

## CERTIFICATE OF ANALYSIS

<b>Report Group</b> : <b>RGCA1800073</b> <b>Amendment</b> : <b>1</b> Client : <b>Yass Valley Council</b> Contact : Carina Martin Address : Yass Valley Council PO Box 6 Yass NSW 2582 Telephone : ---- Project : Murrumbateman Landfill Sampler : ---- Quote number : ---- No. of samples received : 64 No. of samples analysed : 64	Page : 1 of 16  Laboratory : ALS Water Resources Group Contact : Client Services Address : 16B Lithgow Street Fyshwick ACT Australia 2609  Telephone : +61 2 6202 5404 Date Samples Received : 23-Jul-2015 15:08
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Accreditation No. 825  
Accredited for compliance with  
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Amanda Gonzalez	Laboratory Technician	Inorganics, Fyshwick, ACT
Brendan Eyers	Sampler	Administration, Fyshwick, ACT
Brendan Eyers	Sampler	Inorganics, Fyshwick, ACT
Clare Kennedy	Analyst	Inorganics, Fyshwick, ACT
Damien Badowski	Sampler	Administration, Fyshwick, ACT
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Geetha Ramasundara	Chemistry Teamleader	Inorganics, Fyshwick, ACT
Kai Squires	Laboratory Manager	Administration, Fyshwick, ACT
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Kathika Atapattu	QC Technician	Inorganics, Fyshwick, ACT
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Shane Reynolds	Lab Manager	Administration, Fyshwick, ACT
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Steven Rowe	Sampler	Administration, Fyshwick, ACT
Terry OBrien	Laboratory Technician	Inorganics, Fyshwick, ACT
Thomas Byron	Sampler	Administration, Fyshwick, ACT





## General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.  
LOR = Limit of reporting  
^ = This result is computed from individual analyte detections at or above the level of reporting  
ø = ALS is not NATA accredited for these tests.  
~ = Indicates an estimated value.

## Work Order Specific Comments

Work Order: **CA1604801**

- For samples collected by ALS WRG, sampling was carried out in accordance with Procedure EN67

Work Order: **CA1605907**

- Result for pH in water tested in the laboratory may be indicative only as holding time is generally not achievable.



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB010 GWW 1 - EPA 4	YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB010 GWW 1 - EPA 4	YMLB030 GWW 3 - EPA 6
Client sampling date / time				23-Jul-2015 10:40	23-Jul-2015 12:00	23-Jul-2015 12:50	26-Oct-2015 11:30	26-Oct-2015 10:06
Compound	CAS Number	LOR	Unit	CA1502935-001 Result	CA1502935-003 Result	CA1502935-004 Result	CA1504414-001 Result	CA1504414-002 Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	119	215	61.5	118	216
Total Alkalinity as CaCO3	----	1	mg/L	119	215	62	118	216
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L	0.20	<0.05	0.42	0.14	<0.05
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	19.1	6.80	8.51	18.8	6.21
∅ Depth to Water Sampling	----	0.01	m	21.7	6.88	8.42	20.1	6.91
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.54	6.39	6.40	6.52	6.23
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	1360	3270	509	1360	3260
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	<2	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4	YMLB030 GWW 3 - EPA 6
Client sampling date / time				26-Oct-2015 10:48	26-Oct-2015 09:10	26-Oct-2015 00:00	18-Jan-2016 13:25	18-Jan-2016 13:45
Compound	CAS Number	LOR	Unit	CA1504414-003	CA1504414-004	CA1504414-005	CA1600171-001	CA1600171-002
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	----	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	----	<0.1	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	61.8	253	----	125	219
Total Alkalinity as CaCO3	----	1	mg/L	62	253	----	125	219
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	----	<0.1	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L	0.39	0.26	----	0.16	<0.05
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	8.21	8.42	----	19.0	6.80
∅ Depth to Water Sampling	----	0.01	m	8.38	8.94	----	21.0	6.94
<b>EN67CA: Job Observations</b>								
∅ Comment	----	1	-	----	----	Unable to access dam due to locked gate. No sample taken	----	----
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.23	6.87	----	6.75	6.42
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	495	1690	----	1390	3180
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	----	<2	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				18-Jan-2016 16:25	18-Jan-2016 15:05	18-Jan-2016 13:25	18-Feb-2016 09:00	14-Apr-2016 09:48
Compound	CAS Number	LOR	Unit	CA1600171-003	CA1600171-004	CA1600171-005	CA1600989-001	CA1602224-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	----	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	----	234	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	60.6	247	----	427	128
Total Alkalinity as CaCO3	----	1	mg/L	61	247	----	661	128
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	----	<0.1	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L	0.43	0.33	----	<0.05	0.13
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	8.32	8.50	----	----	19.1
∅ Depth to Water Sampling	----	0.01	m	8.45	9.03	----	----	21.7
<b>EN67CA: Job Observations</b>								
∅ Comment	----	1	-	----	----	No access to leachate dam	----	----
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.47	7.02	----	9.26	6.54
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	497	1690	----	2550	1430
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	12	<2	----	16	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				14-Apr-2016 12:06	14-Apr-2016 12:45	14-Apr-2016 11:15	14-Apr-2016 11:00	30-Aug-2016 10:50
Compound	CAS Number	LOR	Unit	CA1602224-002	CA1602224-003	CA1602224-004	CA1602224-005	CA1604801-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	251	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	221	62.6	253	477	123
Total Alkalinity as CaCO3	----	1	mg/L	221	63	253	728	123
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L	<0.1	<0.1	<0.1	0.4	----
Ammonia as N	7664-41-7	0.1	mg/L N	----	----	----	----	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L	<0.05	0.41	0.28	<0.05	----
Nitrite + Nitrate as N	----	0.05	mg/L N	----	----	----	----	0.06
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	7.02	8.58	8.25	----	18.4
∅ Depth to Water Sampling	----	0.01	m	7.12	8.76	9.07	----	19.0
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.41	6.41	7.00	9.26	7.76
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	3150	502	1700	2650	1530
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	11	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				30-Aug-2016 15:16	30-Aug-2016 11:50	30-Aug-2016 13:02	30-Aug-2016 10:50	20-Oct-2016 00:00
Compound	CAS Number	LOR	Unit	CA1604801-002	CA1604801-003	CA1604801-004	CA1604801-005	CA1605907-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	229	62.3	251	640	109
Total Alkalinity as CaCO3	----	1	mg/L	229	62	251	640	109
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	<0.1	<0.1	<0.1	12.8	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	0.41	0.34	0.06	0.05
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	6.47	7.90	7.51	----	18.2
∅ Depth to Water Sampling	----	0.01	m	6.56	8.06	8.12	----	19.0
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.80	6.51	7.18	8.03	6.90
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	3290	460	1580	2030	1480
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	2	<2





## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				20-Oct-2016 00:00	20-Oct-2016 00:00	20-Oct-2016 00:00	20-Oct-2016 00:00	12-Jan-2017 09:40
Compound	CAS Number	LOR	Unit	CA1605907-002	CA1605907-003	CA1605907-004	CA1605907-005	CA1700164-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	----	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	----	<0.1	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	245	57.6	----	597	145
Total Alkalinity as CaCO3	----	1	mg/L	245	58	----	597	145
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	0.1	<0.1	----	17.6	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	0.38	----	0.14	<0.05
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	6.12	7.31	----	----	18.0
∅ Depth to Water Sampling	----	0.01	m	6.12	7.31	----	----	18.6
<b>EN67CA: Job Observations</b>								
∅ Comment	----	1	-	----	----	Couldnt access site due to road conditions	----	----
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.99	6.47	----	7.98	6.69
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	2840	470	----	1900	1540
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	----	3	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				12-Jan-2017 11:46	12-Jan-2017 12:24	12-Jan-2017 11:11	12-Jan-2017 10:32	12-Apr-2017 13:38
Compound	CAS Number	LOR	Unit	CA1700164-002	CA1700164-003	CA1700164-004	CA1700164-005	CA1702171-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	52.3	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	247	59.6	239	594	136
Total Alkalinity as CaCO3	----	1	mg/L	247	60	239	646	136
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	<0.1	<0.1	<0.1	6.1	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	0.39	0.87	2.81	0.26
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	5.94	7.47	6.72	----	18.2
∅ Depth to Water Sampling	----	0.01	m	6.01	7.64	7.26	----	19.9
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.58	6.40	7.05	8.44	7.06
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	2990	477	1440	2140	1440
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	10	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				12-Apr-2017 12:27	12-Apr-2017 13:00	12-Apr-2017 11:35	12-Apr-2017 11:00	28-Jul-2017 11:36
Compound	CAS Number	LOR	Unit	CA1702171-002	CA1702171-003	CA1702171-004	CA1702171-005	CA1704101-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	263	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	257	67.1	258	452	157
Total Alkalinity as CaCO3	----	1	mg/L	257	67	258	714	157
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	<0.1	<0.1	<0.1	1.3	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	0.40	0.60	0.33	0.09
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	6.16	7.76	7.05	----	18.2
∅ Depth to Water Sampling	----	0.01	m	6.25	7.90	7.75	----	18.6
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.76	6.68	7.23	8.98	6.80
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	3140	510	1520	2380	1510
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	25	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				28-Jul-2017 10:55	28-Jul-2017 10:13	28-Jul-2017 09:34	28-Jul-2017 12:00	06-Oct-2017 11:40
Compound	CAS Number	LOR	Unit	CA1704101-002	CA1704101-003	CA1704101-004	CA1704101-005	CA1705451-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	81.4	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	261	73.1	275	674	120
Total Alkalinity as CaCO3	----	1	mg/L	261	73	275	756	120
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	<0.1	<0.1	<0.1	5.0	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	0.42	0.49	0.34	0.11
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	6.27	7.85	7.25	----	18.2
∅ Depth to Water Sampling	----	0.01	m	6.34	8.02	7.52	----	18.7
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.72	6.55	7.14	8.51	7.00
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	3020	474	1600	2340	1480
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	3	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				06-Oct-2017 13:32	06-Oct-2017 12:27	06-Oct-2017 12:58	06-Oct-2017 11:50	17-Jan-2018 10:01
Compound	CAS Number	LOR	Unit	CA1705451-002	CA1705451-003	CA1705451-004	CA1705451-005	CA1800352-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	74.6	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	242	58.2	243	555	135
Total Alkalinity as CaCO3	----	1	mg/L	242	58	243	630	135
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	<0.1	<0.1	<0.1	0.5	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	0.39	0.49	0.66	0.37
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	6.35	7.78	7.39	----	18.3
∅ Depth to Water Sampling	----	0.01	m	8.46	8.07	7.68	----	18.9
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.70	6.81	7.30	8.81	6.94
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	3070	486	1590	2390	1470
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	15	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				17-Jan-2018 12:00	17-Jan-2018 13:16	17-Jan-2018 11:15	17-Jan-2018 10:30	06-Apr-2018 09:57
Compound	CAS Number	LOR	Unit	CA1800352-002	CA1800352-003	CA1800352-004	CA1800352-005	CA1802281-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	----	<0.1	<0.1	----	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	----	<0.1	<0.1	----	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	----	55.7	246	----	132
Total Alkalinity as CaCO3	----	1	mg/L	----	56	246	----	132
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	----	<0.1	<0.1	----	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	----	0.39	0.40	----	<0.05
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	----	8.07	7.42	----	18.4
∅ Depth to Water Sampling	----	0.01	m	----	8.10	7.74	----	19.2
<b>EN67CA: Job Observations</b>								
∅ Comment	----	1	-	Could not access	----	----	Could not access	----
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	----	6.45	7.20	----	6.89
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	----	471	1620	----	1560
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	----	<2	<2	----	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	YMLB010 GWW 1 - EPA 4
Client sampling date / time				06-Apr-2018 11:30	06-Apr-2018 10:37	06-Apr-2018 11:10	06-Apr-2018 11:46	27-Jul-2018 10:34
Compound	CAS Number	LOR	Unit	CA1802281-002	CA1802281-003	CA1802281-004	CA1802281-005	CA1804541-001
				Result	Result	Result	Result	Result
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	----	<0.1	<0.1	<0.1	<0.1
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	----	<0.1	<0.1	384	<0.1
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	----	59.9	258	376	155
Total Alkalinity as CaCO3	----	1	mg/L	----	60	258	761	155
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	----	<0.1	<0.1	<0.1	<0.1
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	----	0.34	0.45	<0.05	0.12
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	----	8.03	7.49	----	18.5
∅ Depth to Water Sampling	----	0.01	m	----	8.17	7.82	----	19.1
<b>EN67CA: Job Observations</b>								
∅ Comment	----	1	-	Dry	----	----	----	----
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	----	6.58	7.54	9.48	6.70
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	----	490	1700	2580	1640
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	----	<2	<2	12	<2



## Analytical Results

Sub-Matrix: WATER  
 (Matrix: WATER)

Client sample ID

				YMLB030 GWW 3 - EPA 6	YMLB060 GWW 6 - 101	YMLB070 GWW 7 - 102	YMLD020 Dam 2 - Murrumbateman Landfill	----
Client sampling date / time				27-Jul-2018 12:31	27-Jul-2018 13:33	27-Jul-2018 11:33	27-Jul-2018 09:03	----
Compound	CAS Number	LOR	Unit	CA1804541-002	CA1804541-003	CA1804541-004	CA1804541-005	-----
				Result	Result	Result	Result	----
<b>ED037: Alkalinity</b>								
Hydroxide Alkalinity as CaCO3	DMO-210-001	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	----
Carbonate Alkalinity as CaCO3	3812-32-6	0.1	mg/L	<0.1	<0.1	<0.1	243	----
Bicarbonate Alkalinity as CaCO3	71-52-3	0.1	mg/L	268	61.7	278	462	----
Total Alkalinity as CaCO3	----	1	mg/L	268	62	278	705	----
<b>EK055: Ammonia as N</b>								
Ammonia as N	7664-41-7	0.1	mg/L N	<0.1	<0.1	<0.1	<0.1	----
<b>EK059: Nitrite plus Nitrate as N (NOx)</b>								
Nitrite + Nitrate as N	----	0.05	mg/L N	<0.05	0.35	0.37	<0.05	----
<b>EN67CA: Field Tests</b>								
∅ Depth to Water level	----	0.01	m	6.64	8.21	7.79	----	----
∅ Depth to Water Sampling	----	0.01	m	6.68	8.23	8.00	----	----
<b>EA005CA: pH</b>								
pH	----	0.01	pH Unit	6.63	6.38	7.10	9.04	----
<b>EA010CA: Conductivity</b>								
Electrical Conductivity @ 25°C	----	2	µS/cm	2720	498	1840	2680	----
<b>EP030CA: Biochemical Oxygen Demand</b>								
Biochemical Oxygen Demand	----	2	mg/L	<2	<2	<2	4	----