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ANNUAL ENVIRONMENTAL REPORT

RILTA ENVIRONMENTAL LTD.

BLOCK 402 GREENOGUE BUSINESS PARK

LICENCE NO. W0192-03

JANUARY 2016 – DECEMBER 2016

Prepared For: -

Rilta Environmental Ltd,
Greenogue Business Park,
Rathcoole,
County Dublin.

Prepared By: -

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Cork.

26 May 2017

Project	Annual Environmental Report 2016			
Client	Rilta Environmental Ltd W0192-03			
Report No	Date	Status	Prepared By	Reviewed By
161950109	26/05/2017	Draft	Mr Neil Sandes PGeo EurGeol	Mr Jim O'Callaghan MSc
	26/05/2017	Final		

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1. INTRODUCTION

This is the 2016 Annual Environmental Report (AER) for Rilta Environmental Limited's (Rilta) Materials Recovery Facility (MRF) located at Block 402, Greenogue Business Park, Rathcoole, County Dublin. The report covers the period from the 1st January 2016 to the 31st December 2016.

The content of the AER is based on Condition 10.1 and Schedule E of the Industrial Emissions Licence (W0192-03) and the report format follows guidelines set in the "Guidance Note for Annual Environmental Report" issued by the Environmental Protection Agency (Agency)[1]. Account is also taken of the AER Draft Guidance Document and AER Information Templates issued by the Agency in December 2013[2].

[1] EPA (Environmental Protection Agency) 1999 Waste Licensing – Draft Guidance on Environmental Management Systems and Reporting to the Agency
[2] EPA (Environmental Protection Agency) 2013 AER Draft Guidance Document

2. SITE DESCRIPTION

2.1 Site Location and Layout

The facility is located within an industrial estate approximately 2km east of Newcastle village and approximately 2.5km west of Rathcoole village. A site layout plan is in Appendix 1.

2.2 Waste Management Activities

The current licence allows Rilta to accept and process up to 111,000 tonnes of non-hazardous and hazardous waste per annum, as set out in Appendix A and Table 2.1 on the next page:

Waste activities at are restricted to those listed 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.

Table 2.1 Waste Types and Quantities (W0192-03)

Waste Type			Maximum Allowable Annual Tonnage Note 3
Non-Hazardous Waste Notes 1,2		**Description**	
		Commercial Waste	500
		C & D Waste	500
		Industrial Sludges	1,000
		Other Industrial Waste	3,000
Non-Hazardous Waste Total			**5,000**
Hazardous Waste	**EWC Code**	**Description**	Maximum Allowable Annual Tonnage Note 3
	13 05 03*	Interceptor Sludges	10,000
	16 07 08*	Waste containing Oil	2,000
	16 10 01*	Aqueous Liquid waste containing Dangerous Substances	1,500
	17 05 03*	Soil and Stones containing Dangerous Substances	60,000
	17 06 01*	Insulation Materials and Construction Materials containing Asbestos	8,000
	17 06 05*		
	Other Note 4		24,500
Hazardous Waste Total			**106,000**
Total Tonnage per Annum			**111,000**

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 **total annual waste quantity remaining 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.

3. EMISSION MONITORING

Rilta implements the environmental monitoring programme specified in the licence to assess the significance of emissions from site activities. The programme includes surface water, wastewater, groundwater, noise, air and dust monitoring.

The monitoring locations are shown on the site layout plan in Appendix 1. The results are submitted in reports to the Agency at quarterly intervals. An overview of the results is presented in this Section, which includes tabulated data.

3.1 Surface Water Monitoring

The rainwater run-off from the hard standing and building roofs discharges to a tributary of the River Grifeen, which flow along the northern site boundary. The tributary flows from east to west towards the River Grifeen. Surface water samples were collected at the discharge point (SW-3) and in the stream at SW-1, which is upstream and SW-2, which is downstream of SW-3. Tables 3.1 to 3.3 present the results for 2016. Rilta, at the request of the agency, included electrical conductivity in the surface water analysis from Q3 onwards. Table 3.3 includes the Emission Limit Values (ELV) specified in the licence. The emission complied with the ELVs

Table 3.1 Surface water Monitoring Results 2016: SW-1

Parameter	Units	Q1	Q2	Q3	Q4
pH	pH units	8.11	8.13	8.36	8.31
Conductivity	µS/cm	-	-	546	546
COD	mg/l	<7	12	<7	33
Total Suspended Solids	mg/l	<10	<10	<10	<10
Mineral Oil	mg/l	<0.01	<0.01	<0.01	<0.01

Table 3.2 Surface water Monitoring Results 2016: SW-2

Parameter	Units	Q1	Q2	Q3	Q4
pH	pH units	6.98	8.14	8.37	8.32
Conductivity	µS/cm	-	-	540	540
COD	mg/l	<7	18	<7	<7
Total Suspended Solids	mg/l	<10	<10	<10	<10
Mineral Oil	mg/l	<0.01	<0.01	<0.01	<0.01

Table 3.3 Surface water Monitoring Results 2016: SW-3

Parameter	Units	Q1	Q2	Q3	Q4	ELV
pH	pH units	8.08	7.71	7.64	7.86	-
Conductivity	µS/cm	-	-	197	197	-
COD	mg/l	13	16	9	7	-
Total Suspended Solids	mg/l	<10	<10	<10	<10	35
Mineral Oil	mg/l	<0.01	<0.01	<0.01	<0.01	5

3.2 Groundwater Monitoring

There are three on-site groundwater monitoring wells (BH-1, BH-2 and BH-3) at the locations shown on the plan in Appendix 1. BH-1 is in the southern (upgradient) section of the site. BH-2 and BH-3 are located in the northern (downgradient) section of the site.

The monitoring includes monthly measurement of groundwater levels and the collection and analysis of samples for pH, electrical conductivity and temperature, quarterly monitoring for pH, electrical conductivity, volatile organic compounds (VOCs), semi volatile organics (sVOC), pesticides, mineral oil, benzene, toluene, ethylbenzene, xylene, arsenic and mercury. and annually for dissolved oxygen, alkalinity, sulphate, total cyanide, chloride, boron, cadmium, calcium, total chromium, copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc. At the request of the agency, DRO was added to the list of parameters analysed quarterly from Q3 onwards.

There are no trigger levels set in the Licence, but for comparative purposes the Table includes the EPA Interim Guideline Values (IGVs) on groundwater quality and the Groundwater Regulations Threshold Value (TV) which were introduced in 2010 (S.I. 9 of 2010)

Table 3.4 includes the monthly field reading results for the three wells. There were no exceedances of the IGV / TVs.

Tables 3.5 to 3.8 include the quarterly groundwater results, with the annual results included in Table 3.5.

Table 3.4 Monthly Monitoring Results

BH-1	Unit	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	IGV	TV
Water Level	mBTOC	2.18	2.25	2.35	2.54	2.39	2.18	2.46	2.70	2.31	2.61	2.67	2.67		
pH	pH Units	7.19	7.74	6.72	7.70	7.71	7.26	7.17	7.09	7.10	7.44	7.5	7.81	6.5-9.5	
Electrical Conductivity	µS/cm	850	683	629	536	559	565	530	556	656	640	639	632	1,000	800 – 1,875
Temperature	ºC	10.3	10.7	10.4	10.7	11.2	11.3	11.7	11.8	12.5	13.0	12.9	12.5	25	
BH-2	**Unit**														
Water Level	mBTOC	2.34	2.36	2.4	2.42	2.98	2.38	2.43	2.45	2.40	2.41	2.43	2.44		
pH	pH Units	7.86	8.37	7.97	7.56	7.67	8.33	7.30	7.45	7.81	8.13	8.36	7.81	6.5-9.5	
Electrical Conductivity	µS/cm	344	351	318	316	357	318	335	360	451	433	385	461	1,000	800 – 1,875
Temperature	ºC	10.1	10.6	10.1	10.1	10.5	10.5	11.1	11.4	12.1	12.3	12.4	12	25	
BH-3	**Unit**														
Water Level	mBTOC	1.47	1.52	1.58	1.61	1.60	1.56	1.63	1.65	1.57	1.65	1.65	1.64		
pH	pH Units	8.17	8.36	8.11	8.56	8.14	8.67	7.49	7.68	8.48	8.90	8.94	9.32	6.5-9.5	
Electrical Conductivity	µS/cm	470	462	467	467	460	457	429	441	485	469	447	450	1,000	800 – 1,875
Temperature	ºC	10.3	10.8	10.1	10.3	11.1	11.0	11.3	11.8	13.0	12.5	12.4	11.9	25	

Table 3.5 Q1 Groundwater Monitoring Results

Parameter	Units	BH-1	BH-2	BH-3	IGV	TV
pH	pH Units	7.47	7.95	8.91	6.5-9.5	-
E.C.	µS/cm	816	328	453	1,000	875 –
Mercury	µg/l	<1	<1	<1	1	0.75
Arsenic	µg/l	<2.5	<2.5	2.8	10	7.5
Boron	µg/l	23	36	39	1,000	750
Cadmium	µg/l	<0.5	<0.5	<0.5	5	3.75
Calcium	mg/l	110.7	38.2	45.5	200	-
Copper	µg/l	<7	<7	<7	30	1,500
Total Iron	µg/l	<20	<20	<20	200	-
Lead	µg/l	<5	<5	<5	10	18.75
Magnesium	mg/l	19.1	4.5	2.4	50	-
Manganese	µg/l	<2	43	22	50	-
Nickel	µg/l	<2	5	19	20	15
Potassium	mg/l	4.3	1.8	5.9	5	-
Sodium	mg/l	42.1	24.6	40.8	150	150
Zinc	µg/l	<3	<3	<3	100	-
Total Chromium	µg/l	<1.5	<1.5	<1.5	30	37.5
Sulphate	mg/l	69.34	54.59	75.05	200	187.5
Chloride	mg/l	60.4	19.0	55.5	30	187.5
Total Cyanide	mg/l	<0.01	0.01	0.02	0.01	0.0375
Total Alkalinity as CaCO3	mg/l	286	110	90	NAC	-
Dissolved Oxygen	mg/l	8	5	8	NAC	-
Benzene	µg/l	<0.5	<0.5	<0.5	1	0.75
Toluene	µg/l	<0.5	<0.5	<0.5	10	-
Ethylbenzene	µg/l	<0.5	<0.5	<0.5	10	-
o-Xylene	µg/l	<0.5	<0.5	<0.5	10	-
p/m-Xylene	µg/l	<1	<1	<1	10	-
MTBE	µg/l	<0.1	5	67.4	30	-
Mineral Oil	mg/l	<0.010	<0.010	<0.010	0.01	-
VOC (Excluding MTBE)	µg/l	ND	ND	ND	*	*
VOC	µg/l	ND	ND	ND	*	*
Pesticides	µg/l	ND	ND	ND	*	*

* - various IGVs in place for individual VOCs.
ND – not detected
NAC – no abnormal change

In Q1, Mercury, cadmium, copper, iron, lead, zinc, chromium, mineral oil, benzene, toluene, ethylbenzene, xylene, VOCs, SVOCs and pesticides were not detected in any sample. In BH-3 nickel exceeded the TV, but not the IGV; potassium and MTBE exceeded their respective IGVs, and total cyanide exceeded the IGV, but not the TV. In BH-1 and BH-3 the chloride levels exceeded the IGV but were lower than the TV, with the highest level detected in the up gradient well (BH-1).

Table 3.6 Q2 Groundwater Monitoring Results

Parameter	Units	BH-1	BH-2	BH-3	IGV	TV
pH	pH Units	7.57	7.96	8.30	6.5-9.5	-
E.C.	µS/cm	592	382	486	1,000	875 – 1,875
Mercury	µg/l	<1	<1	<1	1	0.75
Arsenic	µg/l	3	<2.5	<2.5	10	7.5
Benzene	µg/l	<0.5	<0.5	0.8	1	0.75
Toluene	µg/l	<5	<5	<5	10	-
Ethylbenzene	µg/l	<0.5	<0.5	<0.5	10	-
o-Xylene	µg/l	<0.5	<0.5	<0.5	10	-
p/m-Xylene	µg/l	<1	<1	<1	10	-
MTBE	µg/l	<0.1	3.4	59.3	30	-
Mineral Oil	mg/l	<0.01	<0.01	<0.01	0.01	-
VOC (Excluding MTBE)	µg/l	ND	ND	ND	*	*
SVOC	µg/l	ND	ND	ND	*	*
Pesticides	µg/l	ND	ND	ND	*	*

* - various IGVs in place for individual VOCs.
ND – not detected

In Q2, mercury, mineral oil, toluene, ethylbenzene, xylene, VOCs, SVOCs and pesticides were not detected in any sample. Arsenic was detected in BH-1 at a concentration that was below the IGV and TV. In BH-3 benzene marginally exceeded the TV but did not exceed the IGV. Benzene is not persistently present in BH-3. MTBE was detected in BH-2 and BH-3 but only exceeded the IGV in BH-3. The concentration of MTBE is less than detected in Q1.

Table 3.7 Q3 Groundwater Monitoring Results

Parameter	Units	BH-1	BH-2	BH-3	IGV	TV
pH	pH Units	7.43	7.42	7.87	6.5-9.5	-
E.C.	µS/cm	810	542	520	1,000	875 - 1,875
Mercury	µg/l	<1	<1	<1	1	0.75
Arsenic	µg/l	<2.5	<2.5	<2.5	10	7.5
Benzene	µg/l	<0.5	<0.5	0.9	1	0.75
Toluene	µg/l	<5	<5	<5	10	-
Ethylbenzene	µg/l	<0.5	<0.5	<0.5	10	-
o-Xylene	µg/l	<0.5	<0.5	<0.5	10	-
p/m-Xylene	µg/l	<1	<1	<1	10	-
MTBE	µg/l	<0.1	<0.1	39.2	30	-
Mineral Oil	mg/l	<0.01	<0.01	<0.01	0.01	-
EPH	mg/l	<0.01	<0.01	0.06		
Mineral Oil	mg/l	<0.01	<0.01	<0.01	0.01	-
SVOC	µg/l	ND	ND	ND	*	*

* - various IGVs in place for individual VOCs.
ND – not detected

In Q3, arsenic, mercury, mineral oil, toluene, ethylbenzene, xylene, VOCs, SVOCs and pesticides were not detected in any sample. In BH-3 benzene marginally exceeded the TV but did not exceed the IGV. Benzene is not persistently present in BH-3. MTBE was detected in BH-3 at a concentration that exceeded the IGV. The concentration of MTBE is significantly

less than the concentrations encountered in both Q1 and Q2 and shows that there is an overall reduction with time.

Table 3.8 Q4 Groundwater Monitoring Results

Parameter	Units	BH-1	BH-2	BH-3	IGV	TV
pH	pH Units	7.53	8.11	8.38	6.5-9.5	-
E.C.	µS/cm	603	379	448	1,000	875 - 1,875
Mercury	µg/l	<1	<1	<1	1	0.75
Arsenic	µg/l	2.6	4.1	5.8	10	7.5
Benzene	µg/l	<0.5	<0.5	0.8	1	0.75
Toluene	µg/l	<5	<5	<5	10	-
Ethylbenzene	µg/l	<0.5	<0.5	<0.5	10	-
o-Xylene	µg/l	<0.5	<0.5	<0.5	10	-
p/m-Xylene	µg/l	<1	<1	<1	10	-
MTBE	µg/l	<0.1	3.7	24.3	30	-
Mineral Oil	mg/l	<0.01	<0.01	<0.01	0.01	-
EPH	mg/l	<0.01	<0.01	<0.01		
Mineral Oil	mg/l	<0.01	<0.01	<0.01	0.01	-
SVOC	µg/l	ND	ND	ND	*	*
Pesticides	µg/l	ND	ND	ND	*	*

* - various IGVs in place for individual VOCs.
ND – not detected

In Q4, mercury, mineral oil, EPH, toluene, ethylbenzene, xylene, VOCs, SVOCs and pesticides were not detected in any sample. In BH-3 benzene marginally exceeded the TV but did not exceed the IGV. While benzene is not persistently present in BH-3 it was detected in Q3 2016 at a similar concentration of 0.9 µg/l. MTBE was detected in BH-2 and BH-3, but the levels did not exceed the IGV. The level of MTBE detected in BH-3 is less than the concentrations recorded in Q1 to Q3 and shows that there is an overall reduction with time. All other parameters were below their respective IGV and TVs.

3.3 Wastewater Monitoring

The Licence requires the monitoring of the wastewater discharge from the site to the municipal sewer on a monthly basis at SE-1. A grab sample and a composite sample are collected and sent to an accredited laboratory and analysed for the parameters listed Tables 3.9 and 3.10.

The sample containers for the samples collected between the 3rd and 4th March were damaged in transit to the laboratory and the contents lost. Rilta staff collected another grab sample on the 22nd March and submitted it to a different lab for analysis.

All of the results were below their respective ELVs.

The daily and hourly maximum volumes of waste water to be discharged from the facility are 180m^3 and 40m^3 respectively (as set out in Schedule B.3 of the licence). The total volume of wastewater discharged during 2016 was 56,385m^3. The maximum daily and hourly waste water discharges recorded were 175m^3 and 24m^3 respectively.

Table 3.9 Wastewater Monitoring Results Q1 – Q2

		January		February		March		April		May		June		ELV Composite Sample	ELV Grab Sample
Parameter	**Unit**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**		
Temperature	**°C**	-	5.1	-	-	-	6.9	-	12	-	15	-	13		42
pH	**Units**	7.40	7.32	-	-	-	6.96	7.40	7.86	-	7.83	-	7.93	6 – 10	6 - 10
BOD	**mg/l**	22	-	-	-	139	-	8	-	<1	-	3	-	800	2,000
COD	**mg/l**	370	-	-	781	421	-	212	-	95	-	33	-	1,600	4,000
Sulphate	**mg/l**	152.37	-	-	97.9	50.27	-	58.20	-	39.45	-	27.72	-	1,000	1,000
Surfactants	**mg/l**	-	0.8	-	0.179	-	1.4	-	10.4	-	1.4	-	1.2	100	100
Zinc	**mg/l**	0.033	-	-	0.140	0.019	-	0.032	-	0.022	-	0.016	-	3	3
Copper	**mg/l**	<0.007	-	-	0.062	0.007	-	0.036	-	0.033	-	0.037	-	1	1
Chromium	**mg/l**	0.0453	-	-	0.013	0.0743	-	0.0345	-	0.0165	-	0.0035	-	1	1
Lead	**mg/l**	<0.005	-	-	0.002-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	0.2	0.2
Nickel	**mg/l**	0.031	-	-	0.016	0.039	-	0.020	-	0.010	-	0.039	-	1	1
Arsenic	**mg/l**	<0.0025	-	-	0.011	0.0524	-	0.0275	-	0.0105	-	<0.0025	-	0.5	0.5
Benzene	**mg/l**	-	<0.0005	-	<0.00047	-	<0.005	-	<0.0005	-	<0.005	-	<0.005	1	1
Toluene	**mg/l**	-	<0.0005	-	<0.00054	-	<0.005	-	<0.0005	-	<0.005	-	<0.005	1	1
Ethylbenzene	**mg/l**	-	<0.0005	-	<0.00045	-	<0.005	-	<0.0005	-	<0.005	-	<0.005	1	1
Xylenes	**mg/l**	-	<0.001	-	<0.00121	-	<0.01	-	<0.001	-	<0.010	-	<0.005	1	1
TSS	**mg/l**	21	-	-	-	16	-	<10	-	<10	-	<10	-	400	500
Ammonia	**mg/l**	253.93	-	-	75.06	394.35	-	165.95	-	71.59	-	18.78	-		
Mineral Oil	**mg/l**	-	<0.01	-	0.066	-	<0.01	-	<0.01	-	<0.010	-	<0.01	10	10

Table 3.10 Wastewater Monitoring Results Q3 – Q4

		July		August		September		October		November		December		ELV Composite Sample	ELV Grab Sample
Parameter	**Unit**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**	**Composite**	**Grab**		
Temperature	**°C**	-	18	-	16	-	15	-	8	-	8	-	12		42
pH	**Units**	-	7.79	-	7.75	-	7.61	-	7.66	-	7.80	-	7.55	6 – 10	6 - 10
BOD	**mg/l**	66	-	42	-	118	-	322	-	257	-	183	-	800	2,000
COD	**mg/l**	608	-	769	-	768	-	843	-	682	-	761	-	1,600	4,000
Sulphate	**mg/l**	42.39	-	1.5	-	8.8	-	76	-	75.3	-	48	-	1,000	1,000
Surfactants	**mg/l**	-	1.1	-	1	-	2.2	-	1.3	-	0.4	-	1.8	100	100
Zinc	**mg/l**	0.027	-	0.055	-	0.034	-	0.014	-	0.183	-	0.226	-	3	3
Copper	**mg/l**	0.028	-	0.059	-	0.015	-	<0.007	-	0.016	-	0.007	-	1	1
Chromium	**mg/l**	0.0779	-	0.090	-	0.101.5	-	0.088	-	0.0637	-	0.0595	-	1	1
Lead	**mg/l**	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	0.2	0.2
Nickel	**mg/l**	0.039	-	0.050	-	0.055	-	0.046	-	0.037	-	0.049	-	1	1
Arsenic	**mg/l**	0.0237	-	0.073	-	0.0982	-	0.0061	-	0.0325	-	0.038	-	0.5	0.5
Benzene	**mg/l**	-	<0.0005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	1	1
Toluene	**mg/l**	-	0.007	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	0.098	1	1
Ethylbenzene	**mg/l**	-	<0.0005	-	<0.005	-	<0.005	-	<0.005	-	<0.005	-	0.022	1	1
Xylenes	**mg/l**	-	0.006	-	<0.010	-	<0.005	-	<0.01	-	<0.010	-	0.133	1	1
TSS	**mg/l**	<10	-	22	-	16	-	11	-	22	-	34	-	400	500
Ammonia	**mg/l**	391.51	-	345.39	-	360.67	-	302.17	-	345.39	-	219.03	-		
Mineral Oil	**mg/l**	-	<0.01	-	<0.010	-	<0.01	-	<0.01	-	0.920	-	9.20	10	10

3.4 Noise Survey

A noise survey is carried out annually at the facility. This was conducted in August 2016. Day time noise monitoring was carried out at approved noise monitoring locations as shown in the site plan with the monitoring locations in Appendix 1 and the results are presented in Table 3.11

Site specific $L_{Aeq\ 30\ min}$ levels were calculated at <54 dB at N1, <52 at N2, 56 dB at N3 and 67 dB at N4. The 55 dB daytime limit specified in waste licence W0192-03 is not considered relevant to any of the four noise stations due to the absence of nearby sensitive receptors. The limit is considered more appropriate to NSLs. An inspection at the nearest NSLs following the survey indicated that facility operations were not audible, and thus lower than the 55 dB daytime noise limit. No tones or impulses were noted at offsite NSLs, thus complying with schedule B.4 of the licence.

Table 3.11 Noise Data

Station	Date	Time	Wind vector	$L_{Aeq\ 30\ min}$ dB	$L_{AF10\ 30\ min}$ dB	$L_{AF90\ 30\ min}$ dB	Specific $L_{Aeq\ 30\ min}$ dB
N1	10.08.16	1017-1047	0	59	63	51	<54
	Facility: Sporadic truck movements and regular forklift truck movements on yard areas clearly audible when present. Activities in nearest buildings also audible at low level on occasion. **Extraneous**: Truck and forklift truck operations at adjacent premises continuously clearly audible. Intermittent traffic on industrial estate roadway outside boundary dominant when present. Distant traffic also audible. Aircraft. **Specific L_{Aeq} determination**: LAeq dominated by traffic and operations at adjacent premises. Site operations considered minor contributor to LAeq, thus <5 dB less.						
N2	10.08.16	0830-0900	0	58	60	52	<<52
	Facility: No emissions audible due to screening by adjacent onsite building. **Extraneous**: Activity at adjacent premises regularly audible and dominant, masking all sources other than loudest aircraft movements, and occasional angle grinder emissions at premises to N. **Specific L_{Aeq} determination**: Emissions inaudible, thus <<L90. Separation distance to building façade: 1.5 m (no space available).						
N3	10.08.16	0904-0934	0	56	57	53	56
	Facility: Liquid flowing in pipes/tanks at adjacent tank farm continuously clearly audible. **Extraneous**: All sources masked by above, apart from aircraft movements, local bird song/calls and loudest truck movements at nearby premises. **Specific L_{Aeq} determination**: LAeq representative, outside of intrusive truck movement at adjacent site 0923.						
N4	10.08.16	0943-1013	0	70	64	52	67
	Facility: Regular blow-down/venting emissions at 5 m repeatedly dominant, and audibly impulsive. Drum centre air management system emissions, and activity in drum centre, also clearly audible. **Extraneous**: Intermittent traffic on adjacent industrial estate roadway clearly audible when present. **Specific L_{Aeq} determination**: Blow-down emissions sufficiently loud to dominate LAeq, thus LAeq considered representative, subject to 3 dB near field correction due to 1.5 m separation distance to building façade (no space available).						

Wind vector: See final appendix. **Specific L_{Aeq}**: Level considered attributable to source under consideration, determined using real time assessment, field notes, time history profiles, statistical analysis, frequency spectra, spectral statistics and near field correction if applicable. **Audibility scale**: Inaudible; faintly audible; slightly audible; audible at low level; quite audible; clearly audible; dominant; intrusive; excessive.

3.5 Dust Monitoring

The facility conducted dust monitoring in May, July and September and the results are in Table 3.9. In May, the dust jar fell from the sampling pole and the sample could not be analysed.

There was one exceedance of the dust deposition limit (350 mg/m^2/day) set in the Licence at D-4 in September (550mg/m^2/day) however, the inorganic particulate faction of the sample which is representative of site activities was 147 mg/m^2/day which is below the limit. The samples were impacted greatly by the presence of vegetative growth (leaves, algae, etc.), which are not derived from site based activities. All other samples were below the dust deposition limit.

Table 3.12 Dust Monitoring Results 2016

	May mg/m^2/day	**July mg/m^2/day**	**September mg/m^2/day**	**Deposition Limit mg/m^2/day**
D-1	41.74	20.98	309	350
D-2	80.34	4.32	196	350
D-3	27.32	9.20	241	350
D-4	-	11.89	550	350

3.6 Air Quality

Volatile Organic Compound monitoring was completed at three monitoring points (A1, A2 and A3) shown on the site layout plan in Appendix 1 on two occasions. With the exception of the Total Organic Carbon as C at A2, all the results complied with the limits. The TOC concentration at A2 was 0.102 kg/hr which exceeded the ELV of 0.1 kg/hr however this was within the limit of error of the measurement and therefore was not deemed to be an environmental incident.

3.7 Nuisance Control Review

Rilta use masking agents in the treatment of waste as required along with a closed door policy when required. Rilta outsource vermin control to an external contractor.

4. SITE DEVELOPMENT WORKS

4.1 Engineering Works

In September 2016 a sludge drying plant was installed and commissioned.

In March 2017 some concrete hardstand areas will be replaced. In April 2017 an upgrade to the drum washing equipment will be completed, as notified to the Agency.

4.2 Summary of Resource & Energy Consumption

Table 4.1 is summary of the resources used on-site during the reporting period.

Table 4.1 Resources Used On-Site in 2015 & 2016

Resources	Quantities 2015	Quantities 2016
Natural Gas	117,769 KwH	138,000 KwH
Road Diesel	68,460 Litres	72,000 Litres
Electricity	468,000 KwH	610,000 KwH
Water	26,768 m^3	46,080 m^3

5. WASTE RECEIVED AND CONSIGNED FROM THE FACILITY

Table 5.1 shows the total quantities of waste received and Table 5.2 shows the total quantities of waste consigned from the facility in 2016. Table 5.3 shows the quantities of waste received and consigned in previous years. A breakdown of the waste types is provided in accordance with the European Waste Catalogue and Hazardous Waste (EWC/HWL) list. A more detailed description of the wastes consigned and the waste destinations are provided in the PRTR Return in Appendix 2.

Table 5.1 Waste Received 2016

Waste Type			Maximum Allowable Annual Tonnage Note 3	Waste Received 2016
Non-Hazardous Waste Notes 1,2		**Description**		
		Commercial Waste	500	0.000
		C & D Waste	500	8,569.5
		Industrial Sludges	1,000	18.3
		Other Industrial Waste	3,000	45,266.3
Non-Hazardous Waste Total			**5,000**	**53,854.1**
Hazardous Waste	**EWC Code**	**Description**	Maximum Allowable Annual Tonnage Note 3	**Waste Received 2016**
	13 05 03*	Interceptor Sludges	10,000	1,098.9
	16 07 08*	Waste containing Oil	2,000	616.1
	16 10 01*	Aqueous Liquid waste containing Dangerous Substances	1,500	5,159.1
	17 05 03*	Soil and Stones containing Dangerous Substances	60,000	17,630.6
	17 06 01*	Insulation Materials and Construction Materials containing Asbestos	8,000	356.7
	17 06 05*			6,526.5
	Other Note 4		24,500	23,076.7
Hazardous Waste Total			**106,000**	**54,464.6**
Total Tonnage per Annum			**111,000**	**108,318.8**

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 **total annual waste quantity remaining 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.

The total amount of non-hazardous waste received was 53,854.1 tonnes and the total amount of hazardous waste received was 54,464.6 tonnes giving a total amount of waste received as 108,318.8 tonnes. The total amount consigned was 101,669.36 tonnes.

The difference in waste received into and consigned from the facility in 2016 is 6,649.44 tonnes. This is related to waste that remained on site at the end of 2016 and was consigned from the site in Q1 2017.

All the wastes consigned from the site went to recovery and disposal facilities agreed with the Agency.

Table 5.2 Waste Consigned 2016

EWC	Description	Waste Out
02 07 04	Materials unsuitable for consumption or processing	18.3
03 02 05*	Other wood preservatives containing dangerous substances	89.7
06 01 01*	Sulphuric acid and sulphurous acid	4.7
06 01 02*	Hydrochloric Acid	1.5
06 01 04*	Phosphoric Acid	5.0
06 01 05*	Nitric Acid	3.9
06 01 06*	Other acids	178.0
06 02 04*	Sodium & potassium hydroxide	0.6
06 02 05*	Other bases	50.3
07 05 13*	Solid wastes containing dangerous substances	58.0
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous substances	159.6
08 03 12*	Waste Ink	4.3
08 04 09*	Waste Adhesives	0.4
08 04 13*	Adhesive Sludge	32.1
09 01 05*	Bleach solutions and bleach fixer solutions	26.3
11 01 09*	Sludges and filter cakes containing dangerous substances	110.7
12 01 09*	Machining emulsions and solutions free of halogens	135.7
13 02 05*	Engine and Gear Oil	0.2
13 02 08*	Nondescript waste oils	10.4
13 03 07*	Heat Transmission Oil	0.2
13 07 03*	Other fuels (including mixtures)	107.6
14 06 03*	Mixed Organic Solvents	391.1
14 06 05*	Sludges or solid wastes containing other solvents	16.4
15 01 03	Wooden packaging	122.8
15 01 04	Washed and Crushed Drums	967.5
15 01 10*	Packaging containing residues of or contaminated by dangerous substances	275.24
15 02 02*	Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	473.1
15 02 03	Absorbents (Non Haz)	1.4
16 01 07*	Oil Filters	69.6
16 01 14*	Antifreeze	0.9
16 02 13*	Discarded Components containing hazardous substances	0.52
16 02 14	WEEE	22.7
16 03 03*	Inorganic Off spec Product Wastes	10.1
16 03 05*	Organic Off spec Product Wastes	0.02

Table 5.2 Cont'd

EWC	Description	Waste Out
16 05 04*	Gases in pressure containers (including halons) containing dangerous substances	16.8
16 05 06*	Laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	114.8
16 05 07*	Discarded inorganic chemicals consisting of or containing dangerous substances	203.2
16 05 08*	Discarded organic chemicals consisting of or containing dangerous substances	236.0
16 06 01*	Lead batteries	3021.9
16 06 02*	Ni-Cd batteries	19.9
16 06 04	Alkaline batteries (except 16 06 03)	6.4
16 06 05	Other batteries and accumulators	1.7
16 09 03*	Hydrogen Peroxide	0.07
16 10 01*	Aqueous liquid wastes containing dangerous substances	569.0
17 03 01*	Bituminous mixtures containing coal tar	17.0
17 05 03*	Soil & stones containing dangerous substances	20,513.4
17 05 04	Soil and stones other than those mentioned in 17 05 03	9,323.3
17 06 01*	Insulation material containing asbestos	307.2
17 06 05*	Construction materials containing asbestos	6965.6
18 01 06*	Medical Chemicals	0.6
18 01 07	Non Haz Chemicals	0.04
18 01 09	Medicines	17.6
18 02 08*	Veterinary Waste	32.2
19 01 07*	Solid Waste From Gas Treatment	12.9
19 02 05*	Sludges from physico/chemical treatment containing dangerous substances	1958.7
19 02 99	Wastes not otherwise specified	54,320
19 09 04	Spent Activated Carbon	15.6
19 12 11*	Other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances	183.5
20 01 19*	Pesticides	12.5
20 01 21*	Fluorescent Tubes	0.1
20 01 25*	Grease Trap Waste	1.8
20 01 27*	Paint, inks, adhesives and resins containing dangerous substances	447.3
20 01 29*	Detergents	1.3
20 01 32	Medicines	0.3
	Total Consigned	101,669.59
	Recovered	22,925.04
	Disposed	78,744.316
	Recovery Rate (%)	22.55

Table 5.3 Waste Received & Consigned in recent years

	2015	2014	2013	2012	2011
Total Received	92,812.421	93,787	82,051	90,081	78,964.72
Total Consigned	82,725.058	86,337.171	78,303.94	78,835.38	77,923.39
Total Recovered	8,892.793	13,366.258	17,927.52	15,082.66	20,923.39
Total Disposed	73,832.265	72,970.913	60,376.42	63,752.72	56,606.39
Recovery Rate	12.04%	15.48%	22.89%	19.13%	26.85%

6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS

6.1 Incidents

There was 1 notifiable environmental incident in 2016.

1) 17th November 2016 – Non-compliance of ELV for dust at monitoring point D-4. The total volume exceeded the ELV as a result of contamination of the sample by organic matter and not site derived inorganic matter. Agency notified following incident.

6.2 Register of Complaints

Rilta maintains a register of complaints received in accordance with Condition 10.4 of the waste licence. The complaints register includes the details of all complaints and the actions carried out in response to each complaint. There were no complaints during the reporting period that related to activity at the licensed site.

7. ENVIRONMENTAL DEVELOPMENT

7.1 Environmental Management Programme Report

Rilta have implemented an Integrated Management System (IMS) in accordance with the requirements of Occupational Health and Safety Assessment Series (OHSAS) 18001:2007 and International Standard Organisation (ISO) 14001:2004 in order to manage the Health, Safety and Environmental performance of their business and to control health and safety risk and to minimise their environmental aspects and impacts.

The IMS has been developed for the achievement of continual improvement taking into account the requirements of the Waste Licence Conditions. Rilta has prepared and effectively implement documented procedures and instructions in accordance with the requirements of both the OHSAS 18001:2007 and ISO 14001:2004. The EMS was recertified in February 2015.

The schedule of Objectives and Targets, including their status for 2016 is included in Appendix 3. A schedule of proposed Objectives and Targets for 2017 is in Appendix 4.

7.2 Site Management Structure

Details of the site management structure are presented in Appendix 5.

7.3 Environmental Management Programme

7.3.1 Schedule of Objectives 2016

The objectives that were achieved during this reporting period are outlined in Appendix 3.

7.4 Communications Programme

Rilta maintains a 'Public File' which contains all correspondence between Rilta and the Agency, all waste data and monitoring data as required by the licence. The 'Public File' is available to view during normal office hours.

7.5 Report Financial Provision

A Decommissioning Management Plan (DMP) and Environmental Liabilities Risk Assessment (ELRA) including Financial Provision (FP) have been submitted to and approved by the Agency.

7.6 Nuisance Controls

Rilta has contracted an external vermin control company to carry out nuisance control at the facility.

7.7 Tank and Pipeline Testing

Bund integrity testing commenced in July 2016 and was completed in May as per Condition 6.11 of the Licence. A copy of the Bund Integrity Test report is included in Appendix 6.

7.8 Water Demand and Trade Effluent Discharge

The trade effluent discharged in 2016 was 54,320m³.

7.9 Efficiency of use of Raw Materials / Reduction in Waste Generated

The main raw material used on site is paint. Paint use overall increased by 840 litres in 2016 when compared to 2015, while acetone was not used in 2016.

Table 7.1 Raw Material Usage 2013 - 2016

	2013	2014	2015	2016
56% Solids Paint	5,500	5,111	5,360	6,200
65% Solids Paint	0	0	0	0
Xylene	180	200	80	120
Acetone	50	0	0	0

All measurements in litres

8. OTHER REPORTS

8.1 European Pollutant Release and Transfer Register

Under the European Pollutant Release and Transfer Register Regulation (EC) No. 166/2006 Rilta are required to submit information annually to the Agency. A copy of the return submitted to the Agency via the web-based data reporting system is included in Appendix 2.

APPENDIX 1

Site Plan showing Environmental 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

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

KS1
SW1
D3
N3
BUNDED TANK AREA
BH3
SW3
BH2
VEHICLE WASH AREA
SW2
KS2
D2
N2
DOCK LEVELLER
GW2
GW3
EFF
RACKED STORAGE
GW1
WASTE TREATMENT CENTRE 1858 SQ.M
STATION 1859 SQ.M
HAZARDOUS WASTE TRANSFER
CONTAMINATED SOIL STORAGE
A3
A1
DRUM CENTRE 1858 SQ.M
OFFICE BLOCK 400 SQ.M
WEIGHBRIDGE
A2
DOCK LEVELLER
D4
N4
D1
N1
BH1
GATE
ELECTRICAL SWITCHROOM

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 Malin Head

suffix	revisions	date	by

Client

Drawing Title
SITE LAYOUT PLAN

Project
INTEGRATED WASTE MANAGEMENT FACILITY, GREENOGUE, CO. DUBLIN

Scale: 1/500		
Drawn by: MARKCONROY	Checked by:	Date: January 2007

O'Callaghan Moran & Assoicates,
Unit 15 Melbourne Business Park,
Model Farm Road,
Cork.

Drawing No.
2.1

Rev.

APPENDIX 2

European Pollutant Release and Transfer Register

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2016

1. FACILITY IDENTIFICATION

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

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Block 402, Grant Drive
Address 2	Greenogue Business Park
Address 3	Rathcoole
Address 4	
	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	Site Manager
AER Returns Contact Telephone Number	014018000
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	70
User Feedback/Comments	Differences in pollutant outputs in trade effluent would have been affected by the lower volume of trade effluent in 2016 as compared to 2015
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) ?	

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			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
19	Chromium and compounds (as Cr)	M	MAB		2.56	2.56	0.0	0.0
20	Copper and compounds (as Cu)	M	MAB		1.36	1.36	0.0	0.0
23	Lead and compounds (as Pb)	M	MAB		0.01	0.01	0.0	0.0
22	Nickel and compounds (as Ni)	M	MAB		1.95	1.95	0.0	0.0
17	Arsenic and compounds (as As)	M	MAB		1.69	1.69	0.0	0.0
24	Zinc and compounds (as Zn)	M	MAB		1.95	1.95	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)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
Pollutant No	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	M	MAB		13325.69	13325.69	0.0	0.0
303	BOD	M	MAB		5481.79	5481.79	0.0	0.0
306	COD	M	MAB		28712.65	28712.65	0.0	0.0
308	Detergents (as MBAS)	M	MAB		104.92	104.92	0.0	0.0
240	Suspended Solids	M	MAB		632.78	632.78	0.0	0.0
343	Sulphate	M	MAB		3068.62	3068.62	0.0	0.0
206	Benzene & toluene & xylene (combined)	M	MAB		1.2	1.2	0.0	0.0
324	Mineral oils	M	MAB		46.11	46.11	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 M/C/E	Method Used	Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
Within the Country	02 07 04	No	18.3	materials unsuitable for consumption or processing	R3	M	Weighed		ERAS ECO,W0211-01	Foxhole,Youghal,Co. Cork,.,Ireland		
To Other Countries	06 01 02	Yes	1.5	hydrochloric acid	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	06 01 04	Yes	2.2	phosphoric and phosphorous acid	R5	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	03 02 05	Yes	89.7	other wood preservatives containing dangerous substances	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	1 Osterweute,Ce25541,Bruns buttel,.,Germany	Sava Gmbh & Co,.,1 Osterweute,Ce25541,Bruns buttel,.,Germany	1 Osterweute,Ce25541,Bruns buttel,.,Germany
To Other Countries	06 01 04	Yes	2.8	phosphoric and phosphorous acid	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	06 01 01	Yes	4.7	sulphuric acid and sulphurous acid	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	06 01 06	Yes	0.03	other acids	D10	M	Weighed	Abroad	AGR mbh - RZR Herten,.	Im Emscherbruch 11,45699,Herten,.,Germany	AGR mbh - RZR Herten,.,Im Emscherbruch 11,45699,Herten,.,Germany	Im Emscherbruch 11,45699,Herten,.,Germany
To Other Countries	06 01 06	Yes	93.4	other acids	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	06 02 04	Yes	0.51	sodium and potassium hydroxide	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	06 02 05	Yes	16.5	other bases	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning I'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	06 02 05	Yes	33.82	other bases	D9	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	07 05 13	Yes	37.37	solid wastes containing dangerous substances	D9	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	07 05 13	Yes	20.64	solid wastes containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,.,.,B4480,Belgium	Recyfuel,.,Engis,.,.,B4480,Belgium	Engis,.,.,B4480,Belgium
To Other Countries	08 01 11	Yes	4.42	waste paint and varnish containing organic solvents or other dangerous substances	R3	M	Weighed	Abroad	Nehlsen Gmbh & Co.,A-4187HH	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Nehlsen Gmbh & Co.,A-4187HH,Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany

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 Facilty Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	09 01 05	Yes	26.31	bleach solutions and bleach fixer solutions	R4	M	Weighed	Abroad	Remondis UK,.	Scott Lane Industrial Estate,Blackrod,Bolton,BL6 5SL,United Kingdom	Remondis UK Carr Lane Recycling and Treatment Facility,EPR/UP3134HY,Carr Lane,Prescott,Knowsley,LE3 41JZ,United Kingdom	Carr Lane,Prescott,Knowsley,LE3 41JZ,United Kingdom
To Other Countries	12 01 09	Yes	6.27	machining emulsions and solutions free of halogens	R1	M	Weighed	Abroad	ARF,.	22 Rue Jean Messager,.,St Remy Du Nord,FR59330,France	ARF,.,22 Rue Jean Messager,.,St Remy du Nord,FR53390,France	22 Rue Jean Messager,.,St Remy du Nord,FR53390,France
To Other Countries	11 01 09	Yes	110.74	sludges and filter cakes containing dangerous substances	R5	M	Weighed	Abroad	Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Fesstoffkonditionierung,783/240406	3-7+31 Gottlieb-Daimler Strasse,DE 33334, Gutersloh,.,Germany	Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Fesstoffkonditionierung,783/240406,3-7+31 Gottlieb-Daimler Strasse,DE 33334,Gutersloh,.,Germany	3-7+31 Gottlieb-Daimler Strasse,DE 33334,Gutersloh,.,Germany
To Other Countries	12 01 09	Yes	22.89	machining emulsions and solutions free of halogens	R1	M	Weighed	Abroad	REVATECH SA,.	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1	REVATECH SA,.,Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1
To Other Countries	12 01 09	Yes	74.26	machining emulsions and solutions free of halogens	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	Osterweute,Ce25541,Bruns buttel,.,Germany	Sava Gmbh & Co,.,1 Osterweute,Ce25541,Bruns buttel,.,Germany	Osterweute,Ce25541,Bruns buttel,.,Germany
To Other Countries	12 01 09	Yes	32.3	machining emulsions and solutions free of halogens	D9	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	13 02 05	Yes	0.17	mineral-based non-chlorinated engine, gear and lubricating oils	R1	M	Weighed	Abroad	Recyfuel,.	Engis,.,.,B4480,Belgium	Recyfuel,.,Engis,.,.,B4480,Belgium	Engis,.,.,B4480,Belgium
To Other Countries	13 07 03	Yes	107.61	other fuels (including mixtures)	R9	M	Weighed	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	14 06 05	Yes	16.39	sludges or solid wastes containing other solvents	D9	M	Weighed	Abroad	Nehlsen Gmbh & Co.,A-4187HH	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Nehlsen Gmbh & Co.,A-4187HH,Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany
To Other Countries	15 01 04	No	967.52	metallic packaging	R4	M	Weighed	Abroad	A1 Metal,WMP007d	Acragar,.,Mountmellick,Co. Laois,Ireland		
Within the Country	15 01 10	Yes	0.13	packaging containing residues of or contaminated by dangerous substances	R1	M	Weighed	Offsite in Ireland	ARF,.	22 Rue Jean Messager,.,St Remy Du Nord,FR59330,France	ARF,.,22 Rue Jean Messager,.,St Remy du Nord,FR53390,France	22 Rue Jean Messager,.,St Remy du Nord,FR53390,France
Within the Country	15 01 03	No	60.74	wooden packaging	R3	M	Weighed	Offsite in Ireland	Max Pallets,.	Colemanstown ,Rathcoole,Co.Dublin,.,Ireland		
Within the Country	15 01 10	Yes	12.81	packaging containing residues of or contaminated by dangerous substances	R1	M	Weighed	Offsite in Ireland	Nehlsen Gmbh & Co.,A-4187HH	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Nehlsen Gmbh & Co.,A-4187HH,Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany

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 Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	15 01 10	Yes	78.86	packaging containing residues of or contaminated by dangerous substances	R3	M	Weighed	Offsite in Ireland	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	15 01 10	Yes	183.44	packaging containing residues of or contaminated by dangerous substances	R5	M	Weighed	Abroad	Delta Containers Direct Ltd,.	Preston Street,Manchester,Manchester,M188DB,United Kingdom	Delta Containers Direct Ltd,.,Preston Street,.,Manchester,M188DB,United Kingdom	Preston Street,.,Manchester,M188DB,United Kingdom
To Other Countries	15 02 02	Yes	0.15	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	D9	M	Weighed	Abroad	Nehlsen Gmbh & Co.,A-4187HH	Nehlsen Gmbh & Co.,A-4187HH,Neiderlassung Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Nehlsen Gmbh & Co.,A-4187HH,Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany
Within the Country	16 02 14	No	1.25	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Offsite in Ireland	A1 Metal,WMP007d	Acragar,.,Mountmellick,Co. Laois,Ireland	Felix Gormley Ltd,.,Monery Upper,Crossdoney,.,Co. Cavan,Ireland	.,.,.,.,Ireland
Within the Country	16 01 07	Yes	69.6	oil filters	R4	M	Weighed	Offsite in Ireland	Hammond Metal Recycling ,.	Pigeon House Road,Ringsend,Dublin 4,.,Ireland	Hammond Metal Recycling,WFP DC 0013-01,Pigeon House Road,Ringsend,Dublin 4,.,Ireland	Pigeon House Road,Ringsend,Dublin 4,.,Ireland
Within the Country	16 02 14	No	21.46	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	Jordanstown drive,Unit 648 Greenogue Business Park,Rathcoole,Co. Dublin,Ireland	SITA Decontamination,D/PMVC/01F28/33629,Westvaartdijk,97,Grimbergen,1850,Netherlands	Westvaartdijk,97,Grimbergen,1850,Netherlands
To Other Countries	16 05 04	Yes	4.93	gases in pressure containers (including halons) containing dangerous substances	R3	M	Weighed	Abroad	Greenway,.	20 Redfern Street,Bootle,Liverpool,L208JB,United Kingdom	Greenway,.,20 Redfern Street,Bootle,Liverpool,L208JB,United Kingdom	20 Redfern Street,Bootle,Liverpool,L208JB,United Kingdom
To Other Countries	16 05 06	Yes	14.78	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	D10	M	Weighed	Abroad	AGR mbh - RZR Herten,.	Im Emscherbruch 11,45699,Herten,.,Germany	AGR mbh - RZR Herten,.,Im Emscherbruch 11,45699,Herten,.,Germany	Im Emscherbruch 11,45699,Herten,.,Germany
To Other Countries	16 05 06	Yes	63.41	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	16 05 08	Yes	232.23	discarded organic chemicals consisting of or containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	16 06 01	Yes	1986.17	lead batteries	R4	M	Weighed	Abroad	HJ Enthoven & Sons,BL5598	Darley Dale Smelter,South Darley,Derbyshire,DE4 2LP,United Kingdom	Nehlsen Gmbh & Co.,A-4187HH,Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany
To Other Countries	16 06 01	Yes	1035.79	lead batteries	R4	M	Weighed	Abroad	Envirowales Limited,OG1070327	Plateux 1 & 2,Rassau Industrial Estate,Ebbw Vale,NP235SD,United Kingdom	Envirowales Limited,OG1070327,Plateux 1 & 2,Rassau Industrial Estate,Ebbw Vale,NP23 5SD,United Kingdom	Plateux 1 & 2,Rassau Industrial Estate,Ebbw Vale,NP23 5SD,United Kingdom

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 Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	15 01 03	No	62.1	wooden packaging	R3	M	Weighed	Offsite in Ireland	Max Pallets,.	Colemanstown ,Rathcoole,Co.Dublin,,,Ireland	Electrical Waste Ireland,WFP-DS-09-0012-01,Jordanstown Drive,Unit 648,Greenogue Business Park,Rathcoole Co Dublin,Ireland	Jordanstown Drive,Unit 648,Greenogue Business Park,Rathcoole Co Dublin,Ireland
Within the Country	16 06 02	Yes	19.93	Ni-Cd batteries	R4	M	Weighed	Offsite in Ireland	KMK Metals,W0113-04	Cappincur Ind Est,Daingean Road,Tullamore,Co. Offaly,Ireland	KMK Metals,W0113-04,Cappincur Ind Est,Daingean Road,Tullamore,Co. Offaly,Ireland	Cappincur Ind Est,Daingean Road,Tullamore,Co. Offaly,Ireland
Within the Country	16 06 04	No	6.4	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	KMK Metals,W0113-04	Cappincur Ind Est,Daingean Road,Tullamore,Co. Offaly,Ireland	Orion B.V.,18/07/2937,De Steven,25,AX Drachten,9206,Netherlands	De Steven,25,AX Drachten,9206,Netherlands
Within the Country	16 06 05	No	1.67	other batteries and accumulators	R4	M	Weighed	Offsite in Ireland	KMK Metals,W0113-04	Cappincur Ind Est,Daingean Road,Tullamore,Co. Offaly,Ireland		
To Other Countries	16 10 01	Yes	0.12	aqueous liquid wastes containing dangerous substances	D10	M	Weighed	Abroad	AGR mbh - RZR Herten,.	Im Emscherbruch 11,45699,Herten,.,Germany	AGR mbh - RZR Herten,.,Im Emscherbruch 11,45699,Herten,.,Germany	Im Emscherbruch 11,45699,Herten,.,Germany
To Other Countries	16 10 01	Yes	29.11	aqueous liquid wastes containing dangerous substances	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	17 05 04	No	2129.0	soil and stones other than those mentioned in 17 05 03	R5	M	Weighed	Abroad	Terracon GmbH ,.	74-76 Hovestrasse,20539 Hamburg,.,.,Germany	Trackwork Ltd,.,Kirk Sandall Ind Estate,Doncaster,South Yorkshire,DN3 1RA,United Kingdom	Kirk Sandall Ind Estate,Doncaster,South Yorkshire,DN3 1RA,United Kingdom
To Other Countries	17 03 01	Yes	17.04	bituminous mixtures containing coal tar	R5	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,14/12/4149	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,.,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	17 05 04	No	510.24	soil and stones other than those mentioned in 17 05 03	D5	M	Weighed	Abroad	Biffa Waste Management (Cottonmount Landfill),.	140 Mallusk Rd. Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom	Biffa Waste Management (Cottonmount Landfill),.,140 Mallusk Road Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom	140 Mallusk Road Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom
To Other Countries	**17 05 03**	**Yes**	9137.18	soil and stones containing dangerous substances	D1	M	Weighed	Abroad	Buhck GmbH,eg0019	Rappenburg,.,Wiershop,21502,Germany	Buhck,eg0019,Rappenberg,.,Wiershop,21502,Germany	Rappenberg,.,Wiershop,21502,Germany
To Other Countries	17 05 03	Yes	11376.2	soil and stones containing dangerous substances	R5	M	Weighed	Abroad	Terracon GmbH ,.	74-76 Hovestrasse,20539 Hamburg,.,.,Germany	Terracon GmbH ,., 74-76 Hovestrasse,20539 Hamburg ,.,., Germany	74-76 Hovestrasse,20539 Hamburg ,.,., Germany
Within the Country	17 05 04	No	6684.05	soil and stones other than those mentioned in 17 05 03	D5	M	Weighed	Offsite in Ireland	Corranure Landfill,W0077-04	Cootehill Rd,Co. Cavan,.,.,Ireland		

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						M/C/E	Method Used					
To Other Countries	17 06 01	Yes	307.24	insulation materials containing asbestos	D1	M	Weighed	Abroad	Biffa Waste Management (Cottonmount Landfill),.	140 Mallusk Rd. Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom	Biffa Waste Management (Cottonmount Landfill),.,140 Mallusk Road Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom	140 Mallusk Road Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom
To Other Countries	18 01 06	Yes	0.56	chemicals consisting of or containing dangerous substances	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	18 01 07	No	0.04	chemicals other than those mentioned in 18 01 06	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Heiko Neumann Entsorgungfachbetrieb,.,Deponie Reesen GmbH & Co. KG,Johann - Sebastian - Bach - Strabe 60,39288,Burg,Germany	Deponie Reesen GmbH & Co. KG,Johann - Sebastian - Bach - Strabe 60,39288,Burg,Germany
To Other Countries	17 06 05	Yes	5391.38	construction materials containing asbestos (18)	D1	M	Weighed	Abroad	GEG mbH,EG0108	Bimohler Strasse,57a,Grossenaspe,24623,Germany	GEG mbH,EG0108,Bimohler Strasse,57a,Grossenaspe,24623,Germany	Bimohler Strasse,57a,Grossenaspe,24623,Germany
To Other Countries	17 06 05	Yes	1574.18	construction materials containing asbestos (18)	D1	M	Weighed	Abroad	Biffa Waste Management (Cottonmount Landfill),.	140 Mallusk Rd. Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom	Biffa Waste Management (Cottonmount Landfill),.,140 Mallusk Road Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom	140 Mallusk Road Mallusk,Newtownabbey,Co. Antrim,GB BT36 4QN,United Kingdom
To Other Countries	19 02 05	Yes	1958.7	sludges from physico/chemical treatment containing dangerous substances	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	18 01 09	No	17.58	medicines other than those mentioned in 18 01 08	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	20 01 27	Yes	16.77	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
Within the Country	19 02 99	No	54320.0	wastes not otherwise specified	D8	M	Weighed	Offsite in Ireland	Ringsend WWTW,.	Pigeon House Road,Ringsend,.,Dublin 4,Ireland		
To Other Countries	20 01 27	Yes	19.58	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	Nehlsen Gmbh & Co.,A-4187HH	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Nehlsen Gmbh & Co.,A-4187HH,Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany	Neiderlassung Nehlsen-Plimp,Betriebsstatte Bremen,Louis-Krages Strasse 10,Bremen,Germany

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 Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	20 01 29	Yes	1.25	detergents containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	20 01 32	No	0.27	medicines other than those mentioned in 20 01 31	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	19 12 11	Yes	183.44	other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances	R3	M	Weighed	Abroad	Delta Containers Direct Ltd,.	Preston Street,Manchester,Manchester,M188DB,United Kingdom 1	Delta Containers Direct Ltd,.,Preston Street,.,Manchester,M188DB,United Kingdom	Preston Street,.,Manchester,M188DB,United Kingdom 1
To Other Countries	20 01 19	Yes	12.53	pesticides	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	Osterweute,Ce25541,Bruns buttel,.,Germany	Sava Gmbh & Co,..,1 Osterweute,Ce25541,Bruns buttel,.,Germany	Osterweute,Ce25541,Bruns buttel,.,Germany
To Other Countries	20 01 27	Yes	155.03	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	ARF,.	22 Rue Jean Messager,.,St Remy Du Nord,FR59330,France	ARF,.,22 Rue Jean Messager,.,St Remy du Nord,FR53390,France	22 Rue Jean Messager,.,St Remy du Nord,FR53390,France
To Other Countries	20 01 27	Yes	255.89	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	06 01 05	Yes	0.006	nitric acid and nitrous acid	D10	M	Weighed	Abroad	AGR mbh - RZR Herten,.	Im Emscherbruch 11,45699,Herten,.,Germany	AGR mbh - RZR Herten,..Im Emscherbruch 11,45699,Herten,.,Germany	Im Emscherbruch 11,45699,Herten,.,Germany
To Other Countries	06 01 05	Yes	1.1	nitric acid and nitrous acid	R5	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	06 01 05	Yes	2.84	nitric acid and nitrous acid	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning l'Industrial D'Ehein,B 4480 ENGIS,..,Belgium	REVATECH SA,..Zoning l'Industrial D'Ehein,B 4480 ENGIS,..,Belgium	Zoning l'Industrial D'Ehein,B 4480 ENGIS,..,Belgium
To Other Countries	06 01 06	Yes	84.63	other acids	R5	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	06 02 04	Yes	0.09	sodium and potassium hydroxide	D9	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	08 01 11	Yes	24.85	waste paint and varnish containing organic solvents or other dangerous substances	R1	M	Weighed	Abroad	ARF,.	22 Rue Jean Messager,.,St Remy Du Nord,FR59330,France	ARF,.,22 Rue Jean Messager,.,St Remy du Nord,FR53390,France	22 Rue Jean Messager,.,St Remy du Nord,FR53390,France
To Other Countries	08 01 11	Yes	1.33	waste paint and varnish containing organic solvents or other dangerous substances	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	08 01 11	Yes	128.96	waste paint and varnish containing organic solvents or other dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,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 Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	08 03 12	Yes	4.28	waste ink containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	08 04 09	Yes	0.37	waste adhesives and sealants containing organic solvents or other dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	08 04 13	Yes	32.1	aqueous sludges containing adhesives or sealants containing organic solvents or other dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	13 02 08	Yes	10.36	other engine, gear and lubricating oils	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	13 03 07	Yes	0.2	mineral-based non-chlorinated insulating and heat transmission oils	R9	M	Weighed	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	14 06 03	Yes	7.56	other solvents and solvent mixtures	R1	M	Weighed	Abroad	ARF,.	22 Rue Jean Messager,.,St Remy Du Nord,FR59330,France	ARF,.,22 Rue Jean Messager,.,St Remy du Nord,FR53390,France	22 Rue Jean Messager,.,St Remy du Nord,FR53390,France
To Other Countries	14 06 03	Yes	383.54	other solvents and solvent mixtures	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	15 02 02	Yes	41.56	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Abroad	ARF,.	22 Rue Jean Messager,.,St Remy Du Nord,FR59330,France	ARF,.,22 Rue Jean Messager,.,St Remy du Nord,FR53390,France	22 Rue Jean Messager,.,St Remy du Nord,FR53390,France
To Other Countries	15 02 02	Yes	8.72	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,., The Netherlands	Afvalstoffen Terminal Moerdijk B.V,821780,Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.,Netherlands	Industrieterrein - Seaport M152,Vlasweg 12,.,4782 PW Moerdijk,Netherlands
To Other Countries	15 02 02	Yes	0.46	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R13	M	Weighed	Abroad	SRCL,W0054-02	Unit 1A,Allied Industrial Estate,Kylemore Rd. Ballyfermot,Dublin 10,Ireland		
To Other Countries	15 02 02	Yes	422.16	absorbents, filter materials, wiping cloths and protective clothing other than those	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium	Recyfuel,.,Engis,..,B4480,Belgium	Engis,..,B4480,Belgium
To Other Countries	15 02 03	No	1.36	mentioned in 15 02 02	R1	M	Weighed	Abroad	Recyfuel,.	Engis,..,B4480,Belgium		
To Other Countries	16 01 14	Yes	0.91	antifreeze fluids containing dangerous substances	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	1 Osterweute,Ce25541,Brunsbuttel,.,Germany	Sava Gmbh & Co,.,1 Osterweute,Ce25541,Brunsbuttel,.,Germany	1 Osterweute,Ce25541,Brunsbuttel,.,Germany
Within the Country	16 02 13	Yes	0.26	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	R4	M	Weighed	Offsite in Ireland	Irish Lamp Recycling,WFP-KE-14-0072-01	Woodstock Industrial Estate,.Athy,Co. Kildare,Ireland		
To Other Countries	16 03 03	Yes	0.01	inorganic wastes containing dangerous substances	D10	M	Weighed	Abroad	AGR mbh - RZR Herten,.	Im Emscherbruch 11,45699,Herten,.,Germany	AGR mbh - RZR Herten,.,Im Emscherbruch 11,45699,Herten,.,Germany	Im Emscherbruch 11,45699,Herten,.,Germany

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 Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	16 03 03	Yes	2.0	inorganic wastes containing dangerous substances	D9	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	16 03 03	Yes	2.86	inorganic wastes containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,,.,B4480,Belgium	Recyfuel,.,Engis,,.,B4480,Belgium	Engis,,.,B4480,Belgium
To Other Countries	16 03 03	Yes	5.27	inorganic wastes containing dangerous substances	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	16 03 05	Yes	0.02	organic wastes containing dangerous substances	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	1 Osterweute,Ce25541,Brunsbuttel,.,Germany	Sava Gmbh & Co,.,1 Osterweute,Ce25541,Brunsbuttel,.,Germany	1 Osterweute,Ce25541,Brunsbuttel,.,Germany
To Other Countries	16 05 04	Yes	11.87	gases in pressure containers (including halons) containing dangerous substances	R3	M	Weighed	Abroad	Grundon Waste Management,.	Thames House,Benson,Wallingford,OX10 6LS,United Kingdom	Grundon Waste Management,.,Thames House,Benson,Wallingford,OX10 6LS,United Kingdom	Thames House,Benson,Wallingford,OX10 6LS,United Kingdom
To Other Countries	16 02 13	Yes	0.26	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	R4	M	Weighed	Abroad	Irish Lamp Recycling,WFP-KE-14-0072-01	Woodstock Industrial Estate,.,Athy,Co. Kildare,Ireland	Future Industries,EPR/KP3437PF,East Ord Ind. Estate,.,Berwick on Tweed,TD15 2TF,United Kingdom	.,.,.,.,United Kingdom
To Other Countries	16 05 06	Yes	5.0	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	D9	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	16 05 06	Yes	0.14	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	R1	M	Weighed	Abroad	Recyfuel,.	Engis,,.,B4480,Belgium	Recyfuel,.,Engis,,.,B4480,Belgium	Engis,,.,B4480,Belgium
To Other Countries	16 05 06	Yes	6.92	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium
To Other Countries	16 05 06	Yes	24.54	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	1 Osterweute,Ce25541,Brunsbuttel,.,Germany	Sava Gmbh & Co,.,1 Osterweute,Ce25541,Brunsbuttel,.,Germany	1 Osterweute,Ce25541,Brunsbuttel,.,Germany
To Other Countries	16 05 07	Yes	0.37	discarded inorganic chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	AGR mbh - RZR Herten,.	Im Emscherbruch 11,45699,Herten,.,Germany	AGR mbh - RZR Herten,.,Im Emscherbruch 11,45699,Herten,.,Germany	Im Emscherbruch 11,45699,Herten,.,Germany
To Other Countries	16 05 07	Yes	60.07	discarded inorganic chemicals consisting of or containing dangerous substances	D9	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	16 05 07	Yes	4.48	discarded inorganic chemicals consisting of or containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,,.,B4480,Belgium	Recyfuel,.,Engis,,.,B4480,Belgium	Engis,,.,B4480,Belgium
To Other Countries	16 05 07	Yes	138.31	discarded inorganic chemicals consisting of or containing dangerous substances	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	REVATECH SA,.,Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,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 Non 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 Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	16 05 08	Yes	3.61	discarded organic chemicals consisting of or containing dangerous substances	D9	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	16 05 08	Yes	0.15	discarded organic chemicals consisting of or containing dangerous substances	R5	M	Weighed	Abroad	REVATECH SA,.	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1	REVATECH SA,.,Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1
To Other Countries	16 09 03	Yes	0.07	peroxides, for example hydrogen peroxide	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	Osterweute,Ce25541,Brunsbuttel,.,Germany	Sava Gmbh & Co,.,1 Osterweute,Ce25541,Brunsbuttel,.,Germany	Osterweute,Ce25541,Brunsbuttel,.,Germany
To Other Countries	16 10 01	Yes	19.15	aqueous liquid wastes containing dangerous substances	R1	M	Weighed	Abroad	ARF,.	22 Rue Jean Messager,.,St Remy Du Nord,FR59330,France	ARF.,.,22 Rue Jean Messager,.,St Remy du Nord,FR53390,France	22 Rue Jean Messager,.,St Remy du Nord,FR53390,France
To Other Countries	16 10 01	Yes	52.34	aqueous liquid wastes containing dangerous substances	R1	M	Weighed	Abroad	McQuillan Environmental,P0187/07A	Caulside Drive,Newpark Ind Est,Co. Antrim,BT41 2DU,United Kingdom	McQuillan Envirocare,P0187/07A,Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom	Caulside Drive,Newpark Industrial Estate,Co. Antrim,BT41 2DU,United Kingdom
To Other Countries	16 10 01	Yes	0.11	aqueous liquid wastes containing dangerous substances	R1	M	Weighed	Abroad	Recyfuel,.	Engis,.,.,B4480,Belgium	Recyfuel,.,Engis,.,.,B4480,Belgium	Engis,.,.,B4480,Belgium
To Other Countries	16 10 01	Yes	69.15	aqueous liquid wastes containing dangerous substances	R1	M	Weighed	Abroad	REVATECH SA,.	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1	REVATECH SA,.,Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1	Zoning l'Industrial D'Ehein,B 4480 ENGIS,.,.,Belgium 1
To Other Countries	16 10 01	Yes	399.02	aqueous liquid wastes containing dangerous substances	D10	M	Weighed	Abroad	Sava Gmbh & Co,.	Osterweute,Ce25541,Brunsbuttel,.,Germany	Sava Gmbh & Co,.,1 Osterweute,Ce25541,Brunsbuttel,.,Germany	Osterweute,Ce25541,Brunsbuttel,.,Germany
To Other Countries	18 02 08	No	32.15	medicines other than those mentioned in 18 02 07	R1	M	Weighed	Abroad	Afvalstoffen Terminal Moerdijk B.V.,821780	Industrieterrein - Seaport M152,Vlasweg 12,4782 PW Moerdijk,.. The Netherlands		
To Other Countries	19 01 07	Yes	12.88	solid wastes from gas treatment	D10	M	Weighed	Abroad	Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Fesstoffkonditionierung,783/240406	3-7+31 Gottlieb-Daimler Strasse,DE 33334, Gutersloh,.,Germany	Zimmermann Sonderabfallentsorgung und Verwertung & Co KG Fesstoffkonditionierung,783/240406,3-7+31 Gottlieb-Daimler Strasse,DE 33334,Gutersloh,.,Germany	3-7+31 Gottlieb-Daimler Strasse,DE 33334,Gutersloh,.,Germany
To Other Countries	19 09 04	No	15.6	spent activated carbon	R4	M	Weighed	Abroad	Purton Carbons,PP3232SB	Riddle Street,Purton,Gloucester,GL13 9HN,United Kingdom		
Within the Country	20 01 21	Yes	0.01	fluorescent tubes and other mercury-containing waste	R4	M	Weighed	Offsite in Ireland	Irish Lamp Recycling,WFP-KE-14-0072-01	Woodstock Industrial Estate,.,Athy,Co. Kildare,Ireland	Future Industries,EPR/KP3437PF,East Ord Ind. Estate,.,Berwick on Tweed,TD15 2TF,United Kingdom	.,.,.,.,United Kingdom
Within the Country	20 01 25	No	1.77	edible oil and fat	R3	M	Weighed	Offsite in Ireland	Green Generation Ltd.,LR014252	Gorteen Lower,Nurney,Co. Kildare,.,Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button

APPENDIX 3

Schedule of 2016 Targets and Objectives

RILTA ENVIRONMENTAL Ltd.

EHS MANAGEMENT SYSTEM

EHS MANAGEMENT PLAN

In accordance with
ISO 14001 & OHSAS18001

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.	Conduct site tours for all staff before end 2016	Collate staff into groups of no more than 5 persons per site tour	CH	Apr 16	
			Complete site walks on non month-end Fridays	CH	Oct 16	
		Complete Staff Environmental Training Package	Andy Wood and CH to develop training package	CH	Jan 16	Yes
			AW and CH to start delivering training package	CH	Feb 16	Yes
			Further training to be developed on foot of original Training findings.	CH	June 16	Yes

2	Optimize waste tracking from cradle to grave	Install suitable waste tracking system for all waste	Install system Snag system Track asbestos Switch Off Old System	CH/DM CH/DM CH/DM CH/DM	Jan 16 Feb 16 March 16 Aug 16	Yes

EMP Ref.	***Objective***	***Target***	***Environmental Management Programme for the implementation of objectives.***	***Responsible Person***	***Completion Date***	***Completed (Y/N)***
3	Ensure quality drainage system	No leaks	Re-coat the settlement tank (1) Re-coat the settlement tank (2) Re-coat the settlement tank (3)	CH CH CH	June 16 August 16 October 16	
4	Ensure only clean water released to the river	No ELV breaches	Empty and clean attenuation tank Skim storm water interceptor on a monthly basis Replace/Repair damaged concrete on a rota basis to ensure no damaged areas by 2016	CH/SH CH/SH CH/SH	June 16 Ongoing Dec 16	Y Y Y

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	Y Yes
6	Optimize the quality of trade effluent	No ELV breaches	Clean 'wet wells' twice a year Clean DAF system twice a year	TMc TMc	Dec 16 Dec 16	Y Y

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. Monitor adjoining river on a quarterly basis. Implement 'closed door' policy system when unloading liquid waste tankers where possible Cold cutting at the cedar site to take place inside with doors close Inform neighbours when bulk soil/sludge are being moved off site Make contact with Fortunes and Bailey care on a quarterly basis	CH CH CM/DG DG CH CH	Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	

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 electricity usage by 5%	Complete targeted energy audit at both 402 and 14A1 sites. Assess findings of audit. Implement findings of audit if economically and practically feasible.	CH CH/SC CH/SC	Aug 16 Sept 16 Dec 16	

EMP Ref.	***Objective***	***Target***	***Environmental Management Programme for the implementation of objectives.***	***Responsible Person***	***Completion Date***	***Completed (Y/N)***
9	Reduce Process Waste	Reduce filtercake volumes	Install and commission sludge drying plant Investigate alternative uses for the new dried waste	CH CH	May 16 Sept 16	
10	Reduce The Number of Lost Time Accidents	Aim for Zero Lost Time Accidents	Tailor Manual Handling Training to emphasize the need to cut out ‘reaching and lifting’ Aim for 100% Manual and Chemical handling	CH CH	May 16 Dec 16	
11						

APPENDIX 4

Schedule of 2017 proposed Targets and Objectives

RILTA ENVIRONMENTAL Ltd.

EHS MANAGEMENT SYSTEM

EHS MANAGEMENT PLAN

In accordance with
ISO 14001 & OHSAS18001

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 produce EHS diary for 2018	Find suitable producer(s) Develop content for approval Get quotes for production Print and distribute to relevant stakeholders	CH SL SL SL	Mar 17 Mar 17 Mar 17 Apr 17	
2	Optimize waste tracking from cradle to grave	Develop integrated system for managing all data	Sign off on suitable reports on electronic tracking system Amend ‘incoming waste records’ to accommodate tracking reports Develop live mass balance monthly update	CH CH CH	Apr 17 May 17 Oct 17	

EMP Ref.	***Objective***	***Target***	***Environmental Management Programme for the implementation of objectives.***	***Responsible Person***	***Completion Date***	***Completed (Y/N)***
3	Ensure quality drainage system	No leaks	Re-coat the settlement tank (1) Re-coat the settlement tank (2) Re-coat the settlement tank (3)	CH CH CH	June 17 August 17 October 17	
4	Ensure only clean water released to the river	No ELV breaches	Empty and clean attenuation tank Skim storm water interceptor on a monthly basis Replace/Repair damaged concrete on a rota basis to ensure no damaged areas by 2017	CH CH CH	Mar 17 Ongoing Dec 17	

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.	Employ solvent free paint	Source suitable paints Assess suitability of existing paint systems	CH CH	Mar 17 April 17	
6	Optimize the quality of trade effluent	No ELV breaches	Clean ‘wet wells’ twice a year Clean DAF system twice a year	TMc TMc	Ongoing Ongoing	

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. Monitor adjoining river on a quarterly basis. Implement 'closed door' policy system when unloading liquid waste tankers where possible Cold cutting at the cedar site to take place inside with doors close Make contact with immediate neighbours on a quarterly basis	CH CH CM/DG DG CH	Ongoing Ongoing Ongoing Ongoing Ongoing	

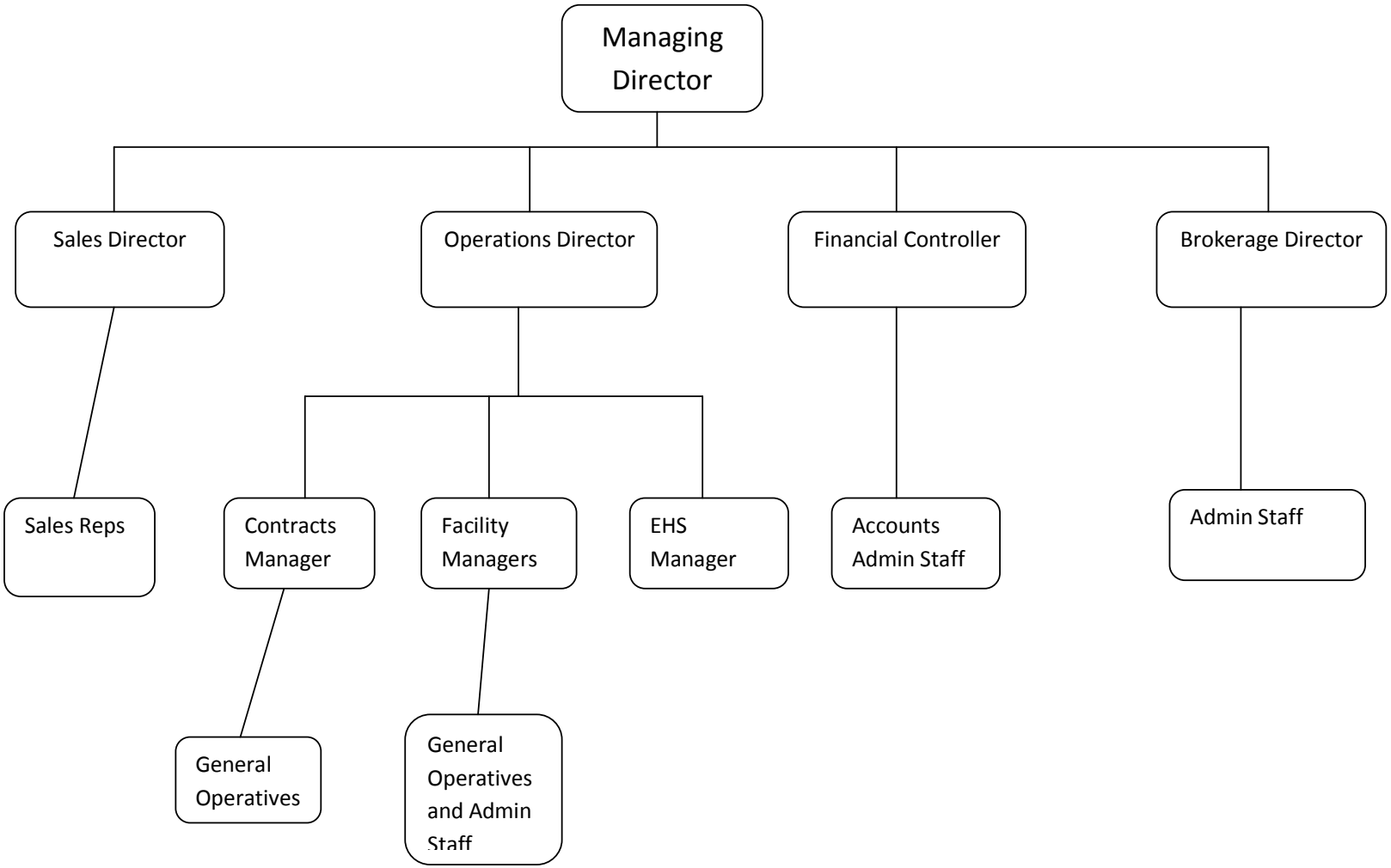
EMP Ref.	***Objective***	***Target***	***Environmental Management Programme for the implementation of objectives.***	***Responsible Person***	***Completion Date***	***Completed (Y/N)***
8	To Be Energy Efficient	Reduce electricity usage by 5%	Assess findings of 2016 audit. Implement findings of audit if economically and practically feasible.	CH/SC CH/SC	Apr 17 June 17	

EMP Ref.	***Objective***	***Target***	***Environmental Management Programme for the implementation of objectives.***	***Responsible Person***	***Completion Date***	***Completed (Y/N)***
9	Reduce Process Waste	Reduce filtercake volumes	Optimize the volume of 'dig-out' waste that can be dried.	DG	June 17	
10	Reduce The Number of Lost Time Accidents	Aim for Zero Lost Time Accidents	Tailor Manual Handling Training to emphasize the need to cut out 'reaching and lifting' Aim for 100% Manual and Chemical handling Develop app for recording 'area of concern/near miss' data Aim for 75 near misses	SL SL SL SL	Ongoing Dec 17 Apr 17 Dec 17	
11	Reduce Detergent use on Tank Cleaning Work	Reduce Detergent use by 10%	Eliminate neat detergent/road bio use Do not exceed recommended usage	EK EK	Dec 17 Dec 17	

APPENDIX 5

Rilta Environmental Management Structure

Rilta Environmental Management Structure



APPENDIX 6

Bund Integrity Test Report 2016 / 2017

Rilta Environmental Ltd.

Bund Integrity Testing at Block 402, Greenogue Business Park, Rathcoole, Co. Dublin

May 2017

Revision: **A**

TOBIN CONSULTING ENGINEERS

TOBIN
Patrick J. Tobin & Co. Ltd.

REPORT

PROJECT:

Bund Integrity Testing

Block 402, Greenogue Business Park, Rathcoole, Co. Dublin

CLIENT:

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DOCUMENT AMENDMENT RECORD

Client: **Rilta Environmental Ltd.**

Project: **10063 – Bund Integrity Testing**

Title: **Bund Integrity Testing**

PROJECT NUMBER: 6731				DOCUMENT REF:6731/Rev A			
A	Bund Integrity Testing	FH	08/05/17	ST	09/05/17	DG	09/05/17
Revision	**Description & Rationale**	**Originated**	**Date**	**Checked**	**Date**	**Authorised**	**Date**
TOBIN Consulting Engineers							

TABLE OF CONTENTS

Appendix A

Figure 1 – Bund / Tank Locations for testing (Block 402, Greenogue Business Park)

Appendix B

Block 402- CCTV Drainage Inspection Report

1 INTRODUCTION

Tobin Consulting Engineers (hereafter referred to as TOBIN) have been commissioned by Rilta Environmental Ltd. to carry out Bund Integrity Testing at their facility at Block 402, Greenogue Business Park, Rathcoole, Co. Dublin under the requirements of the site's EPA Waste Licence (EPA Waste Licence Reg. No. W0192-03).

TOBIN proposed that over a period amenable to facility operations hydrostatic testing, CCTV survey and structural survey would be carried out on the specified bunds and areas.

A CCTV survey of the site drainage was carried out by Rilta staff on 1/03/2017. A structural survey of the buildings outlined for assessment at the site was carried out by a TOBIN Engineer on Monday, 19th December 2016.

Hydrostatic testing of a number of bunded areas and underground settlement tanks commenced on Saturday, April 1st and concluded on Monday, 10th April 2017, The underground settlement tanks were tested in July 2016.

Areas / Bunds for testing identified within Block 402, Greenogue Business Park include:

- Area / Bund No. 1: Contaminated Soil Storage Building
- Area / Bund No. 2: Asbestos Storage Building
- Area / Bund No. 3: Outdoor Bunded Tank Area
- Area / Bund No. 4: Indoor Oil Bund
- Area / Bund No. 5: Indoor Chemical Bund
- Area / Bund No. 6: Underground Tanks (Settlement Tanks (3No.) & Wet Wells (2No.))
- Area / Bund No. 7: Site Drainage Network
- Area / Bund No. 8: Brokerage Quarantine Area, No.7 Portable Bund
- Area / Bund No. 10: Drum Division Sump
- AJ – MHF-11: CCTV Drainage Inspection
- Pipework between Outdoor bund & Internal sump

TOBIN carried out preliminary inspections of the bunds and areas listed above and made assessments as to the necessity/suitability of each for hydrostatic testing or structural assessment. A detailed bund location map (Figure 1) is contained in Appendix A.

2 METHODOLOGY

It was proposed that over a period when the facility was non-operational, liquid levels within the overground bunds and underground tanks would be monitored, following preparatory works, for a three day period (preferably over a weekend). Any subsequent fluctuation in levels over this period would indicate if the integrity of each bund is intact.

2.1 METHODOLOGY FOR TESTING AT BLOCK 402, GREENOGUE BUSINESS PARK

A methodology for the testing of individual bunds and tanks within Block 402 is detailed below. The locations of the areas tested at Block 402 are shown in Figure 1 in Appendix A.

2.1.1 Contaminated Soil Storage Building (Area / Bund No. 1)

A structural survey was carried out by a TOBIN Engineer on the Contaminated Soil Storage Building at Block 402, on Monday, 19th December 2016, located as shown on Figure 1 of Appendix A. This building is designated as an area for the storage of contaminated soil material.

The survey consisted of a visual assessment of all walls, floors and ramps within the building.

This area is generally used to store contaminated soil and at the time of the inspection had mainly been emptied out. The construction of the ground floor slab is a typical industrial ground floor construction with 6m x 6m concrete bays. There is a concrete upstand approx 100mm high around the perimeter of the area with block walls above.

The floor slab and up-stand was generally found to be in good structural condition with no obvious defects.

2.1.2 Asbestos Storage Building (Area / Bund No. 2)

A CCTV survey was carried out on all drainage pipework associated with the Asbestos Storage Building at Block 402, to ensure the integrity of the pipes and associated valves. The location of the valve connection from this building to the site drainage network is shown on Figure 1.

2.1.3 Outdoor Bunded Tank Area (Area / Bund No. 3)

It was proposed to carry out a hydrostatic test on the Outdoor Concrete Bund at the Tank Area on the Block 402 site, on Saturday, 1st of April 2017, located as shown in Figure 1 of Appendix A. The

bund was thoroughly cleaned out, with any debris and sludge removed from the bund prior to testing.

The bund was then incrementally filled with water to a level that is equal to 25% of the overall capacity of the bund. This was to represent the maximum capacity the bund will be required to hold.

When the bund was full to the required limit it was allowed to sit for one day to allow the concrete walls and base to absorb any initial water and reach an equilibrium state. After this 24hr period had lapsed, the level of water was measured at 24hr intervals over 3 days.

Further to this testing the bund was inspected by a structural engineer to ensure that any remedial work that is required has been carried out such as protective coating applied or any cracks or faults repaired and sealed to a satisfactory standard.

Please Note: *During this 3 day test period the total drop in water level, after allowing for rainfall and evaporation, should not exceed 1/500th of the average depth of water or 10mm.*

2.1.4 Indoor Oil Bund (Area / Bund No. 4)

It was proposed to carry out a hydrostatic test on the Indoor Oil Bund in the Hydrocarbon Waste Treatment Building on the Block 402 site, on Wednesday, 5th of April 2017, located as shown in Figure 1 of Appendix A. The bund was thoroughly cleaned out, with any debris and sludge removed from the bund prior to testing.

The bund was then incrementally filled with water to a level that is equal to 25% of the overall capacity of the bund. This was to represent the maximum capacity the bund will be required to hold.

When the bund was full to the required limit it was allowed to sit for one day to allow the concrete walls and base to absorb any initial water and reach an equilibrium state. After this 24hr period had lapsed, the level of water was measured at 24hr intervals over 3 days.

Further to this testing the bund was inspected by a structural engineer to ensure that any remedial work that is required has been carried out such as protective coating applied or any cracks or faults repaired and sealed to a satisfactory standard.

Please Note: *During this 3 day test period the total drop in water level, after allowing for rainfall and evaporation, should not exceed 1/500th of the average depth of water or 10mm.*

2.1.5 Indoor Chemical Bund (Area / Bund No. 5)

It was proposed to carry out a hydrostatic test on the Indoor Chemical Bund in the Hydrocarbon Waste Treatment Building on the Block 402 site, Saturday, 8th of April 2017, located as shown in Figure 1 of Appendix A. The bund was thoroughly cleaned out, with any debris and sludge removed from the bund prior to testing.

The bund was then incrementally filled with water to a level that is equal to 25% of the overall capacity of the bund. This was to represent the maximum capacity the bund will be required to hold.

When the bund was full to the required limit it was allowed to sit for one day to allow the concrete walls and base to absorb any initial water and reach an equilibrium state. After this 24hr period had lapsed, the level of water was measured at 24hr intervals over 3 days.

Further to this testing the bund was inspected by a structural engineer to ensure that any remedial work that is required has been carried out such as protective coating applied or any cracks or faults repaired and sealed to a satisfactory standard.

Please Note: *During this 3 day test period the total drop in water level, after allowing for rainfall and evaporation, should not exceed 1/500th of the average depth of water or 10mm.*

2.1.6 Underground Tanks {Settlement Tanks (3No.) and Wet Wells (2No.)} (Area / Bund No. 6)

It was proposed that hydrostatic testing on the Underground Tanks on the Block 402 site would be carried out over a period when the underground tanks were non-operational.

It was proposed, that a data logger would be placed in each of the underground settlement tanks to increase measurement accuracy. The loggers were then added to each tank on the Friday of the testing period and the liquid allowed stand for 24hrs to ensure a state of equilibrium.

The exit and entry points to the tanks were closed on the Friday and the internal liquid allowed to stand for a 24hr period. The level of the liquid in each chamber was recorded over the weekend and the loggers were removed, prior to the recommencement of work at the facility on the Monday morning.

2.1.7 Site Drainage Network (Area / Bund No. 7)

It was proposed to carry out a CCTV survey on the entire drainage network and associated valves on the Block 402 site, to ensure the integrity of same. Upon inspection, if any pipework or valves show signs of major deterioration or malfunction they shall be replaced or repaired.

2.1.8 Brokerage Quarantine Area Portable Bund (Area / Bund No. 8)

It was proposed to test the Outdoor Portable Plastic Bund at the Brokerage Quarantine Building on the Block 402 site, located as shown in Figure 1 of Appendix A. The bund was thoroughly cleaned out, with any debris and sludge removed from the bund prior to testing.

The bund was then incrementally filled with water to a level that is equal to 25% of the overall capacity of the bund. This was to represent the maximum capacity the bund will be required to hold.

When the bund was full to the required limit it was be allowed to sit for one day to allow the container/bund to absorb any initial water and reach an equilibrium state. After this 24hr period had lapsed, the level of water was measured at 24hr intervals over 3 days.

Further to this testing the bund was inspected by a structural engineer to ensure that any remedial work that is required has been carried out. In this case as the bunds are plastic it would be recommended to replace the bund in the event of a fault or malfunction.

Please Note: *During this 3 day test period the total drop in water level, after allowing for rainfall and evaporation, should not exceed 1/500th of the average depth of water or 10mm.*

2.1.9 Drum Division Sump (Area / Bund No. 10)

A CCTV survey was carried out on all drainage pipework associated with the Drum Division Sump to ensure the integrity of the pipes and associated valves. The location of the sump is shown on Figure 1 in Appendix A.

3.0 CONTROL

Due to the potential for evaporation in the settlement tanks/bunded areas, a control was put in place (note: where tanks are internal there is no risk of precipitation influencing levels). A

container was filled to a specific level with liquid from the Underground Tanks. This control was left beside the internal tanks throughout the testing period. This control provides an indication of the evaporation rate active on the tanks and the influence of any rainfall during the testing period. Due to the potential for evaporation and precipitation in the Outdoor Concrete Bund, a control was put in place. A container was filled to a specific level with water. This control was left beside the Outdoor Concrete Bund.

These controls provide an indication of the evaporation and precipitation rate active on the bunds both indoors and outdoors.

3.1 FAILURE

Should the structure not satisfy the test, remedial works will be recommended and carried out and the same procedure will be repeated.

3.2 WATER DISPOSAL

Any water used in this procedure will be treated on site.

3.3 PROGRAMME FOR TESTING (BLOCK 402)

It was proposed that all testing would be carried out for Block 402 over a series of 5-day period (ie. from Saturday April 1st – Monday April 3rd 2017).

- Day 1: TOBIN staff attended Block 402 on Thursday, 30th March 2017, before the testing commenced in order to assess all Areas / Bunds for testing and to review the locations of the Areas / Bunds to be tested (with Rilta staff).

- Day 2: Preparation of test areas including the addition of water to containers/bunds where required for hydrostatic testing (with Rilta staff). Levels were taken by TOBIN staff.

- Days 3-5: TOBIN staff attended site on Saturday, 1st April, Sunday, 2nd April and Monday, 3rd April 2017 to take levels at each test location. Levels were taken at the same time each day, weather conditions noted and controls checked.

- A TOBIN Structural Engineer visited site to carry out a structural assessment of the bunds and buildings on Monday, 19th December 2016.

4 RESULTS

4.1 HYDROSTATIC SURVEY RESULTS

Hydrostatic testing was carried out on the Bunded areas & Underground Storage Tanks from Saturday April 1st to Monday April 3rd 2017, Wednesday April 5th to Friday April 7th 2017 and Saturday April 8th to Monday April 10th 2017.

No fluctuation in liquid level was noted in the bunds or tanks during the first monitoring period Day 1 to Day 2 (1st April – 2nd April 2017, 5th of April – 6th of April 2017 and 8th of April – 9th of April 2017) and levels remained constant for the second monitoring period Day 2 to Day 3 (April 2nd – April 3rd 2017, April 7th – April 8th 2017 and April 8th to April 9th 2017). Results from the controls showed no variation and were consistent with readings from all storage tanks.

As no fluctuation was noted in liquid levels during the measurement period and the control remained constant, it is determined that all tested bunds and tanks are in good structural condition. No ancillary works are required for these bunds.

4.2 TESTING AT BLOCK 402, GREENOGUE BUSINESS PARK

Testing commenced 'as per methodology' on Saturday April 1st 2017 Measurements were recorded over three consecutive days and the results were analysed by TOBIN staff. No fluctuation in liquid level was noted at any of the monitoring locations, during any of the daily monitoring events (see results below). The controls for these assessments showed no change, remaining consistent with the results from the daily monitoring.

4.2.1 Contaminated Soil Storage Building (Area / Bund No. 1)

As per methodology a structural survey was carried out by a TOBIN Engineer on the Contaminated Soil Storage Building at Block 402, on Monday, 19th December 2016, located as shown on Figure 1 of Appendix A. This building is designated as an area for the storage of contaminated soil material.

The survey consisted of a visual assessment of all walls, floors and ramps within the building.

This area is generally used to store contaminated soil and at the time of the inspection had mainly been emptied out. The construction of the ground floor slab is a typical industrial ground floor construction with 6m x 6m concrete bays. There is a concrete upstand approx 100mm high around the perimeter of the area with block walls above.

The floor slab and up-stand was generally found to be in good structural condition with no obvious defects.

4.2.2 Asbestos Storage Building (Area / Bund No. 2)

As per methodology a CCTV survey was carried out on all drainage pipework associated with the Asbestos Storage Building at Block 402, to ensure the integrity of the pipes and associated valves. The location of the valve connection from this building to the site drainage network is shown on Figure 1.

This area is generally used to store dry material. The concrete floors have no joints and were found to be in good condition. There is a reinforced concrete wall around the perimeter of the units, this was also found to be in good structural condition. There is a valved drainage system under the floor which is manually released. The drainage system is outlined in detail in section 5.1 of this report.

4.2.3 Outdoor Bunded Tank Area (Area / Bund No. 3)

As per methodology Area / Bund No. 3 was filled with water to an appropriate level (110% tank volume) on Friday 31st of March 2017. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Saturday 1st of April. Table 4-1 below represents recorded water levels within the bund and control over the test period. Various levels were taken for each bund as there was a variation in floor level in some of the bunds. The overall bund was tested in 3 separate parts (Front, Middle & Rear).

Table 4-1 Bund / Area No. 3 Test Result

Measurement Location	Sat 1st Apr (Top of bund to water level)	Sun 2nd Apr (Top of bund to water level)	Mon 3rd Apr (Top of bund to water level)	Fluctuation	Pass / Fail
Front of bund					
A, Front Left	75cm	75cm	75cm	0.0cm	**Pass**
B, Front Right	76cm	76cm	76cm	0.0cm	**Pass**
C, Rear Left	75cm	75cm	75cm	0.0cm	**Pass**
D, Rear Right	76cm	76cm	76cm	0.0cm	**Pass**
Middle of bund					
E, Front Left	76cm	76cm	76cm	0.0cm	**Pass**

F, Front Right	76cm	76cm	76cm	0.0cm	**Pass**
G, Rear Left	76cm	76cm	76cm	0.0cm	**Pass**
H, Rear Right	76cm	76cm	76cm	0.0cm	**Pass**
Rear of bund					
I, Front Left	72cm	72cm	72cm	0.0cm	**Pass**
J, Front Right	72cm	72cm	72cm	0.0cm	**Pass**
Control	21cm	21cm	21cm	0.0cm	**Pass**

Testing at this location was not impacted by facility operations.

4.2.4 Indoor Oil Bund (Area / Bund No. 4)

As per methodology Area / Bund No. 4 was filled with water to an appropriate level (110% tank volume) on Tuesday 4th of April 2017. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Wednesday 5th April. Table 4-2 below represents recorded water levels within the bund and control over the test period. Various levels were taken for each bund as there was a variation in floor level in some of the bunds.

Table 4-2 Bund / Area No. 4 Test Result

Measurement Location	Wed 5th Apr (Top of bund to water level)	Thur 6th Apr (Top of bund to water level)	Fri 7th Apr (Top of bund to water level)	Fluctuation	Pass / Fail
A, Front Left	76cm	76cm	76cm	0.0cm	**Pass**
B, Front Right	77cm	77cm	77cm	0.0cm	**Pass**
C, Left Centre	77cm	77cm	7cm	0.0cm	**Pass**
Control	13cm	13cm	13cm	0.0cm	**Pass**

Testing at this location was not impacted by facility operations.

4.2.5 Indoor Chemical Bund (Area / Bund No. 5)

As per methodology Area / Bund No. 5 was filled with water to an appropriate level (110% tank volume) on Friday 7th April 2017. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Saturday 8th April. Table 4-3 below represents recorded water levels within the bund and control over the test period. Various levels were taken for each bund as there was a variation in floor level in some of the bunds.

Table 4-3 Bund / Area No. 5 Test Result

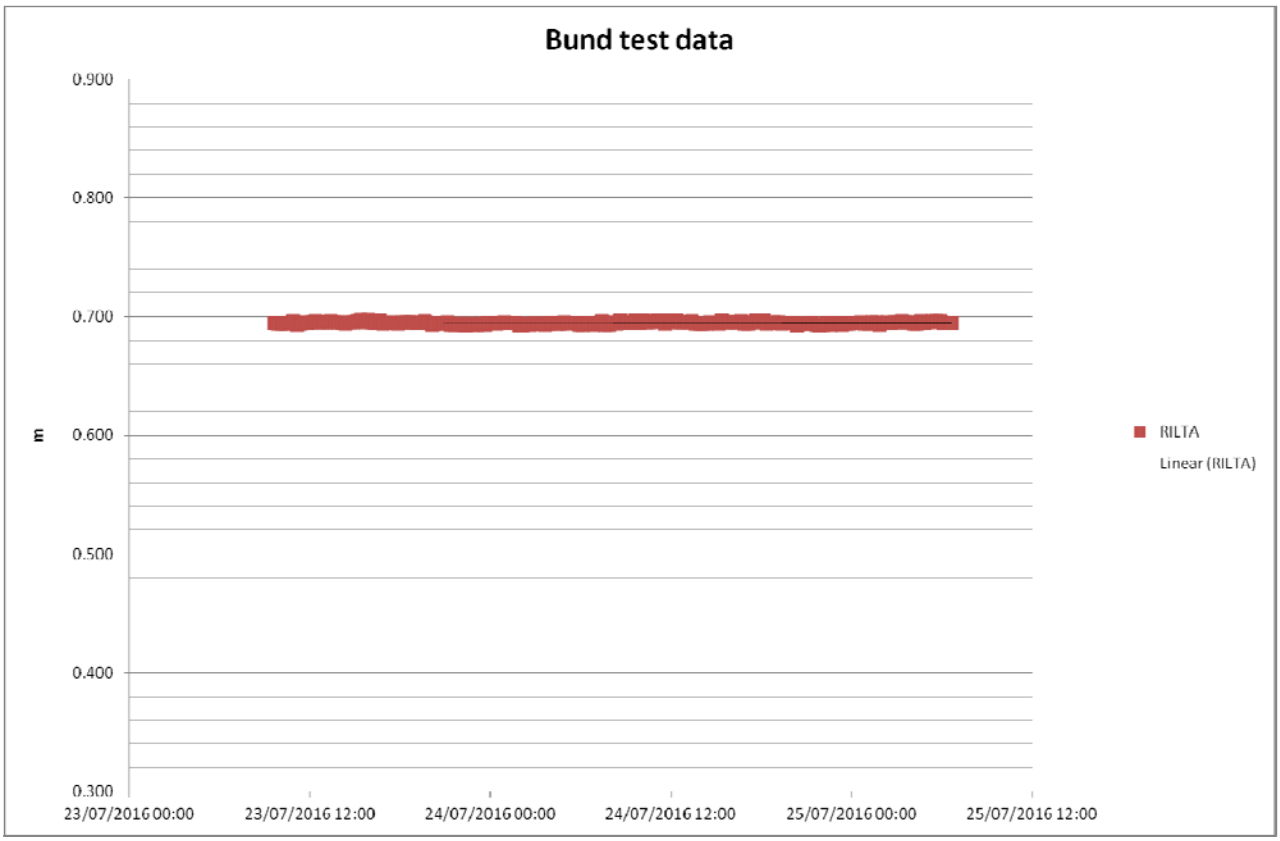
Measurement Location	Sat 8th Apr (Top of bund to water level)	Sun 9th Apr (Top of bund to water level)	Mon 10th Apr (Top of bund to water level)	Fluctuation	Pass / Fail
A, Front Left	131cm	131cm	131cm	0.0cm	**Pass**
B, Front Right	131cm	131cm	131cm	0.0cm	**Pass**
C, Rear Right	133cm	133cm	133cm	0.0cm	**Pass**
D, Rear Left	133cm	133cm	133cm	0.0cm	**Pass**
Control	11cm	11cm	11cm	0.0cm	**Pass**

Testing at this location was not impacted by facility operations.

4.2.6 Underground Tanks (Area / Bund No. 6) {Settlement Tanks (3No.) and Wet Wells (2No.)}

As per methodology Area / Bund No. 6 was filled with water to an appropriate level (110% tank volume) on Friday 22rd July 2016. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated, a data logger was then placed in the underground concrete bund. The test commenced on Saturday April 1st 2017. Table 4-15 below represents recorded change in water levels within the bund and control over the test period.

Table 4-15 Bund / Area No. 16 Test Result



Testing at this location was not impacted by facility operations.

No fluctuation in liquid levels was noted in the bunds or tanks during the first monitoring period Day 1 to Day 2 (July 23rd to July 24th 2017) and levels remained constant for the second monitoring period Day 2 to Day 3 (July 24th to July 25th 2017) Results from the controls showed no variation and were consistent with readings from all storage tanks.

As no fluctuation was noted in liquid levels during the measurement period and the control remained constant, it is determined that all tested bunds and tanks are in good structural condition. No ancillary works are required for these bunds

4.2.7 Site Drainage Network (Area / Bund No. 7)

As per methodology a CCTV survey was carried out on the entire drainage network and associated valves at Block 402 to ensure the integrity of same. The CCTV report is included in Appendix B.

4.2.8 Brokerage Quarantine Area Portable Bund (Area / Bund No.8)

As per methodology Area / Bund No. 8 were filled with water to an appropriate level (110% tank volume) on Friday 7th of April 2017. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Saturday 8th April. Table 4-5 below represents recorded water levels within the bund and control over the test period. Various levels were taken for each bund as there was a variation in floor level in some of the bunds.

Table 4-5 Bund / Area No. 8 Test Result

Bund No.	Sat 8th Apr (Top of bund to water level)	Sun 9th Apr (Top of bund to water level)	Mon 10th Apr (Top of bund to water level)	Fluctuation	Pass / Fail
1	L: 34.2cm R:34.2cm	L: 34.2cm R:34.2cm	L: 34.2cm R:34.2cm	0.0cm	**Pass**
2	L: 31.1cm R:33.4cm	L: 31.1cm R:33.4cm	L: 31.1cm R:33.4cm	0.0cm	**Pass**
3	L: 36.8cm R:33.3cm	L: 36.8cm R:33.3cm	L: 36.8cm R:33.3cm	0.0cm	**Pass**
4	L: 41cm R:38.4cm	L: 41cm R:38.4cm	L: 41cm R:38.4cm	0.0cm	**Pass**
5	L: 17.4cm R:17.1cm	L: 17.4cm R:17.1cm	L: 17.4cm R:17.1cm	0.0cm	**Pass**
6	L: 5.7cm R:5.2cm	L: 5.7cm R:5.2cm	L: 5.7cm R:5.2cm	0.0cm	**Pass**
7	L: 5.7cm R:5.2cm	L: 5.7cm R:5.2cm	L: 5.7cm R:5.2cm	0.0cm	**Pass**

Testing at this location was not impacted by facility operations.

4.2.9 Drum Division Sump (Area / Bund No. 9)

A CCTV survey was carried out on all drainage pipework associated with the Drum Division Sump to ensure the integrity of the pipes and associated valves. The CCTV report is included in Appendix B.

5 CCTV

5.1 CCTV SURVEY

A CCTV drainage inspection was carried out on 1st of March 2017, 3rd of March 2017, 11th of March 2017, 22nd of March 2017, 30th of March 2017, 31st March 2017 and 19th of April 2017, on behalf of Rilta Environmental Ltd. The Inspection Report is included in Appendix B attached.

6 CONCLUSION

The assessment of the bunds / areas after CCTV survey, structural and hydrostatic testing is as follows:

Areas / Bunds for testing identified within Rilta Site, Block 402, Greenogue Business Park include:

- Area / Bund No. 1: Contaminated Soil Storage Building = **PASS**
- Area / Bund No. 2: Asbestos Storage Building = **PASS**
- Area / Bund No. 3: Outdoor Bunded Tank Area = **PASS**
- Area / Bund No. 4: Indoor Oil Bund = **PASS**
- Area / Bund No. 5: Indoor Chemical Bund = **PASS**
- Area / Bund No. 6: Underground Tanks = **PASS**
- Area / Bund No. 7: Site Drainage Network = **PASS**
- Area / Bund No. 8: Brokerage Quarantine Area, Portable Bund = **PASS**

Remedial Works recommended

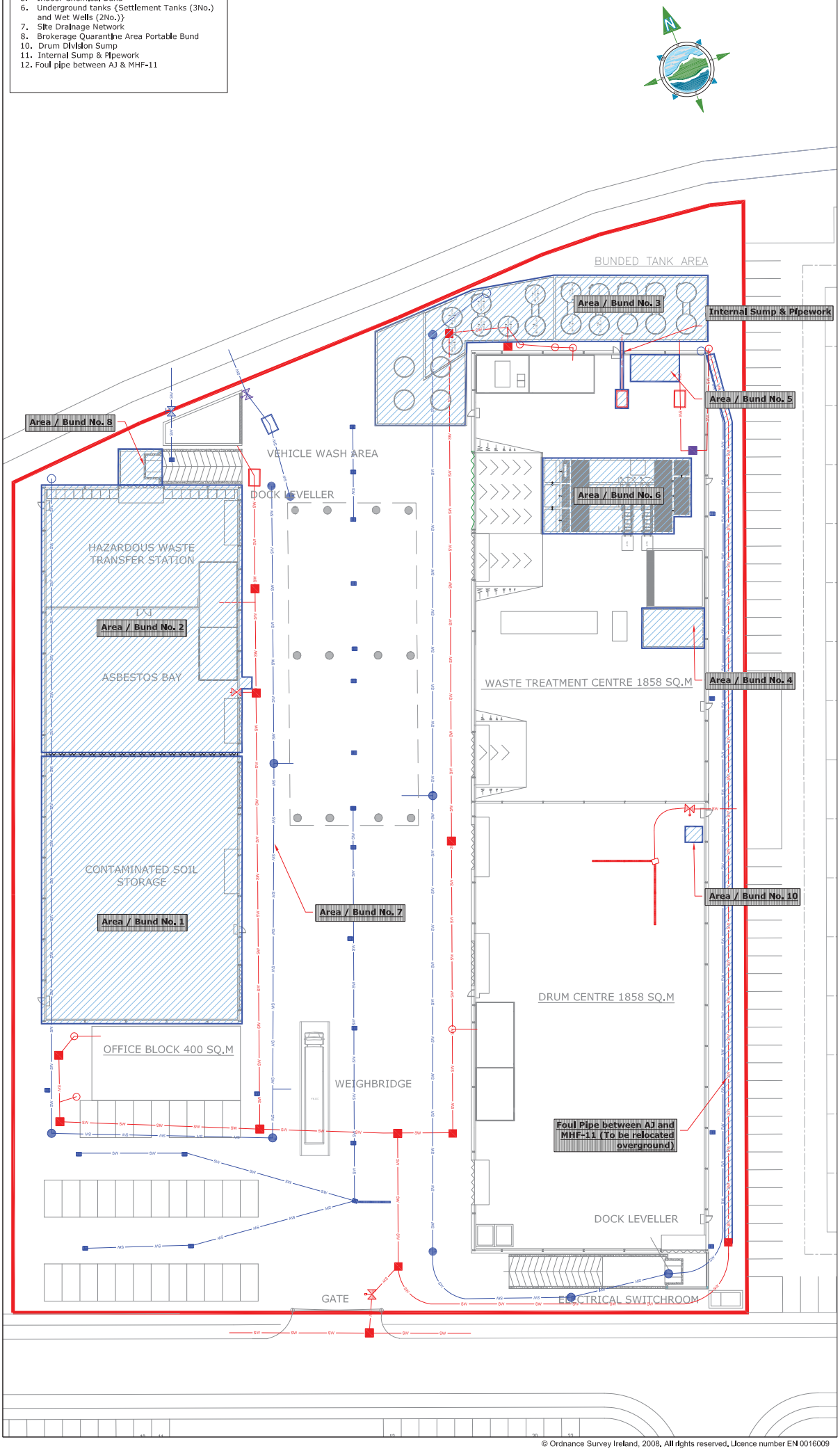
- Area / Bund No. 9: Drum Division Sump = **PASS**

APPENDIX A

Figure 1: Bund / Tank Locations for Testing
(Block 402, Greenogue Business Park)

TEST AREAS

1. Contaminated Soil Storage Building
2. Asbestos Storage Building
3. Outdoor Bunded Tank Area
4. Indoor Oil Bund
5. Indoor Chemical Bund
6. Underground tanks {Settlement Tanks (3No.) and Wet Wells (2No.)}
7. Site Drainage Network
8. Brokerage Quarantine Area Portable Bund
10. Drum Division Sump
11. Internal Sump & Pipework
12. Foul pipe between AJ & MHF-11



GENERAL LEGEND

FACILITY BOUNDARY	TEST AREAS
SURFACE WATER DRAIN	FOUL WATER DRAIN
SW MANHOLE	FOUL MANHOLE
GULLY	SHUT OFF VALVE
ACCESS CHAMBER	INTERCEPTOR

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 BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chkd.
A	May 2017	ISSUED FOR REPORT	MN	ST

Client: RILTA Environmental Limited

Project: BUND INTEGRITY TESTING AT BLOCK 402 GREENOGUE BUSINESS PARK, RATHCOOLE, CO. DUBLIN

Title: BUND / TANK LOCATIONS FOR TESTING

BLOCK 402 SITE

Scale @ A1:	1:250	
Prepared by: M. Nolan	Checked: S.Tinnelly	Date: May 2017
Project Director:	D.Grehan	

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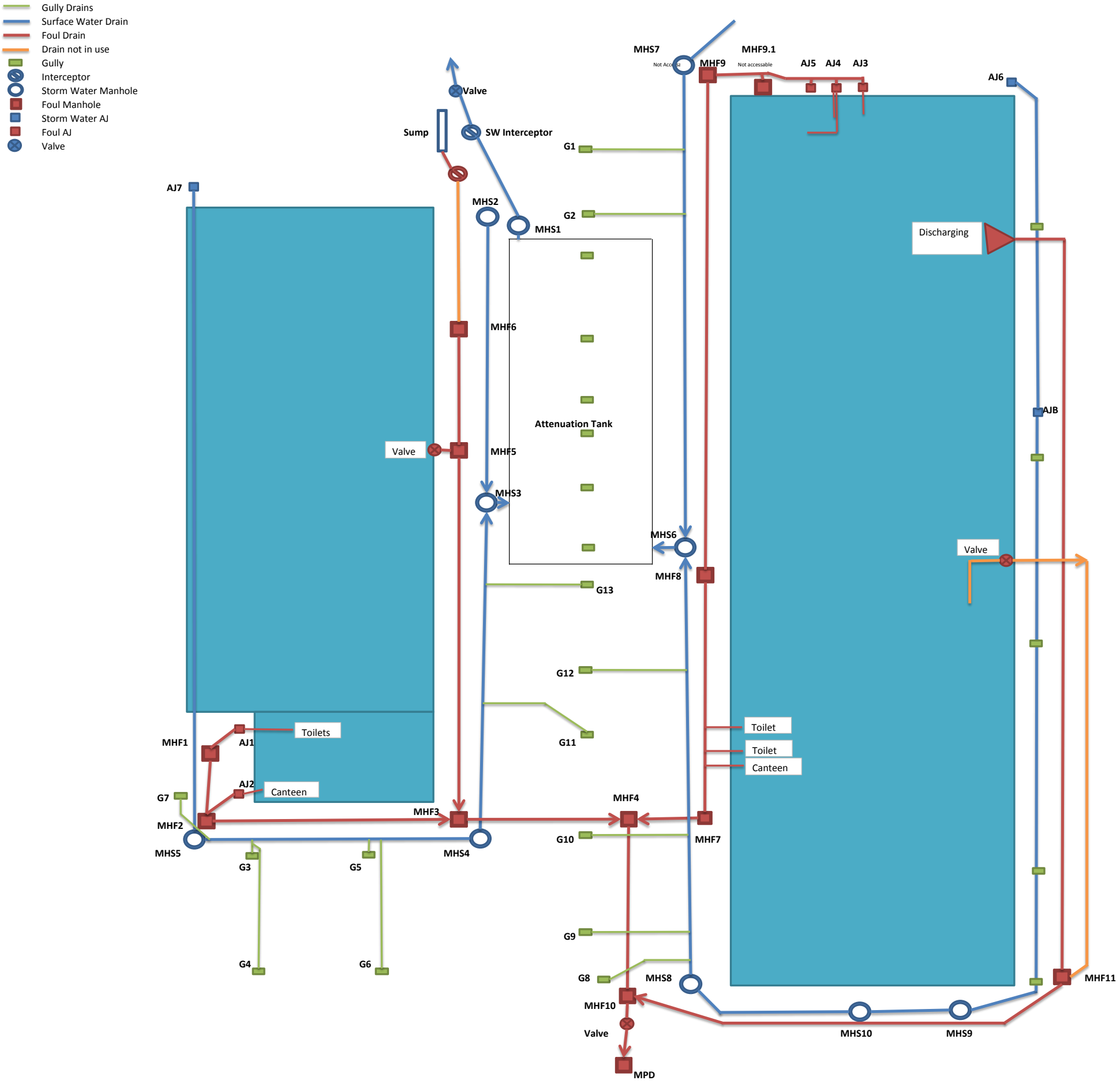
Drawing No.: Figure 1 Revision: A

APPENDIX B

Block 402 - CCTV Drainage Inspection Report


Gully Drains
Surface Water Drain
Foul Drain
Drain not in use
Gully
Interceptor
Storm Water Manhole
Foul Manhole
Storm Water AJ
Foul AJ
Valve
AJ7
MHS2
MHS1
G2
MHS7
Not Accessable
MHF9
MHF9.1
Not accessable
AJ5
AJ4
AJ3
AJ6
Valve
Sump
SW Interceptor
G1
Discharging
MHF6
Attenuation Tank
AJB
Valve
MHF5
MHS3
MHS6
MHF8
Valve
G13
G12
G11
MHF1
AJ1
Toilets
Toilet
Toilet
Canteen
AJ2
Canteen
G7
MHF2
MHF3
MHF4
MHS5
MHS4
G10
MHF7
G3
G5
G4
G6
G9
G8
MHS8
MHF11
MHF10
Valve
MHS10
MHS9
MPD

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Project-information / Inspection: 1

Project name :	Project Number :	Contact :	Date :
Rilta Environmental Ltd.			**01/03/2017**

Client	**Rilta Environmental Ltd.**
Responsible:	**Colm Hussey**
Department:	
Street:	**Unit 402, Greenoque Business Park**
City, St Zip:	**Rathcoole**
Po Box:	**Dublin**
Telephone:	
Fax:	
Mobile:	
e-mail:	

Proj mgr	**Rilta Environmental Ltd.**
Responsible:	**Colm Hussey**
Department:	
Street:	**Unit 402, Greenoque Business Park**
City, St Zip:	**Rathcoole**
Po Box:	**Dublin**
Telephone:	
Fax:	
Mobile:	
e-mail:	

Contractor	**Rilta Environmental Ltd**
Responsible:	**Eoin Kirby, Frantisek Navratil**
Department:	**Contracts**
Street:	**Greenogue Business Park**
City, St Zip:	**Rathcoole**
Po Box:	**Dublin**
Telephone:	**01 4018000**
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e-mail:	**info@rilta.ie**

Rilta Environmental Ltd
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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
01/03/2017		**rain**	**Frantisek**	**1**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
rain	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS2**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS3**
Inspection	**MHS3 (U/S) MHS2**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Concrete**
Total length :	**29.84 m**	Lining :	

Comment :

1:252 Position	Code	Observation	MPEG	Photo	Grade
MHS3					
0.01	MH	Start node type, manhole, reference number : MH3	00:00:00		(Constr) 0
0.02	WL	Water level, 5% of the vertical dimension			(Serv) 0
2.01	CN	Connection other than junction, at 10 o'clock, diameter 150mm	00:01:02		(Constr) 0
13.32	CN	Connection other than junction, at 10 o'clock, diameter 150mm	00:03:22		(Constr) 0
15.14	WL	Water level, 0% of the vertical dimension	00:03:40		(Serv) 0
17.04	WL	Water level, 5% of the vertical dimension	00:03:53		(Serv) 0
19.82	WL	Water level, 0% of the vertical dimension	00:04:38		(Serv) 0
29.27	CN	Connection other than junction, at 10 o'clock, diameter 150mm	00:06:28		(Constr) 0
29.84	WL	Water level, 0% of the vertical dimension	00:06:45		(Serv) 0
MHS2					
29.84	MHF	Finish node type, manhole reference number: MH2	00:06:48		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
01/03/2017		**no rain or snow**	**Frantisek**	**2**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS3**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**ET**
Inspection	**MHS3 (D/S) ET**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**1.72 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
MHS3	0.00	MH	Start node type, manhole, reference number : MHS3	00:00:00		(Constr) 0
	0.01	WL	Water level, 10% of the vertical dimension			(Serv) 0
	1.67	WL	Water level, 0% of the vertical dimension	00:01:22		(Serv) 0
ET	1.72	MHF	Finish node type, manhole reference number: ET	00:02:15		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
01/03/2017		**no rain or snow**	**Frantisek**	**3**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS3**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS4**
Inspection	**MHS3 (D/S) MHS4**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**47.52 m**	Lining :	

Comment :

1:378 Position	Code	Observation	MPEG	Photo	Grade
MHS3					
0.00	MH	Start node type, manhole, reference number : MH3	00:00:00		(Constr) 0
0.16	WL	Water level, 5% of the vertical dimension			(Serv) 0
3.11	WLC	Clear water level, 0% of the vertical dimension	00:00:46		(Serv) 0
4.14	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:01:23		(Constr) 0
7.64	CN	Connection other than junction, at 10 o'clock, diameter 150mm	00:02:46		(Constr) 0
11.87	WL	Water level, 5% of the vertical dimension	00:03:37		(Serv) 0
14.45	WL	Water level, 10% of the vertical dimension	00:03:51		(Serv) 0
15.94	CN	Connection other than junction, at 4 o'clock, diameter 150mm	00:04:34		(Constr) 0
21.11	WL	Water level, 15% of the vertical dimension	00:05:35		(Serv) 0
26.29	WL	Water level, 5% of the vertical dimension	00:06:47		(Serv) 0
28.75	WL	Water level, 10% of the vertical dimension	00:07:04		(Serv) 0
28.75	CN	Connection other than junction, at 12 o'clock, diameter 150mm	00:07:24		(Constr) 0
29.84	WL	Water level, 15% of the vertical dimension	00:07:37		(Serv) 0
35.64	WL	Water level, 5% of the vertical dimension	00:08:21		(Serv) 0
39.87	WLC	Clear water level, 10% of the vertical dimension	00:08:41		(Serv) 0
41.12	CN	Connection other than junction, at 11 o'clock, diameter 150mm	00:09:32		(Constr) 0
47.52	WL	Water level, 0% of the vertical dimension	00:10:11		(Serv) 0
47.52	MHF	Finish node type, manhole reference number: MH4	00:10:14		(Constr) 0
MHS4					

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
01/03/2017		**no rain or snow**	**Frantisek**	**4**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS7**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS6**
Inspection	**MHS6 (U/S) MHS7**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**56.13 m**	Lining :	

Comment :

1:462 Position	Code	Observation	MPEG	Photo	Grade
MHS6					
0.00	MH	Start node type, manhole, reference number : MHS6	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:25		(Serv) 0
0.20	CN	Connection other than junction, at 2 o'clock, diameter 150mm Remarks: Unknown Connection	00:00:28		(Constr) 0
3.89	WLC	Clear water level, 5% of the vertical dimension	00:01:18		(Serv) 0
5.53	WL	Water level, 0% of the vertical dimension	00:01:36		(Serv) 0
11.53	CN	Connection other than junction, at 3 o'clock, diameter 150mm	00:02:38		(Constr) 0
35.60	CN	Connection other than junction, at 11 o'clock, diameter 150mm	00:07:03		(Constr) 0
38.86	CN	Connection other than junction, at 3 o'clock, diameter 150mm	00:08:00		(Constr) 0
42.41	CN	Connection other than junction, at 11 o'clock, diameter 150mm	00:08:54		(Constr) 0
42.41	WL	Water level, 5% of the vertical dimension	00:09:03		(Serv) 0
44.30	WLC	Clear water level, 0% of the vertical dimension	00:09:26		(Serv) 0
45.22	CN	Connection other than junction, at 3 o'clock, diameter 150mm	00:09:52		(Constr) 0
51.11	WL	Water level, 5% of the vertical dimension	00:11:00		(Serv) 0
56.13	WL	Water level, 0% of the vertical dimension	00:12:44		(Serv) 0
MHS7					
56.13	MHF	Finish node type, manhole reference number: MHS7	00:12:47		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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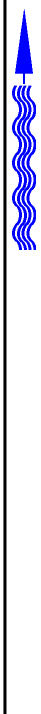
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
01/03/2017		**no rain or snow**	**Frantisek**	**5**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS8**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS6**
Inspection	**MHS6 (U/S) MHS8**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**64.55 m**	Lining :	

Comment :



1:525 Position	Code	Observation	MPEG	Photo	Grade
MHS6					
0.00	MH	Start node type, manhole, reference number : MHS6	00:00:00		(Constr) 0
0.01	WL	Water level, 5% of the vertical dimension			(Serv) 0
0.86	WL	Water level, 0% of the vertical dimension	00:00:25		(Serv) 0
6.37	WL	Water level, 5% of the vertical dimension	00:01:23		(Serv) 0
14.17	CN	Connection other than junction, at 9 o'clock, diameter 150mm	00:02:52		(Constr) 0
19.46	WLC	Clear water level, 10% of the vertical dimension	00:03:36		(Serv) 0
22.11	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:04:21		(Constr) 0
24.55	WL	Water level, 0% of the vertical dimension	00:04:42		(Serv) 0
28.44	CN	Connection other than junction, at 9 o'clock, diameter 150mm	00:05:30		(Constr) 0
29.93	WL	Water level, 5% of the vertical dimension	00:05:48		(Serv) 0
34.12	WL	Water level, 0% of the vertical dimension	00:06:34		(Serv) 0
42.26	WL	Water level, 5% of the vertical dimension	00:07:33		(Serv) 0
43.57	WL	Water level, 0% of the vertical dimension	00:07:42		(Serv) 0
44.85	CN	Connection other than junction, at 9 o'clock, diameter 150mm	00:08:23		(Constr) 0
46.70	WL	Water level, 10% of the vertical dimension	00:08:40		(Serv) 0
50.14	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:09:25		(Constr) 0
56.64	CN	Connection other than junction, at 9 o'clock, diameter 150mm	00:10:30		(Constr) 0
57.27	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:10:57		(Constr) 0
57.73	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:11:31		(Constr) 0
64.55	WL	Water level, 0% of the vertical dimension	00:12:20		(Serv) 0
64.55	MHF	Finish node type, manhole reference number: MHS8	00:12:24		(Constr) 0
MHS8					

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection report / Inspection: 1

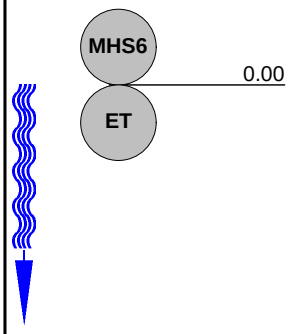
Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
01/03/2017		**no rain or snow**	**Frantisek**	**6**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS6**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**ET**
Inspection	**MHS6 (D/S) ET**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**0.00 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade



Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade

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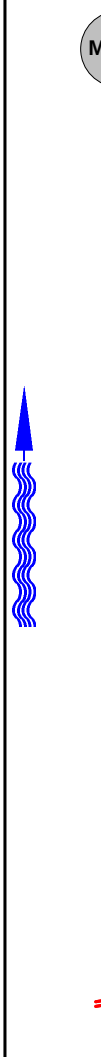
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
03/03/2017		**no rain or snow**	**Frantisek**	**7**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS5**
Inspection	**MHS5 (U/S) AJ**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**45.66 m**	Lining :	

Comment :



1:378 Position	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number : MHS5	00:00:00		(Constr) 0
0.01	WL	Water level, 5% of the vertical dimension	00:00:00		(Serv) 0
3.76	WL	Water level, 0% of the vertical dimension	00:01:20		(Serv) 0
9.12	WL	Water level, 10% of the vertical dimension	00:02:41		(Serv) 0
11.60	WL	Water level, 0% of the vertical dimension	00:03:24		(Serv) 0
19.55	CN	Connection other than junction, at 10 o'clock, diameter 100mm	00:06:01		(Constr) 0
32.63	CN	Connection other than junction, at 10 o'clock, diameter 100mm	00:09:41		(Constr) 0
32.98	WL	Water level, 5% of the vertical dimension	00:10:01		(Serv) 0
35.95	WL	Water level, 0% of the vertical dimension	00:10:36		(Serv) 0
39.11	WL	Water level, 5% of the vertical dimension	00:11:38		(Serv) 0
42.38	WL	Water level, 0% of the vertical dimension	00:12:22		(Serv) 0
45.10	CN	Connection other than junction, at 10 o'clock, diameter 100mm	00:14:16		(Constr) 0
45.10	OBX	Other obstacles, other object in invert, from 6 to 12 o'clock, 65% cross-sectional area loss Remarks: Poor workmanshi	00:14:19		(Serv) 5
45.49	CN	Connection other than junction, at 10 o'clock, diameter 100mm	00:13:29	8_14A	(Constr) 0
45.66	WL	Water level, 0% of the vertical dimension	00:14:31		(Serv) 0
45.66	SA	Survey abandoned Remarks: Survey could not be completed due to a pipe instaled cross whole diameter of t	00:14:35		(Misc) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**1**	**10**	**0.22**	**10**	**5**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**03/03/2017**	**7**	**X**

Photo: 8_14A, MPEG #: 280217_1, 00:13:29
45.49m, Connection other than junction, at 10 o'clock, diameter 100mm

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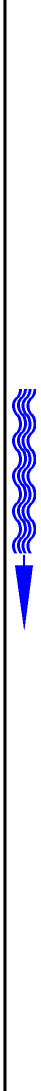
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
11/03/2017		**no rain or snow**	**Frantisek**	**8**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS5**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS4**
Inspection	**MHS5 (D/S) MHS4**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**28.16 m**	Lining :	

Comment :



1:231 Position	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number : MHS5	00:00:02		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:04		(Serv) 0
0.73	WL	Water level, 5% of the vertical dimension	00:00:55		(Serv) 0
2.63	CN	Connection other than junction, at 2 o'clock, diameter 100mm	00:02:28		(Constr) 0
4.72	CN	Connection other than junction, at 10 o'clock, diameter 100mm	00:03:33		(Constr) 0
13.45	WL	Water level, 5% of the vertical dimension	00:07:03		(Serv) 0
16.65	CN	Connection other than junction, at 2 o'clock, diameter 100mm	00:08:10		(Constr) 0
17.22	CN	Connection other than junction, at 2 o'clock, diameter 100mm	00:08:50		(Constr) 0
24.75	WL	Water level, 0% of the vertical dimension	00:10:57		(Serv) 0
28.16	WL	Water level, 0% of the vertical dimension	00:11:45		(Serv) 0
28.16	MHF	Finish node type, manhole reference number: MHS4	00:11:47		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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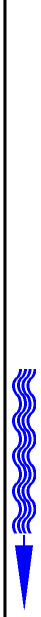
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**9**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ3**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF9**
Inspection	**AJ3 (D/S) MHF9**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**19.71 m**	Lining :	

Comment :



1:168 Position	Code	Observation	MPEG	Photo	Grade
AJ3					
0.00	IC	Start node type, inspection chamber, reference number : AJ3	00:00:02		(Constr) 0
0.00	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
0.20	LL	Line deviates left	00:00:02		(Serv) 0
2.50	CN	Connection other than junction, at 9 o'clock, diameter 100mm Remarks: From AJ4	00:00:30		(Constr) 0
3.20	CN	Connection other than junction, at 9 o'clock, diameter 100mm Remarks: From Lab	00:00:40		(Constr) 0
5.40	WL	Water level, 5% of the vertical dimension	00:01:01		(Serv) 0
6.00	DES	Settled deposits, fine, 5% cross-sectional area loss	00:01:06		(Serv) 2
6.30	WL	Water level, 10% of the vertical dimension	00:01:11		(Serv) 0
6.70	JN	Junction, at 3 o'clock, diameter 100mm Remarks: AJ5	00:01:21		(Constr) 0
7.20	LR	Line deviates right	00:01:48		(Serv) 0
7.40	WL	Water level, 0% of the vertical dimension	00:01:52		(Serv) 0
8.40	LL	Line deviates left	00:02:07		(Serv) 0
11.50	CN	Connection other than junction, at 11 o'clock, diameter 100mm Remarks: Unknown connection	00:02:32		(Constr) 0
18.00	WL	Water level, 5% of the vertical dimension	00:03:59		(Serv) 0
19.00	WLC	Clear water level, 15% of the vertical dimension	00:04:05		(Serv) 0
19.70	WL	Water level, 5% of the vertical dimension	00:04:12		(Serv) 0
MHF9					
19.71	MHF	Finish node type, manhole reference number: MHF9	00:04:17		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**1**	**1**	**0.05**	**1**	**2**

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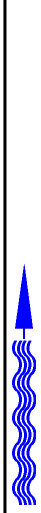
Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**10**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**US**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**AJ3**
Inspection	**AJ3 (U/S) US**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**4.42 m**	Lining :	

Comment :



1:50 Position	Code	Observation	MPEG	Photo	Grade
AJ3					
0.00	IC	Start node type, inspection chamber, reference number : AJ3	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
2.60	CN	Connection other than junction, at 11 o'clock, diameter 100mm Remarks: From sink	00:00:39		(Constr) 0
3.50	CN	Connection other than junction, at 3 o'clock, diameter 100mm Remarks: Connection from the toilet on right hand	00:00:33		(Constr) 0
3.60	DES	Settled deposits, fine, 15% cross-sectional area loss	00:00:35	10_5A	(Serv) 3
4.40	LU	Line deviates up	00:00:51		(Serv) 0
US					
4.41	WL	Water level, 0% of the vertical dimension	00:00:51		(Serv) 0
4.42	BRF	Finish node type, major connection without manhole reference number: US Remarks: From wash machine	00:00:51		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**1**	**2**	**0.45**	**2**	**3**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**22/03/2017**	**10**	**X**

Photo: 10_5A, MPEG #: 280217_1, 00:00:35
3.6m, Settled deposits, fine, 15% cross-sectional area loss

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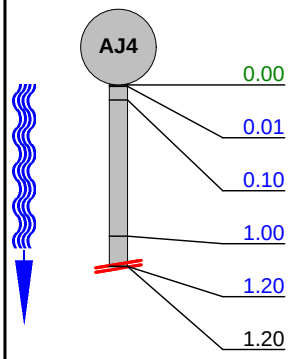
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**11**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ4**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**AJ4 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**1.40 m**	Lining :	

Comment :



1:50 Position	Code	Observation	MPEG	Photo	Grade
0.00	IC	Start node type, inspection chamber, reference number : AJ4	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
0.10	LL	Line deviates left	00:00:01		(Serv) 0
1.00	LR	Line deviates right	00:00:12		(Serv) 0
1.20	WL	Water level, 0% of the vertical dimension	00:00:24		(Serv) 0
1.20	SA	Survey abandoned Remarks: Survey could not be completed due to sharp bends on this pipe.	00:00:24		(Misc) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**12**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**SINK**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**AJ4**
Inspection	**AJ4 (U/S) SINK**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**3.52 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
AJ4	0.00	IC	Start node type, inspection chamber, reference number : AJ4	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	3.50	LU	Line deviates up	00:00:36		(Serv) 0
SINK	3.51	WL	Water level, 0% of the vertical dimension	00:00:36		(Serv) 0
	3.52	BRF	Finish node type, major connection without manhole reference number: SINK	00:00:36		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**13**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**TOILET**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**AJ4**
Inspection	**AJ4 (U/S) TOILET**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**7.11 m**	Lining :	

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
AJ4	0.00	IC	Start node type, inspection chamber, reference number : AJ4	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.30	OJM	Open joint, medium	00:00:03	13_3A	(Struct) 1
	2.50	OJM	Open joint, medium	00:00:36	13_4A	(Struct) 1
	3.40	CN	Connection other than junction, at 11 o'clock, diameter 100mm Remarks: From Urinals	00:00:57		(Constr) 0
	4.80	CN	Connection other than junction, at 11 o'clock, diameter 100mm Remarks: From Toilet	00:01:24		(Constr) 0
	5.50	LR	Line deviates right	00:01:05		(Serv) 0
	7.10	WL	Water level, 0% of the vertical dimension	00:01:26		(Serv) 0
TOILET	7.11	BRF	Finish node type, major connection without manhole reference number: SINK Remarks: Sink beside Lab door.	00:01:26		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
2	**1**	**0.28**	**2**	**1**	**0**	**0**	**0**	**0**	**1**

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Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**22/03/2017**	**13**	**X**

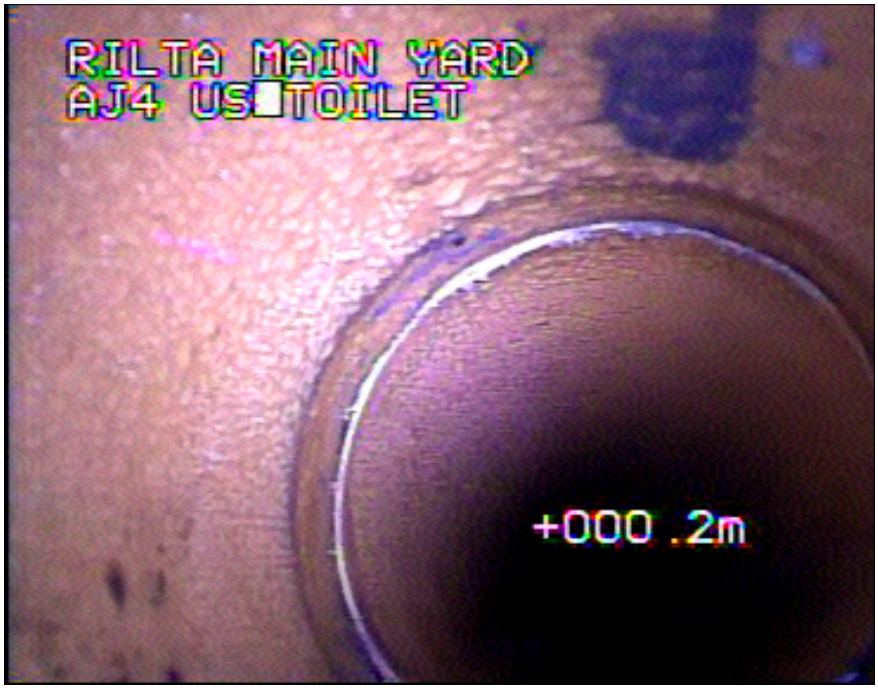

Photo: 13_3A, MPEG #: 280217_1, 00:00:03
0.3m, Open joint, medium

Photo: 13_4A, MPEG #: 280217_1, 00:00:36
2.5m, Open joint, medium

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**14**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF2**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF3**
Inspection	**MHF2 (D/S) MHF3**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**25.81 m**	Lining :	

Comment :

1:210 Position	Code	Observation	MPEG	Photo	Grade
MHF2					
0.00	MH	Start node type, manhole, reference number : MHF2	00:00:02		(Constr) 0
0.01	WL	Water level, 5% of the vertical dimension	00:00:02		(Serv) 0
8.30	WLC	Clear water level, 10% of the vertical dimension	00:01:25		(Serv) 0
10.80	WL	Water level, 5% of the vertical dimension	00:02:32		(Serv) 0
25.80	WL	Water level, 5% of the vertical dimension	00:05:23		(Serv) 0
25.81	MHF	Finish node type, manhole reference number: MHF3	00:05:23		(Constr) 0
MHF3					

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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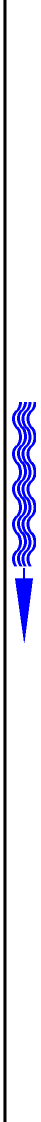
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**15**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF8**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF7**
Inspection	**MHF8 (D/S) MHF7**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**39.51 m**	Lining :	

Comment :



1:315 Position	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number : MHF8	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
5.30	WL	Water level, 5% of the vertical dimension	00:00:47		(Serv) 0
7.00	WL	Water level, 10% of the vertical dimension	00:01:00		(Serv) 0
14.50	WL	Water level, 5% of the vertical dimension	00:01:53		(Serv) 0
18.50	WL	Water level, 10% of the vertical dimension	00:02:29		(Serv) 0
19.40	WL	Water level, 5% of the vertical dimension	00:02:35		(Serv) 0
23.20	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: Toilet from Drum Division.	00:03:01		(Constr) 0
23.90	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: Toilet from Drum Division.	00:03:07		(Constr) 0
25.30	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: Toilet from Drum Division.	00:03:18		(Constr) 0
32.60	CN	Connection other than junction, at 11 o'clock, diameter 100mm Remarks: Connection from canteen	00:04:25		(Constr) 0
36.40	WL	Water level, 10% of the vertical dimension	00:04:56		(Serv) 0
37.10	WL	Water level, 15% of the vertical dimension	00:05:01		(Serv) 0
39.00	WL	Water level, 10% of the vertical dimension	00:05:17		(Serv) 0
39.50	WL	Water level, 5% of the vertical dimension	00:05:20		(Serv) 0
39.51	MHF	Finish node type, manhole reference number: MHF7	00:05:20		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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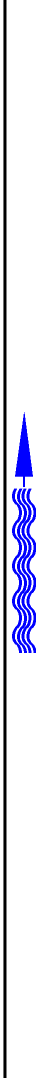
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**16**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF9**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF8**
Inspection	**MHF8 (U/S) MHF9**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**58.61 m**	Lining :	

Comment :



1:462 Position	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number : MHF8	00:00:00		(Constr) 0
0.01	WL	Water level, 15% of the vertical dimension	00:00:00		(Serv) 0
1.90	WLC	Clear water level, 10% of the vertical dimension	00:00:24		(Serv) 0
3.00	WL	Water level, 5% of the vertical dimension	00:00:45		(Serv) 0
14.10	WLC	Clear water level, 10% of the vertical dimension	00:02:04		(Serv) 0
16.50	WL	Water level, 5% of the vertical dimension	00:02:22		(Serv) 0
18.20	WL	Water level, 10% of the vertical dimension	00:02:35		(Serv) 0
19.90	WLC	Clear water level, 5% of the vertical dimension	00:02:48		(Serv) 0
29.50	WLC	Clear water level, 10% of the vertical dimension	00:04:02		(Serv) 0
33.30	WL	Water level, 5% of the vertical dimension	00:04:35		(Serv) 0
52.20	WL	Water level, 10% of the vertical dimension	00:07:11		(Serv) 0
56.40	WL	Water level, 5% of the vertical dimension	00:07:46		(Serv) 0
58.60	WL	Water level, 5% of the vertical dimension	00:08:10		(Serv) 0
58.61	SA	Survey abandoned Remarks: Survey could not be completed due to a length of the camera rod	00:08:10		(Misc) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**17**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**TOILET**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**AJ1**
Inspection	**AJ1 (U/S) TOILET**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**7.51 m**	Lining :	

Comment :

1:63 Position	Code	Observation	MPEG	Photo	Grade
AJ1					
0.00	IC	Start node type, inspection chamber, reference number : AJ1	00:00:03		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:03		(Serv) 0
0.60	LL	Line deviates left	00:00:14		(Serv) 0
1.60	LR	Line deviates right	00:00:22		(Serv) 0
1.61	CN	Connection other than junction, at 12 o'clock, diameter 100mm	00:00:22		(Constr) 0
3.90	CN	Connection other than junction, at 12 o'clock, diameter 100mm	00:00:45		(Constr) 0
4.90	CN	Connection other than junction, at 12 o'clock, diameter 100mm	00:00:57		(Constr) 0
7.50	LU	Line deviates up	00:01:39		(Serv) 0
7.50	WL	Water level, 0% of the vertical dimension	00:01:39		(Serv) 0
TOILET					
7.51	BRF	Finish node type, major connection without manhole reference number: TOILET	00:01:39		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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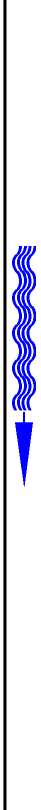
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**18**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**no**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ2**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**AJ2 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**4.21 m**	Lining :	

Comment :



1:50 Position	Code	Observation	MPEG	Photo	Grade
AJ2					
0.00	IC	Start node type, inspection chamber, reference number : AJ2	00:00:02		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
0.60	LL	Line deviates left	00:00:09		(Serv) 0
2.60	LL	Line deviates left	00:00:31		(Serv) 0
3.90	LL	Line deviates left	00:00:42		(Serv) 0
4.20	WL	Water level, 0% of the vertical dimension	00:00:44		(Serv) 0
DS					
4.21	BRF	Finish node type, major connection without manhole reference number: DS Remarks: Connected to drain from	00:00:44		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**19**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**SUMP**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**FIC**
Inspection	**FIC (U/S) SUMP**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**2.91 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
FIC	0.00	OS	Start node type, oil separator, reference number : FIC	00:00:01		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	1.10	OJM	Open joint, medium	00:00:27	19_3A	(Struct) 1
	2.80	FC	Fracture, circumferential, from 2 to 7 o'clock	00:00:51	19_4A	(Struct) 3
SUMP	2.90	WL	Water level, 0% of the vertical dimension	00:01:36		(Serv) 0
	2.91	CPF	Finish node type, catchpit reference number: SUMP	00:01:36		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
2	**40**	**14.09**	**41**	**3**	**0**	**0**	**0**	**0**	**1**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**22/03/2017**	**19**	**X**

Photo: 19_3A, MPEG #: 280217_1, 00:00:27
1.1m, Open joint, medium

Photo: 19_4A, MPEG #: 280217_1, 00:00:51
2.8m, Fracture, circumferential, from 2 to 7 o'clock

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**20**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G1**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G1 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**9.91 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
G1	0.00	GY	Start node type, gully, reference number : G1	00:00:02		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	9.60	LD	Line deviates down	00:01:59		(Serv) 0
	9.90	WL	Water level, 0% of the vertical dimension	00:02:07		(Serv) 0
DS	9.91	BRF	Finish node type, major connection without manhole reference number: DS Remarks: Connected to drain from	00:02:07		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**21**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G2**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G2 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**9.91 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
G2	0.00	GY	Start node type, gully, reference number : G2	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	3.00	WL	Water level, 5% of the vertical dimension	00:00:30		(Serv) 0
	6.10	WL	Water level, 0% of the vertical dimension	00:00:52		(Serv) 0
	9.90	LD	Line deviates down	00:01:18		(Serv) 0
DS	9.91	BRF	Finish node type, major connection without manhole reference number: DS Remarks: Connected to drain from	00:01:24		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**22**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF1**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF2**
Inspection	**MHF1 (D/S) MHF2**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**8.51 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
MHF1						
	0.00	GY	Start node type, gully, reference number : MHF1	00:00:01		(Constr) 0
	0.00	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	7.70	WLC	Clear water level, 5% of the vertical dimension	00:01:19		(Serv) 0
	8.50	WL	Water level, 0% of the vertical dimension	00:01:25		(Serv) 0
MHF2	8.51	MHF	Finish node type, manhole reference number: MHF2	00:01:25		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**23**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF5**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF3**
Inspection	**MHF5 (D/S) MHF3**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**55.51 m**	Lining :	

Comment :

1:350 Position	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number : MHF5	00:00:02		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
3.20	WLC	Clear water level, 5% of the vertical dimension	00:00:35		(Serv) 0
3.20	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:35		(Serv) 2
5.90	WLC	Clear water level, 0% of the vertical dimension	00:01:01		(Serv) 0
7.00	WL	Water level, 5% of the vertical dimension	00:01:10		(Serv) 0
8.20	WL	Water level, 0% of the vertical dimension	00:01:22		(Serv) 0
12.90	WL	Water level, 5% of the vertical dimension	00:02:01		(Serv) 0
13.70	WL	Water level, 10% of the vertical dimension	00:02:09		(Serv) 0
14.70	DES	Settled deposits, fine, 5% cross-sectional area loss	00:02:19		(Serv) 2
23.30	WL	Water level, 5% of the vertical dimension	00:03:28		(Serv) 0
24.00	WL	Water level, 0% of the vertical dimension	00:03:34		(Serv) 0
25.10	WL	Water level, 5% of the vertical dimension	00:03:42		(Serv) 0
25.70	WL	Water level, 10% of the vertical dimension	00:03:47		(Serv) 0
27.80	WL	Water level, 5% of the vertical dimension	00:04:03		(Serv) 0
29.20	WL	Water level, 10% of the vertical dimension	00:04:14		(Serv) 0
29.70	WL	Water level, 15% of the vertical dimension	00:04:17		(Serv) 0
34.40	WL	Water level, 10% of the vertical dimension	00:04:57		(Serv) 0
35.20	WLC	Clear water level, 5% of the vertical dimension	00:05:04		(Serv) 0
37.60	WL	Water level, 0% of the vertical dimension	00:05:24		(Serv) 0
43.30	WL	Water level, 5% of the vertical dimension	00:06:08		(Serv) 0

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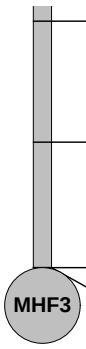
Inspection Report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR :
22/03/2017		**no rain or snow**	**Frantisek**	**23**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Grade:
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	



1:350 Position	Code	Observation	MPEG	Photo	Grade
44.10	WL	Water level, 0% of the vertical dimension	00:06:16		(Serv) 0
49.70	WL	Water level, 5% of the vertical dimension	00:07:00		(Serv) 0
55.50	WL	Water level, 0% of the vertical dimension	00:07:51		(Serv) 0
55.51	MHF	Finish node type, manhole reference number: MHF3	00:07:51		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**2**	**1**	**0.04**	**2**	**2**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**24**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF6**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF5**
Inspection	**MHF5 (U/S) MHF6**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**17.81 m**	Lining :	

Comment :

1:147 Position	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number : MHF5	00:00:02		(Constr) 0
0.01	WL	Water level, 5% of the vertical dimension	00:00:02		(Serv) 0
5.20	WL	Water level, 10% of the vertical dimension	00:00:49		(Serv) 0
6.70	WL	Water level, 5% of the vertical dimension	00:01:10		(Serv) 0
8.40	WL	Water level, 0% of the vertical dimension	00:01:31		(Serv) 0
8.50	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: From toilets	00:01:30		(Constr) 0
17.80	WL	Water level, 0% of the vertical dimension	00:03:46		(Serv) 0
17.81	MHF	Finish node type, manhole reference number: MHF6	00:03:46		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**25**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**VALVE**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MH5**
Inspection	**MH5 (U/S) VALVE**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**3.01 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
MH5	0.00	MH	Start node type, manhole, reference number : MH5	00:00:03		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:03		(Serv) 0
	3.00	WL	Water level, 0% of the vertical dimension	00:00:37		(Serv) 0
VALVE	3.01	BRF	Finish node type, major connection without manhole reference number: VALVE	00:00:37		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**26**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ1**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF1**
Inspection	**MHF1 (U/S) AJ1**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**3.11 m**	Lining :	

Comment :

1:50 Position	Code	Observation	MPEG	Photo	Grade
MHF1					
0.00	MH	Start node type, manhole, reference number : MHF1	00:00:02		(Constr) 0
0.01	WL	Water level, 5% of the vertical dimension	00:00:02		(Serv) 0
0.30	SCC	Shape changes to circular, 100mm high	00:00:00		0
0.40	WLC	Clear water level, 0% of the vertical dimension	00:00:15		(Serv) 0
3.10	WLC	Clear water level, 0% of the vertical dimension	00:00:39		(Serv) 0
AJ1					
3.11	ICF	Finish node type, inspection chamber reference number: AJ1	00:00:39		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**27**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS1**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**MHS1 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**8.01 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
MHS1	0.00	MH	Start node type, manhole, reference number : MHS1	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.40	REM	General remark Remarks: Gate Valve	00:00:16		(Misc) 0
	1.50	SR	Sealing ring intruding, from 9 to 12 o'clock	00:00:47	27_4A	(Constr) 1
	4.80	WL	Water level, 5% of the vertical dimension	00:01:41		(Serv) 0
	7.99	LD	Line deviates down	00:02:31		(Serv) 0
DS	8.00	WL	Water level, 0% of the vertical dimension	00:02:31		(Serv) 0
	8.01	OSF	Finish node type, oil separator reference number: DS	00:02:31		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	**5**	**0.62**	**5**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**22/03/2017**	**27**	**X**

Photo: 27_4A, MPEG #: 280217_1, 00:00:47
1.5m, Sealing ring intruding, from 9 to 12 o'clock

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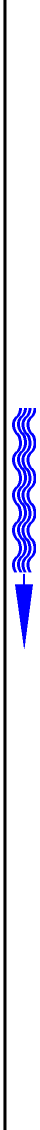
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**28**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF11**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF10**
Inspection	**MHF11 (D/S) MHF10**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**47.81 m**	Lining :	

Comment :



1:378 Position	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number : MHF11	00:00:00		(Constr) 0
0.01	WL	Water level, 5% of the vertical dimension	00:00:00		(Serv) 0
0.90	WL	Water level, 10% of the vertical dimension	00:00:11		(Serv) 0
4.40	WL	Water level, 5% of the vertical dimension	00:00:35		(Serv) 0
4.90	WL	Water level, 0% of the vertical dimension	00:00:40		(Serv) 0
6.10	WL	Water level, 5% of the vertical dimension	00:00:52		(Serv) 0
9.00	LR	Line deviates right	00:01:35		(Serv) 0
14.50	WL	Water level, 0% of the vertical dimension	00:02:12		(Serv) 0
16.20	WL	Water level, 5% of the vertical dimension	00:02:25		(Serv) 0
25.00	WL	Water level, 10% of the vertical dimension	00:03:43		(Serv) 0
26.70	WL	Water level, 5% of the vertical dimension	00:03:56		(Serv) 0
29.60	WL	Water level, 0% of the vertical dimension	00:04:18		(Serv) 0
39.60	WLC	Clear water level, 10% of the vertical dimension	00:05:39		(Serv) 0
40.30	WL	Water level, 15% of the vertical dimension	00:05:46		(Serv) 0
41.50	WL	Water level, 10% of the vertical dimension	00:05:58		(Serv) 0
42.30	WL	Water level, 0% of the vertical dimension	00:06:04		(Serv) 0
46.50	LD	Line deviates down	00:06:36		(Serv) 0
47.50	LU	Line deviates up	00:06:59		(Serv) 0
47.80	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
47.81	MHF	Finish node type, manhole reference number: MHF10	00:00:00		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**29**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF4**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF10**
Inspection	**MHF4 (D/S) MHF10**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**18.91 m**	Lining :	

Comment :

1:168 Position	Code	Observation	MPEG	Photo	Grade
MHF4					
0.00	MH	Start node type, manhole, reference number : MHF4	00:00:01		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
7.40	WL	Water level, 5% of the vertical dimension	00:00:53		(Serv) 0
11.20	WL	Water level, 10% of the vertical dimension	00:01:19		(Serv) 0
12.20	WL	Water level, 5% of the vertical dimension	00:01:25		(Serv) 0
13.30	WL	Water level, 10% of the vertical dimension	00:01:33		(Serv) 0
18.90	WL	Water level, 5% of the vertical dimension	00:02:09		(Serv) 0
MHF10					
18.91	MHF	Finish node type, manhole reference number: MHF10	00:02:09		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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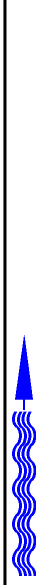
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**30**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF3**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF4**
Inspection	**MHF4 (U/S) MHF3**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**13.51 m**	Lining :	

Comment :



1:126 Position	Code	Observation	MPEG	Photo	Grade
MHF4					
0.00	MH	Start node type, manhole, reference number : MHF4	00:00:02		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
3.10	WL	Water level, 5% of the vertical dimension	00:00:38		(Serv) 0
13.50	WL	Water level, 5% of the vertical dimension	00:02:55		(Serv) 0
MHF3					
13.51	MHF	Finish node type, manhole reference number: MHF3	00:02:55		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**31**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF7**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF4**
Inspection	**MHF4 (U/S) MHF7**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**8.21 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
MHF4	0.00	MH	Start node type, manhole, reference number : MHF4	00:00:02		(Constr) 0
	0.01	WL	Water level, 10% of the vertical dimension	00:00:00		(Serv) 0
	2.00	WL	Water level, 15% of the vertical dimension	00:00:19		(Serv) 0
	3.60	WLC	Clear water level, 10% of the vertical dimension	00:00:30		(Serv) 0
	8.20	WL	Water level, 0% of the vertical dimension	00:01:03		(Serv) 0
MHF7	8.21	MHF	Finish node type, manhole reference number: MHF7	00:01:03		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**32**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**US1**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF11**
Inspection	**MHF11 (U/S) US1**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**52.61 m**	Lining :	

Comment :

1:420 Position	Code	Observation	MPEG	Photo	Grade
MHF11					
0.00	MH	Start node type, manhole, reference number : MHF11	00:00:01		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
0.50	LL	Line deviates left	00:00:05		(Serv) 0
2.60	WL	Water level, 5% of the vertical dimension	00:00:28		(Serv) 0
8.40	WL	Water level, 0% of the vertical dimension	00:04:28		(Serv) 0
12.20	WL	Water level, 5% of the vertical dimension	00:01:36		(Serv) 0
15.40	WL	Water level, 10% of the vertical dimension	00:01:56		(Serv) 0
32.00	WLC	Clear water level, 0% of the vertical dimension	00:03:47		(Serv) 0
36.70	WL	Water level, 5% of the vertical dimension	00:04:25		(Serv) 0
37.60	WLC	Clear water level, 10% of the vertical dimension	00:04:36		(Serv) 0
39.50	WL	Water level, 15% of the vertical dimension	00:05:03		(Serv) 0
39.50	WL	Water level, 20% of the vertical dimension	00:05:09		(Serv) 0
42.00	WL	Water level, 25% of the vertical dimension	00:05:33		(Serv) 0
42.00	CUW	Loss of vision, camera under water	00:05:33		(Misc) 0
52.60	WLC	Clear water level, 25% of the vertical dimension	00:07:33		(Serv) 0
52.61	SA	Survey abandoned Remarks: Suurvey could not be completed due to length of this pipe.			(Misc) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**33**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**US2**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF11**
Inspection	**MHF11 (U/S) US2**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**58.51 m**	Lining :	

Comment :

1:462 Position	Code	Observation	MPEG	Photo	Grade
MHF11					
0.00	MH	Start node type, manhole, reference number : MHF11	00:00:02		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
4.40	WL	Water level, 5% of the vertical dimension	00:00:49		(Serv) 0
10.90	WL	Water level, 10% of the vertical dimension	00:01:28		(Serv) 0
16.30	WL	Water level, 15% of the vertical dimension	00:02:12		(Serv) 0
18.00	WL	Water level, 5% of the vertical dimension	00:02:32		(Serv) 0
20.80	WL	Water level, 10% of the vertical dimension	00:02:47		(Serv) 0
24.60	WL	Water level, 0% of the vertical dimension	00:03:16		(Serv) 0
33.00	WL	Water level, 5% of the vertical dimension	00:04:14		(Serv) 0
37.60	WLC	Clear water level, 10% of the vertical dimension	00:04:44		(Serv) 0
39.80	WL	Water level, 5% of the vertical dimension	00:05:02		(Serv) 0
45.10	WL	Water level, 10% of the vertical dimension	00:05:34		(Serv) 0
46.10	WLC	Clear water level, 20% of the vertical dimension	00:05:43		(Serv) 0
46.40	CUW	Loss of vision, camera under water	00:05:49		(Misc) 0
58.50	WLC	Clear water level, 25% of the vertical dimension	00:06:36		(Serv) 0
58.51	SA	Survey abandoned Remarks: Survey could not be completed due to length of this pipe.	00:06:36		(Misc) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**34**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**RE**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF11**
Inspection	**RE (D/S) MHF11**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**55.81 m**	Lining :	

Comment :

1:450 Position	Code	Observation	MPEG	Photo	Grade
RE 0.00	RE	Start node type, rodding eye, reference number : RE	00:06:36		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
2.80	WL	Water level, 5% of the vertical dimension	00:00:28		(Serv) 0
11.80	WL	Water level, 0% of the vertical dimension	00:01:38		(Serv) 0
14.80	WL	Water level, 5% of the vertical dimension	00:01:58		(Serv) 0
17.70	LR	Line deviates right	00:02:24		(Serv) 0
18.60	LL	Line deviates left	00:02:23		(Serv) 0
19.30	LL	Line deviates left	00:02:29		(Serv) 0
20.00	LR	Line deviates right	00:02:35		(Serv) 0
20.00	WL	Water level, 0% of the vertical dimension	00:02:35		(Serv) 0
25.00	WL	Water level, 5% of the vertical dimension	00:03:06		(Serv) 0
26.00	WL	Water level, 10% of the vertical dimension	00:03:11		(Serv) 0
30.50	WLC	Clear water level, 15% of the vertical dimension	00:04:02		(Serv) 0
33.60	WL	Water level, 5% of the vertical dimension	00:04:45		(Serv) 0
35.50	WL	Water level, 0% of the vertical dimension	00:05:03		(Serv) 0
40.90	WL	Water level, 5% of the vertical dimension	00:05:44		(Serv) 0
43.20	WL	Water level, 10% of the vertical dimension	00:06:08		(Serv) 0
46.80	WL	Water level, 15% of the vertical dimension	00:06:03		(Serv) 0
48.10	WL	Water level, 20% of the vertical dimension	00:06:21		(Serv) 0
49.20	CUW	Loss of vision, camera under water	00:06:36		(Misc) 0
54.50	WL	Water level, 10% of the vertical dimension	00:07:05		(Serv) 0

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Inspection Report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR :
22/03/2017		**no rain or snow**	**Frantisek**	**34**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Grade:
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	

1:450 Position	Code	Observation	MPEG	Photo	Grade
55.80	WL	Water level, 5% of the vertical dimension	00:00:00		(Serv) 0
55.81	SA	Survey abandoned Remarks: Survey could not be completed due to length of this pipe. Survey is going to be	00:00:00		(Misc) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**35**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**US**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**RE**
Inspection	**RE (U/S) US**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**2.51 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
RE	0.00	RE	Start node type, rodding eye, reference number : RE	00:00:02		(Constr) 0
	0.00	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	0.30	WL	Water level, 5% of the vertical dimension	00:00:05		(Serv) 0
	1.20	WL	Water level, 0% of the vertical dimension	00:00:10		(Serv) 0
	2.10	LU	Line deviates up	00:00:19		(Serv) 0
	2.50	WLC	Clear water level, 0% of the vertical dimension	00:00:40		(Serv) 0
US	2.51	BRF	Finish node type, major connection without manhole reference number: US Remarks: WWTP	00:00:40		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
22/03/2017		**no rain or snow**	**Frantisek**	**36**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MPD**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF10**
Inspection	**MHF10 (U/S) MPD**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**200.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**0.00 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
MHF10	0.00	SA	Survey abandoned Remarks: Survey could not be done due to high water level in the Public Main Drain	00:00:40		(Misc) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
30/03/2017		**no rain or snow**	**Frantisek**	**37**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G3**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G3 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**1.81 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
G3	0.00	GY	Start node type, gully, reference number : G3	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	1.00	CN	Connection other than junction, at 3 o'clock, diameter 150mm Remarks: Connection from G4	00:00:13		(Constr) 0
	1.40	LD	Line deviates down	00:00:20		(Serv) 0
	1.80	WL	Water level, 0% of the vertical dimension	00:00:27		(Serv) 0
DS	1.81	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:00:27		(Constr) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
30/03/2017		**no rain or snow**	**Frantisek**	**38**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G4**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G4 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**15.90 m**	Lining :	

Comment :

1:126 Position	Code	Observation	MPEG	Photo	Grade
G4					
0.00	GY	Start node type, gully, reference number : G4	00:00:00		(Constr) 0
0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:00		(Serv) 0
2.20	OJM	Open joint, medium	00:00:12	38_3A	(Struct) 1
3.20	WL	Water level, 5% of the vertical dimension	00:00:21		(Serv) 0
4.70	SZ	Surface damage, other, from 4 to 8 o'clock Remarks: Dents	00:00:33	38_5A	(Struct) 0
5.80	WL	Water level, 10% of the vertical dimension	00:00:44		(Serv) 0
6.30	WL	Water level, 15% of the vertical dimension	00:00:49		(Serv) 0
6.90	WL	Water level, 20% of the vertical dimension	00:00:56		(Serv) 0
8.00	WLC	Clear water level, 15% of the vertical dimension	00:01:03		(Serv) 0
8.90	WL	Water level, 20% of the vertical dimension	00:01:10		(Serv) 0
11.40	WL	Water level, 10% of the vertical dimension	00:01:40		(Serv) 0
12.40	WL	Water level, 5% of the vertical dimension	00:01:47		(Serv) 0
13.00	CN	Connection other than junction, at 9 o'clock, diameter 150mm Remarks: Uknown connection	00:01:54		(Constr) 0
13.10	WL	Water level, 0% of the vertical dimension	00:01:56		(Serv) 0
15.60	LL	Line deviates left	00:02:20		(Serv) 0
15.90	WL	Water level, 0% of the vertical dimension	00:02:23		(Serv) 0
15.90	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:02:23		(Constr) 0
DS					

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	**1**	**0.06**	**1**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**30/03/2017**	**38**	**X**

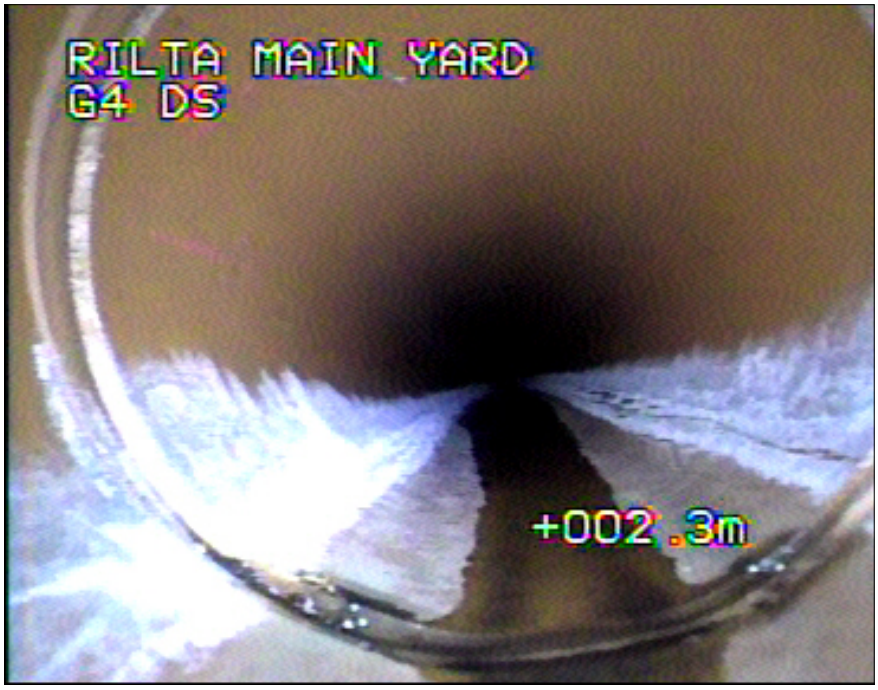

Photo: 38_3A, MPEG #: 280217_1, 00:00:12
2.2m, Open joint, medium

Photo: 38_5A, MPEG #: 280217_1, 00:00:33
4.7m, Surface damage, other, from 4 to 8 o'clock

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
30/03/2017		**no rain or snow**	**Frantisek**	**39**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G5**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G5 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**1.81 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
G5	0.00	GY	Start node type, gully, reference number : G5	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	1.40	LD	Line deviates down	00:00:13		(Serv) 0
	1.80	WLC	Clear water level, 0% of the vertical dimension	00:00:15		(Serv) 0
DS	1.81	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This drain is connected t	00:00:15		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
30/03/2017		**no rain or snow**	**Frantisek**	**40**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G6**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G6 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**15.10 m**	Lining :	

Comment :

1:126 Position	Code	Observation	MPEG	Photo	Grade
G6					
0.00	GY	Start node type, gully, reference number : G6	00:00:01		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
14.70	LD	Line deviates down	00:02:09		(Serv) 0
15.10	WL	Water level, 0% of the vertical dimension	00:02:15		(Serv) 0
DS					
15.10	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:02:15		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
30/03/2017		**no rain or snow**	**Frantisek**	**41**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G7**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G7 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**10.20 m**	Lining :	

Comment :

1:84 Position	Code	Observation	MPEG	Photo	Grade
G7					
0.00	GY	Start node type, gully, reference number : G7	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
3.00	WL	Water level, 5% of the vertical dimension	00:00:27		(Serv) 0
3.80	LL	Line deviates left	00:00:34		(Serv) 0
5.90	WLC	Clear water level, 10% of the vertical dimension	00:00:50		(Serv) 0
7.30	WL	Water level, 0% of the vertical dimension	00:01:09		(Serv) 0
8.70	WL	Water level, 5% of the vertical dimension	00:01:25		(Serv) 0
10.10	WL	Water level, 0% of the vertical dimension	00:02:05		(Serv) 0
10.11	SA	Survey abandoned Remarks: Survey could not be completed due to a sharp bend on this pipe.	00:02:05		(Misc) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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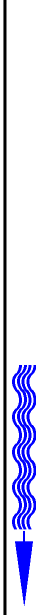
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
30/03/2017		**no rain or snow**	**Frantisek**	**42**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G8**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G8 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**12.20 m**	Lining :	

Comment :



1:105 Position	Code	Observation	MPEG	Photo	Grade
G8					
0.00	GY	Start node type, gully, reference number : G8	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
1.40	REM	General remark Remarks: Socket of this pipe is connected against the stream.	00:00:15	42_3A	(Misc) 0
4.10	SZ	Surface damage, other, from 4 to 5 o'clock Remarks: A dent	00:00:36	42_4A	(Struct) 0
7.70	LR	Line deviates right Remarks: 45 Deg.	00:01:07		(Serv) 0
12.20	WL	Water level, 0% of the vertical dimension	00:01:39		(Serv) 0
DS					
12.20	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:39		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**30/03/2017**	**42**	**X**

Photo: 42_3A, MPEG #: 280217_1, 00:00:15
1.4m, General remark

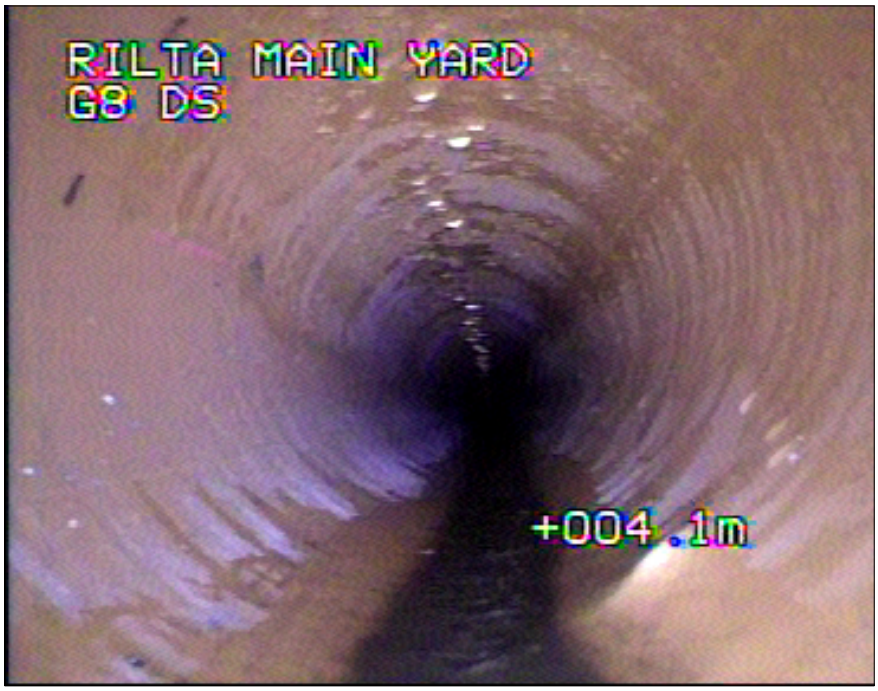

Photo: 42_4A, MPEG #: 280217_1, 00:00:36
4.1m, Surface damage, other, from 4 to 5 o'clock

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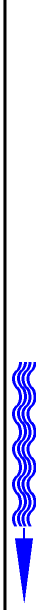
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
30/03/2017		**no rain or snow**	**Frantisek**	**43**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G9**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G9 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**9.70 m**	Lining :	

Comment :



1:84 Position	Code	Observation	MPEG	Photo	Grade
G9					
0.00	GY	Start node type, gully, reference number : G9	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
0.60	REM	General remark Remarks: Sockets of tihis pipe are connected against the stream.	00:00:08	43_3A	(Misc) 0
6.50	LL	Line deviates left Remarks: 45 Deg.	00:00:56		(Serv) 0
9.60	LR	Line deviates right	00:01:23		(Serv) 0
9.60	LD	Line deviates down	00:01:23		(Serv) 0
DS					
9.70	WL	Water level, 0% of the vertical dimension	00:01:27		(Serv) 0
9.70	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is conneted to t	00:01:27		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**30/03/2017**	**43**	**X**

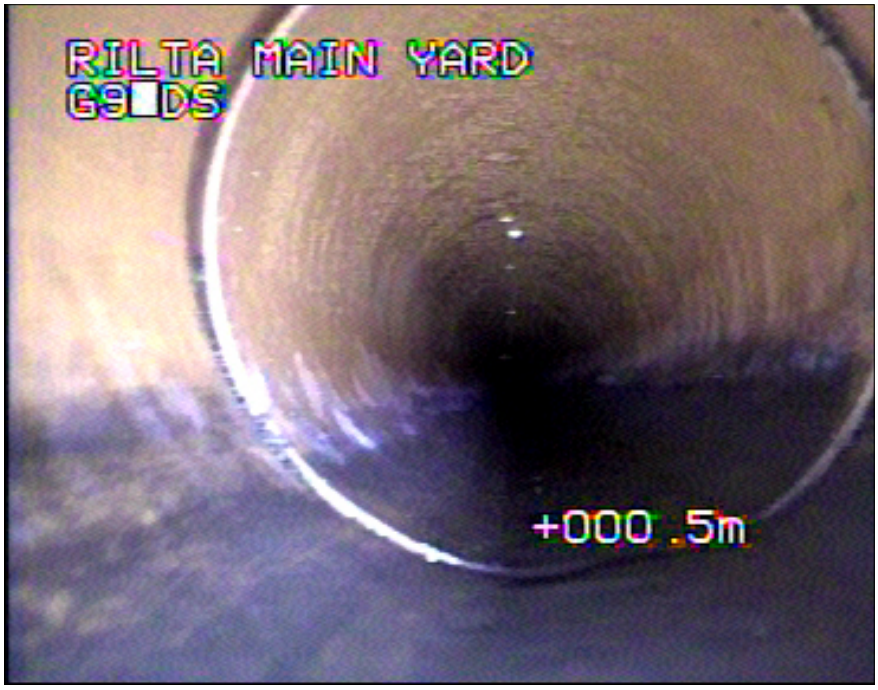

Photo: 43_3A, MPEG #: 280217_1, 00:00:08
0.6m, General remark

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
31/03/2017		**no rain or snow**	**Frantisek**	**44**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ6**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS8**
Inspection	**MHS8 (U/S) AJ6**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**41.16 m**	Lining :	

Comment :

1:336 Position	Code	Observation	MPEG	Photo	Grade
MHS8					
0.00	MH	Start node type, manhole, reference number : MHS8	00:00:00		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension			(Serv) 0
2.48	WL	Water level, 5% of the vertical dimension	00:01:25		(Serv) 0
33.84	REM	General remark Remarks: manhole	00:13:01		(Misc) 0
34.26	CN	Connection other than junction, at 11 o'clock, diameter 100mm Remarks: gully conoction	00:14:05		(Constr) 0
41.16	WL	Water level, 0% of the vertical dimension	00:17:36		(Serv) 0
41.16	SA	Survey abandoned Remarks: Survey could not be completed due to sharp bend on this pipe	00:17:36		(Misc) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**45**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ7**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHS5**
Inspection	**AJ7 (D/S) MHS5**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**39.61 m**	Lining :	

Comment :

1:315 Position	Code	Observation	MPEG	Photo	Grade
AJ7					
0.00	IC	Start node type, inspection chamber, reference number : AJ7	00:00:02		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
3.60	WL	Water level, 5% of the vertical dimension	00:00:32		(Serv) 0
8.50	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:00:32		(Constr) 0
9.80	WLC	Clear water level, 10% of the vertical dimension	00:01:14		(Serv) 0
20.10	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:02:33		(Constr) 0
26.40	CN	Connection other than junction, at 2 o'clock, diameter 150mm	00:03:22		(Constr) 0
26.60	WL	Water level, 5% of the vertical dimension	00:03:23		(Serv) 0
39.59	OBS	Other obstacles built into structure, from 1 to 3 o'clock, 75% cross-sectional area loss Remarks: Poor workmanshi	00:00:00	45_9A	(Serv) 5
39.60	WL	Water level, 5% of the vertical dimension	00:00:00		(Serv) 0
39.61	SA	Survey abandoned Remarks: Survey could not be completed due to a pipe cross the way.	00:00:00		(Misc) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**19/04/2017**	**45**	**X**

Photo: 45_9A, MPEG #: 280217_1, 00:00:00
39.59m, Other obstacles built into structure, from 1 to 3 o'clock, 75% cross-sectional area loss

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**46**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G10**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G10 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**9.81 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
G10	0.00	GY	Start node type, gully, reference number : G10	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	9.80	WL	Water level, 0% of the vertical dimension	00:01:43		(Serv) 0
DS	9.81	BRF	Finish node type, major connection without manhole reference number: DS Remarks: Connected to the drain b	00:01:43		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**47**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G11**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G11 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**12.40 m**	Lining :	

Comment :

1:105 Position	Code	Observation	MPEG	Photo	Grade
G11					
0.00	GY	Start node type, gully, reference number : G11	00:00:02		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:19		(Serv) 0
2.20	REM	General remark Remarks: Dents.	00:00:59	47_3A	(Misc) 0
5.80	D	Deformed sewer/drain, 10%	00:01:48	47_4A	(Struct) 4
7.20	WL	Water level, 5% of the vertical dimension	00:02:05		(Serv) 0
9.00	LL	Line deviates left	00:02:25		(Serv) 0
12.00	LD	Line deviates down	00:02:52		(Serv) 0
12.30	WL	Water level, 0% of the vertical dimension	00:02:57		(Serv) 0
DS					
12.31	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This drain is connected t	00:02:57		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	**80**	**6.45**	**80**	**4**	**0**	**0**	**0**	**0**	**1**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**19/04/2017**	**47**	**X**

Photo: 47_3A, MPEG #: 280217_1, 00:00:59
2.2m, General remark

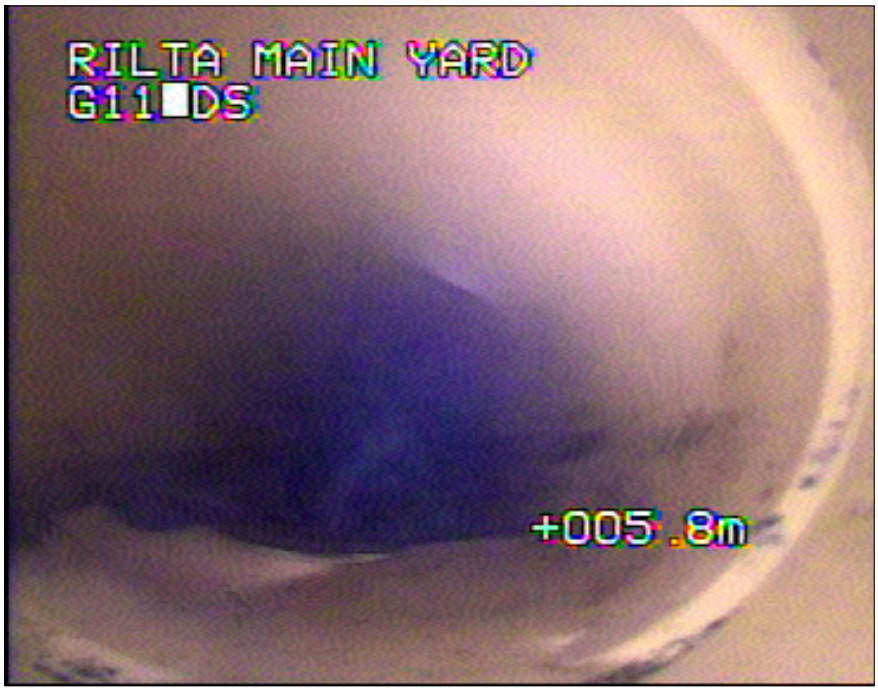

Photo: 47_4A, MPEG #: 280217_1, 00:01:48
5.8m, Deformed sewer/drain, 10%

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Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**48**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G12**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G12 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**9.81 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
G12	0.00	GY	Start node type, gully, reference number : G12	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	8.50	LD	Line deviates down	00:01:37		(Serv) 0
	9.80	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
DS	9.81	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This drain is connected t	00:00:00		(Constr) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**49**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**G13**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**DS**
Inspection	**G13 (D/S) DS**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**11.11 m**	Lining :	

Comment :

1:105 Position	Code	Observation	MPEG	Photo	Grade
G13					
0.00	GY	Start node type, gully, reference number : G13	00:00:01		(Constr) 0
0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
11.10	WL	Water level, 0% of the vertical dimension	00:01:54		(Serv) 0
DS					
11.11	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:54		(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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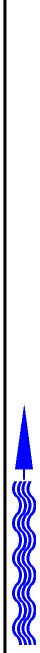
Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**50**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHF9**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MHF8**
Inspection	**MHF8 (U/S) MHF9**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**58.01 m**	Lining :	

Comment :



1:462 Position	Code	Observation	MPEG	Photo	Grade
MHF8					
0.00	MH	Start node type, manhole, reference number : MHF8	00:00:00		(Constr) 0
0.01	WL	Water level, 10% of the vertical dimension	00:00:00		(Serv) 0
3.00	WL	Water level, 5% of the vertical dimension	00:00:33		(Serv) 0
27.90	WL	Water level, 10% of the vertical dimension	00:03:59		(Serv) 0
29.70	WL	Water level, 5% of the vertical dimension	00:05:12		(Serv) 0
33.20	WLC	Clear water level, 10% of the vertical dimension	00:06:24		(Serv) 0
34.30	WL	Water level, 5% of the vertical dimension	00:06:52		(Serv) 0
43.40	WL	Water level, 10% of the vertical dimension	00:07:43		(Serv) 0
44.30	WL	Water level, 20% of the vertical dimension	00:07:48		(Serv) 0
48.80	WL	Water level, 10% of the vertical dimension	00:08:26		(Serv) 0
51.80	WLC	Clear water level, 15% of the vertical dimension	00:08:57		(Serv) 0
52.80	WLC	Clear water level, 20% of the vertical dimension	00:09:07		(Serv) 0
54.90	WLC	Clear water level, 10% of the vertical dimension	00:10:07		(Serv) 0
58.00	WLC	Clear water level, 10% of the vertical dimension	00:00:00		(Serv) 0
58.01	SA	Survey abandoned Remarks: Survey could not be completed due to cameras rod.	00:00:00		(Misc) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**51**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**PD**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**OV**
Inspection	**PD (D/S) OV**	Pipe Length		D/S Depth :	

Use:	**Foul**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**100.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**5.30 m**	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
PD	0.00	MH	Start node type, manhole, reference number : PD	00:00:01		(Constr) 0
	0.01	WL	Water level, 5% of the vertical dimension	00:00:01		(Serv) 0
	0.90	WL	Water level, 0% of the vertical dimension	00:00:14		(Serv) 0
	1.70	LR	Line deviates right	00:00:22		(Serv) 0
	3.00	WL	Water level, 5% of the vertical dimension	00:00:35		(Serv) 0
	4.00	WL	Water level, 10% of the vertical dimension	00:00:45		(Serv) 0
	5.00	WL	Water level, 20% of the vertical dimension	00:00:53		(Serv) 0
OV	5.30	LR	Line deviates right	00:01:00		(Serv) 0

Structural Defects | **Constructional Features**

Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**52**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**MHS6**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**ET**
Inspection	**MHS6 (D/S) ET**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**225.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**9.30 m**	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
MHS6						
	0.42	WL	Water level, 5% of the vertical dimension	00:01:11		(Serv) 0
	0.42	CPF	Finish node type, catchpit reference number: ET	00:01:12		(Constr) 0
	9.24	MH	Start node type, manhole, reference number : MHS6	00:00:00		(Constr) 0
ET	9.24	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	9.30	WL	Water level, 5% of the vertical dimension	00:00:14		(Serv) 0

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**53**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJ6**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**AJB**
Inspection	**AJ6 (D/S) AJB**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**48.91 m**	Lining :	

Comment :

1:399 Position	Code	Observation	MPEG	Photo	Grade
AJ6					
0.00	IC	Start node type, inspection chamber, reference number : AJ6	00:00:00		(Constr) 0
0.40	WLC	Clear water level, 25% of the vertical dimension	00:00:10		(Serv) 0
0.40	CUW	Loss of vision, camera under water	00:00:35		(Misc) 0
3.60	WL	Water level, 10% of the vertical dimension	00:00:56		(Serv) 0
4.20	WL	Water level, 5% of the vertical dimension	00:01:05		(Serv) 0
11.20	WL	Water level, 5% of the vertical dimension	00:02:29		(Serv) 0
17.90	WLC	Clear water level, 10% of the vertical dimension	00:03:17		(Serv) 0
21.70	WL	Water level, 15% of the vertical dimension	00:03:44		(Serv) 0
23.70	WLC	Clear water level, 20% of the vertical dimension	00:04:01		(Serv) 0
24.70	WL	Water level, 15% of the vertical dimension	00:04:09		(Serv) 0
25.30	WL	Water level, 10% of the vertical dimension	00:04:16		(Serv) 0
27.00	WL	Water level, 5% of the vertical dimension	00:04:30		(Serv) 0
30.00	WLC	Clear water level, 0% of the vertical dimension	00:04:49		(Serv) 0
31.30	WL	Water level, 5% of the vertical dimension	00:05:00		(Serv) 0
33.00	WL	Water level, 10% of the vertical dimension	00:05:14		(Serv) 0
35.00	WL	Water level, 5% of the vertical dimension	00:05:31		(Serv) 0
48.50	SR	Sealing ring intruding, from 11 to 2 o'clock Remarks: Just beside AJB	00:07:29	53_17A	(Constr) 1
48.90	WL	Water level, 5% of the vertical dimension	00:07:43		(Serv) 0
48.91	ICF	Finish node type, inspection chamber reference number: AJB	00:07:43		(Constr) 0
AJB					

Structural Defects | **Constructional Features**
Service Defects | **Miscellaneous Featuress**

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	**5**	**0.1**	**5**	**1**	**0**	**0**	**0**	**0**	**1**

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Inspection pictures / Inspection: 1

Place :	Road :	Date :	Section number :	PLR Suffix :
Rathcoole	**Grants Drive**	**19/04/2017**	**53**	**X**

Photo: 53_17A, MPEG #: 280217_1, 00:07:29
48.5m, Sealing ring intruding, from 11 to 2 o'clock

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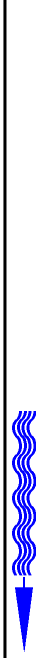
Inspection report / Inspection: 1

Date :	Job number :	Weather :	Operator :	Section number :	PLR SUFFIX:
19/04/2017		**no rain or snow**	**Frantisek**	**54**	**X**
Weather	Vehicle :	Camera :	Preset :	Cleaned :	Operator :
no rain or snow	**VEHICLE 1**	**camera 1**		**yes**	**Frantisek**

Place :	**Rathcoole**	Location details:		U/S MH :	**AJB**
Road :	**Grants Drive**	Catchment:		U/S Depth :	
Location	**Property with buildings**	Tape number :	**280217_1**	D/S MH :	**MH8**
Inspection	**AJB (D/S) MH8**	Pipe Length		D/S Depth :	

Use:	**Surface water**	Pipe shape :	**Circular**
Year laid :		Pipe size :	**150.00 mm**
Purpose :	**Routine inspection of condition**	Pipe material :	**Polyvinyl chloride**
Total length :	**37.31 m**	Lining :	

Comment :



1:294 Position	Code	Observation	MPEG	Photo	Grade
AJB					
0.00	IC	Start node type, inspection chamber, reference number : AJB	00:00:02		(Constr) 0
0.01	WL	Water level, 5% of the vertical dimension	00:00:02		(Serv) 0
0.60	WL	Water level, 10% of the vertical dimension	00:00:07		(Serv) 0
5.10	WL	Water level, 5% of the vertical dimension	00:00:51		(Serv) 0
13.30	WLC	Clear water level, 10% of the vertical dimension	00:01:56		(Serv) 0
13.30	CN	Connection other than junction, at 1 o'clock, diameter 100mm	00:01:56		(Constr) 0
14.40	WL	Water level, 15% of the vertical dimension	00:02:06		(Serv) 0
20.90	WL	Water level, 10% of the vertical dimension	00:03:12		(Serv) 0
23.00	WL	Water level, 20% of the vertical dimension	00:03:37		(Serv) 0
23.30	WL	Water level, 20% of the vertical dimension	00:03:47		(Serv) 0
24.80	WL	Water level, 25% of the vertical dimension	00:04:17		(Serv) 0
24.80	CUW	Loss of vision, camera under water	00:04:17		(Misc) 0
37.30	WL	Water level, 25% of the vertical dimension	00:05:23		(Serv) 0
37.31	SA	Survey abandoned Remarks: Survey could not be completed due to level of water in the pipe.	00:05:23		(Misc) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Featuress				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1