

PERMIT NUMBER	BT19081X	OPERATOR	JLA DISPOSAL LTD
INSTALLATION	PALLEG PHASE II	FORM NO.	January to March 2023
REPORTING GROUNDWATER MONITORING FOR THE PERIOD		FROM	01/01/2023
		TO	31/03/2023

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 March	<0.2	mg/l	TM099	14/03/2023	
2	GW2	Arsenic				mg/l	TM152		
3	GW2	Biochemical Oxygen Demand (BOD)				mg/l	TM045		
4	GW2	Boron				mg/l	TM152		
5	GW2	Cadmium	0.005mg/l	January to March	0.00008	mg/l	TM152	14/03/2023	
6	GW2	Calcium				mg/l	TM152		
7	GW2	Chemical Oxygen Demand COD				mg/l	TM107		
8	GW2	Chloride	200mg/l	January to March	32.7	mg/l	TM097	14/03/2023	
9	GW2	Chromium				mg/l	TM152		
10	GW2	Copper				mg/l	TM152		
11	GW2	Electrical conductivity		January to March	1	uS/cm	TM120	14/03/2023	
12	GW2	Iron				mg/l	TM152		
13	GW2	Lead				mg/l	TM152		
14	GW2	Magnesium				mg/l	TM152		
15	GW2	Manganese				mg/l	TM152		
16	GW2	Mecoprop	0.0004mg/l	January to March	<0.2	ug/l		14/03/2023	
17	GW2	Mercury	0.001mg/l	January to March	0.00001	ug/l	TM183	14/03/2023	
18	GW2	Nickel				mg/l	TM152		
19	GW2	pH	5.5 - 9.5	January to March	7.06	pH units	TM133	14/03/2023	
20	GW2	Phenols				ug/l	TM062		
21	GW2	Potassium				mg/l	TM083		
22	GW2	Sodium				mg/l	TM083		
23	GW2	Sulphate				mg/l	TM098		
24	GW2	Temperature C				°C	Field Measured		
25	GW2	Toluene	0.004mg/l	January to March	0.001	ug/l	TM208	14/03/2023	
26	GW2	Total Alkalinity				mg/l	TM043		
27	GW2	Total Organic Carbon				mg/l	TM090		

28	GW2	Total Oxidised Nitrogen				mg/l	TM102		
29	GW2	Water Level				Level m	Field Measured		
30	GW2	Zinc	0.1mg/l	January to March	0.00628	ug/l	TM152	14/03/2023	
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 March	12.7	mg/l	TM099	14/03/2023	
2	GW3	Arsenic				mg/l	TM152		
3	GW3	Biochemical Oxygen Demand (BOD)				mg/l	TM045		
4	GW3	Boron				mg/l	TM152		
5	GW3	Cadmium	0.005mg/l	January to March	0.00008	mg/l	TM152	14/03/2023	
6	GW3	Calcium				mg/l	TM152		
7	GW3	Chemical Oxygen Demand COD				mg/l	TM107		
8	GW3	Chloride	200mg/l	January to March	33.7	mg/l	TM097	14/03/2023	
9	GW3	Chromium				mg/l	TM152		
10	GW3	Copper				mg/l	TM152		
11	GW3	Electrical conductivity		January to March	1.04	uS/cm	TM120	14/03/2023	
12	GW3	Iron				mg/l	TM152		
13	GW3	Lead				mg/l	TM152		
14	GW3	Magnesium				mg/l	TM152		
15	GW3	Manganese				mg/l	TM152		
16	GW3	Mecoprop	0.0004mg/l	January to March	<4	ug/l		14/03/2023	
17	GW3	Mercury	0.001mg/l	January to March	0.00001	ug/l	TM183	14/03/2023	
18	GW3	Nickel				mg/l	TM152		
19	GW3	pH	5.5 - 9.5	January to March	7.38	pH units	TM133	14/03/2023	
20	GW3	Phenols				ug/l	TM062		
21	GW3	Potassium				mg/l	TM083		
22	GW3	Sodium				mg/l	TM083		
23	GW3	Sulphate				mg/l	TM098		
24	GW3	Temperature C				°C	Field Measured		
25	GW3	Toluene	0.004mg/l	January to March	0.001	ug/l	TM208	14/03/2023	
26	GW3	Total Alkalinity				mg/l	TM043		

27	GW3	Total Organic Carbon				mg/l	TM090		
28	GW3	Total Oxidised Nitrogen				mg/l	TM102		
29	GW3	Water Level				Level m	Field Measured		
30	GW3	Zinc	0.1mg/l	January to March	0.00222	ug/l	TM152	14/03/2023	
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	January to March	3.91	mg/l	TM099	14/03/2023	
2	GW5	Arsenic				mg/l	TM152		
3	GW5	Biochemical Oxygen Demand (BOD)				mg/l	TM045		
4	GW5	Boron				mg/l	TM152		
5	GW5	Cadmium	0.005mg/l	January to March	0.00008	mg/l	TM152	14/03/2023	
6	GW5	Calcium				mg/l	TM152		
7	GW5	Chemical Oxygen Demand COD				mg/l	TM107		
8	GW5	Chloride	200mg/l	January to March	34.2	mg/l	TM097	14/03/2023	
9	GW5	Chromium				mg/l	TM152		
10	GW5	Copper				mg/l	TM152		
11	GW5	Electrical conductivity		January to March	0.711	uS/cm	TM120	14/03/2023	
12	GW5	Iron				mg/l	TM152		
13	GW5	Lead				mg/l	TM152		
14	GW5	Magnesium				mg/l	TM152		
15	GW5	Manganese				mg/l	TM152		
16	GW5	Mecoprop	0.0004mg/l	January to March	0.315	ug/l		14/03/2023	
17	GW5	Mercury	0.001mg/l	January to March	0.00001	ug/l	TM183	14/03/2023	
18	GW5	Nickel				mg/l	TM152		
19	GW5	pH	5.5 - 9.5	January to March	6.92	pH units	TM133	14/03/2023	
20	GW5	Phenols				ug/l	TM062		
21	GW5	Potassium				mg/l	TM083		
22	GW5	Sodium				mg/l	TM083		

23	GW5	Sulphate				mg/l	TM098		
24	GW5	Temperature C				°C	Field Measured		
25	GW5	Toluene	0.004mg/l	January to March	0.001	ug/l	TM208	14/03/2023	
26	GW5	Total Alkalinity				mg/l	TM043		
27	GW5	Total Organic Carbon				mg/l	TM090		
28	GW5	Total Oxidised Nitrogen				mg/l	TM102		
29	GW5	Water Level				Level m	Field Measured		
30	GW5	Zinc	0.1mg/l	January to March	0.0151	ug/l	TM152	14/03/2023	
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		
No.	Monitoring	Substance/	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and	Uncertainty
1	GW9	Ammoniacal Nitrogen	2.5mg/l	January to March	0.237	mg/l	TM099	14/03/2023	
2	GW9	Arsenic				mg/l	TM152		
3	GW9	Biochemical Oxygen Demand (BOD)				mg/l	TM045		
4	GW9	Boron				mg/l	TM152		
5	GW9	Cadmium	0.005mg/l	January to March	0.00008	mg/l	TM152	14/03/2023	
6	GW9	Calcium				mg/l	TM152		
7	GW9	Chemical Oxygen Demand COD				mg/l	TM107		
8	GW9	Chloride	200mg/l	January to March	10	mg/l	TM097	14/03/2023	
9	GW9	Chromium				mg/l	TM152		
10	GW9	Copper				mg/l	TM152		
11	GW9	Electrical conductivity		January to March	0.666	uS/cm	TM120	14/03/2023	
12	GW9	Iron				mg/l	TM152		
13	GW9	Lead				mg/l	TM152		
14	GW9	Magnesium				mg/l	TM152		
15	GW9	Manganese				mg/l	TM152		
16	GW9	Mecoprop	0.0004mg/l	January to March	<4	ug/l		14/03/2023	
17	GW9	Mercury	0.001mg/l	January to March	0.00001	ug/l	TM183	14/03/2023	
18	GW9	Nickel				mg/l	TM152		
19	GW9	pH	5.5 - 9.5	January to March	7.46	pH units	TM133	14/03/2023	

20	GW9	Phenols				ug/l	TM062		
21	GW9	Potassium				mg/l	TM083		
22	GW9	Sodium				mg/l	TM083		
23	GW9	Sulphate				mg/l	TM098		
24	GW9	Temperature C				°C	Field Measured		
25	GW9	Toluene	0.004mg/l	January to March	0.001	ug/l	TM208	14/03/2023	
26	GW9	Total Alkalinity				mg/l	TM043		
27	GW9	Total Organic Carbon				mg/l	TM090		
28	GW9	Total Oxidised Nitrogen				mg/l	TM102		
29	GW9	Water Level				Level m	Field Measured		
30	GW9	Zinc	0.1mg/l	January to March	0.00175	ug/l	TM152	14/03/2023	
No.	Monitoring Point	Substance/Parameter	Trigger Level	Reference Period	Results	LoD/Units	Test Method	Sample Date and Times	Uncertainty
1	GW10	Ammoniacal Nitrogen	2.5mg/l	January to March	3.18	mg/l	TM099	14/03/2023	
2	GW10	Arsenic				mg/l	TM152		
3	GW10	Biochemical Oxygen Demand (BOD)				mg/l	TM045		
4	GW10	Boron				mg/l	TM152		
5	GW10	Cadmium	0.005mg/l	January to March	0.00008	mg/l	TM152	14/03/2023	
6	GW10	Calcium				mg/l	TM152		
7	GW10	Chemical Oxygen Demand COD				mg/l	TM107		
8	GW10	Chloride	200mg/l	January to March	32	mg/l	TM097	14/03/2023	
9	GW10	Chromium				mg/l	TM152		
10	GW10	Copper				mg/l	TM152		
11	GW10	Electrical conductivity		January to March	0.917	uS/cm	TM120	14/03/2023	
12	GW10	Iron				mg/l	TM152		
13	GW10	Lead				mg/l	TM152		
14	GW10	Magnesium				mg/l	TM152		
15	GW10	Manganese				mg/l	TM152		
16	GW10	Mecoprop	0.0004mg/l	January to March	<0.2	ug/l		14/03/2023	
17	GW10	Mercury	0.001mg/l	January to March	0.00001	ug/l	TM183	14/03/2023	
18	GW10	Nickel				mg/l	TM152		

19	GW10	pH	5.5 - 9.5	January to March	7.44	pH units	TM133	14/03/2023	
20	GW10	Phenols				ug/l	TM062		
21	GW10	Potassium				mg/l	TM083		
22	GW10	Sodium				mg/l	TM083		
23	GW10	Sulphate				mg/l	TM098		
24	GW10	Temperature C				°C	Field Measured		
25	GW10	Toluene	0.004mg/l	January to March	0.001	ug/l	TM208	14/03/2023	
26	GW10	Total Alkalinity				mg/l	TM043		
27	GW10	Total Organic Carbon				mg/l	TM090		
28	GW10	Total Oxidised Nitrogen				mg/l	TM102		
29	GW10	Water Level				Level m	Field Measured		
30	GW10	Zinc	0.1mg/l	January to March	0.00268	ug/l	TM152	14/03/2023	

Signed JL Adams

Date 24/03/2023

PRINT NAME JOHN ADAMS