5 % of the total number of blasts over each reporting period; and

L4.4:

Ground vibration peak particle velocity from the blasting must not exceed 10 mm/s at any time at any noise sensitive locations.

Blast SSD_6333 Limits

In accordance with Table 3: Blasting Criteria in SSD_6333.

The airblast overpressure level from blasting operations must not exceed:

* 115 (dB(Lin Peak)) for more than 5 % of the total number of blasts during over each reporting period; and

* 120 (dB(Lin Peak)) at any time.

The ground vibration peak particle velocity from blasting operations must not exceed:

* 5 mm/s for more than 5 % of the total number of blasts carried out on the premises during over each reporting period; and

* 10 mm/s at any time;

* at any point within one metre of any affected residential boundary or other noise sensitive area in the vicinity of the plant.