

Rilta Environmental Ltd.

RILTA
Environmental
Limited



Annual Environmental Report (AER),
Site 402, Greenogue Business Park.

January 1st – December 31st 2012

March 2013

TOBIN CONSULTING ENGINEERS





REPORT

PROJECT: Rilta Environmental Ltd.
Site 402 – Environmental Monitoring

CLIENT: Rilta Environmental Ltd,
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Greenogue Business Park,
Rathcoole,
County Dublin

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1 INTRODUCTION

The Environmental Protection Agency (EPA) issued Rilta Environmental Ltd. (RILTA) with Waste Licence Reg. No. W0192-03 for its site at Block 402, Greenogue Business Park, Rathcoole, County Dublin on 22nd July 2010. The facility is located within an industrial estate approximately 2 km east of Newcastle village and approximately 2.5km west of Rathcoole village. The facility has been in operation since 2004. RILTA retained Tobin Consulting Engineers (TOBIN) to prepare the Annual Environmental Report (AER) for the reporting period January 2012 to December 2012. This report has been prepared in accordance with Condition 11.10 and Schedule E of the waste licence.

This report addresses Condition 11.10 of the waste licence for the facility.

Condition 11.10 states: 'The licensee shall submit to the Agency by the 31st March of each year an AER covering the previous calendar year. This report which shall be to the satisfaction of the Agency shall include as a minimum the information specified in Schedule E: Annual Environmental Report, of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency'.

The format of the report follows guidelines set in the "Guidance Note for Annual Environmental Report" issued by the Environmental Protection Agency. Account is also taken of the AER Draft Guidance Document and AER Information Templates issued by the Agency in January 2013.

1.1 WASTE ACTIVITIES AND RECORDS

The RILTA facility is a fully engineered and contained industrial site. It is licensed to accept 111,000 tonnes of waste material per annum, as set out in Schedule A of the waste licence. Table 1.1 below summarises the tonnes of waste RILTA is licensed to accept and compares it to waste tonnages accepted in 2012.

Table 1.1 Waste Acceptance Tonnages as per Waste Licence 192-03

Waste Type		Maximum (Tonnes Per Annum) ^{Note 3}	2012 Tonnages	
Non-Hazardous Wastes ^{Note 1,2}	Commercial Waste	500	0	
	Construction & Demolition Waste	500	361.5	
	Industrial Sludges	1,000	0	
	Other Industrial Waste	3,000	49959.8	
Non Hazardous Waste Total		5000	50321.3	
Hazardous Wastes EWC Code	Description *			
	13 05 03*	Interceptor sludges	10,000	757.9
	16 07 08*	Waste containing oil	2,000	1,259
	16 10 01*	Aqueous liquid waste containing dangerous substances	1,500	1,838.8
	17 05 03*	Soil and stones containing dangerous substances	60,000	6,478.3
	17 06 01* 17 06 05*	Insulation materials and construction Materials containing asbestos.	8,000	2,812.2
		Other ^{Note 4}	24,400	26,613.5
Hazardous Waste Total		106,000	39,759.7	
Total		111,000	90,081	

Note 1: Any proposals to accept other compatible non-hazardous waste types must be agreed in advance with the Agency.

Note 2: Excluding putrescible waste.

Note 3: The limitations on individual hazardous and non-hazardous waste types may be varied with the agreement of the agency subject to the individual total limits for hazardous and non-hazardous waste staying the same.

Note 4: Hazardous waste types as detailed in Attachment H.1 of the review application for this licence Reg No: 192-03 or may be otherwise agreed in advance with the agency.

Waste activities at the facility are restricted to those outlined in Part 1 – Schedule of Activities Licensed.

Licensed Waste Disposal Activities, in accordance with the 3rd Schedule of the Waste Management Act, 1996 to 2010:

Class 7: Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination), which results in final compounds or mixtures, which are disposed of by means of any activity referred to in

paragraphs 1 to 10 of this Schedule (including evaporation, drying and calcination);

Class 11: Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule;

Class 12: Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule; and

Class 13: Storage prior to submission to any activity referred to in a preceding paragraph of this schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.

Licensed Waste Disposal Activities, 4th Schedule of the Waste Management Acts 1996 to 2010:

Class 2: Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation processes);

Class 3: Recycling or reclamation of metals and metal compounds;

Class 4: Recycling or reclamation of other inorganic materials;

Class 6: Recovery of components used for pollution abatement;

Class 8: Oil re-refining or other re-uses of oil; and

Class 13: Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

2 EMISSIONS FROM THE FACILITY

Schedule C of Waste Licence 192-03 requires RILTA to carry out noise, air, dust, surface water, groundwater and wastewater emissions monitoring. The locations of these monitoring points are shown on Drawing 1250/01/1002, as submitted to the Environmental Protection Agency on the 28th of February 2005 and attached in Appendix A.

Monthly, quarterly and annual monitoring was carried out during the period 1st January 2012 to 31st December 2012. All monitoring results and reports have been submitted to the agency as required by Condition 11 and Schedule C of the waste licence. The following is a summary of the results and findings from the 2012 monitoring period.

2.1 GROUNDWATER EMISSIONS

Groundwater monitoring was conducted on a quarterly basis at 3 no. groundwater monitoring locations as set out Drawing 1250/01/1002 (see Appendix A). Results for all 4 quarterly monitoring events were furnished to the agency as part of the environmental monitoring reports sent in April, July and October 2012 and January 2013.

2.1.1 Groundwater Monitoring (BH1)

The following is a summary of the values recorded for each parameter at BH1.

pH: The pH of groundwater analysed from BH1 ranged from 7.02 to 7.50 during 2012. Results from all monitoring events had values within the normal pH range (6.5 pH 9.5) set out in the EPA Interim Guideline Values¹ (IGV) and reflects the natural background condition of the groundwater.

Conductivity: The conductivity concentrations in BH1 ranged from 595 μ S/cm to 687 μ S/cm during 2012. Results from all monitoring events were within the normal electrical conductivity range and were considerably lower than the IGV limit (1000 μ S/cm), reflecting normal background groundwater concentrations.

Heavy metals: Concentrations of mercury in BH1 were below the laboratory limit of detection (LOD) (1), during all monitoring events in 2012. Concentrations of arsenic in BH1 ranged from 0.138 μ g /l to 0.595 μ g /l, during 2012. Copper, chromium, cadmium, boron, nickel, iron, lead and zinc were all analysed as part of the annual groundwater suite of parameters for BH1

¹ From the EPA Interim Report – 'TOWARDS SETTING GUIDELINE VALUES FOR THE PROTECTION OF GROUNDWATER IN IRELAND'

during Q1 2012. All concentrations of heavy metals at BH1 during 2012 were below the required limit levels set out in the EPA.

Inorganic: The following inorganic parameters were analysed at BH1 during Q1 2012, as part of the annual groundwater suite: total alkalinity, cyanide, chloride, sulphate, potassium, sodium, calcium and magnesium. These parameters all had results within the limit values specified in the EPA IGVs, with the exception of chloride (64.41mg/l) which exceeded the EPA IGV (30mg/l) and potassium (5.296mg/l) which exceeded slightly the EPA IGV (5mg/l).

Pesticide: No concentrations of pesticides were detected during any monitoring event at BH1 during 2012.

List 1/11 Organic Substances, Mineral Oil, BTEX: Concentrations of list 1/11 organic substances (VOCs & SVOCs), mineral oil and BTEX were below the laboratory LOD² during all groundwater monitoring events at BH1 during 2012.

2.1.2 Groundwater monitoring point 2 (BH2)

The following is a summary of the values recorded for each parameter at BH2.

pH: The pH of groundwater analysed from BH2 ranged from 8.28 to 9.52 during 2012. Results from all monitoring events had values within the normal pH range set out in the IGVs (6.5 pH – 9.5) and reflects the natural background condition of the groundwater.

Conductivity: The conductivity concentrations in BH2 ranged from 210µS/cm to 331µS/cm during 2012. Results from all monitoring events were within the normal electrical conductivity range and were considerably lower than the IGV limit (1000 µS/cm), reflecting normal background groundwater concentrations.

Heavy metals: Concentrations of arsenic at BH2 ranged from 2.23 – 5.50µg/l during 2012. This concentration is within the IGV limit of 10 µg/l. Concentrations of mercury at BH2 ranged from 0.068-0.33µg/l. This concentration is within the IGV limit of 1µg/l.

Copper, chromium, cadmium, boron, nickel, iron, lead and zinc were all analysed as part of the annual groundwater suite of parameters for BH2, during Q1 2012. All concentrations of metals tested at BH2 during 2012 were below the required limit levels set out in the EPA IGVs, with the exception of iron (316µg/l) which exceeded the EPA IGV (200µg/l).

² TPG CWG - Limit of Detection

Inorganic: The following inorganic parameters were analysed at BH2 during Q1 2012, as part of the annual groundwater suite: total alkalinity, cyanide, chloride, sulphate, potassium, sodium, calcium and magnesium. These parameters all had results within the limit values specified in the EPA IGVs.

Pesticide: No concentrations of pesticides were detected during any monitoring event at BH2 during 2012.

List 1/11 Organic Substances, Mineral Oil, BTEX: All groundwater sampled at BH2 from January to December 2012 had concentrations of BTEX below the laboratory LOD. Mineral oil concentrations were also below laboratory LOD during all quarters with the exception of Q1 when mineral oil of 5.68µg/l was detected. This level of mineral oil is below the EPA IGV of (10µg/l).

List1/11 substances were detected at BH2 during monitoring events in 2012. Volatile organic compounds (VOCs) were during 2012 – 37.9µg/l during Q3. Concentrations of semi volatile organic compounds (SVOC) were not detected (were all below their respective laboratory LODs) at BH2 during 2012.

2.1.3 Groundwater monitoring point 3 (BH3)

The following is a summary of the values recorded for each parameter at BH3.

pH: The pH of the analysed groundwater from BH3 ranged from 9.11 to 10.10 during 2012. The reported pH values for BH3 were outside the pH range (6.5 pH 9.5) set out in the EPA IGV during monitoring events Q1 and Q2 (10.10 and 10.04, respectively). As discussed in the previous AERs, pH levels at BH3 are assumed to be elevated due to the use of alkaline cements and backfill construction material, which was used during the installation of underground tanks at the facility.

Conductivity: The conductivity within BH3 ranged from 276µS/cm to 309µS/cm during 2012. Electrical conductivity at BH3 during all monitoring events was below the EPA IGV (1000µS/cm).

Heavy metals: Concentrations of arsenic at BH3 ranged from 4.91- 8.69µ/l during 2012. Concentrations of mercury in BH3 was below the laboratory LOD (<1 µg/l) at all monitoring events, with the exception of Q1 when the mercury concentration was 1.34µg/l.

Copper, chromium, cadmium, boron, nickel, iron, lead and zinc were all analysed at BH3 during Q1 2012, as part of the annual groundwater testing suite of parameters. All concentrations of metals tested at BH3 during 2012 were below the required limit levels set out in the EPA IGVs.

Inorganic: The following inorganic parameters were analysed at BH3 during Q1 2012 as part of the annual groundwater suite: total alkalinity, cyanide, chloride, sulphate, potassium, sodium, calcium and magnesium. These parameters all had results within the limit values specified in the EPA IGVs, with the exception of chloride (38.2mg/l) which exceeded the EPA IGV (30mg/l), potassium (5.4mg/l) which slightly exceeded the IGV (5mg/l) and cyanide (13µg/l) which also exceeded the IGV (10µg/l).

Pesticide: No Pesticide concentrations were detected during any monitoring event at BH3 during 2012.

List 1/11 Organic Substances, Mineral Oil, BTEX: BTEX3 and Mineral oil concentrations were below the laboratory limit of detection during all monitoring events at BH3 in 2012.

List1/11 substances were detected at BH3 during 2012. VOCs were detected at BH3 during Q3 (18.1µg/l). Concentrations of semi volatile organic compounds were not detected (were all below their respective laboratory LODs) at BH3 during 2012.

2.2 SURFACE WATER EMISSIONS

Surface water monitoring was conducted on a quarterly basis at 3 no. surface water monitoring locations, as set out Drawing 1250/01/1002 (see Appendix A). Results for all 4 quarterly monitoring events were furnished to the agency as part of the environmental monitoring reports sent in April, July and October 2012 and January 2013.

2.2.1 Surface Water Monitoring

Results from all surface water monitoring locations indicate that surface water quality at the RILTA facility is within normal chemical range and is consistent with natural uncontaminated surface waters. The following is a summary of parameter concentrations at all surface water monitoring locations.

³ TPG CWG - Limit of detection

pH: The pH values at all surface water monitoring locations were within the normal range in 2012 (6.5 pH 9.5) set out in SI No. 278 of 2007⁴ and reflect the natural conditions of this surface water feature.

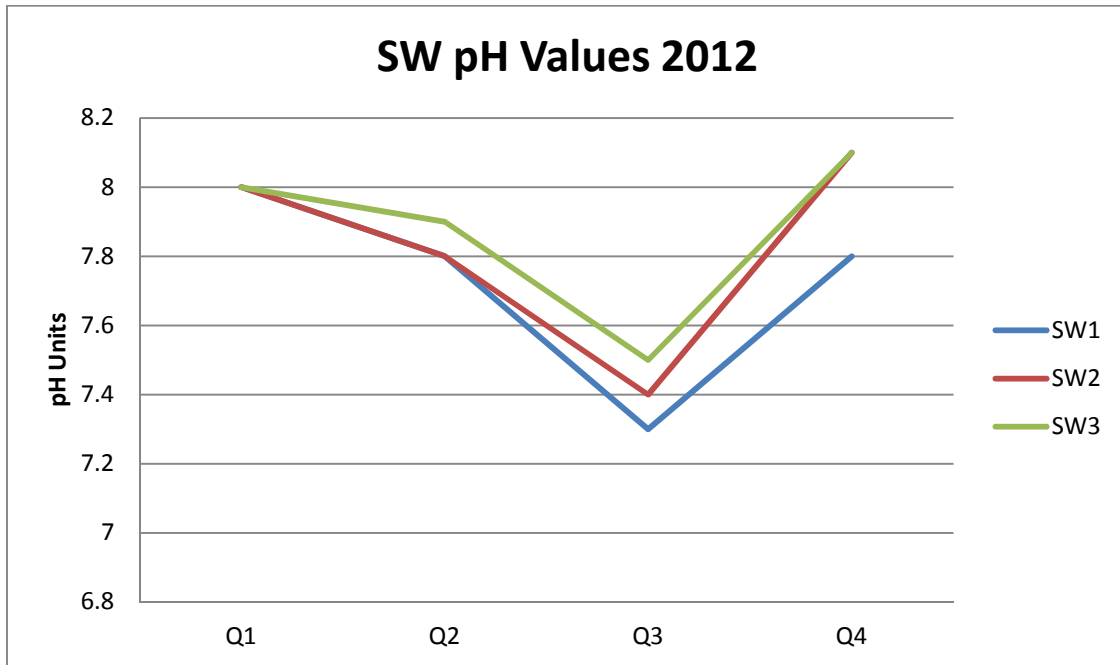


Figure 2.1 Surface Water pH Results - 2012

Table 2.1 Surface Water pH Results - 2012

pH	Q1	Q2	Q3	Q4
SW1	8.0	7.8	7.3	7.8
SW2	8.0	7.8	7.4	8.1
SW3	8.0	7.9	7.5	8.1

Chemical Oxygen Demand: The chemical oxygen demand for at all monitoring locations was consistent with historic monitoring results from the site. Concentrations were slightly elevated in Q2 with a peak concentrations of 14mg/l and 8mg/l at SW2 and SW3 respectively. There is no limit for surface water COD set out in waste licence 192-03 or SI No. 278 of 2007. COD results from 2012 are summarised in Table 2.2 below.

⁴ SI No 278 of 2007 – European Communities (Drinking Water) (No. 2) Regulations

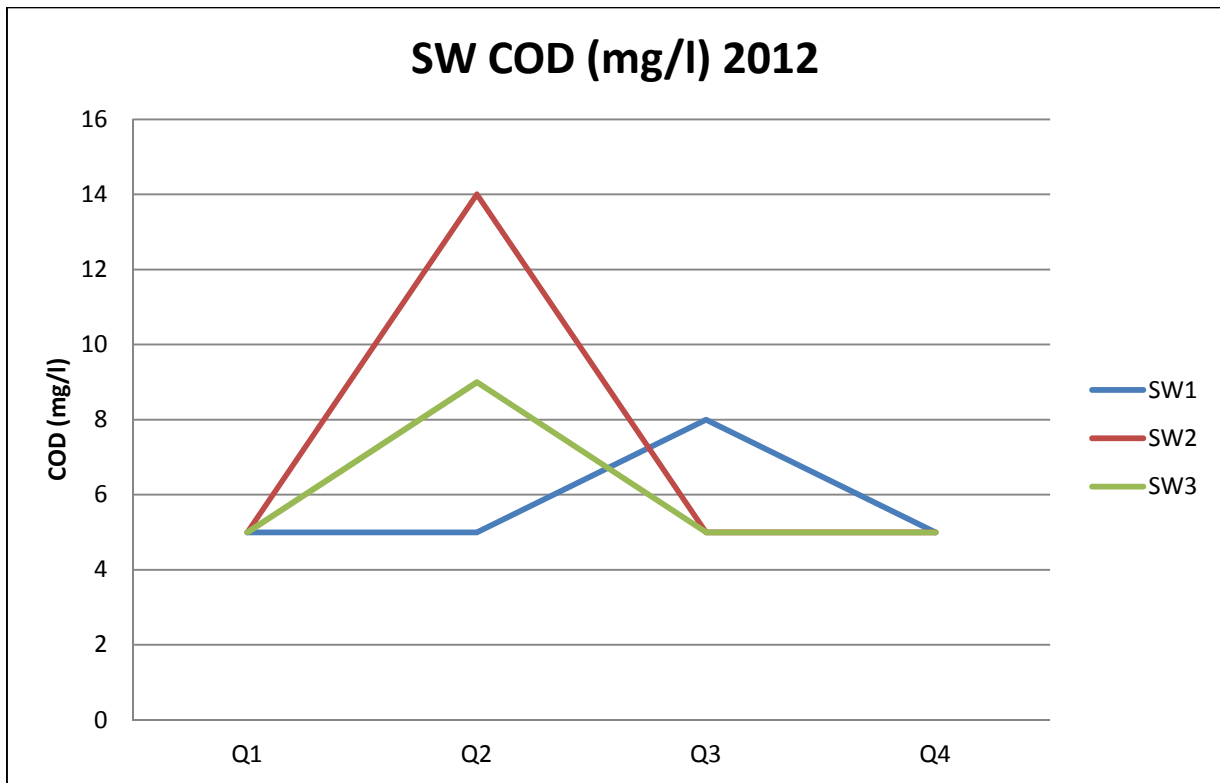


Figure 2.2 Surface Water COD Results - 2012

Table 2.2 Surface Water COD Results - 2012

COD (mg/l)	Q1	Q2	Q3	Q4
SW1	<5	<5	8	<5
SW2	<5	14	<5	<5
SW3	<5	9	<5	<5

Suspended Solids: The concentrations of suspended solids at all surface water monitoring locations were below the limit levels set out in waste licence 192-03 (35mg/l) for all monitoring events during 2012.

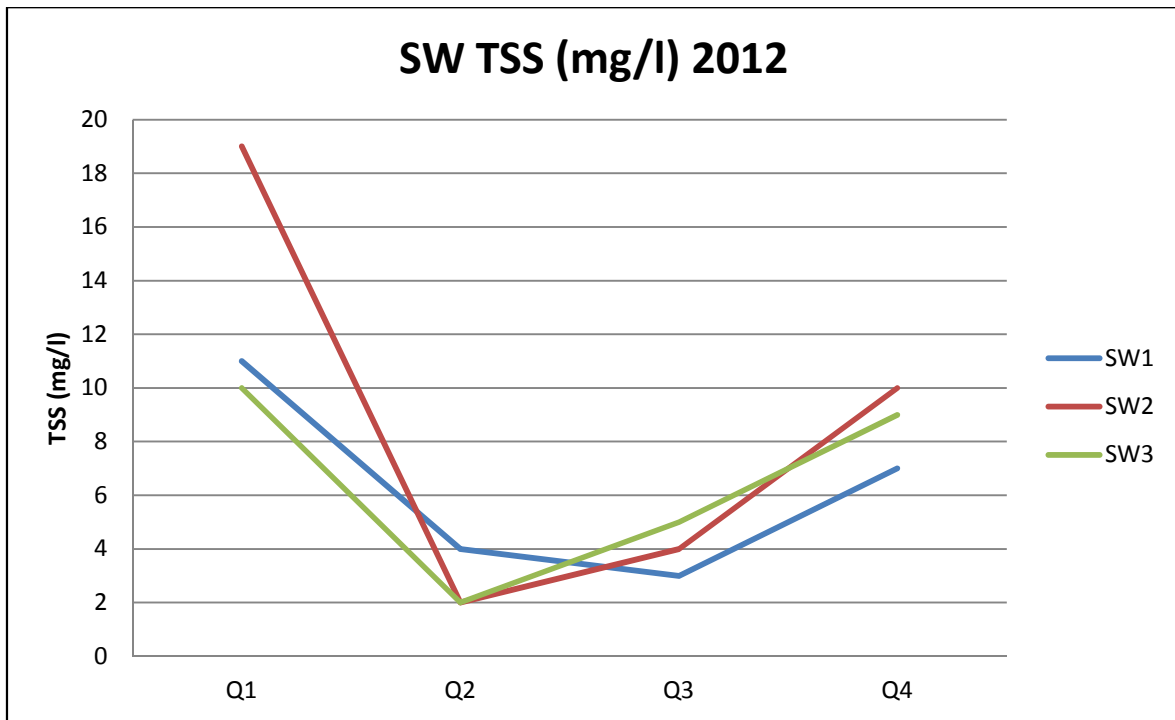


Figure 2.3 Surface Water Total Suspended Solids Results - 2012

Table 2.3 Surface Water Total Suspended Solids Results - 2012

TSS (mg/l)	Q1	Q2	Q3	Q4
SW1	11	4	3	7
SW2	19	2	4	10
SW3	10	2	5	9

Mineral Oils: Concentrations of Mineral Oil were below the laboratory detection limit (<2.5ug/l) during all monitoring events during 2012, with the exception of Q4. Although SW3 had concentrations above the laboratory LOD (10.6ug/l) in Q4, it remained significantly below the limit value set out in W192-03 (5000ug/l).

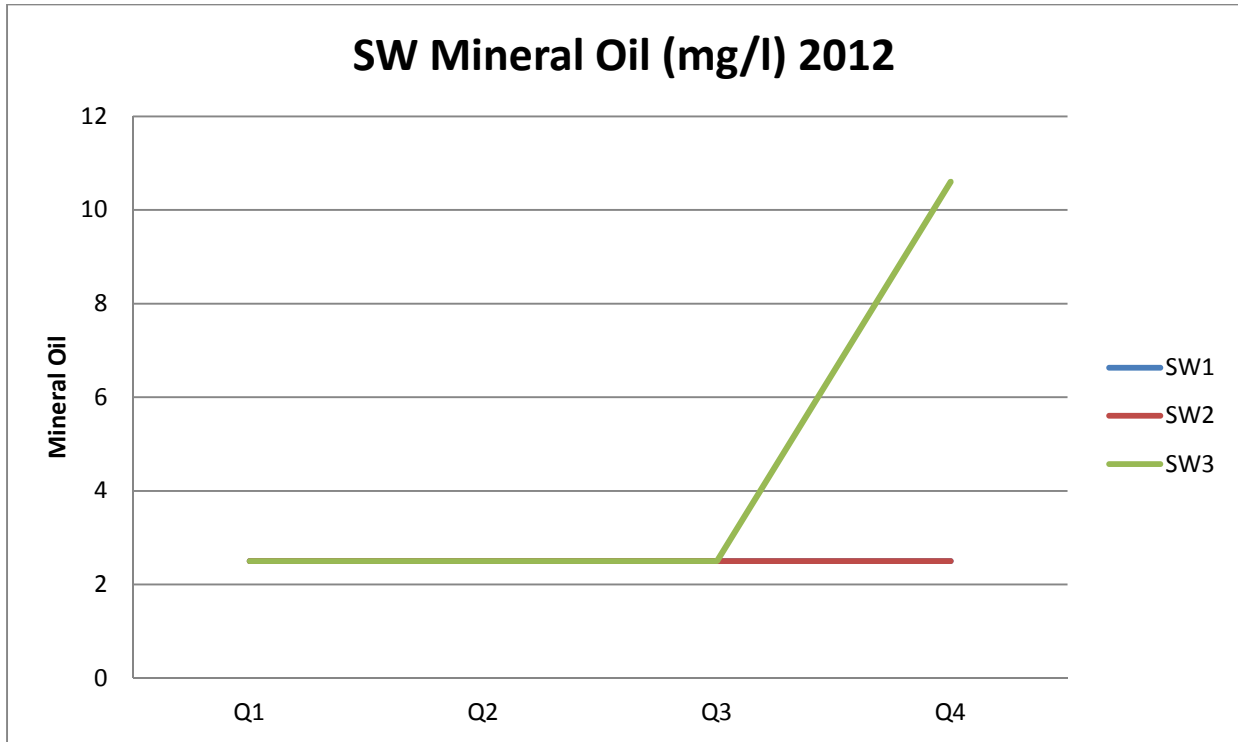


Figure 2.4 Surface Water Mineral Oil Results – 2012

Table 2.4 Surface Water Mineral Oil (mg/l) Results - 2012

Mineral Oil ($\mu\text{g/l}$)	Q1	Q2	Q3	Q4
SW1	<math><2.5</math>	<math><2.5</math>	<math><2.5</math>	<math><2.5</math>
SW2	<math><2.5</math>	<math><2.5</math>	<math><2.5</math>	<math><2.5</math>
SW3	<math><2.5</math>	<math><2.5</math>	<math><2.5</math>	10.6

2.3 WASTEWATER EMISSIONS

Waste water monitoring was conducted on a monthly basis at 1 no. monitoring location, as per Schedule C of the waste licence 192-03 and illustrated on Drawing 1250/01/1002 (see Appendix A). Results for all 12 no. monitoring events were furnished to the agency as part of the quarterly environmental monitoring reports sent to the Agency in April, July and October 2012, and January 2013.

2.3.1 Wastewater Monitoring

The concentration of pH was within the required licence limit (6.5 pH 10) during all monitoring events in 2012. A summary of the reported monthly pH concentrations is contained in Table 2.5 and Figure 2.5 below.

The concentration of mineral oil at WW1 was below the required licence limit during all monitoring events in 2012. A summary of the reported monthly mineral oil concentrations is contained in Table 2.5 and illustrated in Figure 2.6 below.

Concentrations of zinc, copper, chromium, lead, nickel, arsenic, benzene, toluene, ethylbenzene and total xylene were all below respective licence limits during 2012. The reported monthly WW1 concentrations for these parameters are summarised in Table 2.5 and illustrated in Figure 2.7 below.

Concentrations of BOD, COD, sulphate, surfactants, suspended solids and ammonical nitrogen⁵ were all below respective licence limits during 2012. A summary of the reported monthly WW1 concentrations for these parameters is contained in Table 2.5 and illustrated in Figure 2.8 below.

The total wastewater volume emitted during 2012 was 58,265m³ (58265000 litres).

⁵ Ammonical nitrogen was added to the WW1 monthly parameters in 2010, as part of licence 192-03.

Table 2.5 Wastewater Results - 2012

Parameter	Units	W0192-03 Grab Sample Limits	2012											
			Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
pH	pH units	6>pH<10	7.4	7.4	7.4	8.0	7.8	7.8	7.7	7.7	7.8	7.8	8.1	6.77
BOD	mg/l	2000	93	7	14.0	70	110	15	50	45	120	52	120	260
COD	mg/l	4000	346	77	131	536	992	293	810	805	965	840	1680	760
Sulphate SO ₄	mg/l	1000	50.02	28.3	31.23	97.70	<0.82	57.58	5.81	<0.82	13.70	0.92	6.84	62.78
Surfactants	mg/l	100	0.66	<0.05	9	0.152	0.872	0.190	0.791	0.053	0.391	5.796	0.322	0.364
Zinc Zn	g/l	3000	93.34	14.59	26.2	75.84	67.27	69.85	103.2	111	128.1	63.07	57.56	61.68
Copper Cu	g/l	1000	75.91	19.95	31.57	130.6	32.29	26.33	79.36	58.6	87.39	45.44	56.63	27.56
Chromium	g/l	1000	16.06	8.98	8.2	67.97	96.94	29.22	79.36	89.18	80.47	89.37	249.4	3.84
Lead	g/l	200	3.69	3.72	3.31	8.876	9.78	1.77	99.46	10.76	10.83	45.44	10.78	1.518
Nickel	g/l	1000	69.29	13.46	14.51	53.33	80.93	30.39	106.3	97.06	77.95	83.62	150.8	234.4
Arsenic	g/l	500	6.78	1.90	2.11	25.28	26.65	9.278	39.24	32.74	27.48	29.29	91.26	1.746
Benzene	g/l	1000	12.5	< 0.47	< 0.47	<0.47	<0.47	< 0.47	<0.47	<0.47	< 0.47	1.308	<0.47	27.262
Toluene	g/l	1000	31.49	<0.54	< 0.54	4.17	10.7	< 0.54	15.99	3.59	20.096	5.39	5.571	65.58
Ethylbenzene	g/l	1000	16.659	< 0.45	< 0.45	3.40	9.967	< 0.45	8.70	<0.45	< 0.45	<0.45	2.05	25.46
Total Xylene	g/l	1000	72.72	< 0.7	< 0.7	6.306	6.304	< 1.18	23.64	2.69	< 1.18	19.96	7.394	213.06
Suspended Solids	mg/l	500	48	6	9	17	35	24	50	38	34	34	61	120
Ammonical Nitrogen	mg/l	-	84.79	45.82	55.76	274.79	516.2	204.21	<0.01	555	<0.01	581.57	38.83	102.4
Mineral Oil	g/l	10000	37.53	< 2.5	5.69	44.52	7.68	< 2.5	28.11	5	10.51	<2.5	<2.5	149.41

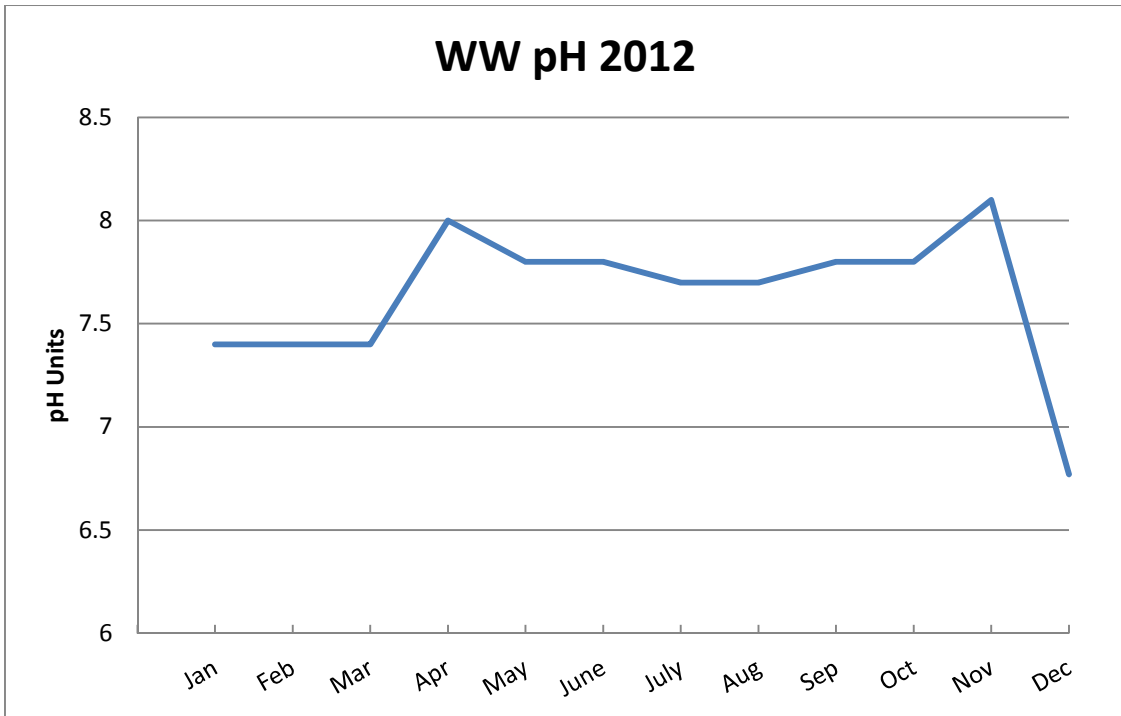


Figure 2.5 Wastewater – pH Trend Data 2012

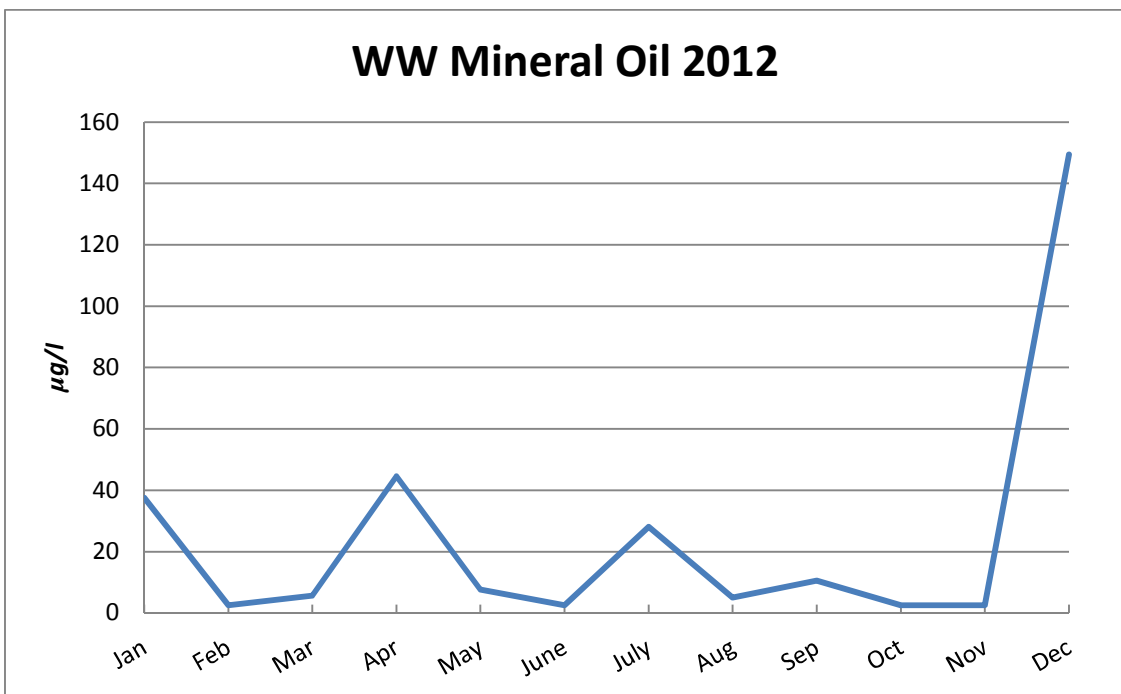


Figure 2.6 Wastewater – Mineral Oil Trend Data 2012

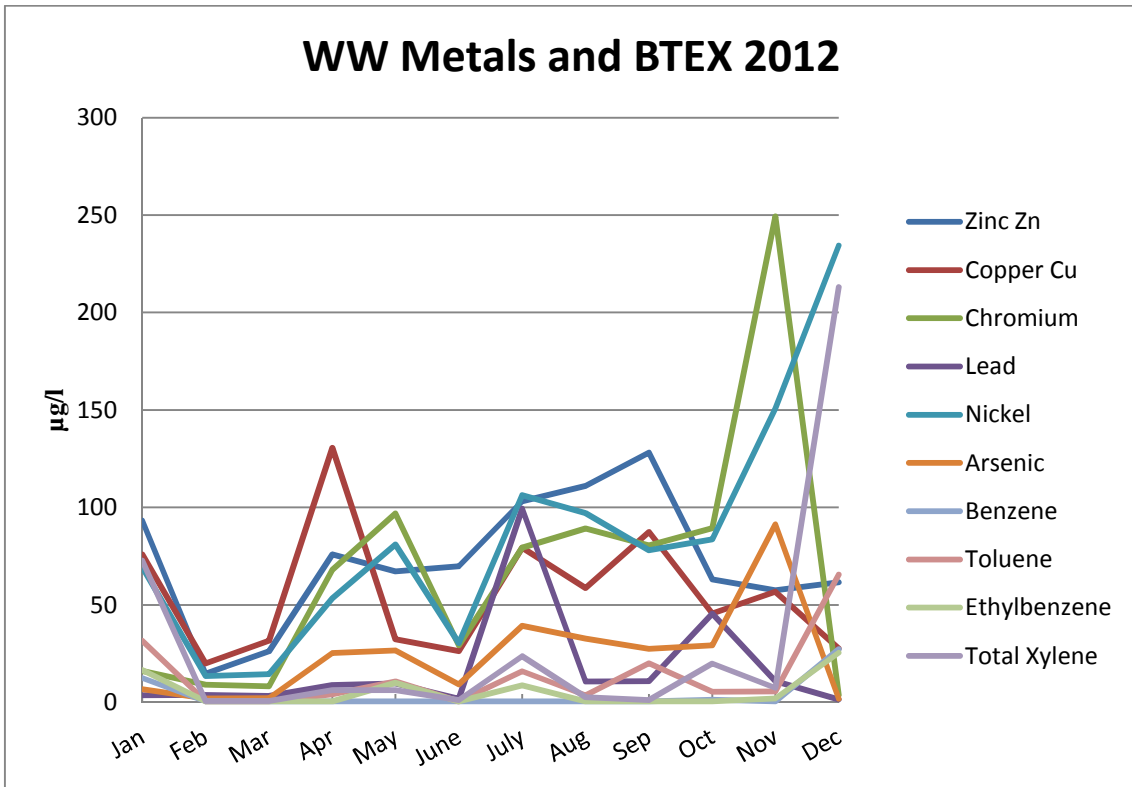


Figure 2.7 Wastewater – Metals and BTEX Trend Data 2012

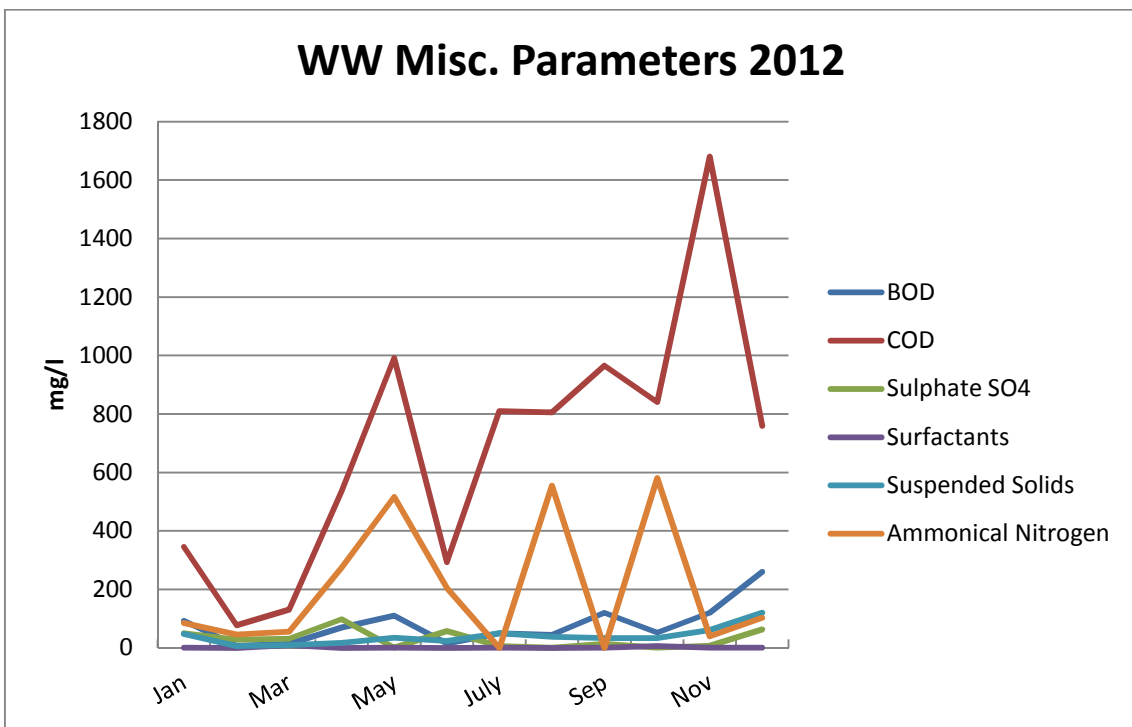


Figure 2.8 Wastewater – Miscellaneous Parameter Trend Data 2012

3 AMBIENT MONITORING

3.1 DUST

According to Schedule E of the waste licence, dust monitoring is required at the facility three times a year (twice between May and September), at monitoring locations illustrated on Drawing 1250/01/1002 (see Appendix A). Dust monitoring was carried out at four separate locations at the 4 no. corner boundaries of the RILTA facility. The samples were delivered to the laboratory of Fitz Scientific for analysis.

The results for each sample location D1, D2, D3 and D4 are included in Appendix C. In summary the air quality at all monitoring locations was good, with no exceedances of the dust deposition limit (350mg/ m²/day) recorded during the 2012 monitoring period.

Table 3.1 Dust Monitoring Results – 2012

Monitoring Period	D1	D2	D3	D4	Source of Dust
	mg/m ² /d	mg/m ² /d	mg/m ² /d	mg/m ² /d	
January 2012	161	58	26	103	No Exceedance
May 2012	*	228	305	241	No Exceedance
July 2012	28	56	142**	148	No Exceedance

*Note: In May, Dust jar D1 was broken following submission to the laboratory and the laboratory could not undertake analysis for gauge D1

**Note: Dust jar D3 was missing at the time of collection following the July monitoring event, the result shown is therefore from a replacement gauge which was set out in August.

3.2 VOC EMISSIONS

Odour Monitoring Ireland were commissioned by Rilta Environmental Limited to perform volatile organic compound (VOC) monitoring of the three licensed emission points located within the facility on a biannual basis. Monitoring was carried out on the 6th of June (Round 1) and the 28th of November 2012 (Round 2). With the exception of Volume flow for location A2, all results from the 2012 monitoring were in compliance with required limits. Measured volumetric airflow rate at A2 was 6,490Nm³/hr during the June monitoring event and 6,490 Nm³/hr during the November monitoring event, which exceeded the limit volumetric airflow rate of 5,292 Nm³/hr.

The full report from OMI detailing ambient emissions from the RILTA facility is contained in Appendix E.

4 NOISE MONITORING

The noise emission limits given in Waste Licence 192-03 are 55 dB(A) for daytime and 45 dB(A) for night time. These levels specifically relate to noise emissions arising from the facility, measured at any noise sensitive location. A more detailed noise monitoring report for this period is contained in Appendix D.

The noise emissions from RILTA Environmental Ltd. are given in Table 4.1 and Table 4.2 below.

Table 4.1 RILTA Daytime Noise – 2012

DAY TIME					
Receptor	Time	Leq	L10	L90	Notes
N1	08:56	60.6	62.9	56.2	Noise at this location was dominated by internal industrial estate traffic, distant traffic and vehicle movements at adjacent premises. Site activity was occasionally audible at this location during daytime monitoring.
N2	09:02	58.8	60.2	56.6	Noise from activities and vehicles at the adjacent premises were the dominant sources. The fast flowing stream, bird song, passing aircraft and on-site activities also contributed to recorded daytime noise levels at N2.
N3	09:42	59.8	63.4	52.0	Activity from adjacent facilities was the dominant noise source. Onsite activity, passing aircraft and bird song also contributed to daytime noise.
N4	10:23	70.6	70.0	63.8	Onsite activity and passing road traffic were the dominant noise sources during daytime monitoring at N4. Passing aircraft and activity at surrounding premises also contributed to noise levels.

Table 4.2 RILTA Night Time Noise – 2012

NIGHT TIME					
Receptor	Time	Leq	L10	L90	Notes
N1	01:49	43.8	45.5	38.5	Noise at this location was dominated by distant traffic. Passing traffic and a dog barking occasionally also contributed to noise levels. The facility was not in operation or audible.
N2	00:40	44.0	46.7	40.7	Distant traffic, the flowing stream and a dog occasionally barking. Site machinery was audible at N2 during night time monitoring as a shed door was open and this noise contributed to recorded levels.
N3	00:05	51.1	51.9	49.6	Night time noise at this location was dominated by an adjacent fast flowing stream. Distant traffic, noise from adjacent premises and passing aircraft also contributed to recorded noise levels. The site was not audible at this location during night time monitoring.
N4	01:15	43.1	43.5	37.1	Dominated by noise from surrounding premises (including an alarm) and distant traffic. The site was not audible at this location during night time monitoring.

Noise levels recorded at the four EPA agreed noise monitoring locations contain noise emissions from adjacent industrial sites, low flying aircraft and traffic on the internal road network of the industrial estate. Noise emissions from the RILTA facility were audible only during daytime monitoring and not audible during the night time monitoring, with the exception of at site N2 when the facility was audible due to a shed door being left open. Note that the EPA agreed noise monitoring locations are all on site and do not reflect emissions at noise sensitive locations.

The A-weighted equivalent continuous sound pressure level (L_{Aeq}, 30 min) recorded at the RILTA facility was above 55 dB(A) at all noise monitoring locations during the daytime monitoring event. It is noted that Greenogue Business Park is a busy industrial estate and noise from external sources including adjacent premises, passing and distant road traffic and passing aircraft contributed to recorded noise levels at all monitoring locations during daytime hours.

During the night time monitoring period the A-weighted equivalent continuous sound pressure level

(L_{Aeq}, 30 min) exceeded 45 dB(A) (night time) limit at N3 only. This exceedance at N3 was directly attributable to extraneous noise sources such as the fast flowing stream adjacent, distant traffic and low flying aircraft from nearby Baldonnell Airport. Site activities were not audible at N3 during night time monitoring.

There were no impulsive noise emissions audible at any of the monitoring locations during the daytime or night time monitoring period. With regard to tonal emissions, two tonal components were present at during daytime monitoring at locations N3 and N4 (16000Hz). However, no tonal emissions at these frequencies were recorded at any other monitoring location during the daytime monitoring event, despite the facility being audible at these locations; therefore it is unlikely that this pure tone originated due to RILTA activities.

During the night time monitoring there was a pure tone recorded at 2.5KHz at location N1. No tonal emissions at this frequency were recorded at any other monitoring location and the site was not audible at N1 during recording. This tone did not originate due to RILTA activities. A pure tone at 125Hz was recorded at monitoring location N2 during night time monitoring. Site machinery was audible at this location as a shed door was open. Similar noise sources were recorded throughout the four no. monitoring locations but N2 was the only location that site machinery was audible. As such is it considered this tone is a result of RILTA site machinery noise.

The 5dB penalty has not been applied to the N3 and N4 day monitoring event or the N1 night time monitoring event as these tones are likely to have been derived from an off-site source.

The 5dB penalty has however been applied to the N2 night time monitoring event and as such increases the L_{Aeq} at this location to 49.0dB(A) which exceeds the 45dB(A) limit set in Waste Licence No. 192-03. It is noted that other industrial estate noises and external sources contributed to recorded noise levels at N2 and that this location does not reflect emissions at noise sensitive locations.

Full 1/3 octave frequency band analysis of both day and night time surveys is presented in Appendix D.

5 RESOURCE CONSUMPTION SUMMARY

The main energy use at RILTA includes:

- Gas
- Electricity
- Water
- Diesel

A review of electricity and gas bills for the period from 01/01/08 to 31/12/12 shows that RILTA used the following quantities.

Table 5.1 Resource and Energy Consumption 2008-2012

Energy	Units	2010	2011	2012
Gas	KwH	175,932	52,240	60,266
Electricity	KwH	422,560	422,566	418,766
Water	m ³	13132	19,420*	17,020
Diesel	L	9888	75,800	62,800

*Water loss due to leaks caused by frost in late 2010 has now been rectified.

6 ENVIRONMENTAL MANAGEMENT

6.1 SCHEDULE OF ENVIRONMENTAL OBJECTIVES AND TARGETS

Details of the Environmental Management Programmes (EMP) for the RILTA facility are contained in Appendix B.

6.2 ENVIRONMENTAL MANAGEMENT PROGRAMME

Details of the 2012 and 2013 EMPs for the RILTA facility are contained in Appendix B.

7 POLLUTANT RELEASE AND TRANSFER REGISTER (PRTR)

Details of the 2012 Pollutant Release Transfer Register (PRTR) for the RILTA facility are included in Appendix F.

8 TANK AND PIPELINE TESTING AND INSPECTION REPORT

As per Condition 11 of waste licence 192-03, any reports on integrity testing of bunds or tanks will be furnished to the agency upon completion. Bund Integrity Testing was carried out at the RILTA facility in August 2012 and February 2013. The results will be submitted following feedback from a recent Agency audit.

9 WATER DEMAND AND TRADE EFFLUENT DISCHARGE

The trade effluent discharged in 2012 was 58265m³, of this 1095m³ of water was re-used; an increase of 650m³ when compared to 2011. This increase was due largely to significant volumes of water being used in carrying out bund testing in 2012.

10 EFFICIENCY OF USE OF RAW MATERIALS/ REDUCTION IN WASTE GENERATED

The main raw material used on site is paint. In 2012 RILTA moved away from using 56% solids paint and is instead using only 65% solids paint, which will further reduce solvent use at the facility. Paint use overall decreased by 1,500L in 2012 when compared to 2011, while Xylene use increased by 40L.

Table 10.1 Raw Material usage 2012

	2011	2012
56% Solids Paint	2,200 L	Nil
65% Solids Paint	6,100L	6,800L
Xylene	200L	240L
Acetone	25L	25L

11 DEVELOPMENT/INFRASTRUCTURAL WORKS

In 2012, 3 no. hardstanding concrete slabs located in the yard of the RILTA facility were replaced. It is hoped that a further two slabs will be replaced in 2013 and that any remaining damaged slabs will be replaced by 2014.

12 COMPLAINTS SUMMARY

There were no complaints received during 2012.

13 FINANCIAL PROVISION

A proposal in respect of financial provision was updated and furnished to the Agency in 2011 and no amendments have been made in the interim.

13.1 MANAGEMENT AND STAFFING STRUCTURE

Details of the management and staffing structure are contained in Appendix G.

13.2 PROGRAMME FOR PUBLIC INFORMATION

RILTA maintains a 'Public File' which contains all correspondence between RILTA and the Agency, all waste data and monitoring data as required by waste licence 0192-03. This file is available for viewing during normal office hours.

14 DECOMMISSIONING MANAGEMENT PLAN

This was submitted to the Agency in April 2011 and no amendments have been made in the interim.

14.1 PREVENTION OF ENVIRONMENTAL DAMAGE AND REMEDIAL ACTIONS (ENVIRONMENTAL LIABILITIES)

This was submitted to the Agency in April 2011 and no amendments have been made in the interim.

14.2 ENVIRONMENTAL LIABILITIES RISK ASSESSMENT (ELRA)

This was submitted to the Agency in April 2011 and no amendments have been made in the interim.

APPENDIX A

Site Map

Monitoring Point Locations (to National Grid Reference)

Groundwater Monitoring Points
 BH1 E301555, N 228440
 BH2 E301600, N228550
 BH3 E301630, N228555

Underground Settlement Tank Monitoring Points
 GW1 E301630, N228515
 GW2 E301650, N228540
 GW3 E301625, N228540

Surface Water/Invertebrate Monitoring Points
 SW1/KS1 E301670, N228562
 SW2/KS2 E301565, N228555
 SW3 (Proposed) E301480, N228560

Dust Monitoring Points
 D1 E301630, N228450
 D2 E301580, N228550
 D3 E301670, N228555
 D4 E301630, N228420

Noise Monitoring Points
 N1 E301630, N228450
 N2 E301580, N228550
 N3 E301670, N228555
 N4 E301630, N228420

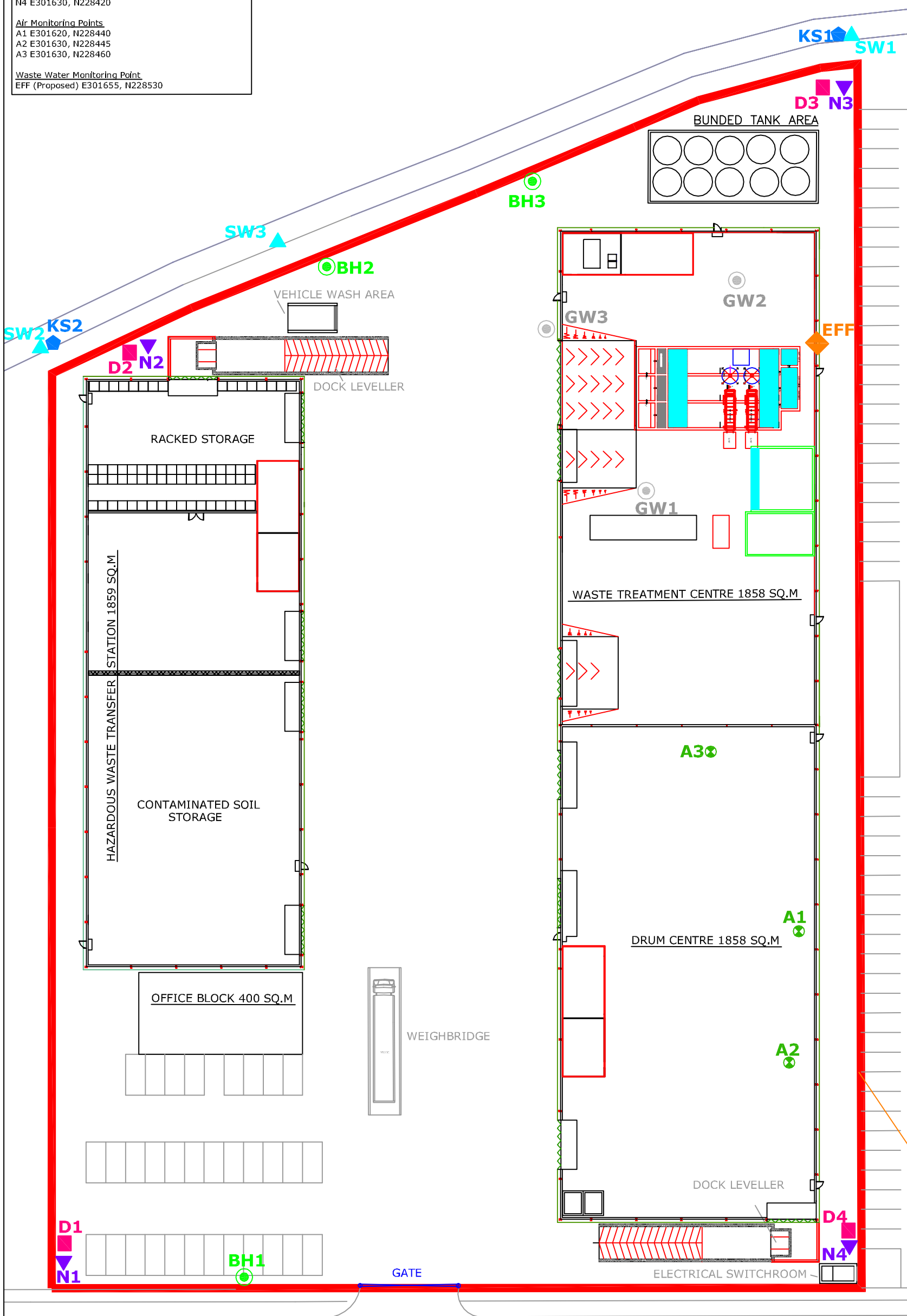
Air Monitoring Points
 A1 E301620, N228440
 A2 E301630, N228445
 A3 E301630, N228460

Waste Water Monitoring Point
 EFF (Proposed) E301655, N228530

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Legend:

- Licence Boundary
- Surface Water Monitoring Points
- Invertebrate Kick Sampling Monitoring Points
- Dust Monitoring Points
- Noise Monitoring Points
- Waste Water Monitoring Point
- Groundwater Monitoring Points
- Underground Settlement Tank Monitoring Points
- Air Monitoring Points



- Notes:
1. Figured Dimensions only to be taken from this drawing
 2. All Drawings to be checked by the Contractor on site
 3. Engineer to be informed of any discrepancies before any work commences
 4. All levels relate to Ordnance Survey Datum at Mean Head

Client	date	Int
Drawing Title		
SITE LAYOUT PLAN		
Project		
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN		
Scale:	1/500	
Drawn by	Checked by	Date
MARKCONROY	DAMIENGREHAN	January 2007
ENGINEER IN CHARGE: DAMIEN GREHAN		
<small>BLK 157 BLANCHARDSTOWN CORPORATE PARK DUBLIN 15, IRELAND TEL: 01 8036611 FAX: 01 8036410 email: info@tobin.ie</small>		
Drawing No.		
1250/01/1002		
Rev.		

APPENDIX B

Environmental Management Programme 2012 & 2013

RILTA ENVIRONMENTAL Ltd.

ENVIRONMENTAL MANAGEMENT SYSTEM



ENVIRONMENTAL MANAGEMENT PLAN

ER-003

In accordance with
ISO 14001

ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE ACHIEVEMENT OF OBJECTIVES AND TARGETS

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
1	Increase environmental awareness among RILTA staff.	Develop and issue quarterly e-mail environmental bulletin.	Confirm content IT to design email template Input information Distribute	CH ONE51 IT CK CH	June 12 June 12 August 12 August 12	N
2	Promote best practice in the processing of waste generated on site.	Change current method of disposing dry sludge to prevent leachate production	Confirm most suitable site Assess most suitable method of transport Assess most suitable method of storage prior to transport which doesn't allow for leachate accumulation 1 st load exported	RS/SC RS/SC EI/CH DG	Mar 12 Apr 12 May 12 June 12	Y Y Y Y

<i>Issue No.</i>	008	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2012	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
3	Improve site housekeeping.	Implement weekly 'Friday tidy up'	Draw up groupings to share tidy up responsibility between sections.	CH	Feb 12	y
			Assign a responsible person for each group and post the rota.	CH	Feb 12	y
			Assess effectiveness and meet with responsible persons	CH	Apr 12	y
4	Reduce trade effluent sent to foul sewer	Install a treated effluent re-use tank	Further investigate treated effluent polishing system	EI/CH	June 12	y
			Implement system if approved.	EI/DG	Sept 12	
			Assess polished effluent for general site use	EI/CH	Oct 12	
			Install Tank if approved	EI/CH	Feb 13	Yes
			Expand use through the whole site	EI	June 13	y

<i>Issue No.</i>	008	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2012	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
5	Reduce use of hazardous raw materials used on site.	Implement the 'treat waste with waste' best practice method on an ongoing basis Reduce volume of Xylene by 5%	Source suitable waste streams for treatment Laboratory approval for the usage of wastes for treatment Investigate the possible usage of waste solvents in instead of product.		Ongoing Ongoing Dec 2012	y y y
6	Optimize the quality of effluent discharged to sewer	As No. 4	As No. 4			

<i>Issue No.</i>	008	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2012	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
7	To be a good and considerate neighbour.	No complaints	Complete noise monitoring.	CH	Ongoing	y
			Monitor adjoining river on a yearly basis.	CH	Ongoing	Yes
			Maintain a 'complaints register' and review annually.	CH	Ongoing	Yes
			Liaise with industrial neighbours on a quarterly basis	CH	Ongoing	Yes
			Implement 'closed door' policy system	CM/DG	Ongoing	Yes
			Cold cutting at the cedar site to take place inside with	DG	Ongoing	y

<i>Issue No.</i>	008	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2012	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

<i>EMP Ref.</i>	<i>Objective</i>	<i>Target</i>	<i>Environmental Management Programme for the implementation of objectives.</i>	<i>Responsible Person</i>	<i>Completion Date</i>	<i>Completed (Y/N)</i>
8	To Be Energy Efficient	Reduce Water and electricity usage	doors close Complete targeted energy audit. Assess findings of audit. Implement findings of audit if economically and practically feasible.	CH CH/EI CH/EI	Apr 12 May 12 Dec 12	n

<i>Issue No.</i>	008	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2012	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

RILTA ENVIRONMENTAL Ltd.

ENVIRONMENTAL MANAGEMENT SYSTEM



ENVIRONMENTAL MANAGEMENT PLAN

In accordance with
ISO 14001

**ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE ACHIEVEMENT OF OBJECTIVES AND
TARGETS**

<i>EMP Ref.</i>	<i>Objective</i>	<i>Target</i>	<i>Environmental Management Programme for the implementation of objectives.</i>	<i>Responsible Person</i>	<i>Completion Date</i>	<i>Completed (Y/N)</i>
1	Increase environmental awareness among RILTA staff.	Develop and issue quarterly e-mail environmental bulletin.	Confirm content IT to design email template Input information Distribute	CH ONE51 IT CH CH	June 13 June 13 August 13 August 13	
2	Promote best practice in the processing of waste generated on site.	Ensure all pallets are recovered	Maintain current pallet storage area to maximize capacity. Ensure broken pallets are not thrown in the skip Have clean and broken pallets collected once a month	CM CM CM	May 13 May 13 May 13	

<i>Issue No.</i>	009	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2013	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
3	Improve site housekeeping.	Empty Drums loading Bay	1 person one Saturday per month to shred washed IBCs currently on loading bay.	AR	May 13	
		Remove all drums from back of drum division	1 person one Saturday per month to crush drums at back of drum division	AR	May 13	
4	Ensure only clean water released to the river	No ELV breaches	Implement thorough cleaning of attenuation tank and repeat on a 3 year basis	CH	June 13	
			Skim storm water interceptor on a monthly basis	CH	Ongoing	
			Replace damaged concrete on a rota basis to ensure no damaged areas by 2015	CH	Dec 14	

<i>Issue No.</i>	009	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2013	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
5	Reduce use of hazardous raw materials used on site.	Implement the 'treat waste with waste' best practice method on an ongoing basis	Source suitable waste streams for treatment Laboratory approval for the usage of wastes for treatment	RS TMc	Ongoing Ongoing	
6	Optimize the quality of effluent discharged to sewer	Have re-usable water on tap	Investigate possibility of final effluent polish system Get approval from EPA	EI CH	Sept 13 Dec 13	

<i>Issue No.</i>	009	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2013	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
7	To be a good and considerate neighbour.	No complaints	<p>Complete noise monitoring.</p> <p>Monitor adjoining river on a quarterly basis.</p> <p>Implement 'closed door' policy system when unloading liquid waste tankers where possible</p> <p>Cold cutting at the cedar site to take place inside with doors close</p>	<p>CH</p> <p>CH</p> <p>CM/DG</p> <p>DG</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	

<i>Issue No.</i>	009	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2013	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

EMP Ref.	Objective	Target	Environmental Management Programme for the implementation of objectives.	Responsible Person	Completion Date	Completed (Y/N)
8	To Be Energy Efficient	Reduce Water and electricity usage	<p>Complete targeted energy audit at both 402 and 14A1 sites.</p> <p>Assess findings of audit.</p> <p>Implement findings of audit if economically and practically feasible.</p>	<p>CH</p> <p>CH/EI</p> <p>CH/EI</p>	<p>Aug 13</p> <p>July 13</p> <p>Dec 13</p>	

<i>Issue No.</i>	009	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Jan 2013	<i>Reviewed by: Name/Position</i>	Eftim Ivanoff Operations Director

APPENDIX C

Dust Analysis Laboratory Results

A copy of this certificate is available on www.fitzsci.ie

Customer	Claire Walsh Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/005/02
Customer PO		Date of Receipt	01/03/2012
Customer Ref	Rilta (Site 402) D1 , 31/01/12 - 29/02/12	Sampled On	29/02/2012
		Date Testing Commenced	01/03/2012
		Received or Collected	Courier: DPD
		Condition on Receipt	Acceptable
		Date of Report	12/03/2012
		Sample Type	Water

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0308	g	
Dust (mg/m2/day)	144	Gravimetry	161.46	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 12/03/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

All organic results are analysed as received and all results are corrected for dry weight at 104 C

Results shall not be reproduced, except in full, without the approval of Fitz Scientific

Results contained in this report relate only to the samples tested

**The analytical result for this parameter may not be reflective of the concentration present at the time of sampling. The maximum recommended preservation time for this parameter has been exceeded.

A copy of this certificate is available on www.fitzsci.ie

Customer	Claire Walsh Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/005/03
Customer PO		Date of Receipt	01/03/2012
Customer Ref	Rilta (Site 402) D2 , 31/01/12 - 29/02/12	Sampled On	29/02/2012
		Date Testing Commenced	01/03/2012
		Received or Collected	Courier: DPD
		Condition on Receipt	Acceptable
		Date of Report	12/03/2012
		Sample Type	Water

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0111	g	
Dust (mg/m2/day)	144	Gravimetry	58.19	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 12/03/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

All organic results are analysed as received and all results are corrected for dry weight at 104 C

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Customer	Claire Walsh Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/005/04
Customer PO		Date of Receipt	01/03/2012
Customer Ref	Rilta (Site 402) D3 , 31/01/12 - 29/02/12	Sampled On	29/02/2012
		Date Testing Commenced	01/03/2012
		Received or Collected	Courier: DPD
		Condition on Receipt	Acceptable
		Date of Report	12/03/2012
		Sample Type	Water

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0050	g	
Dust (mg/m2/day)	144	Gravimetry	26.21	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 12/03/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

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Customer	Claire Walsh Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/005/05
Customer PO		Date of Receipt	01/03/2012
Customer Ref	Rilta (Site 402) D4 , 31/01/12 - 29/02/12	Sampled On	29/02/2012
		Date Testing Commenced	01/03/2012
		Received or Collected	Courier: DPD
		Condition on Receipt	Acceptable
		Date of Report	12/03/2012
		Sample Type	Water

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0197	g	
Dust (mg/m2/day)	144	Gravimetry	103.27	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 12/03/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

All organic results are analysed as received and all results are corrected for dry weight at 104 C

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Results contained in this report relate only to the samples tested

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A copy of this certificate is available on www.fitzsci.ie

Customer	Claire Walsh Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/010/01
Customer PO		Date of Receipt	04/07/2012
Customer Ref	Greenogue Site - D2 (30/05/12 - 27/06/12)	Sampled On	27/06/2012
		Date Testing Commenced	04/07/2012
		Received or Collected	By Fitz:Paul
		Condition on Receipt	Acceptable
		Date of Report	09/07/2012
		Sample Type	Other

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0249	g	
Dust (mg/m2/day)	144	Gravimetry	228.4	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 09/07/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

All organic results are analysed as received and all results are corrected for dry weight at 104 C

Results shall not be reproduced, except in full, without the approval of Fitz Scientific

Results contained in this report relate only to the samples tested

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A copy of this certificate is available on www.fitzsci.ie

Customer	Claire Walsh Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/010/02
Customer PO		Date of Receipt	04/07/2012
Customer Ref	Greenogue Site - D3 (30/05/12 - 27/06/12)	Sampled On	27/06/2012
		Date Testing Commenced	04/07/2012
		Received or Collected	By Fitz:Paul
		Condition on Receipt	Acceptable
		Date of Report	09/07/2012
		Sample Type	Other

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0330	g	
Dust (mg/m2/day)	144	Gravimetry	305.1	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 09/07/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

All organic results are analysed as received and all results are corrected for dry weight at 104 C

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A copy of this certificate is available on www.fitzsci.ie

Customer	Claire Walsh Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/010/03
Customer PO		Date of Receipt	04/07/2012
Customer Ref	Greenogue Site - D4 (30/05/12 - 27/06/12)	Sampled On	27/06/2012
		Date Testing Commenced	04/07/2012
		Received or Collected	By Fitz:Paul
		Condition on Receipt	Acceptable
		Date of Report	09/07/2012
		Sample Type	Other

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0224	g	
Dust (mg/m2/day)	144	Gravimetry	241.15	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 09/07/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

All organic results are analysed as received and all results are corrected for dry weight at 104 C

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A copy of this certificate is available on www.fitzsci.ie

Customer	Orla McAlister	Lab Report Ref. No.	1102/013/01
	Tobin Consulting Engineers TES	Date of Receipt	04/08/2012
	Block 10-4	Sampled On	02/08/2012
	Blanchardstown Corp PK	Date Testing Commenced	04/08/2012
	Dublin 15	Received or Collected	Courier: DPD
	Dublin	Condition on Receipt	Unacceptable
Customer PO		Date of Report	14/08/2012
Customer Ref	Greenogue Site - D1 28 Days Exposure	Sample Type	Other
Ref 2			

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0055	g	
Dust (mg/m2/day)	144	Gravimetry	27.78	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 14/08/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

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Customer	Orla McAlister	Lab Report Ref. No.	1102/013/02
	Tobin Consulting Engineers TES	Date of Receipt	04/08/2012
	Block 10-4	Sampled On	02/08/2012
	Blanchardstown Corp PK	Date Testing Commenced	04/08/2012
	Dublin 15	Received or Collected	Courier: DPD
	Dublin	Condition on Receipt	Unacceptable
Customer PO		Date of Report	14/08/2012
Customer Ref	Greenogue Site - D2 28 Days Exposure	Sample Type	Other
Ref 2			

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0106	g	
Dust (mg/m2/day)	144	Gravimetry	55.57	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 14/08/2012

Acc. : Accredited Parameters by ISO 17025:2005

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Customer	Orla McAlister Tobin Consulting Engineers TES Block 10-4 Blanchardstown Corp PK Dublin 15 Dublin	Lab Report Ref. No.	1102/014/02
Customer PO		Date of Receipt	07/09/2012
Customer Ref	D3	Sampled On	06/09/2012
Ref 2	Rilta Greenogue (Block 402) Ref: 3084	Date Testing Commenced	07/09/2012
		Received or Collected	Courier: DPD
		Condition on Receipt	Acceptable
		Date of Report	02/10/2012
		Sample Type	Other

CERTIFICATE OF ANALYSIS

Test Parameter	SOP	Analytical Technique	Result	Units	Acc.
Dust	144	Gravimetry	0.0271	g	
Dust (mg/m2/day)	144	Gravimetry	142.07	mg/m2/day	

Signed : 
Aoife Harmon - Technical Supervisor

Date : 02/10/2012

Acc. : Accredited Parameters by ISO 17025:2005

PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)

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Results contained in this report relate only to the samples tested

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Table with customer details (Customer, Customer PO, Customer Ref, Ref 2) and lab report details (Lab Report Ref. No., Date of Receipt, Sampled On, Date Testing Commenced, Received or Collected, Condition on Receipt, Date of Report, Sample Type).

CERTIFICATE OF ANALYSIS

Table with 6 columns: Test Parameter, SOP, Analytical Technique, Result, Units, Acc. Rows include Dust and Dust (mg/m2/day).

Signed : [Signature]
Aoife Harmon - Technical Supervisor

Date : 14/08/2012

Acc. : Accredited Parameters by ISO 17025:2005
PVL - Parametric Value Limit as per EU Drinking water Regulations (SI 278 2007)
All organic results are analysed as received and all results are corrected for dry weight at 104 C
Results shall not be reproduced, except in full, without the approval of Fitz Scientific
Results contained in this report relate only to the samples tested
**The analytical result for this parameter may not be reflective of the concentration present at the time of sampling. The maximum recommended preservation time for this parameter has been exceeded.

APPENDIX D

Annual Noise Monitoring Report

RILTA ENVIRONMENTAL LTD.

Annual Noise Survey 2012

RILTA
Environmental
Limited



November 2012

TOBIN CONSULTING ENGINEERS



REPORT

PROJECT:

Annual Noise Survey at the Rilta Integrated Waste Management Facility

CLIENT:

RILTA Environmental Ltd.
Greenogue Business Park,
Rathcoole,
D24

COMPANY:

TOBIN Consulting Engineers
Block 10-4,
Blanchardstown Corporate Park,
Dublin 15

www.tobin.ie

DOCUMENT AMENDMENT RECORD

Client:	Rilta Environmental Ltd
Project:	Annual Noise Survey at the Rilta Integrated Waste Management Facility
Title:	November 2012 Noise Monitoring

PROJECT NUMBER: 3084				DOCUMENT REF: 3084 – 01			
A	Noise Report	AAM	05/11/12	OMA	06/11/12	DG	07/11/12
Revision	Description & Rationale	Originated	Date	Checked	Date	Authorised	Date
TOBIN Consulting Engineers							

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2.2	MEASUREMENT PROCEDURE	1
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1 INTRODUCTION

This report deals with the noise monitoring requirement conditions of RILTA Environmental Ltd. (RILTA) hazardous waste facility at Greenogue Business Park, Rathcoole, Co. Dublin, Waste Licence No. 192-03.

2 NOISE MONITORING SURVEY

TOBIN Consulting Engineers (TOBIN) was commissioned by RILTA to carry out an annual day and night time noise survey at their facility in Greenogue Business Park. The noise survey was carried out within the site boundary of the waste facility at four no. locations agreed with the EPA (see Appendix A). Weather conditions during monitoring event were dry and calm with an occasional slight breeze. The following conditions were adhered to in undertaking the survey:

- Measurement of noise levels was undertaken using Type 1 instrumentation;
- Cognisance was taken of the EPA's 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in relation to Scheduled Activities (NG4); and
- The survey was carried out in accordance with ISO 1996 Acoustics - Description and Measurement of Environmental Noise: Parts 1/2/3.

2.1 INSTRUMENTATION USED

The following instrumentation was used in the environmental noise monitoring survey:

- One Larson Davis 824 Precision Integrating Sound Level Analyser/Data logger with *Real-Time* Frequency Analyser Facility;
- Wind Shield Type: Larson Davis 2120 Windscreen; and
- Calibration Type: Larson Davis Precision Acoustic Calibrator Model CA200.

2.2 MEASUREMENT PROCEDURE

Daytime noise monitoring was carried out on 2nd November 2012 and night time noise monitoring was carried out on the 6th November 2012 by TOBIN. Noise monitoring was undertaken for 30 minute intervals at four agreed EPA locations. All the environmental noise analysers had data logging facilities were set on real-time, the logged data was later downloaded via a personal computer using software. One third octave frequency analysis was taken at the locations using the 824 Precision Integrating Sound Level Analyser/Data logger with real-time frequency analyser facility.

The measurement locations were all away from reflecting surfaces and at 1.5m height above local ground.

All acoustic instrumentation was calibrated before and after the survey period and no drift of calibration was observed (calibration level 114dB at 1000Hz).

2.3 RESULTS OF NOISE SURVEY

The noise monitoring locations are summarised in Table 2-1 below and shown in Appendix A. The results of the noise survey are given in Table 2-2. The 1/3 octave frequency analysis data is given in graphical format in Appendix B.

Table 2-1 Noise Monitoring Locations

Monitoring Location	Description
N1	South western boundary of site
N2	North western boundary of site
N3	North eastern boundary of site
N4	South eastern boundary of site

Location N1

Noise monitoring location N1 is located at the south-western boundary of the site, adjacent to the site car park and to the access road to RILTA within Greenogue Business Park. Noise at this location during daytime monitoring was dominated by internal industrial estate traffic passing the site, distant traffic and also by activity and vehicle movements at adjacent premises. Site activity was occasionally audible at this location during daytime monitoring.

Noise at this location during night time monitoring was dominated by distant traffic. Noise from the surrounding premises also contributed to recorded levels along with a dog occasionally barking and passing vehicles on internal estate roads. The site was not audible at this location during night time monitoring.

Location N2

N2 is located in the north-western corner of the site. Noise from activities and vehicles at the adjacent premises were the dominant sources of noise during daytime monitoring. The fast flowing stream, bird song, passing aircraft and on-site activities also contributed to recorded daytime noise levels at N2.

Night time noise sources included distant traffic, the flowing stream and a dog occasionally barking. Site machinery was audible at N2 during night time monitoring as a shed door was open and this noise contributed to recorded levels.

Location N3

N3 is located at the north-eastern site boundary, adjacent to the tank farm. At this location, activity from adjacent facilities was the dominant noise source. Onsite activity, passing aircraft and bird song also contributed to daytime noise levels at N3.

Night time noise at this location was dominated by an adjacent fast flowing stream. Distant traffic, noise from adjacent premises and passing aircraft also contributed to recorded noise levels. The site was not audible at this location during night time monitoring.

Location N4

Noise monitoring location N4 is located in the south-eastern corner of the site adjacent to the access road to RILTA within Greenogue Business Park. Onsite activity and passing road traffic were the dominant noise sources during daytime monitoring at N4. Passing aircraft and activity at surrounding premises also contributed to noise levels.

Noise at location N4 during night time monitoring was dominated by noise from surrounding premises (including an alarm) and distant traffic. The site was not audible at this location during night time monitoring.

Table 2-2 Noise Monitoring Results – dB(A) and 30 minute intervals

Daytime Results				
Receptor	Time	Leq	L10	L90
N1	08:56	60.6	62.9	56.2
N2	09:02	58.8	60.2	56.6
N3	09:42	59.8	63.4	52.0
N4	10:23	70.6	70.0	63.8
Night Time Results				
Receptor	Time	Leq	L10	L90
N1	01:49	43.8	45.5	38.5
N2	00:40	44.0	46.7	40.7
N3	00:05	51.1	51.9	49.6
N4	01:15	43.1	43.5	37.1

3 CONCLUSION

The noise emission limits given in Waste Licence 192-03 are 55 dB(A) for daytime and 45 dB(A) for night time. These levels specifically relate to noise emissions arising from the facility, measured at any noise sensitive location.

The daytime and night time noise emissions from RILTA Environmental Ltd are summarised in Table 2-2 above.

Noise levels recorded at the four EPA agreed noise monitoring locations contain noise emissions from adjacent industrial sites, low flying aircraft and traffic on the internal road network of the industrial estate. Noise emissions from the RILTA facility were audible at all monitoring locations during daytime monitoring and only at location N2 during the night time monitoring. Note that the EPA agreed noise monitoring locations are all on site and do not reflect emissions at noise sensitive locations.

The A-weighted equivalent continuous sound pressure level (LAeq, 30 min) recorded at the RILTA facility was above 55 dB(A) at all noise monitoring locations during daytime monitoring. It is noted that Greenogue Business Park is a busy industrial estate and noise from external sources including adjacent premises, passing and distant road traffic and passing aircraft contributed to recorded noise levels at all monitoring locations during daytime hours.

During the night time monitoring period the A-weighted equivalent continuous sound pressure level (LAeq, 30 min) exceeded 45 dB(A) (night time) limit at N3 only. This exceedance at N3 was directly attributable to extraneous noise sources such as the fast flowing stream adjacent, distant traffic and low flying aircraft from nearby Baldonnell Airport. Site activities were not audible at N3 during night time monitoring.

There were no impulsive noise emissions audible at any of the monitoring locations during the daytime or night time monitoring period.

During the daytime monitoring there was a pure tone at 16000Hz measured at monitoring locations N3 and N4. Both these locations are situated to the east of the site. The tone at N3 and N4 (16000Hz) was not recorded at monitoring locations N1 or N2 in which site activities were also audible during the day and as such is unlikely to have originated due to RILTA activities.

During the night time monitoring there was a pure tone recorded at 2.5KHz at location N1. No tonal emissions at this frequency were recorded at any other monitoring location and the site was not audible at N1 during recording. This tone did not originate due to RILTA activities. A pure tone at 125Hz was recorded at monitoring location N2 during night time monitoring. Site machinery was audible at this location as a shed door was open. Similar noise sources were recorded throughout the four no. monitoring locations but N2 was the only location that site machinery was audible. As such is it considered this tone is a result of RILTA site machinery noise.

The 5dB penalty has not been applied to the N3 and N4 day monitoring event or the N1 night time monitoring event as these tones are likely to have been derived from an off-site source.

The 5dB penalty has however been applied to the N2 night time monitoring event and as such increases the LAeq at this location to 49.0dB(A) which exceeds the 45dB(A) limit set in Waste Licence No. 192-03. It is noted that other industrial estate noises and external sources contributed to recorded noise levels at N2 and that this location does not reflect emissions at noise sensitive locations.

Full 1/3 octave frequency band analysis of both day and night time surveys is presented in *Appendix B*.

APPENDIX A

Noise Monitoring Locations

Monitoring Point Locations (to National Grid Reference)

Groundwater Monitoring Points
 BH1 E301555, N 228440
 BH2 E301600, N228550
 BH3 E301630, N228555

Underground Settlement Tank Monitoring Points
 GW1 E301630, N228515
 GW2 E301650, N228540
 GW3 E301625, N228540

Surface Water/Invertebrate Monitoring Points
 SW1/KS1 E301670, N228562
 SW2/KS2 E301565, N228555
 SW3 (Proposed) E301480, N228560

Dust Monitoring Points
 D1 E301630, N228450
 D2 E301580, N228550
 D3 E301670, N228555
 D4 E301630, N228420

Noise Monitoring Points
 N1 E301630, N228450
 N2 E301580, N228550
 N3 E301670, N228555
 N4 E301630, N228420

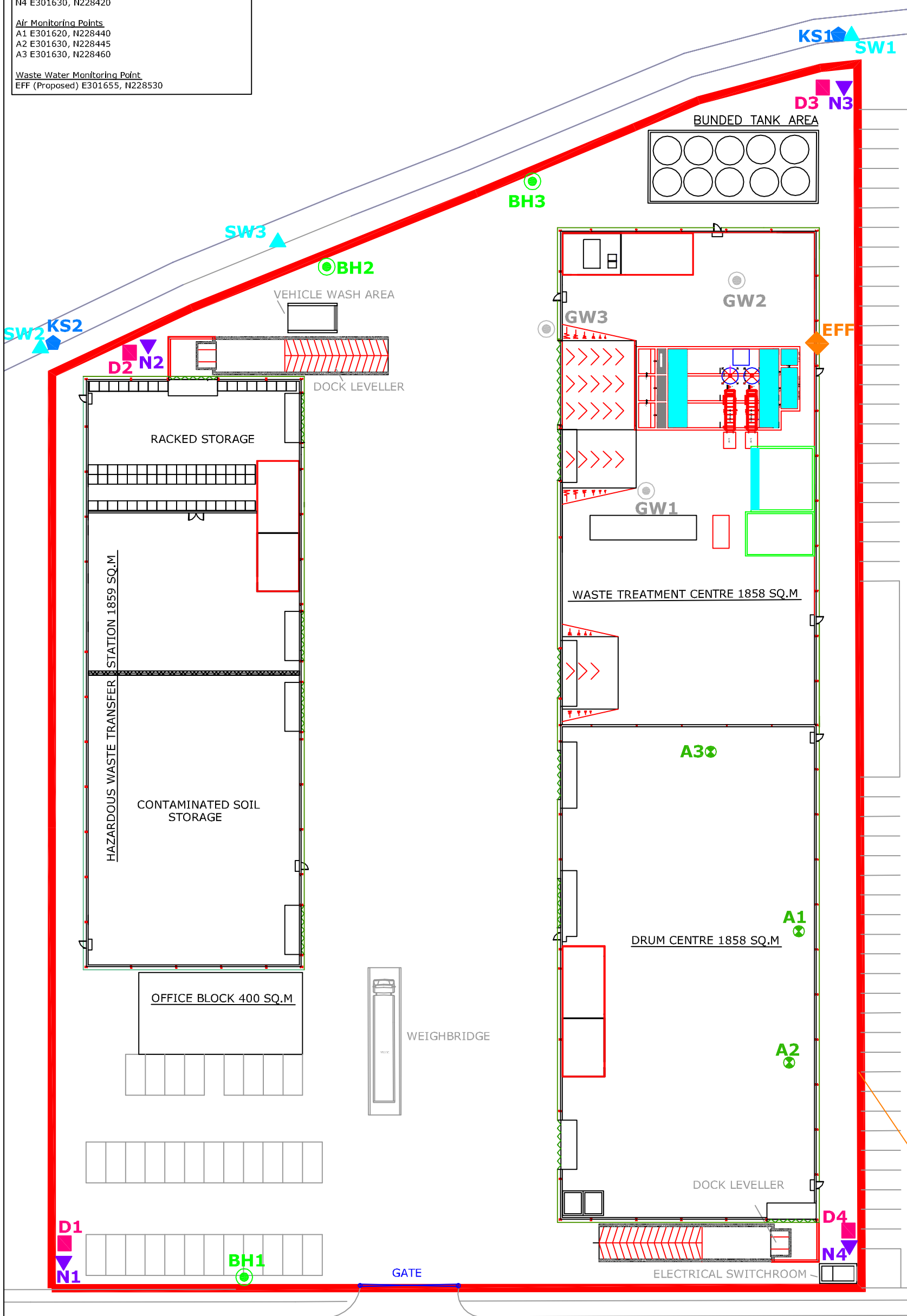
Air Monitoring Points
 A1 E301620, N228440
 A2 E301630, N228445
 A3 E301630, N228460

Waste Water Monitoring Point
 EFF (Proposed) E301655, N228530

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Legend:

- ▬ Licence Boundary
- ▲ Surface Water Monitoring Points
- ◆ Invertebrate Kick Sampling Monitoring Points
- Dust Monitoring Points
- ▼ Noise Monitoring Points
- ◇ Waste Water Monitoring Point
- Groundwater Monitoring Points
- Underground Settlement Tank Monitoring Points
- ⊗ Air Monitoring Points



- Notes:
1. Figured Dimensions only to be taken from this drawing
 2. All Drawings to be checked by the Contractor on site
 3. Engineer to be informed of any discrepancies before any work commences
 4. All levels relate to Ordnance Survey Datum at Mean Head

Client	date	Int
Drawing Title		
SITE LAYOUT PLAN		
Project		
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN		
Scale: 1/500	Checked by	Date
Drawn by	DAMIENGREHAN	January 2007
ENGINEER IN CHARGE: DAMIEN GREHAN		
<small> B&S 107 BLACKHARTS TOWN CORPORATE PARK DUBLIN 15 IRELAND TEL: 01 800 6611 FAX: 01 800 4410 email: info@tobin.ie </small>		
Drawing No.		
1250/01/1002		
Rev.		

APPENDIX B

1/3 Octave Frequency Analysis Day & Night Noise Surveys

Figure 1 N1 Daytime Frequency Analysis

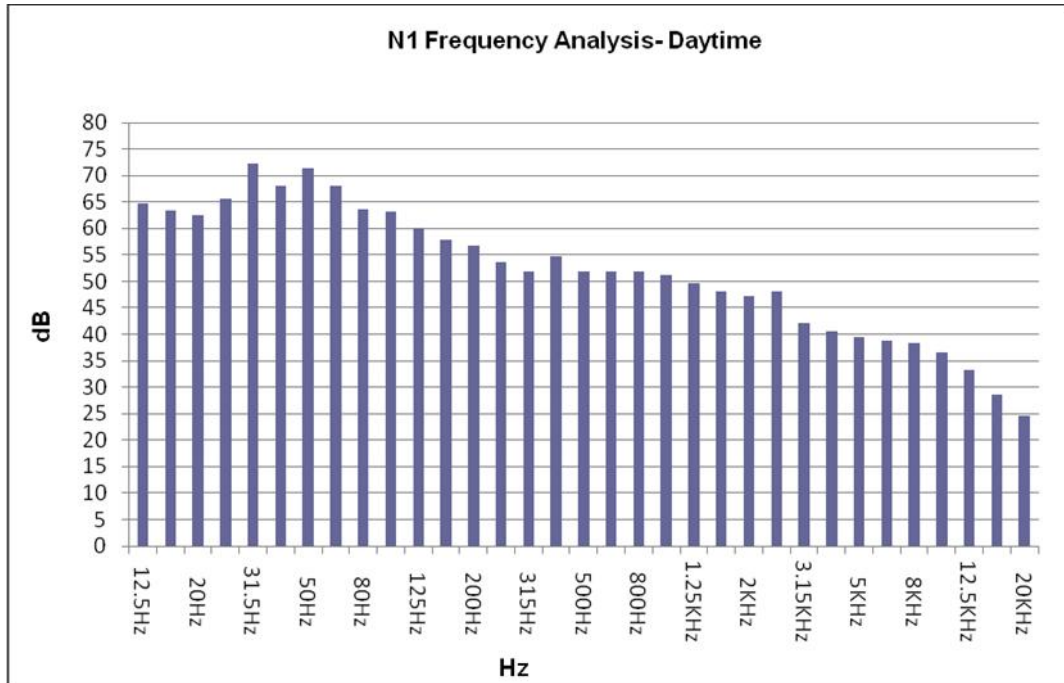


Figure 2 N1 Night Time Frequency Analysis

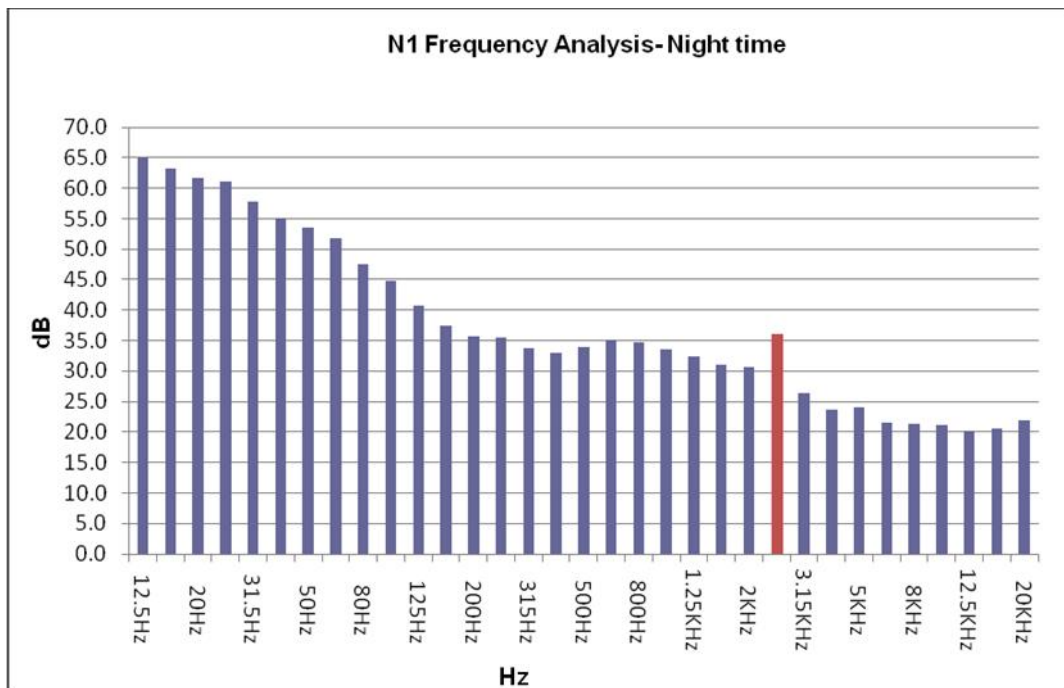


Figure 3 N2 Daytime Frequency Analysis

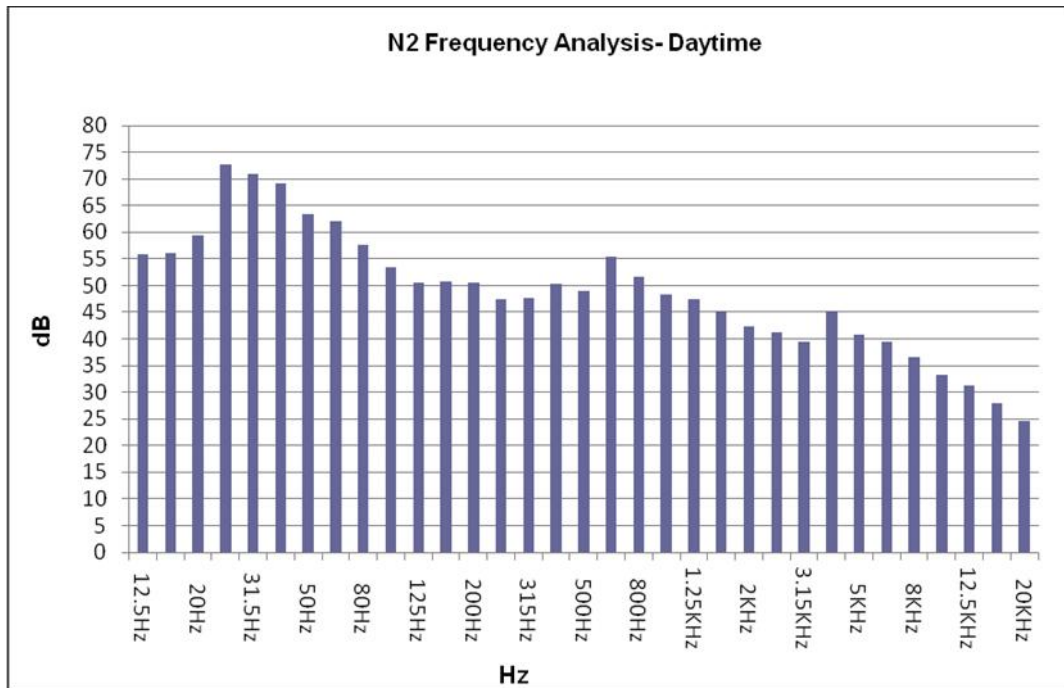


Figure 4 N2 Night Time Frequency Analysis

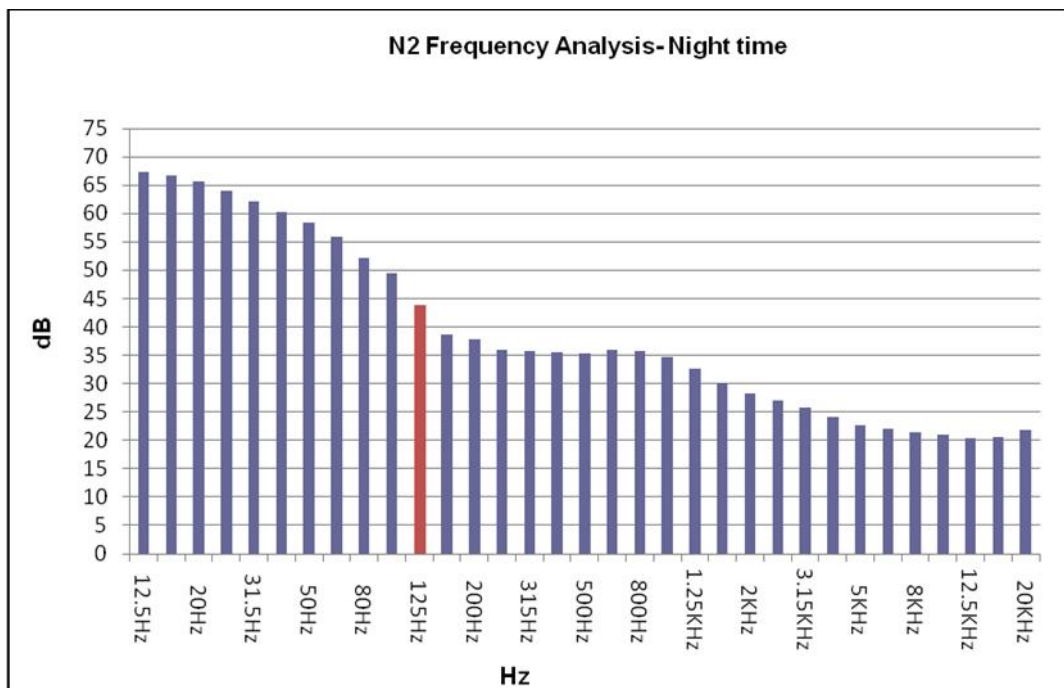


Figure 5 N3 Daytime Frequency Analysis

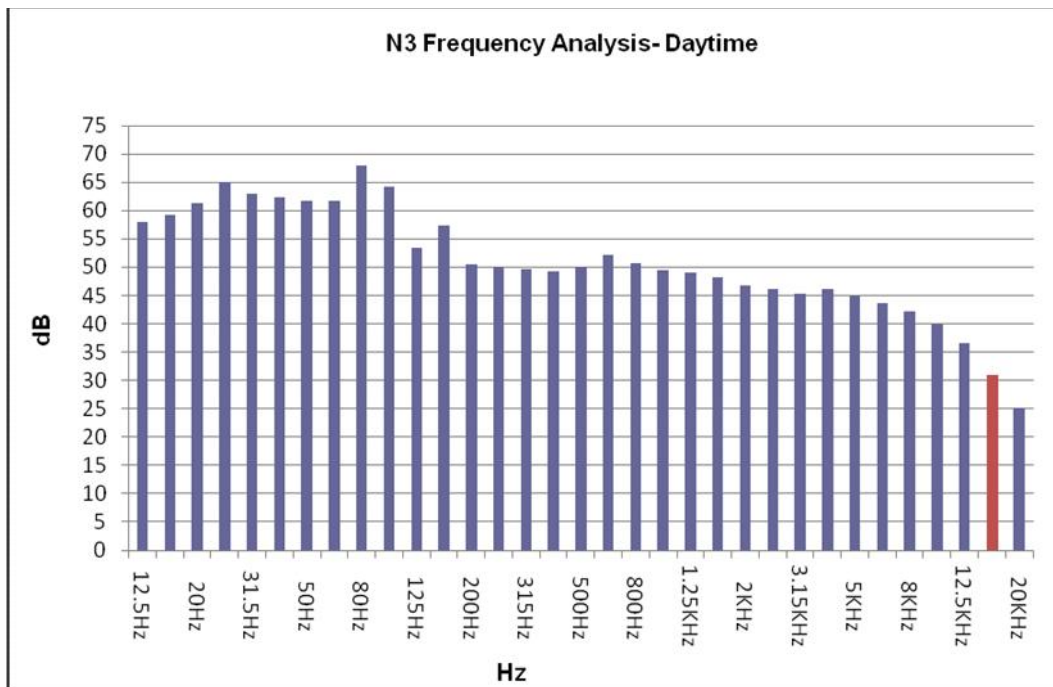


Figure 6 N3 Night Time Frequency Analysis

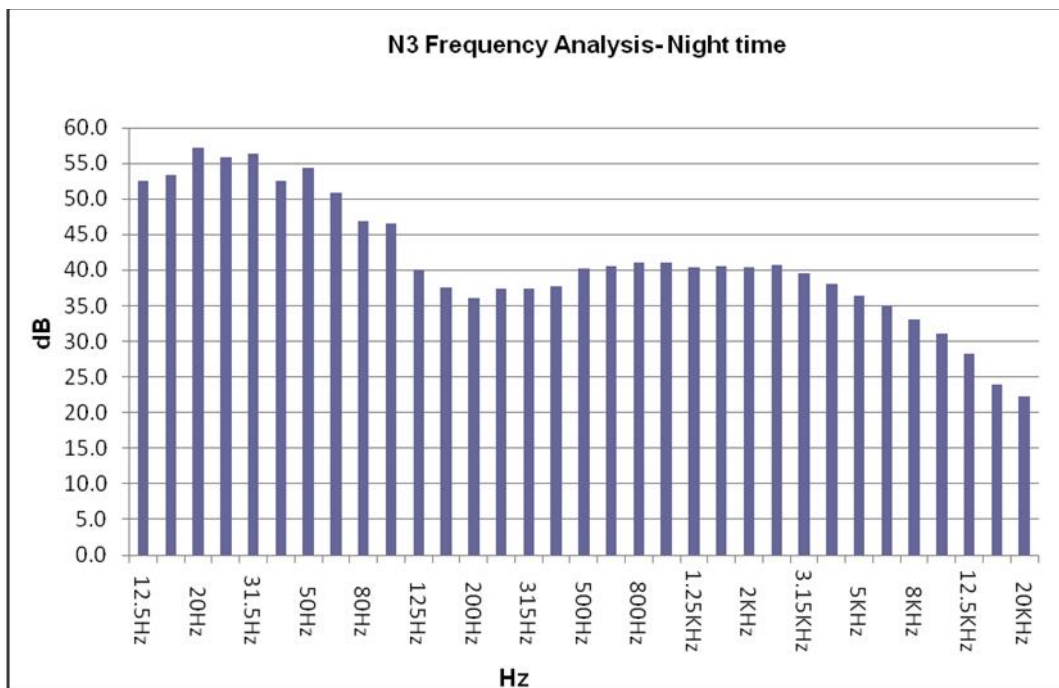


Figure 7 N4 Daytime Frequency Analysis

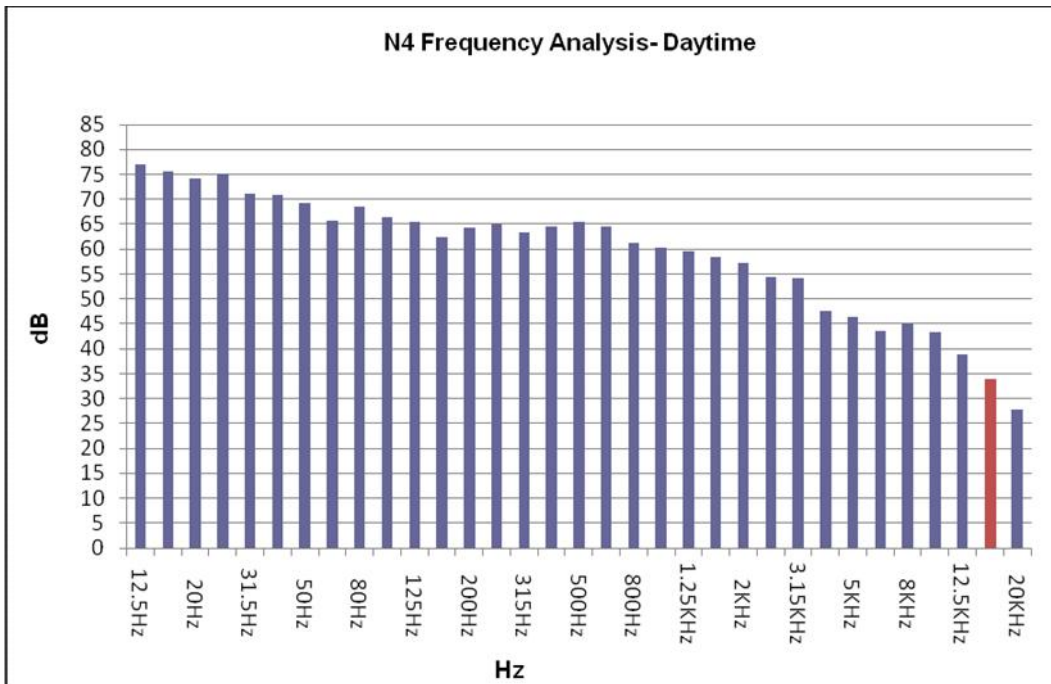
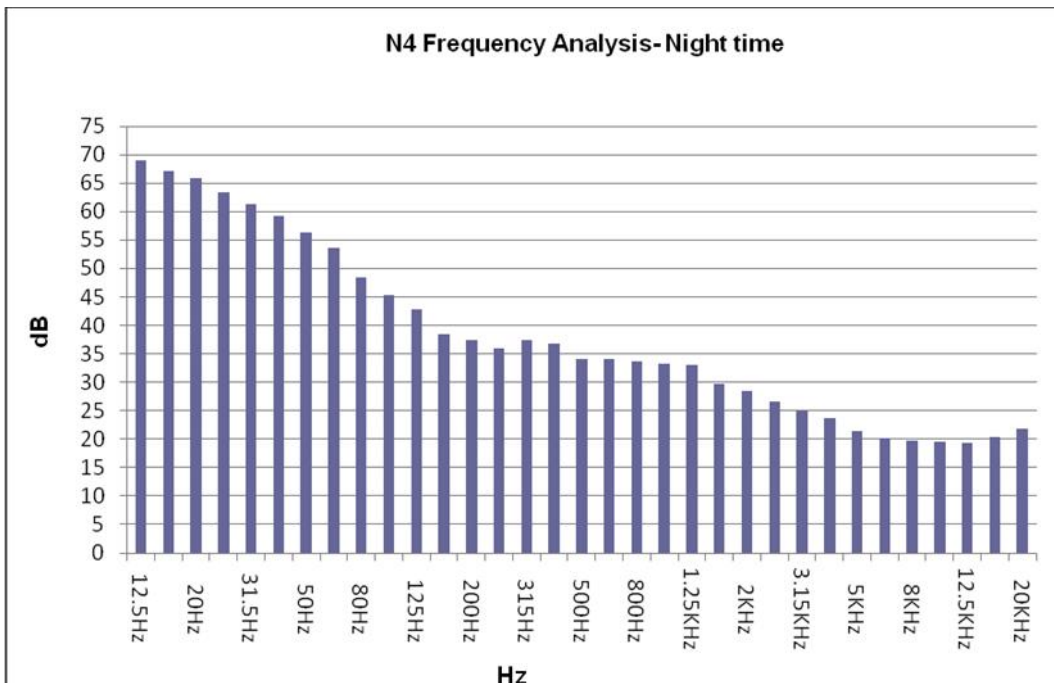


Figure 8 N4 Night Time Frequency Analysis





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APPENDIX E

Emissions Report



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**ROUND 1 2012-MONITORING OF VOC EXHAUST STACKS
CONCENTRATIONS AT RILTA LTD, BLOCK 402, GREENOGUE
BUSINESS PARK, RATHCOOLE, CO. DUBLIN**

PERFORMED BY ODOUR MONITORING IRELAND ON BEHALF OF RILTA ENVIRONMENTAL LIMITED

PREPARED BY:	Dr. John Casey
ATTENTION:	Mr. Colm Hussey
LICENCE NUMBER:	WL00192-03
LICENCE HOLDER:	Rilta Environmental Limited
FACILITY NAME:	Block 402, Grants's Drive
DATE OF MONITORING VISIT:	06 th June 2012
NAME AND ADDRESS OF CLIENT ORGANISATION:	Rilta Environmental Ltd., Block 402, Grants's Drive, Greenogue Business Park, Rathcoole, Co. Dublin
NAME AND ADDRESS OF MONITORING ORGANISATION:	Odour Monitoring Ireland, Unit 32 DeGranville Court, Dublin Road, Trim, Co. Meath
DATE OF REPORTING:	28 th June 2012
NAME AND THE FUNCTION OF THE PERSON APPROVING THE REPORT:	Dr. Brian Sheridan, Managing Partner, Odour Monitoring Ireland
REPORT NUMBER:	2012264(1)
REVIEWERS:	

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This document is submitted as part of environmental monitoring carried out by Odour Monitoring Ireland. The results reported are representative of actual conditions on the day of monitoring.

Respectively submitted,




Brian Sheridan
Brian Sheridan B.Sc. M.Sc. (Agr) Ph.D (Eng).

For and on behalf of Odour Monitoring Ireland™

DOCUMENT AMENDMENT RECORD

Client: Rilta Environmental Limited

Title: Round 2 2011 - Monitoring of VOC concentrations at Rilta Environmental Ltd., Block 402, Greenogue Business Park, Rathcoole, Co. Dublin

Project Number: 2012264(1)			Document Reference: 2012264(1)		
2012264(1)	Document for review	JWC	BAS	BAS	28/06/2012
Revision	Purpose/Description	Originated	Checked	Authorised	Date
					

Part 1 - Executive Summary

The results of the monitoring exercise are contained in Section 2 of this report.

Location	Date and Time	Flow (m ³ N/hr)	Compliance	Mass flow (kgN/hr)	Expanded Uncertainty as % limit value	Compliance
A1	06/06/12 10.00 to 10.30	2,314	Yes	0.006	1.47	Yes
A2	06/06/12 11.00 to 11.30	6,490	No	0.015	2.41	Yes
A3	06/06/12 11.30 to 12.00	1,924	Yes	0.22	2.14	Yes

1.1 Monitoring Objectives

Odour Monitoring Ireland were commissioned by Rilta Environmental Limited to perform Volatile Organic Compound (VOC) monitoring of three licensed emission points located within the facility. The survey was carried out on the 06th June 2012. The monitoring was carried out at this facility as part of compliance monitoring with the requirements of Waste licence W0192-03. The emissions testing was carried out by Odour Monitoring Ireland on behalf of Rilta Environmental Limited.

1.2 Special Monitoring Requirements

There were no special monitoring requirements for this campaign.

1.3 The substances to be monitored at each emission point

The parameters listed in *Table 1.1* were monitored using the appropriate instrumentation as illustrated in *Table 1.1*. All monitoring was carried out in accordance with Environmental Protection Agency Office of Environmental Enforcement (OEE) Air Emission Monitoring Guidance Note 2 (AG2).

Table 1.1. Monitored parameters and techniques

Sample location	Parameter	Analytical method
A1, A2, A3	Volumetric airflow rate & Temperature (°C)	Pitot in accordance with EN13284-1:2002. MGO coated K type thermocouple and PT100
A1, A2, A3	Total Organic Carbon (TOC)	EN13649:2002 analysis via Gas Chromatography in an UKAS accredited lab.

This report presents details of this monitoring programme. This environmental monitoring was carried out Dr. John Casey, Managing Partner, Odour Monitoring Ireland on the 06th June 2012. Results and Conclusions are presented herein.

2. Monitoring Results

This section will present the results of the monitoring exercise.

2.1 Operating Information

Emission Point Reference	Date	Process Type	Process Duration	Fuel	Feedstock	Abatement	Load
A1	06/06/2012	Drum washer	Continuous	N/A	Air emission from washing processes	No	Air emission from washing processes
A2	06/06/2012	Drum painter	Continuous	N/A	Air emission from paint processes	No	Air emission from paint processes
A3	06/06/2012	Drum dryer	Continuous	N/A	Air emission from drying processes	No	Air emission from drying processes

2.2 Monitoring Result Reference Conditions

Emission Point Reference	Temperature (K)	Pressure	Moisture Correction	Oxygen Correction (%)
A1	K	101.3	Yes	None
A2	K	101.3	Yes	None
A3	K	101.3	Yes	None

2.3. Sampling Location Summary

Comment	Yes/No
Recommended 5 hydraulic diameters straight length before sampling plane	Yes*
Recommended 2 hydraulic diameters straight length after sampling plane	Yes*
Ports number <1.5m - 2 ports >1.5m - 4 ports	2 ports*
Appropriate port size	Yes
Suitable working platform	Yes

Note: *Airflow rate in accordance with EN13284 with exception of location A1 due to access issues airflow rate was performed at one plane on the base of the stack.

2.4. Sampling time runs

Parameter	Approx. Sampling period per location
Volumetric air flow rate	Manually calculated
Stack gas temp	30 minutes
T A Luft Organics	38 minutes

Table 2.5. Measurement results and emission limit values within Waste licence 192-03 - Schedule B

Emission Point	Temperature (Kelvin)	Limit Volumetric airflow rate (Nm ³ hr ⁻¹)	Measured Volumetric airflow rate (Nm ³ hr ⁻¹)
A1	285.15	5,292	2,314
A2	285.15	5,292	6,490
A3	301.15	2,520	1,924

Table 2.6. Results of monitoring at Emission Point A1

Library/ID	Conc. of VOC (mgC/ Nm ³)	Expanded uncertainty as % of limit value	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	3.5 mgC/Nm ³	1.47	0.006 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	-	1.0 kg/hr

Table 2.7. Results of monitoring at Emission Point A2

Library/ID	Conc. of VOC (mgC/Nm ³)	Expanded uncertainty as % of limit value	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	6.16 mgC/Nm ³	2.41	0.015 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	-	0.10 kg/hr

Table 2.8. Results of VOC Monitoring at Emission Point A3.

Library/ID	Conc. of Speciated VOC (mg Nm ⁻³ as C)	Expanded uncertainty as % of limit value	Mass Flow of Speciated VOC (kg/hr)
Total Organic Carbon (TOC as carbon)	32 [±] mgC/Nm ³	2.14	0.22 kg/hr
Total Organic Carbon (TOC as carbon) Limit value	-	--	0.30 kg/hr

* Note compounds identified on GCMS screen were Ethylbenzene 2.52 mg/m³, m&p xylene 10.8 mg/m³ and o-xylene 3.43 mg/m³.

Mass emissions for location A1, A2, A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for locations A1 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03. Volume flow for location A2 was not in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

4. Conclusions

The following conclusions were drawn from the study:

- Mass emissions for location A1, A2, A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.
- Volume flow for locations A1 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.
- Volume flow for location A2 was not in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

5. *Appendix I-Sampling, analysis*

5.1.1 Location of Sampling

Rilta Environmental Ltd., Block 402, Grants's Drive, Greenogue Business Park, Rathcoole, Co. Dublin

5.1.2 Date & Time of Sampling

06th Jun. 2012

5.1.3 Personnel Present During Sampling

Dr. John Casey, Odour Monitoring Ireland, Trim, Co. Meath.

5.1.4 Instrumentation check list

Federal Method 2 S type pitot and MGO coated thermocouple;

L type pitot tube

Testo 400 handheld and appropriate probes.

SKC sample pumps and Bios Primary calibrator and glass impingers.



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**ROUND 2 2012-MONITORING OF VOC EXHAUST STACKS
CONCENTRATIONS AT RILTA LTD, BLOCK 402, GREENOGUE
BUSINESS PARK, RATHCOOLE, CO. DUBLIN**

PERFORMED BY ODOUR MONITORING IRELAND ON BEHALF OF RILTA ENVIRONMENTAL LIMITED

PREPARED BY:	Dr. John Casey
ATTENTION:	Mr. Colm Hussey
LICENCE NUMBER:	WL00192-03
LICENCE HOLDER:	Rilta Environmental Limited
FACILITY NAME:	Block 402, Grants Drive
DATE OF MONITORING VISIT:	28 th Nov 2013
NAME AND ADDRESS OF CLIENT ORGANISATION:	Rilta Environmental Ltd., Block 402, Grants Drive, Greenogue Business Park, Rathcoole, Co. Dublin
NAME AND ADDRESS OF MONITORING ORGANISATION:	Odour Monitoring Ireland, Unit 32 DeGranville Court, Dublin Road, Trim, Co. Meath
DATE OF REPORTING:	19 th Jan 2013
NAME AND THE FUNCTION OF THE PERSON APPROVING THE REPORT:	Dr. Brian Sheridan, Managing Partner, Odour Monitoring Ireland
REPORT NUMBER:	2013666(1)
REVIEWERS:	

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This document is submitted as part of environmental monitoring carried out by Odour Monitoring Ireland. The results reported are representative of actual conditions on the day of monitoring.

Respectively submitted,



Brian Sheridan
Brian Sheridan B.Sc. M.Sc. (Agr) Ph.D (Eng).

For and on behalf of Odour Monitoring Ireland™

DOCUMENT AMENDMENT RECORD

Client: Rilta Environmental Limited

Title: Round 2 2012 - Monitoring of VOC concentrations at Rilta Environmental Ltd., Block 402, Greenogue Business Park, Rathcoole, Co. Dublin

Project Number: 2013666(1)			Document Reference: Round 2 2012 - Monitoring of VOC concentrations at Rilta Environmental Ltd., Block 402, Greenogue Business Park, Rathcoole, Co. Dublin		
2013666(1)	Document for review	JWC	BAS	BAS	19/01/2013
Revision	Purpose/Description	Originated	Checked	Authorised	Date
					

Executive Summary

The results of the monitoring exercise are contained in Section 2 of this report.

Location	Date and Time	Parameter	Value	Emission limit value	Expanded Uncertainty as % limit value	Compliance
A1	28/11/2012 - 12.00 to 12.10PM	Flow (Nm ³ /hr)	2,428	5,292	3.89	Yes
	28/11/2012 - 12.25 to 12.55PM	TaLuft Organics (mg/Nm ³)	0.10 kg/hr	20 mg/Nm ³ (>0.1 kg/hr)		Yes
	28/11/2012 - 12.25 to 12.55PM	TOC as C (mgC/Nm ³)	0.194	1.0		Yes
A2	28/11/2012 - 12.20 to 12.30PM	Flow (Nm ³ /hr)	6,240	5292	4.12	No
	28/11/2012 – 12.35 to 13.05PM	TaLuft Organics (mg/Nm ³)	0.009 kg/hr	20 mg/Nm ³ (>0.1 kg/hr)		Yes
	28/11/2012 – 12.35 to 13.05PM	TOC as C (mgC/Nm ³)	1.60	0.10 kg/hr		Yes
A3	28/11/2012 - 12.40 to 12.48PM	Flow (Nm ³ /hr)	1,914	2520	3.58	Yes
	28/11/2012 – 12.45 to 13.15PM	TaLuft Organics (mg/Nm ³)	0.071	20 mg/Nm ³ (>0.1 kg/hr)		Yes
	28/11/2012 – 12.45 to 13.15PM	TOC as C (mgC/Nm ³)	0.112	0.30 kg/hr		Yes

1.1 Monitoring Objectives

Odour Monitoring Ireland was commissioned by Rilta Environmental Limited to perform Volatile Organic Compound (VOC) monitoring of three licensed emission points located within the facility. The survey was carried out on the 28th Nov 2012. The monitoring was carried out at this facility as part of compliance monitoring with the requirements of Waste licence W0192-03. The emission testing was carried out by Odour Monitoring Ireland on behalf of Rilta Environmental Limited.

1.2 Special Monitoring Requirements

There were no special monitoring requirements for this campaign.

1.3 The substances to be monitored at each emission point

The parameters listed in *Table 1.1* were monitored using the appropriate instrumentation as illustrated in *Table 1.1*. All monitoring was carried out in accordance with Environmental Protection Agency Office of Environmental Enforcement (OEE) Air Emission Monitoring Guidance Note 2 (AG2).

Table 1.1. Monitored parameters and techniques

Sample location	Parameter	Analytical method
A1, A2, A3	Volumetric airflow rate & Temperature (°C)	Pitot in accordance with EN13284-1:2002. PT100 type thermocouple
A1, A2, A3	Total Organic Carbon (TOC)	EN13649:2002 analysis via Gas Chromatography in an UKAS accredited lab.
A1, A2, A3	TaLuft Organics	EN13649:2002 analysis via Gas Chromatography in an UKAS accredited lab.

This report presents details of this monitoring programme. This environmental monitoring was carried out Dr. Brian Sheridan, Odour Monitoring Ireland on the 28th Nov 2012. Results and Conclusions are presented herein.

2. Monitoring Results

This section will present the results of the monitoring exercise.

2.1 Operating Information

Emission Point Reference	Date	Process Type	Process Duration	Fuel	Feedstock	Abatement	Load
A1	28/11/2012	Drum washer	Continuous	N/A	Air emission from washing processes	No	Air emission from washing processes
A2	28/11/2012	Drum painter	Continuous	N/A	Air emission from paint processes	No	Air emission from paint processes
A3	28/11/2012	Drum dryer	Continuous	N/A	Air emission from drying processes	No	Air emission from drying processes

2.2 Monitoring Result Reference Conditions

Emission Point Reference	Temperature (K)	Pressure	Moisture Correction	Oxygen Correction (%)
A1	K	101.3	Yes	None
A2	K	101.3	Yes	None
A3	K	101.3	Yes	None

2.3. Sampling Location Summary

Comment	Yes/No
Recommended 5 hydraulic diameters straight length before sampling plane	Yes*
Recommended 2 hydraulic diameters straight length after sampling plane	Yes*
Ports number <1.5m - 2 ports >1.5m - 4 ports	2 ports*
Appropriate port size	Yes
Suitable working platform	No

Note: *Airflow rate in accordance with EN13284 with exception of location A1 due to access issues airflow rate was performed at one plane on the base of the stack.

2.4. Sampling time runs

Parameter	Approx. Sampling period per location
Stack gas flow and temp	10 minutes
T A Luft Organics	30 minutes

Table 2.5. Measurement results and emission limit values within Waste licence 192-03 - Schedule B.

Emission Point	Temperature (Kelvin)	Limit Volumetric airflow rate (Nm ³ /hr)	Measured Volumetric airflow rate (Nm ³ /hr)
A1	286.15	5,292	2428
A2	287.15	5,292	6240
A3	312.15	2,520	1914

Table 2.6. Results of monitoring at Emission Point A1.

Identity	Air phase conc. (mg/Nm ³)	Expanded uncertainty as % of limit value
Ethyl benzene	9.64	3.89
Limonene	3.60	
Xylene isomers	31.54	
Total Organic Carbon (TOC as C)	80	

Table 2.7. Results of monitoring at Emission Point A2.

Identity	Air phase conc. (mg/Nm ³)	Expanded uncertainty as % of limit value
Limonene	1.24	4.12
Total Organic Carbon (TOC as C)	1.60	-

Table 2.8.Results of VOC Monitoring at Emission Point A3.

Identity	Air phase conc. (mg/Nm³)	Expanded uncertainty as % of limit value
Ethyl benzene	6.28	3.58
Limonene	4.26	
Xylene isomers	30.58	
Total Organic Carbon (TOC as C)	59	

3. Conclusions

The following conclusions were drawn from the study:

- Mass emissions for location A1, A2, A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.
- Volume flow for locations A1 and A3 were in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.
- Volume flow for location A2 was not in compliance with emission limit values as set out in Schedule B of Waste licence 192-03.

4. Appendix I-Sampling, analysis

4.1.1 Location of Sampling

Rilta Environmental Ltd., Block 402, Grants Drive, Greenogue Business Park, Rathcoole, Co. Dublin

4.1.2 Date & Time of Sampling

28/11/2012

4.1.3 Personnel Present During Sampling

Dr. Brian Sheridan, Odour Monitoring Ireland, Trim, Co. Meath.

4.1.4 Instrumentation check list

S type pitot and PT100 thermocouple;
Testo 400 handheld and appropriate probes.
SKC sample pumps and Bios Primary calibrator and glass impingers.
Dry gas metres.

APPENDIX F

Pollutant Release and Transfer Register (PRTR)



Environmental Protection Agency

[PRTR# : W0192 | Facility Name : Rilta Environmental Limited | Filename : W0192_2012.xls | Return Year : 2012]

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.12

REFERENCE YEAR	2012
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Rilta Environmental Limited
Facility Name	Rilta Environmental Limited
PRTR Identification Number	W0192
Licence Number	W0192-03

Waste or IPPC Classes of Activity

No.	class_name
4.13	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.
3.11	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.13	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.
3.7	#####
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.
4.6	Recovery of components used for pollution abatement.
4.8	Oil re-refining or other re-uses of oil.
Address 1	Block 402, Grant's Drive
Address 2	Greenogue Business Park
Address 3	Rathcoole
Address 4	County Dublin
	Dublin
Country	Ireland
Coordinates of Location	-8.48281 51.8695
River Basin District	IEEA
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Colm Hussey
AER Returns Contact Email Address	colm.hussey@rilta.ie
AER Returns Contact Position	Facility Manager
AER Returns Contact Telephone Number	014018024
AER Returns Contact Mobile Phone Number	0879176264
AER Returns Contact Fax Number	014018080
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	68
User Feedback/Comments	

Web Address

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(a)	Installations for the recovery or disposal of hazardous waste
5(c)	Installations for the disposal of non-hazardous waste
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	
--	--

[Link to previous years emissions data](#)

4.1 RELEASES TO AIR

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

No. Annex II	POLLUTANT	Name	METHODOLOGY		Please enter all quantities in this section in KGs				
			M/C/E	Method Code	Method Used / Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
							0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

No. Annex II	POLLUTANT	Name	METHODOLOGY		Please enter all quantities in this section in KGs				
			M/C/E	Method Code	Method Used / Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
							0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

Pollutant No.	Name	METHODOLOGY		Please enter all quantities in this section in KGs						
		M/C/E	Method Code	Method Used / Designation or Description biannual measured result measured by 1000hrs	Emission Point 1	Emission Point 2	Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
351	Total Organic Carbon (as C)	C	MAB		4.0	27.5	155.0	186.5	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their flared methane (CH4) emission to the environment under T (Total) KG/yr for Section A. Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Please enter summary data on the quantities of methane flared and / or utilised	M/C/E	Method Code	Method Used / Designation or Description	Facility Total Capacity m3 per hour	
				Method Code	Method Used / Designation or Description
Total estimated methane generation (as per site model)	0.0			N/A	
Methane flared	0.0			0.0	(Total Flaring Capacity)
Methane utilised in engines	0.0			0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0			N/A	

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

SECTION A : PRTR POLLUTANTS		OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER				Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	QUANTITY
17	Arsenic and compounds (as As)	M	MAB	Average measured result multiplied by the discharged volume		1.75	1.75	0.0	0.0
19	Chromium and compounds (as Cr)	M	MAB	Average measured result multiplied by the discharged volume		4.07	4.07	0.0	0.0
20	Copper and compounds (as Cu)	M	MAB	Average measured result multiplied by the discharged volume		3.5	3.5	0.0	0.0
23	Lead and compounds (as Pb)	M	MAB	Average measured result multiplied by the discharged volume		1.17	1.17	0.0	0.0
22	Nickel and compounds (as Ni)	M	MAB	Average measured result multiplied by the discharged volume		8.16	8.16	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)		OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER				Please enter all quantities in this section in KGs			
Pollutant No.	Name	M/C/E	Method Code	Method Used Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	QUANTITY
303	BOD	M	MAB	Average measured result multiplied by the discharge volume		4643.7	4643.7	0.0	0.0
238	Ammonia (as N)	M	MAB	Average measured result multiplied by the discharged volume		11944.3	11944.3	0.0	0.0
206	Benzene & toluene & xylene (combined)	M	MAB	Average measured result multiplied by the discharged volume		3.56	3.56	0.0	0.0
306	COD	M	MAB	Average measured result multiplied by the discharged volume		39981.4	39981.4	0.0	0.0
308	Detergents (as MBAS)	M	MAB	Average measured result multiplied by the discharged volume		81.57	81.57	0.0	0.0
324	Mineral oils	M	MAB	Average measured result multiplied by the discharged volume		1.17	1.17	0.0	0.0
240	Suspended Solids	M	MAB	Average measured result multiplied by the discharged volume		2313.1	2313.1	0.0	0.0
343	Sulphate	M	MAB	Average measured result multiplied by the discharged volume		1730.47	1730.47	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Licence/Permit No of Next Destination Facility Haz Waste Name and Licence/Permit No of Recover/Disposer	Haz Waste - Address of Next Destination Facility Non-Haz Waste- Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination (i.e. Final Recoverer / Disposer Site (HAZARDOUS WASTE ONLY))
						M/C/E	Method Used					
To Other Countries	02 07 04	No	187.36	materials unsuitable for consumption or processing	R10	M	Weighed	Abroad	Kompositssysteme Nord GmbH, 108ZEB026	Industriepark 6.D-27777, Ganderskeese, Germany	REVATECH SA, Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium	Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium
To Other Countries	06 01 06	Yes	283.84	other acids	R9	M	Weighed	Abroad	REVATECH SA, Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Festsstoffkonditionierung, 783/240406	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany	REVATECH SA, Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium	Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium
To Other Countries	06 03 14	No	185.0	solid salts and solution other than those mentioned in 06 03 11 and 06 03 13	R5	M	Weighed	Abroad	Verwertung & Co KG Festsstoffkonditionierung, 783/240406	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany	REVATECH SA, Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium	Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium
To Other Countries	01 05 05	Yes	433.0	oil-containing drilling muds and wastes	D9	M	Weighed	Abroad	TWMA EA	Unit 12, Dates Industrial Estate, Peterhead, AB42 3JF, United Kingdom	TWMA Ltd., EA, Unit 12, Dates Industrial Estate, Peterhead, AB42 3JF, United Kingdom	Unit 12, Dates Industrial Estate, Peterhead, AB42 3JF, United Kingdom
To Other Countries	08 01 11	Yes	497.18	solvents or other dangerous substances	R1	M	Weighed	Abroad	Alvastoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Viasweg 12, 4782 PW Moerdijk, The Netherlands	Industrieterrein - Seaport M152, Viasweg 12, 4782 PW Moerdijk, Netherlands	Industrieterrein - Seaport M152, Viasweg 12, 4782 PW Moerdijk, Netherlands
To Other Countries	09 01 05	Yes	94.68	bleach solutions and bleach fixer solutions	R4	M	Weighed	Abroad	Remondis Production GmbH, WML0707M01	Brunnenstrasse 138 DE 44536, Lunen, Germany	Remondis Production GmbH, WML0707M01, Brunnenstrasse 138 DE 44536, Lunen, Germany	Brunnenstrasse 138 DE 44536, Lunen, Germany
To Other Countries	10 01 04	Yes	11.86	oil fly ash and boiler dust	R5	M	Weighed	Abroad	Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Festsstoffkonditionierung, 783/240406	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany
To Other Countries	10 01 01	No	403.0	Boiler Ash	R5	M	Weighed	Abroad	Lafarge Cement UK, P0052/04A	29 Sandholes Road, Cookstown BT80 9AR, United Kingdom	Lafarge Activit� Pl�tre, rue Marcel Demonque, 500, Zone du P�le Technologique Agro Parc, F-84915 Avignon Cedex 9, France	rue Marcel Demonque, 500, Zone du P�le Technologique Agro Parc, F-84915 Avignon Cedex 9, France
To Other Countries	11 01 05	Yes	82.0	pickling acids	R4	M	Weighed	Abroad	REVATECH SA, Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Festsstoffkonditionierung, 783/240406	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany	REVATECH SA, Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium	Zoning Industrial D'Ehein, B 4480 ENGIS, Belgium
To Other Countries	11 01 09	Yes	35.38	sludges and filter cakes containing dangerous substances	R5	M	Weighed	Abroad	Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Festsstoffkonditionierung, 783/240406	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany	3-7+31 Gottlieb-Daimler Strasse DE 33334, Guterslo, Germany
To Other Countries	13 03 01	Yes	11.82	insulating or heat transmission oils containing PCBs	D10	M	Weighed	Abroad	SITA Decontamination, D/PMVC0 1F28/33629	Westvaardijk 97, Grimbergen, 1850, Netherlands	SITA Decontamination, D/PMVC0 1F28/33629, Westvaardijk 97, Grimbergen, 1850, Netherlands	Westvaardijk 97, Grimbergen, 1850, Netherlands
To Other Countries	13 02 08	Yes	22.2	other engine, gear and lubricating oils	R9	M	Weighed	Abroad	Holcim SA, 43797764	Rue des Fabriques, 2, Obourg B7034, Belgium	Holcim SA, 43797764, Rue des Fabriques, 2, Obourg B7034, Belgium	Rue des Fabriques, 2, Obourg B7034, Belgium

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste - Name and Licence/Permit No of Next Destination Facility Haz Waste Name and Licence/Permit No of Recover/Disposer	Haz Waste - Address of Next Non-Haz Waste Address of Recover/Disposer	Name and License /Permit No. and Address of Final Receiver/ Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination (i.e. Final/Recovery/ Disposal Site (HAZARDOUS WASTE ONLY))
						M/C/E	Method Used					
									Avvalstoffen Terminal Moerdijk		Avvalstoffen Terminal Moerdijk	
To Other Countries	14 06 03	Yes	238.66	other solvents and solvent mixtures	R1	M	Weighed	Abroad	Avvalstoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, Netherlands	
Within the Country	15 01 04	No	3.5	metallic packaging	R4	M	Weighed	Offsite in Ireland	A1 Metal/WMP007d			
To Other Countries	15 02 02	Yes	56.16	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Abroad	Avvalstoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, Netherlands	
Within the Country	16 02 14	No	1.14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Offsite in Ireland	Electrical Waste Ireland/Permit No. WFP-DS-09-0012-01	Greenogue Business Park, Rathcoole, Co. Dublin, Ireland		
To Other Countries	16 05 06	Yes	60.21	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	R1	M	Weighed	Abroad	Avvalstoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, Netherlands	
To Other Countries	16 05 07	Yes	72.12	discarded inorganic chemicals consisting of or containing dangerous substances	R6	M	Weighed	Abroad	REVATECH SA, ..	Zoning l'Industrial D'Ehein, B 4480 ENGIS, Belgium	Zoning l'Industrial D'Ehein, B 4480 ENGIS, Belgium	
To Other Countries	16 06 01	Yes	5239.1	lead batteries	R4	M	Weighed	Abroad	HJ Enthoven & Sons BL5598	Darley Dale Smelter, South Darley, Derbyshire, DE4 2LP, United Kingdom	Darley Dale Smelter, South Darley, Derbyshire, DE4 2LP, United Kingdom	
Within the Country	16 06 02	Yes	13.5	Ni-Cd batteries	R4	M	Weighed	Offsite in Ireland	The Recycling Village Ltd., WP2007/20	Louth, Ireland	Unit 4 Tinure Business Park, Monasterboice, Co. Louth, Ireland	
Within the Country	16 06 04	No	20.0	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	The Recycling Village Ltd., WP2007/20	Louth, Ireland	Unit 4 Tinure Business Park, Monasterboice, Co. Louth, Ireland	
Within the Country	16 06 05	No	1.0	other batteries and accumulators	R4	M	Weighed	Offsite in Ireland	The Recycling Village Ltd., WP2007/20	Louth, Ireland	Unit 4 Tinure Business Park, Monasterboice, Co. Louth, Ireland	
To Other Countries	16 10 01	Yes	49.0	aqueous liquid wastes containing dangerous substances	D8	M	Weighed	Abroad	Avvalstoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, Netherlands	
To Other Countries	16 10 01	Yes	424.3	aqueous liquid wastes containing dangerous substances	D8	M	Weighed	Abroad	REVATECH SA, ..	Zoning l'Industrial D'Ehein, B 4480 ENGIS, Belgium	Zoning l'Industrial D'Ehein, B 4480 ENGIS, Belgium	
To Other Countries	16 10 01	Yes	398.4	aqueous liquid wastes containing dangerous substances	D8	M	Weighed	Abroad	Sava GmbH & Co., ..	Ostenweute, Ce25541, Bruns butel, Germany	Ostenweute, Ce25541, Bruns butel, Germany	
To Other Countries	17 05 03	Yes	1367.0	soil and stones containing dangerous substances	D5	M	Weighed	Abroad	Terracon GmbH ..	Hovestrasse, 20539 Hamburg, Germany	Hovestrasse, 20539 Hamburg, Germany	

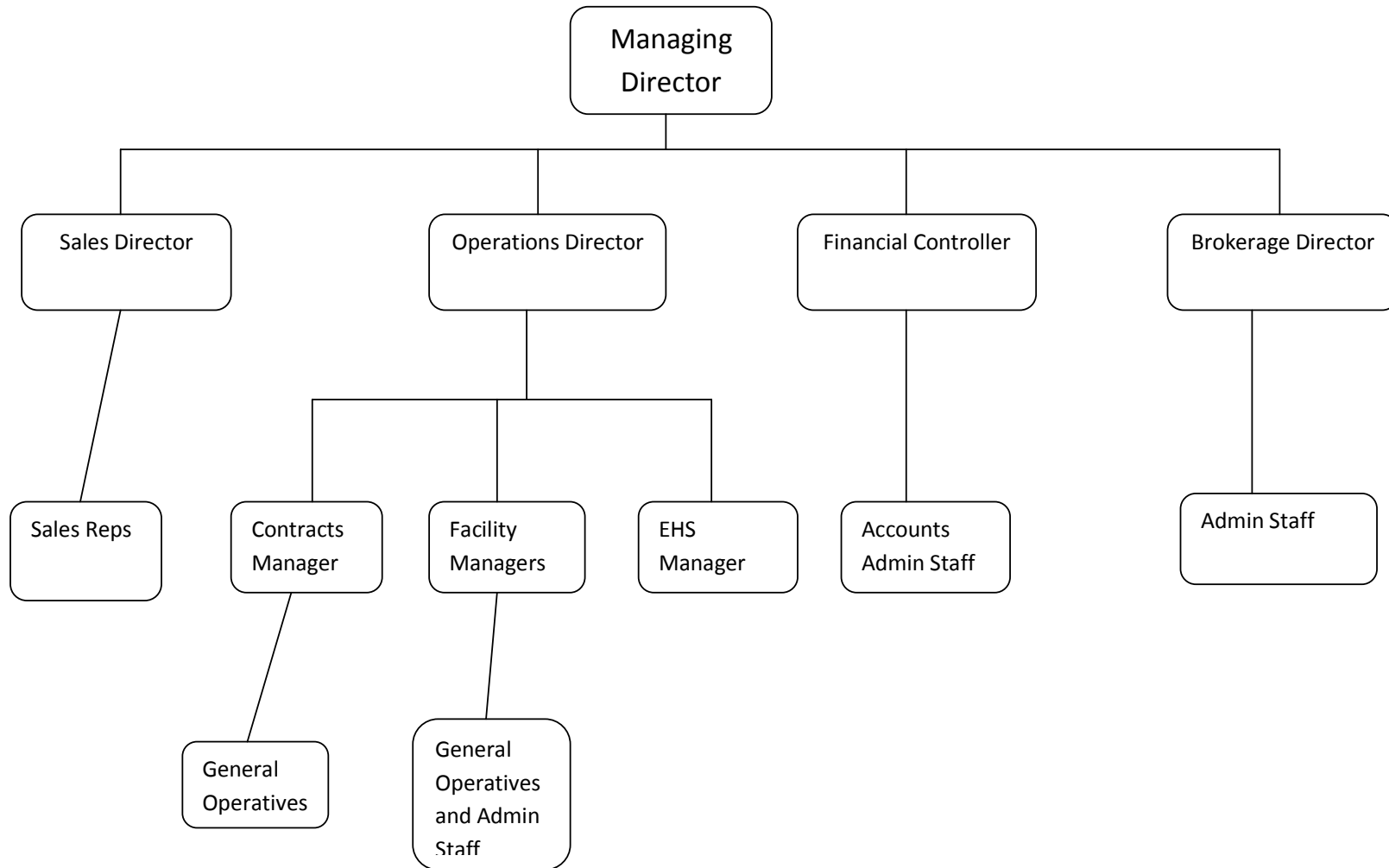
Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Licence/Permit No of Next Destination Facility Haz.Waste: Name and Licence/Permit No of Recover/Disposer	Haz.Waste: Address of Next Destination Facility Non-Haz.Waste: Address of Recover/Disposer	Name and License /Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination (i.e. Final Recoverer / Disposer) (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	18 01 09	No	69.5	medicines other than those mentioned in 18 01 08	R1	M	Weighted	Abroad	Afvalstoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Irish Lamp Recycling, Blackpark, Kilkenny Rd., Athy, Co. Kildare, Ireland	Blackpark, Kilkenny Rd., Athy, Co. Kildare, Ireland
To Other Countries	18 02 08	No	103.8	medicines other than those mentioned in 18 02 07	R1	M	Weighted	Abroad	Afvalstoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Irish Lamp Recycling, Blackpark, Kilkenny Rd., Athy, Co. Kildare, Ireland	Blackpark, Kilkenny Rd., Athy, Co. Kildare, Ireland
Within the Country	20 01 21	Yes	0.84	fluorescent tubes and other mercury-containing waste	R4	M	Weighted	Offsite in Ireland	Irish Lamp Recycling, Blackpark, Kilkenny Rd., Athy, Co. Kildare, Ireland	Irish Lamp Recycling, Blackpark, Kilkenny Rd., Athy, Co. Kildare, Ireland	Afvalstoffen Terminal Moerdijk	Blackpark, Kilkenny Rd., Athy, Co. Kildare, Ireland
To Other Countries	20 01 27	Yes	483.8	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighted	Abroad	Afvalstoffen Terminal Moerdijk B.V., 821780	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Neilsen GmbH & Co., A-4187HH, Neiderlassung	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, Netherlands
To Other Countries	20 01 27	Yes	96.68	paint, inks, adhesives and resins containing dangerous substances	R3	M	Weighted	Abroad	Neilsen GmbH & Co., A-4187HH	Neiderlassung Neilsen-Pilmp, Betriebsstätte Bremen, Louis-Krages Strasse 10, Bremen, Germany	Neiderlassung Neilsen-Pilmp, Betriebsstätte Bremen, Louis-Krages Strasse 10, Bremen, Germany	Neiderlassung Neilsen-Pilmp, Betriebsstätte Bremen, Louis-Krages Strasse 10, Bremen, Germany
To Other Countries	13 07 03	Yes	107.1	other fuels (including mixtures) absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	R9	M	Weighted	Abroad	Centec International, EA	The Science Park, Brooks Lane, Middlewich, CW10 0JG, United Kingdom	Centec International, EA, Brooks Lane, Middlewich, CW10 0JG, United Kingdom	Brooks Lane, Middlewich, CW10 0JG, United Kingdom
To Other Countries	15 02 03	No	23.9	discarded equipment other than those mentioned in 15 02 02	D1	M	Weighted	Abroad	GVE Gesellschaft GmbH, Metais, 07101/2015	Gf'ersloh, Germany	Felix Gormley Metals, 01/07/2015, Monery, Crossodoney Co. Cavan, Ireland	Monery, Crossodoney Co. Cavan, Ireland
Within the Country	16 01 07	Yes	70.8	oil filters	R4	M	Weighted	Offsite in Ireland	Felix Gormley Metals, 07/01/2015	Monery, Crossodoney Co. Cavan, Ireland	Monery, Crossodoney Co. Cavan, Ireland	Monery, Crossodoney Co. Cavan, Ireland
To Other Countries	16 02 09	Yes	55.6	transformers and capacitors containing PCBs	D10	M	Weighted	Abroad	Orion B.V., 18/07/2937	De Steven, 25 AX Drachten, 9206, Netherlands	Orion B.V., 18/07/2937, De Steven, 25 AX Drachten, 9206, Netherlands	De Steven, 25 AX Drachten, 9206, Netherlands
Within the Country	16 02 14	No	4.7	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighted	Offsite in Ireland	The Recycling Village Ltd., WP2007/20	Unit 4 Timure Business Park, Monasterboice, Co. Louth, Ireland	Orion B.V., 18/07/2937, De Steven, 25 AX Drachten, 9206, Netherlands	Drachten, 9206, Netherlands
To Other Countries	16 05 04	Yes	11.64	gases in pressure containers (including halons) containing dangerous substances	R4	M	Weighted	Abroad	PHS Group, EA	Block B, Western Industrial Estate, Caerphilly, CF83 1XH, United Kingdom	PHS Group, EA, Block B, Western Industrial Estate, Caerphilly, CF83 1XH, United Kingdom	Block B, Western Industrial Estate, Caerphilly, CF83 1XH, United Kingdom
Within the Country	16 06 05	No	1.0	other batteries and accumulators	R4	M	Weighted	Offsite in Ireland	The Recycling Village Ltd., WP2007/20	Unit 4 Timure Business Park, Monasterboice, Co. Louth, Ireland	Orion B.V., 18/07/2937, De Steven, 25 AX Drachten, 9206, Netherlands	Drachten, 9206, Netherlands
To Other Countries	16 10 01	Yes	26.5	aqueous liquid wastes containing dangerous substances	D10	M	Weighted	Abroad	Scoti Centre, Z.I. De Port Jerome, Lillebonne, 76170, France	Scoti Centre, Z.I. De Port Jerome, Lillebonne, 76170, France	Scoti Centre, Z.I. De Port Jerome, Lillebonne, 76170, France	Z.I. De Port Jerome, Lillebonne, 76170, France
To Other Countries	17 03 01	Yes	21.4	bituminous mixtures containing coal tar	R5	M	Weighted	Abroad	Afvalstoffen Terminal Moerdijk B.V., 14/12/4149	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, The Netherlands	Afvalstoffen Terminal Moerdijk	Industrieterrein - Seaport M152, Vlasweg 12, 4782 PW Moerdijk, Netherlands

Transfer Destination	European Waste Code	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Licence/Permit No of Next Destination Facility Haz Waste Licence No of Recover/Disposer	Haz Waste / Address of Next Non Haz Waste Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination (i.e. Final Recovery / Disposal Site) (HAZARDOUS WASTE ONLY)
					M/C/E	Method Used					
To Other Countries	17 06 01	29.0	insulation materials containing asbestos	D5	M	Weighed	Abroad	Quinn Environmental P0145/06A	Auglish Rd.29 Tandragee,BT62 2EE,United Kingdom	Auglish Rd.29 Tandragee,BT62 2EE,United Kingdom	
To Other Countries	17 06 05	2659.2 (18)	construction materials containing asbestos	D1	M	Weighed	Abroad	GEG mbH,EG0108	Bimohler Strasse,57a,Grossenasppe,2 4623,Germany	GEG mbH,EG0108,Bimohler Strasse,57a,Grossenasppe,2 4623,Germany	
To Other Countries	19 02 05	513.77	sludges from physico/chemical treatment containing dangerous substances	R1	M	Weighed	Abroad	Geocycle	Rue de Courrière 49 B - 7181 Senefle ... ,Belgium	Geocycle S.A. ... ,Rue de Courrière 49 B - 7181 Senefle ... ,Belgium	
To Other Countries	19 08 12	98.9	industrial waste water other than those mentioned in 19 08 11	R1	M	Weighed	Abroad	Granox Ltd.,CP3230BE	Dock Estate,Widnes,WA8 0PB,United Kingdom		
Within the Country	19 12 02	901.2	ferrous metal	R4	M	Weighed	Offsite in Ireland	A1 Metal,WMP007d	Acragar,Mountmellick,Co. Laois,Ireland		
To Other Countries	20 01 27	131.6	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	Avalstoffen Terminal Moerdijk B.V.,14/12/4149	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,The Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,Netherlands	
Within the Country	19 02 99	58265.0	wastes not otherwise specified	D8	M	Weighed	Offsite in Ireland	Ringsend WWTW	Road,Ringsend,Dublin 4,Ireland		
To Other Countries	13 03 07	175.7	mineral-based non-chlorinated insulating and heat transmission oils	R9	M	Weighed	Abroad	Midland Oil Refinery,GP3135SD	Shelah Road,Halesowen,B63 3PN,United Kingdom	Shelah Road,Halesowen,B63 3PN,United Kingdom	
Within the Country	17 05 04	4681.9	soil and stones other than those mentioned in 17 05 03	R5	M	Weighed	Offsite in Ireland	Greenstar,W0178-02	Ballinrober,Ballinasloe,Co. Galway,Ireland		
To Other Countries	15 01 02	80.44	plastic packaging	R3	M	Weighed	Abroad	Envaco	Schumanplein,16/02/2013,L anaken,3620,Belgium		

APPENDIX G

Environmental Management and Staffing Structure

Rilta Environmental Management Structure





NATIONAL NETWORK

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