

PERMIT NUMBER	BT19081X	OPERATOR	JLA DISPOSAL LTD
INSTALLATION	PALLEG PHASE II	FORM NO.	Jan - Jun 21
REPORTING GROUNDWATER MONITORING FOR THE PERIOD		FROM	01/01/2021
		TO	30/06/2021

No.	Monitoring Point	Substance/Parameter	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and Times	Uncertainty
1	GW1	Ammoniacal Nitrogen	2.5mg/l			mg/l	TM099		
2	GW1	Arsenic				mg/l	TM152		
3	GW1	Biochemical Oxygen Demand				mg/l	TM045		
4	GW1	Boron				mg/l	TM152		
5	GW1	Cadmium	0.005mg/l			mg/l	TM152		
6	GW1	Calcium				mg/l	TM152		
7	GW1	Chemical Oxygen Demand				mg/l	TM107		
8	GW1	Chloride	200mg/l			mg/l	TM097		
9	GW1	Chromium				mg/l	TM152		
10	GW1	Copper				mg/l	TM152		
11	GW1	Electrical conductivity				uS/cm	TM120		
12	GW1	Iron				mg/l	TM152		
13	GW1	Lead				mg/l	TM152		
14	GW1	Magnesium				mg/l	TM152		
15	GW1	Manganese				mg/l	TM152		
16	GW1	Mecoprop	0.0004mg/l			ug/l			
17	GW1	Mercury	0.001mg/l			ug/l	TM183		
18	GW1	Nickel				mg/l	TM152		
19	GW1	pH	5.5 - 9.5			pH units	TM133		
20	GW1	Phenols	0.0005mg/l			ug/l	TM062		
21	GW1	Potassium				mg/l	TM083		
22	GW1	Sodium				mg/l	TM083		
23	GW1	Sulphate				mg/l	TM098		
24	GW1	Temperature C				°C	Field Measured		
25	GW1	Toluene	0.004mg/l			ug/l	TM208		
26	GW1	Total Alkalinity				mg/l	TM043		
27	GW1	Total Organic Carbon				mg/l	TM090		

28	GW1	Total Oxidised Nitrogen				mg/l	TM102		
29	GW1	Water Level				Level m	Field Measured		
30	GW1	Zinc	0.1mg/l			ug/l	TM152		
	Monitoring Point	Substance/Parameter	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and Times	Uncertainty
1	GW2	Ammoniacal Nitrogen	2.5mg/l	January to June	<0.2	mg/l	TM099	28/06/2021	
2	GW2	Arsenic		January to June	<0.5	mg/l	TM152	28/06/2021	
3	GW2	Biochemical Oxygen Demand (BOD)		January to June	5.44	mg/l	TM045	28/06/2021	
4	GW2	Boron		January to June	0.0165	mg/l	TM152	28/06/2021	
5	GW2	Cadmium	0.005mg/l	January to June	0.00008	mg/l	TM152	28/06/2021	
6	GW2	Calcium		January to June		mg/l	TM152		
7	GW2	Chemical Oxygen Demand COD		January to June	223	mg/l	TM107	28/06/2021	
8	GW2	Chloride	200mg/l	January to June	26.7	mg/l	TM097	28/06/2021	
9	GW2	Chromium		January to June	0.001	mg/l	TM152	28/06/2021	
10	GW2	Copper		January to June	0.00129	mg/l	TM152	28/06/2021	
11	GW2	Electrical conductivity		January to June	1.01	uS/cm	TM120	28/06/2021	
12	GW2	Iron		January to June	<0.019	mg/l	TM152	28/06/2021	
13	GW2	Lead		January to June	0.0002	mg/l	TM152	28/06/2021	
14	GW2	Magnesium		January to June	11.8	mg/l	TM152	28/06/2021	
15	GW2	Manganese		January to June	3.23	mg/l	TM152	28/06/2021	
16	GW2	Mecoprop	0.0004mg/l	January to June	0.0004	ug/l		28/06/2021	
17	GW2	Mercury	0.001mg/l	January to June	0.00001	ug/l	TM183	28/06/2021	
18	GW2	Nickel		January to June	0.000975	mg/l	TM152	28/06/2021	
19	GW2	pH	5.5 - 9.5	January to June	6.93	pH units	TM133	28/06/2021	
20	GW2	Phenols	0.0005mg/l	January to June	0.0002	ug/l	TM062	28/06/2021	
21	GW2	Potassium		January to June	1.77	mg/l	TM083	28/06/2021	
22	GW2	Sodium		January to June	14.4	mg/l	TM083	28/06/2021	
23	GW2	Sulphate		January to June	156	mg/l	TM098	28/06/2021	
24	GW2	Temperature C		January to June		°C	Field Measured		
25	GW2	Toluene	0.004mg/l	January to June		ug/l	TM208		
26	GW2	Total Alkalinity		January to June	450	mg/l	TM043	28/06/2021	

27	GW2	Total Organic Carbon		January to June	8.17	mg/l	TM090	28/06/2021	
28	GW2	Total Oxidised Nitrogen		January to June	<0.1	mg/l	TM102	28/06/2021	
29	GW2	Water Level		January to June		Level m	Field Measured		
30	GW2	Zinc	0.1mg/l	January to June	0.00187	ug/l	TM152	28/06/2021	
No.	Monitoring Point	Substance/Parameter	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and Times	Uncertainty
1	GW3	Ammoniacal Nitrogen	2.5mg/l	January to June	1.12	mg/l	TM099	28/06/2021	
2	GW3	Arsenic		January to June	0.00193	mg/l	TM152	28/06/2021	
3	GW3	Biochemical Oxygen Demand (BOD)		January to June	13.8	mg/l	TM045	28/06/2021	
4	GW3	Boron		January to June	0.0412	mg/l	TM152	28/06/2021	
5	GW3	Cadmium	0.005mg/l	January to June	0.00008	mg/l	TM152	28/06/2021	
6	GW3	Calcium		January to June		mg/l	TM152	28/06/2021	
7	GW3	Chemical Oxygen Demand COD		January to June	211	mg/l	TM107	28/06/2021	
8	GW3	Chloride	200mg/l	January to June	19.7	mg/l	TM097	28/06/2021	
9	GW3	Chromium		January to June	0.001	mg/l	TM152	28/06/2021	
10	GW3	Copper		January to June	0.00003	mg/l	TM152	28/06/2021	
11	GW3	Electrical conductivity		January to June	0.737	uS/cm	TM120	28/06/2021	
12	GW3	Iron		January to June	0.915	mg/l	TM152	28/06/2021	
13	GW3	Lead		January to June	0.0002	mg/l	TM152	28/06/2021	
14	GW3	Magnesium		January to June	13.6	mg/l	TM152	28/06/2021	
15	GW3	Manganese		January to June	2.13	mg/l	TM152	28/06/2021	
16	GW3	Mecoprop	0.0004mg/l	January to June	0.0004	ug/l		28/06/2021	
17	GW3	Mercury	0.001mg/l	January to June	0.00001	ug/l	TM183	28/06/2021	
18	GW3	Nickel		January to June	0.00147	mg/l	TM152	28/06/2021	
19	GW3	pH	5.5 - 9.5	January to June	7.17	pH units	TM133	28/06/2021	
20	GW3	Phenols	0.0005mg/l	January to June	0.0002	ug/l	TM062	28/06/2021	
21	GW3	Potassium		January to June	4.58	mg/l	TM083	28/06/2021	
22	GW3	Sodium		January to June	13.4	mg/l	TM083	28/06/2021	
23	GW3	Sulphate		January to June	101	mg/l	TM098	28/06/2021	
24	GW3	Temperature C		January to June		°C	Field Measured		

25	GW3	Toluene	0.004mg/l	January to June		ug/l	TM208		
26	GW3	Total Alkalinity		January to June	325	mg/l	TM043	28/06/2021	
27	GW3	Total Organic Carbon		January to June	12.4	mg/l	TM090	28/06/2021	
28	GW3	Total Oxidised Nitrogen		January to June	<0.1	mg/l	TM102	28/06/2021	
29	GW3	Water Level		January to June		Level m	Field Measured		
30	GW3	Zinc	0.1mg/l	January to June	0.00102	ug/l	TM152	28/06/2021	
No.	Monitoring Point	Substance/Parameter	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and Times	Uncertainty
1	GW4	Ammoniacal Nitrogen	2.5mg/l			mg/l	TM099		
2	GW4	Arsenic				mg/l	TM152		
3	GW4	Biochemical Oxygen Demand (BOD)				mg/l	TM045		
4	GW4	Boron				mg/l	TM152		
5	GW4	Cadmium	0.005mg/l			mg/l	TM152		
6	GW4	Calcium				mg/l	TM152		
7	GW4	Chemical Oxygen Demand COD				mg/l	TM107		
8	GW4	Chloride	200mg/l			mg/l	TM097		
9	GW4	Chromium				mg/l	TM152		
10	GW4	Copper				mg/l	TM152		
11	GW4	Electrical conductivity				uS/cm			
12	GW4	Iron				mg/l	TM152		
13	GW4	Lead				mg/l	TM152		
14	GW4	Magnesium				mg/l	TM152		
15	GW4	Manganese				mg/l	TM152		
16	GW4	Mecoprop	0.0004mg/l			ug/l			
17	GW4	Mercury	0.001mg/l			ug/l	TM183		
18	GW4	Nickel				mg/l	TM152		
19	GW4	pH	5.5 - 9.5			pH units	TM133		
20	GW4	Phenols	0.0005mg/l			ug/l	TM062		
21	GW4	Potassium				mg/l	TM083		
22	GW4	Sodium				mg/l	TM083		

23	GW4	Sulphate				mg/l	TM098		
24	GW4	Temperature C				°C	Field Measured		
25	GW4	Toluene	0.004mg/l			ug/l	TM208		
26	GW4	Total Alkalinity				mg/l	TM043		
27	GW4	Total Organic Carbon				mg/l	TM090		
28	GW4	Total Oxidised Nitrogen				mg/l	TM102		
29	GW4	Water Level				Level m	Field Measured		
30	GW4	Zinc	0.1mg/l			ug/l	TM152		
No.	Monitoring Point	Substance/Parameter	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and Times	Uncertainty
1	GW5	Ammoniacal Nitrogen	2.5mg/l		<0.2	mg/l	TM099		
2	GW5	Arsenic			0.00445	mg/l	TM152		
3	GW5	Biochemical Oxygen Demand (BOD)			<1	mg/l	TM045		
4	GW5	Boron			0.211	mg/l	TM152		
5	GW5	Cadmium	0.005mg/l		0.00008	mg/l	TM152		
6	GW5	Calcium			82.4	mg/l	TM152		
7	GW5	Chemical Oxygen Demand COD			45.9	mg/l	TM107		
8	GW5	Chloride	200mg/l		15	mg/l	TM097		
9	GW5	Chromium			0.001	mg/l	TM152		
10	GW5	Copper			0.0013	mg/l	TM152		
11	GW5	Electrical conductivity			0.468	uS/cm	TM120		
12	GW5	Iron			0.522	mg/l	TM152		
13	GW5	Lead			0.000731	mg/l	TM152		
14	GW5	Magnesium			4.13	mg/l	TM152		
15	GW5	Manganese			0.131	mg/l	TM152		
16	GW5	Mecoprop	0.0004mg/l		0.0002	ug/l			
17	GW5	Mercury	0.001mg/l		0.00001	ug/l	TM183		
18	GW5	Nickel			0.00206	mg/l	TM152		
19	GW5	pH	5.5 - 9.5		6.61	pH units	TM133		

20	GW5	Phenols	0.0005mg/l		0.0002	ug/l	TM062		
21	GW5	Potassium			1.07	mg/l	TM083		
22	GW5	Sodium			6.87	mg/l	TM083		
23	GW5	Sulphate			16.3	mg/l	TM098		
24	GW5	Temperature C				°C	Field Measured		
25	GW5	Toluene	0.004mg/l		0.0004	ug/l	TM208		
26	GW5	Total Alkalinity			241	mg/l	TM043		
27	GW5	Total Organic Carbon			14.5	mg/l	TM090		
28	GW5	Total Oxidised Nitrogen			<0.1	mg/l	TM102		
29	GW5	Water Level				Level m	Field Measured		
30	GW5	Zinc	0.1mg/l		0.0149	ug/l	TM152		
No.	Monitoring Point	Substance/Parameter	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and Times	Uncertainty
1	GW8	Ammoniacal Nitrogen	2.5mg/l			mg/l	TM099		
2	GW8	Arsenic				mg/l	TM152		
3	GW8	Biochemical Oxygen Demand (BOD)				mg/l	TM045		
4	GW8	Boron				mg/l	TM152		
5	GW8	Cadmium	0.005mg/l			mg/l	TM152		
6	GW8	Calcium				mg/l	TM152		
7	GW8	Chemical Oxygen Demand COD				mg/l	TM107		
8	GW8	Chloride	200mg/l			mg/l	TM097		
9	GW8	Chromium				mg/l	TM152		
10	GW8	Copper				mg/l	TM152		
11	GW8	Electrical conductivity				uS/cm	TM120		
12	GW8	Iron				mg/l	TM152		
13	GW8	Lead				mg/l	TM152		
14	GW8	Magnesium				mg/l	TM152		
15	GW8	Manganese				mg/l	TM152		
16	GW8	Mecoprop	0.0004mg/l			ug/l			
17	GW8	Mercury	0.001mg/l			ug/l	TM183		

18	GW8	Nickel				mg/l	TM152		
19	GW8	pH	5.5 - 9.5			pH units	TM133		
20	GW8	Phenols	0.0005mg/l			ug/l	TM062		
21	GW8	Potassium				mg/l	TM083		
22	GW8	Sodium				mg/l	TM083		
23	GW8	Sulphate				mg/l	TM098		
24	GW8	Temperature C				°C	Field Measured		
25	GW8	Toluene	0.004mg/l			ug/l	TM208		
26	GW8	Total Alkalinity				mg/l	TM043		
27	GW8	Total Organic Carbon				mg/l	TM090		
28	GW8	Total Oxidised Nitrogen				mg/l	TM102		
29	GW8	Water Level				Level m	Field Measured		
30	GW8	Zinc	0.1mg/l			ug/l	TM152		

Signed JL Adams

Date 23/07/2021

PRINT NAME JOHN ADAMS