



**PROPOSAL FOR THE REDUCTION IN
ENVIRONMENTAL MONITORING
AT
ASHGROVE RECYCLING LTD
CHURCHFIELD INDUSTRIAL ESTATE
CORK**

**PREPARED FOR:
Ashgrove Plant Ltd. T/A Ashgrove Recycling.**

**Waste Licence Ref:
W0 147-01**

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Abstract: This report represents a proposal to reduce the environmental monitoring relating to the operation of the Recycling Facility, at Churchfield Industrial Estate, Cork. Foul water monitoring is undertaken in accordance with waste licence Ref: W0147-01.

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1. INTRODUCTION

1.1. Introduction

Enviroglan Ltd. was appointed by Ashgrove Recycling to review the current frequency of environmental monitoring at the site.

Condition 8.2 of the licence states; *The licensee shall amend the frequency, locations, methods and scope of monitoring as required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.*

This report outlines the proposed reduction in the monitoring frequency.

2. CURRENT MONITORING REQUIREMENT

2.1. Current Environmental Media Monitored

In accordance with waste licence W0147-01, the following environmental monitoring is undertaken:

Surface water	Bi-annually
Foul water	Monthly and Toxicity Annually
Dust Monitoring	Three times a year (Twice during the period May to September)
Noise	Bi-Annually

In support of the proposed reduction in environmental monitoring, a summary of results from 2021 and 2022 (to date) is outlined herein.

2.1.1. Surface water

Surface water on site goes to storm sewer. Monitoring of the storm water on site is undertaken bi-annually. Although the surface water limit as set in the waste licence has not been exceed, it is proposed by Ashgrove Recycling to retain surface water monitoring on a bi-annual basis.

Surface water Monitoring Results Round 1 in 2021

Test	EPA Limits	Units	Round 1
			Result
Ammoniacal Nitrogen	-	mg/L	0.116
BOD	-	mg/L	3.9
TPH	100	mg/L	<0.01
Suspended Solids	-	mg/L	42
pH	-	pH Units	7.8

Surface water Monitoring Results Round 2 in 2021

Table 1. Surface Water Parameter Concentrations 2021 (above-limit concentrations are in shaded cells)

Test	EPA Limits	Units	Round 2
			Result
Ammoniacal Nitrogen	-	mg/L	<0.05
BOD	-	mg/L	3.7
TPH	100	mg/L	<0.01
Suspended Solids	-	mg/L	23
pH	-	pH Units	7.9

Surface water Monitoring Results Round 1 in 2022

Table 2.1: Summary of Results of Surface Water Monitoring for Round 1 2022

Parameter	June 2022	EPA Limits
Ammonium as NH4 (calc) (mg/l)	0.32	--
Biochemical Oxygen Demand (mg/l)	3	--
pH	7.1	--
Total Suspended Solids (mg/l)	18	--
TPH (mg/l)	<0.01	100

Surface water Monitoring Results Round 2 in 2022

Table 2.1: Summary of Results of Surface Water Monitoring for Round 2 2022

Parameter	June 2022	EPA Limits
Ammonium as NH4 (calc) (mg/l)	0.19	--
Biochemical Oxygen Demand (mg/l)	3	--
pH	7.2	--
Total Suspended Solids (mg/l)	9	--
TPH (mg/l)	<0.01	100

2.1.2. Foul water

Foul water from the yard flow to sewer and ultimately to waste water treatment plant at Carrigrennan. Foul water monitoring is undertaken at the site on a monthly basis. The following extracts from reports in 2021 and 2022 illustrates the results obtained.

Foul water analysis for Q1 in 2021

Table 1. Foul Water Parameter Concentrations for Q1 2021 (above-limit concentrations are in shaded cells)

Test	Limits	Units	Q1 2021		
			January	February	March
			Result		
Ammoniacal Nitrogen	20	mg/L	4.6	<1.00	0.605
Sulphate	300*	mg/L	88	190	96
BOD	1000	mg/L	51	9	16
COD	2000	mg/L	302	39	51
Detergents/Surfactants as MBAS	100	mg/L	4.84	<0.21	0.017
Oils/Fats/Grease	100	mg/L	14.1	<1	9.1
Suspended Solids	300	mg/L	68	24	27
pH	5-10	pH units	7.6	7.8	7.8

*Note: Sulphate limit amended in Technical Amendment A

Foul water analysis for Q2 in 2021

Table 1. Foul Water Parameter Concentrations for Q2 2021 (above-limit concentrations are in shaded cells)

Test	Limits	Units	Q2 2021		
			April	May	June
			Result		
Ammoniacal Nitrogen	20	mg/L	3.6	1.1	1.1
Sulphate	300*	mg/L	120	210	68
BOD	1000	mg/L	19	93	28
COD	2000	mg/L	354	188	58
Detergents/Surfactants as MBAS	100	mg/L	0.29	0.31	0.51
Oils/Fats/Grease	100	mg/L	<1.0	23.5	<4.0
Suspended Solids	300	mg/L	48	45	29
pH	5-10	pH units	7.8	7.1	7.4

*Note: Sulphate limit amended in Technical Amendment A

Foul water analysis for Q3 in 2021

Table 1. Foul Water Parameter Concentrations for Q3 2021 (above-limit concentrations are in shaded cells)

Test	Limits	Units	Q3 2021		
			July	August	September
Test			Result		
Ammoniacal Nitrogen	20	mg/L	0.37	6.5	1.25
Sulphate	300*	mg/L	41	200	31.6
BOD	1000	mg/L	<2	49	5.3
COD	2000	mg/L	16	144	28
Detergents/Surfactants as MBAS	100	mg/L	0.125	0.31	0.25
Oils/Fats/Grease	100	mg/L	<1	35.4	19
Suspended Solids	300	mg/L	5	25	<5
pH	5-10	pH units	7.6	8.1	7.19

*Note: Sulphate limit amended in Technical Amendment A

Foul water analysis for Q4 in 2021

Table 1. Foul Water Parameter Concentrations for Q4 2021 (above-limit concentrations are in shaded cells)

Test	Limits	Units	Q4 2021		
			October	November	December
Test			Result		
Ammoniacal Nitrogen	20	mg/L	8.982	18.67	17.788
Sulphate	300*	mg/L	245.579	132.458	211.214
BOD	1000	mg/L	28.3	23	23.6
COD	2000	mg/L	108	89	180
Detergents/Surfactants as MBAS	100	mg/L	7.1	8.5	9.3
Oils/Fats/Grease	100	mg/L	<1	<1	<1
Suspended Solids	300	mg/L	13	48	42
pH	5-10	pH units	7.5	7.7	7.6

*Note: Sulphate limit amended in Technical Amendment A

Foul water analysis for Q1 2022

Table 1. Foul Water Parameter Concentrations for Q1 2022 (above-limit concentrations are in shaded cells)

Test	Limits	Units	Q1 2022		
			January	February	March
			Result		
Ammoniacal Nitrogen	20	mg/L	2.598	-	0.32
Sulphate	300*	mg/L	85.231	-	49.621
BOD	1000	mg/L	13	-	9.8
COD	2000	mg/L	77	-	76
Detergents/Surfactants as MBAS	100	mg/L	5	-	0.29
Oils/Fats/Grease	100	mg/L	<1	-	7
Suspended Solids	300	mg/L	10	-	13
pH	5-10	pH units	7	-	7.2

*Note: Sulphate limit amended in Technical Amendment A

*Note: No foul water results were obtained in February. This was due to a project miscommunication by ByrneLooby regarding the monitoring schedule. This issue will not reoccur going forward and foul water samples will continue to be taken monthly for the rest of 2022.

Foul water analysis for Q2 2022

Table 2.1: Foul Water Parameter Concentrations for Q2 2022

Parameter	Units	April 2022	May 2022	June 2022	Reference Criteria
Ammoniacal Nitrogen as NH4	mg/l	3.33	2.931	4.871	20
Sulphate	mg/l	36.941	111.037	50.161	300*
BOD	mg/l	56.1	28.9	10.7	1000
COD	mg/l	183	118	50	2000
Detergents/Surf actants as MBAS	mg/l	12	4.5	0.1	100
Oils/Fats/Grease	mg/l	12	<1	3	100
Suspended Solids	mg/l	40	17	5	300
pH	pH units	7.4	6.8	6.9	5-10

*Note: Sulphate limit amended in Technical Amendment A

Foul water analysis for Q3 2022

Table 2.1: Foul Water Parameter Concentrations for Q3 2022

Parameter	Units	July 2022	Aug 2022	Sept 2022	Reference Criteria
Ammoniacal Nitrogen as NH4	mg/l	0.15	0.133	4.6	20
Sulphate	mg/l	33.7	44.6	97.6	300*
BOD	mg/l	12.5	12.8	46.4	1000
COD	mg/l	72	78	170	2000
Detergents/Surf actants as MBAS	mg/l	0.22	2.0	0.39	100
Oils/Fats/Grease	mg/l	18	14.0	28	100
Suspended Solids	mg/l	11	13	132	300
pH	pH units	6.8	7.0	7.4	5-10
Temp	DegC	12.5	13	11.0	--

*Note: Sulphate limit amended in Technical Amendment A

Foul water analysis for Q4 2022

(Awaiting November and December results.)

Table 2.1: Foul Water Parameter Concentrations for Q4 2022

Parameter	Units	Oct 2022	Nov 2022	Dec 2022	Reference Criteria
Ammoniacal Nitrogen as NH4	mg/l	<0.006	--	--	20
Sulphate	mg/l	24.8	--	--	300*
BOD	mg/l	8	--	--	1,000
COD	mg/l	22	--	--	2,000
Detergents/Surf actants as MBAS	mg/l	0.084	--	--	100
Oils/Fats/Grease	mg/l	<20	--	--	100
Suspended Solids	mg/l	<5	--	--	300
pH	pH units	7.0	--	--	5-10
Temp	DegC		--	--	--

*Note: Sulphate limit amended in Technical Amendment A

The results of the foul water monitoring indicate that the levels are within the criteria referred to in the waste licence. Furthermore the water from the foul network on site is further treated at the Carrigrennan wastewater treatment plant.

Therefore it is requested that the monthly monitoring is reduced to quarterly.

Toxicity analysis indicated a result of <1 toxic units in 2021. Hence, it is also proposed to remove the requirement of the toxicity testing and replace it with 'as may be required by the Agency'.

2.1.3. Dust Monitoring

Dust deposition was measured in accordance with VDI 2119: Measurement of Dust Using a Bergerhoff Dust Deposition Gauge. No results have exceeded the licence limit of 350 mg/m²/day in the previous two years.

Date	D1 to D4 Respectively
28/01 to 26/02 2021	234 mg/m ² /day, 179 mg/m ² /day, 158 mg/m ² /day, 110 mg/m ² /day
26/04 to 28/05 2021	272 mg/m ² /day, 124 mg/m ² /day, 260 mg/m ² /day, 144 mg/m ² /day
13/09 to 11/10 2021	85 mg/m ² /day, 66 mg/m ² /day, 149 mg/m ² /day, 99 mg/m ² /day
16/03 to 15/04 2022	215 mg/m ² /day, 149 mg/m ² /day, 192 mg/m ² /day, 134 mg/m ² /day
26/6 to 28/07 2022	272 mg/m ² /day, 124 mg/m ² /day, 260 mg/m ² /day, 144 mg/m ² /day
31/08 to 30/9 2022	85 mg/m ² /day, 66 mg/m ² /day, 149 mg/m ² /day, 99 mg/m ² /day

It is proposed to reduce the dust deposition monitoring to bi-annually.

2.1.4. Noise

June 2021 Noise Monitoring Results

Table 5.1 Daytime Noise Monitoring Survey Results

Monitoring Location	Date/Time	L _{Aeq, 30min}	L _{A90, 30min}	L _{A10, 30min}
		dB(A)	dB(A)	dB(A)
M1	09:17-09:47	62.3	56.6	64.5
	09:47-10:17	56.7	55.4	59.5
	10:17-10:47	54.6	53.5	56.8
M2	11:01-11:31	62.3	60.4	64.5
	11:31-12:01	63.5	61.5	65.8
	12:01-12:31	64.5	61.5	67.6
M3	12:49-13:19	60.4	57.8	62.6
	13:19-13:49	62.3	58.9	64.2
	13:49-14:19	61.7	57.4	63.7
M4	14:34-14:04	52.3	51.2	54.7
	14:04-14:34	51.4	49.5	53.9
	14:34-15:04	54.9	48.8	56.8

December 2021 Noise Monitoring Results

Table 5.1 Daytime Noise Monitoring Survey Results from B1 Survey on 9th June 2021.

Monitoring Location	Date/Time	L _{Aeq, 30min}	L _{A90, 30min}	L _{A10, 30min}
		dB(A)	dB(A)	dB(A)
M1	11:48-12:18	63.5	53.0	64.6
	12:18-12:48	62.6	52.6	65.5
	12:48-13:18	62.9	53.0	64.2
M2	13:30-14:00	58.5	53.6	61.8
	14:00-14:30	57.6	53.5	61.3
	14:30-15:00	59.3	52.0	60.8
M3	15:08-15:38	64.6	54.0	67.6
	15:38-16:08	64.1	55.6	66.4
	16:08-16:38	63.0	54.4	67.6
M4	10:05-10:35	52.2	43.0	57.5
	10:35-11:05	52.9	43.8	56.9
	11:05-11:30	53.9	42.8	57.7

June 2022 Noise Monitoring Results

Table 5.1 Daytime Noise Monitoring Survey Results

Monitoring Location	Start Time	End Time	L _{Aeq, 30min}	L _{A90, 30min}	L _{A10, 30min}
			dB(A)	dB(A)	dB(A)
M1	09:22	09:52	60.9	55.4	62.1
	09:52	10:22	61.2	56.8	63.4
	10:22	10:52	58.5	54.2	60.3
M2	11:00	11:30	61.2	55.9	63.7
	11:30	12:00	59.5	52.1	61.8
	12:00	12:30	62.5	52.7	63.9
M3	12:42	13:12	59.5	51.2	61.4
	13:12	13:42	58.3	49.8	60.0
	13:42	14:12	61.3	50.5	62.8
M4	14:26	14:56	50.9	48.2	52.2
	14:56	15:26	49.8	47.9	51.3
	15:26	15:56	51.8	46.5	53.5

The conclusion of the noise surveys indicate the noise emissions from the facility are only considered audible at the monitoring location M1 close to facility entrance within the industrial estate, At all other locations assessed the noise levels emanating from the Ashgrove facility are considered not to be impacting on local sensitive areas.

It is therefore requested that noise monitoring be reduced to annual monitoring.