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**ANNUAL ENVIRONMENTAL REPORT**  
**RILTA ENVIRONMENTAL LTD.**  
**SITE 14-A1 GREENOGUE BUSINESS PARK**  
**LICENCE NO. W0185-01**  
**JANUARY 2016 – DECEMBER 2016**

**Prepared For: -**

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

**Prepared By: -**

O' Callaghan Moran & Associates,  
Unit 15 Melbourne Business Park,  
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Cork.

**7 April 2017**

Project	Annual Environmental Report 2016			
Client	Rilta Environmental Ltd W0185-01			
Report No	Date	Status	Prepared By	Reviewed By
161950209	23/03/2017	Draft	Mr Neil Sandes PGeo EurGeol	Mr Jim O'Callaghan MSc
	07/04/2107	Final		

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## **1. INTRODUCTION**

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This is the 2016 Annual Environmental Report (AER) for the Rilta Environmental Limited (Rilta) Materials Recovery Facility (MRF) located at Unit 14-A1 Greenogue Business Park, Rathcoole, County Dublin. The report covers the period from the 1<sup>st</sup> January 2016 to the 31<sup>st</sup> December 2016. The content of the AER is based on Schedule E of the Waste Licence (W0185-01).

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## 2. SITE DESCRIPTION

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### 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. Rilta have been operating at the facility since 2009.

### 2.2 Waste Management Activities

During the reporting period the licence allowed Rilta to accept and process up to 60,000 tonnes of waste per annum, as set out in Appendix A and summarised below:

#### 2.2.1 Waste Types & Processes

During the reporting period, the facility was licensed to accept the following waste categories and maximum quantities, as specified in Schedule A of the Licence: -

- Household Waste (7,000 tonnes)
- Commercial & Industrial Waste (15,000 tonnes)
- Construction & Demolition Waste (1,000 tonnes)
- Sewage Sludge (2,000 tonnes)
- Industrial Sludge (2,000 tonnes)
- Hazardous Waste (as listed in Table E.2.2 entitled 'Hazardous waste Types and Quantities' of the application (33,000 tonnes)

*Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Act, 1996:*

**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);**

This activity relates to the shredding of waste materials, including, household hazardous waste containers and metals, plastics, card and paper. Physico-chemical treatment may be carried out on effluents to meet discharge criteria.

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

This activity relates to bulking-up of waste on-site prior to shipment of waste for disposal offsite.

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

This activity relates to the baling and repackaging of various waste types prior to disposal off-site.

**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;**

This activity relates to the storage of hazardous and non-hazardous waste at the facility prior to disposal off-site.

*Licensed Waste Disposal Activities, Fourth Schedule of the Waste Management Act, 1996.*

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

This activity relates to the recycling of various organic substances including, wood, paper/cardboard, textile materials and vegetable oils.

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

This activity relates to the dismantling, shredding, baling and recycling of various metal wastes.

**Class 4: Recycling or reclamation of other inorganic materials;**

This activity is limited to the reclamation of refrigerator gasses.

**Class 11: Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule:**

This activity is to make provision for the acceptance on-site for transfer to an appropriate facility of waste that has been obtained from any activity referred to previously in the Schedule.

**Class 12: Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule;**

This activity refers to the exchange of certain waste types and their packaging for further processing off-site

**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;**

This activity is limited to the storage of waste at the facility prior to off-site recovery.

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### 3. EMISSION MONITORING

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Rilta implements the environmental monitoring programme specified in the licence to assess the significance of emissions from the site activities. The programme includes surface water, wastewater, groundwater, noise and dust monitoring. The monitoring locations are shown on the plan in Appendix A. The monitoring results are submitted to the Agency at quarterly intervals. An overview of the results is presented in this Section.

#### 3.1 Surface Water Monitoring

Surface water monitoring was carried out quarterly at one location (SW1). There are no emission limit values (ELVs) or trigger levels set in the Licence. Following a request from the Agency, trigger levels were developed in September 2015 in accordance with the Agency's guidance on setting of trigger levels for storm water discharges to off-site surface waters at EPA licensed IPPC & Waste facilities based on data from Q-1 2009 to Q-3 2015.

Table 3.1 presents the surface water monitoring results in 2016. All parameters are below their respective warning levels.

**Table 3.1** Surface water Monitoring Results 2016: SW1

Parameter	Units	Q1	Q2	Q3	Q4	Warning Level	Action Level
pH	pH units	7.51	6.83	7.5	6.47	8.78	9.34
Conductivity	mS/cm	344	134	125	283	573	715
COD	mg/l	24	25	17	19	57	76

#### 3.2 Groundwater Monitoring

There are two groundwater monitoring wells on site (GW-1 and GW-2). The locations are shown on the plan in Appendix 1. GW-1 is in the southern section of the site and is upgradient of GW-2, which is in the northern end of the site.

Monitoring is carried out quarterly. The parameters analysed quarterly are pH, electrical conductivity, temperature, dissolved oxygen, chloride, sulphate, Total Organic Carbon. Annual monitoring of List I/II Organic Substances and dissolved metals are carried out annually.

Tables 3.2 to Table 3.5 include the groundwater analytical results for GW-1 and GW-2 for each quarter. The tables included for comparison purposes the Interim Guideline Values (IGV) prepared by the Agency and the groundwater Threshold Values (TV) from the Groundwater Regulations 2010.

In Q1 there was a slight exceedance of the IGV for manganese in GW-1. There was exceedances of the IGV for chloride and electrical conductivity in GW-2 but the GTVs were not exceeded.

There were no further exceedances of the IGV or TVs throughout the year. There is no significant change in water quality between the upgradient and downgradient wells.

**Table 3.2** Q1 Groundwater Monitoring Results (Annual Parameters)

Parameter	Unit	GW-1	GW-2	IGV	TV
Boron	µg/l	18	20	<b>1,000</b>	<b>750</b>
Cadmium	µg/l	<0.5	<0.5	<b>5</b>	<b>3.75</b>
Calcium	mg/l	124.9	181	<b>200</b>	-
Copper	µg/l	<7	<7	<b>30</b>	<b>1,500</b>
Iron	µg/l	<20	<20	<b>200</b>	-
Lead	µg/l	<5	<5	<b>10</b>	<b>18.75</b>
Magnesium	mg/l	8.9	14	<b>50</b>	-
Manganese	µg/l	511	40	<b>50</b>	-
Nickel	µg/l	3	<2	<b>20</b>	<b>15</b>
Potassium	mg/l	0.9	2.1	<b>5</b>	-
Zinc	µg/l	<3	<3	<b>100</b>	-
Sulphate	mg/l	96.81	185.52	<b>200</b>	<b>187.5</b>
Chloride	mg/l	17.5	48.4	<b>30</b>	<b>187.5</b>
Dissolved Oxygen	mg/l	6	7	<b>NAC</b>	-
Electrical Conductivity	µS/cm	673	1,118	<b>1,000</b>	<b>875 – 1,875</b>
pH	pH units	7.10	7.16	<b>6.5-9.5</b>	-
Total Organic Carbon	mg/l	<2	<2	<b>NAC</b>	-
VOC	µg/l	ND	ND	-	-
sVOC	µg/l	ND	ND	-	-

NAC – no abnormal change

ND – None Detected

**Table 3.3** Q2 Groundwater Monitoring Results

Parameter	Unit	GW-1 Up Gradient	GW-2 Down Gradient	IGV	TV
pH	pH Units	7.59	7.54	<b>6.5-9.5</b>	-
EC	µS/cm	761	642	<b>1,000</b>	<b>875 – 1,875</b>
Dissolved Oxygen	mg/l	7	7	<b>NAC</b>	-
Chloride	mg/l	19.6	15.1	<b>30</b>	<b>187.5</b>
Sulphate	mg/l	106.69	67.69	<b>200</b>	<b>187.5</b>
Total Organic Carbon	mg/l	<2	<2	<b>NAC</b>	-

NAC – no abnormal change



**Table 3.4** Q3 Groundwater Monitoring Results

Parameter	Unit	GW-1 Up Gradient	GW-2 Down Gradient	IGV	TV
pH	pH Units	7.52	7.98	6.5-9.5	-
EC	µS/cm	626	401	1,000	875 – 1,875
Dissolved Oxygen	mg/l	7	5	NAC	-
Chloride	mg/l	18.5	19.7	30	187.5
Sulphate	mg/l	19.61	54.08	200	187.5
Total Organic Carbon	mg/l	<2	3	NAC	-

NAC – no abnormal change

**Table 3.5** Q4 Groundwater Monitoring Results

Parameter	Unit	GW-1 Up Gradient	GW-2 Down Gradient	IGV	TV
pH	pH Units	7.46	7.46	6.5-9.5	-
EC	µS/cm	700	525	1,000	875 – 1,875
Dissolved Oxygen	mg/l	8	8	NAC	-
Chloride	mg/l	17.4	8.3	30	187.5
Sulphate	mg/l	87.7	52.7	200	187.5
Total Organic Carbon	mg/l	<2	2	NAC	-

NAC – no abnormal change

### 3.3 Wastewater Monitoring

The facility is designed to collect wastewater (foul) from floor wash downs in the warehouse building and discharge to it to the municipal sewer that serves the industrial estate. However, as putrescible wastes are not accepted at the facility and floor wash downs are not required, there is no wastewater discharge to sewer and no requirement for monitoring to be carried out.

### 3.4 Noise Survey

An annual noise survey is carried out. This was carried out in August 2016. Daytime noise monitoring was carried out at approved noise monitoring locations as shown on the site plan in Appendix 1 and the results are summarised in Table 3.6. Site operations were not audible at any of the stations and were therefore lower than the 55dB daytime limit as specified in the licence.

**Table 3.6** Day-time Noise Survey Results

Station	N1	N2	N3
Period	Daytime	Daytime	Daytime
Ambient L <sub>Aeq</sub> 30 min (dB)	62	64	54
Facility specific L <sub>Aeq</sub> 30 min (dB)	<52	<51	<<49
Tone objectively detected	x	x	x
Tone attributable to facility	x	x	x
Facility audibly tonal	x	x	x
Facility audibly impulsive	x	x	x
Facility rated L <sub>Req</sub> 30 min (dB)	<52	<51	<<49
Limit (dB)	55	55	55
Compliance	✓	✓	✓

### 3.5 Dust Monitoring

Dust monitoring was carried out in August, September and October and the results are in Table 3.7. There was one exceedance of the dust deposition limit (350 mg/m<sup>2</sup>/day) set in the Licence. In September 2016 the result for D-3 (1,591 mg/m<sup>2</sup>/day) exceeded the dust deposition limit, however, the inorganic particulate fraction of the sample which is representative of site activities was 191 mg/m<sup>2</sup>/day which is below the limit. The sample was impacted greatly by the presence of vegetative growth (leaves, algae, etc.), which was not derived from site based activities. The exceedance was reported to the Agency.

**Table 3.7** Dust Monitoring Results 2016

	April / May mg/m <sup>2</sup> /day	July / August mg/m <sup>2</sup> /day	September mg/m <sup>2</sup> /day	Deposition Limit mg/m <sup>2</sup> /day
D-1	20.81	7.24	113	350
D-2	15.29	10.77	123	350
D-3	33.27	4.99	1,591	350
D-4	42.41	3.03	108	350

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## 4. SITE DEVELOPMENT WORKS

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### 4.1 Engineering Works

There was no engineering works completed in 2016 and none are proposed for 2017.

### 4.2 Summary of Resource & Energy Consumption

Table 4.1 is a summary of the resource and energy consumption during the reporting period and a comparison with the consumption in 2015.

**Table 4.1** Resources Used On-Site in 2015 & 2016

<b>Resources</b>	<b>Quantities 2014</b>	<b>Quantities 2016</b>
Road Diesel	1,220 litres	1360 litres
Electricity	56,100 KwH	64,000 KwH
Water	480m <sup>3</sup>	840m <sup>3</sup>

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## 5. WASTE RECEIVED AND CONSIGNED FROM THE FACILITY

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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 List of Waste. A more detailed description of the wastes consigned and the waste destinations are provided in the PRTR submission in Appendix 2.

The total amount received in 2016 was 1,332 tonnes. The total amount consigned was 1,403.5 tonnes. The difference in waste received into and consigned is 71.533 tonnes. This relates to waste that was on-site at the end of 2016 and which was consigned in 2017. All the wastes consigned from the site went to authorised recovery and disposal facilities.

**Table 5.1** Waste Received 2016

EWC	Description	Waste In
16 02 11*	WEEE	380.06
16 02 13*	Transformers	1269.88
16 02 14	Redundant Equipment	23.2

**Table 5.2** Waste Consigned 2016

EWC	Description	Waste Out
13 03 07*	Mineral Based non-chlorinated insulating and heat transmission oils	212.14
13 05 07*	Oily Water from oil/water interceptors	15.02
16 02 11*	Discarded equipment containing chlorofluorocarbons, HCFC, HFC	380.06
16 02 14	Discarded Equipment other than those mentioned in 16 02 09 to 16 02 13	23.2
19 12 02	Ferrous Metal	845.29
19 12 03	Non-ferrous Metal	83.5
16 07 08*	Wastes containing oil	71.7
	<b>Total Received</b>	1,673.14
	<b>Total Consigned</b>	1630.91
	<b>Recovered</b>	1544.19
	<b>Disposed</b>	86.72
	<b>Recovery Rate (%)</b>	94.68%

**Table 5.3** Waste Received & Consigned in Recent Years

	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
<b>Total Received</b>	1,332	2615.18	2614.40	2714	2617.5
<b>Total Consigned</b>	1,403.541	2,546.67	2478.48	2788.20	2339.69
<b>Total Recovered</b>	1,375.901	2,528.81	2474.98	2753.30	2339.69
<b>Total Disposed</b>	27.64	17.86	3.5	34.9	0
<b>Recovery Rate</b>	98.03%	99.30%	99.86%	98.75%	100%

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## **6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS**

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### **6.1 Incidents**

There was 1 notifiable environmental incident in 2016.

- 1) 17<sup>th</sup> November 2016 – Non-compliance of ELV for dust at monitoring point D-3. 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. There were no complaints during the reporting period.

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## **7. ENVIRONMENTAL DEVELOPMENT**

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### **7.1 Environmental Management Programme Report**

RILTA has 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 facility was recertified in February 2015.

The schedule of the EMS Objectives and Targets, including their status for 2017 is included in Appendix 3.

### **7.2 Site Management Structure**

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

### **7.3 Environmental Management Programme**

The objectives that were achieved during this reporting period are outlined in Appendix 4.

### **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. Opening Times for Inspection of Records are from 10 am – 4 pm. Visits to the site should be arranged in advance by ringing the Facility Manager at 01 401 8000

### **7.5 Nuisance Controls**

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

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## **8. OTHER REPORTS**

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### **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 information submitted to the Agency via the web-based data reporting system is in Appendix 2.

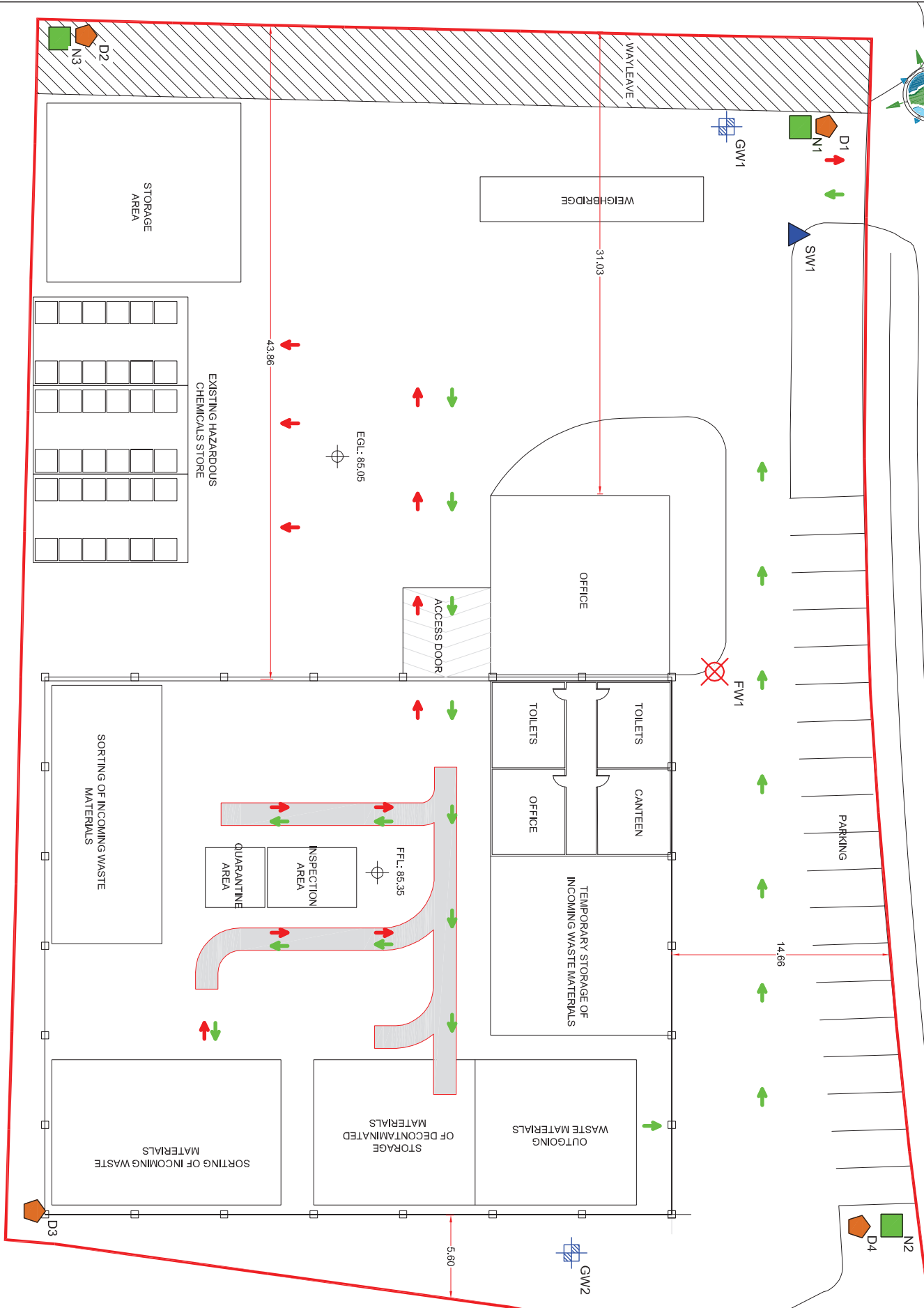
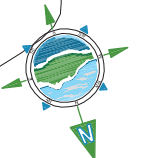
### **8.2 Bund Integrity Test Report**

Bund integrity testing was completed in 2016. A copy of the report was submitted to the agency in 2016 and is included in Appendix 6.



# **APPENDIX 1**

Site Plan showing Environmental Monitoring Locations



- LEGEND:**
- SURFACE WATER DISCHARGE POINT
  - GROUNDWATER MONITORING WELL
  - NOISE MONITORING POINT
  - FLOOD WATER MONITORING POINT
  - DUST MONITORING POINT

Rev	Date	Description	By	Check
001	18.04.11	ISSUE FOR TENDER	MM	ST
002	19.04.11	ISSUE FOR TENDER	MM	ST

Client: **RILTA Environmental Limited**

Project: **RILTA WASTE FACILITY AT GREENOUGE BUSINESS PARK**

Title: **ENVIRONMENTAL MONITORING LOCATIONS**

Scale @ A1: **1:125**

Prepared By: **M. Nolan** Checked: **April 2011** Date:

O'Callaghan Moran & Associates  
 Unit 15 Melbourn Business Park,  
 Mabel Farm Road,  
 Carrick.

## **APPENDIX 2**

European Pollutant Release and Transfer Register



Environmental Protection Agency

| PRTR# : W0185 | Facility Name : Rilta Environmental | Filename : W0185\_2016.xlsm | Return Year : 2016 |

[Guidance to completing the PRTR workbook](#)

# PRTR Returns Workbook

Version 1.1.19

<b>REFERENCE YEAR</b>	<b>2016</b>
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## 1. FACILITY IDENTIFICATION

<b>Parent Company Name</b>	Rilta Environmental Limited
<b>Facility Name</b>	Rilta Environmental
<b>PRTR Identification Number</b>	W0185
<b>Licence Number</b>	W0185-01

### Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

<b>Address 1</b>	Block 402, Grant Drive
<b>Address 2</b>	Greenogue Business Park
<b>Address 3</b>	Rathcoole
<b>Address 4</b>	
	Dublin
<b>Country</b>	Ireland
<b>Coordinates of Location</b>	-6.47708 53.2999
<b>River Basin District</b>	IEEA
<b>NACE Code</b>	3832
<b>Main Economic Activity</b>	Recovery of sorted materials
<b>AER Returns Contact Name</b>	Colm Hussey
<b>AER Returns Contact Email Address</b>	colm.hussey@rilta.ie
<b>AER Returns Contact Position</b>	Site Manager
<b>AER Returns Contact Telephone Number</b>	0879176264
<b>AER Returns Contact Mobile Phone Number</b>	0879176264
<b>AER Returns Contact Fax Number</b>	
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	0
<b>Number of Operating Hours in Year</b>	0
<b>Number of Employees</b>	70
<b>User Feedback/Comments</b>	
<b>Web Address</b>	

## 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)

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

## 4. WASTE IMPORTED/ACCEPTED ONTO SITE

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

<b>Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?</b>	
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5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE | PRTR : W0185 | Facility Name : Rita Environmental | Filename : W0185\_2016.xlsx | Return Year : 2016 | 22/03/2017 08:02

Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Has Waste Location No of Heat Exchanger Has Waste Name and Licence/Permit No of Recover/Disposer	Has Waste Address of Next Destination Facility Non-Haz Waste Address of Recover/Disposer	Name and License / Permit No. and Address of Final Receiver / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination (i.e. Final Recovery / Disposal Site) (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	13 03 07	Yes	212.1	mineral-based non-chlorinated insulating and heat transmission oils	R9	M	Weighted	Offsite in Ireland	Rita Environmental Ltd, W192-3, 402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	
Within the Country	13 05 07	Yes	15.02	oil/water separators discarded equipment containing	D9	M	Weighted	Offsite in Ireland	Rita Environmental Ltd, W192-3	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	
To Other Countries	16 02 11	Yes	380.1	chlorofluorocarbons, HCFC, HFC	R4	M	Weighted	Abroad	Tech Rec NI, Hegarty Metals, Permit No. WP 05/04	Dungannon, ... Co. Tyrone, Ireland	Dungannon, ... Co. Tyrone, Ireland	
Within the Country	16 02 14	No	23.2	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighted	Offsite in Ireland	Tech Rec NI, Hegarty Metals, Permit No. WP 05/04	Dock Road, Limerick, Ireland	Dungannon, ... Co. Tyrone, Ireland	
Within the Country	16 07 08	Yes	71.7	wastes containing oil	D9	M	Weighted	Offsite in Ireland	Rita Environmental Ltd, W192-3	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	
Within the Country	16 07 99	No	0.0	wastes not otherwise specified	D9	M	Weighted	Offsite in Ireland	Rita Environmental Ltd, W192-3	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	402 Greenogue Business Park, Rathcoole, Co. Dublin, Ireland	
Within the Country	19 12 02	No	845.3	ferrous metal	R4	M	Weighted	Offsite in Ireland	Hegarty Metals, Permit No. WP 05/04	Dock Road, Limerick, Ireland	Dungannon, ... Co. Tyrone, Ireland	
Within the Country	19 12 03	No	83.5	non-ferrous metal	R4	M	Weighted	Offsite in Ireland	Hegarty Metals, Permit No. WP 05/04	Dock Road, Limerick, Ireland	Dungannon, ... Co. Tyrone, 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**

**RILTA**  
*Environmental*  
*Limited*



***EHS MANAGEMENT PLAN***

In accordance with  
***ISO 14001 & OHSAS18001***

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

<b><i>EMP Ref.</i></b>	<b><i>Objective</i></b>	<b><i>Target</i></b>	<b><i>Environmental Management Programme for the implementation of objectives.</i></b>	<b><i>Responsible Person</i></b>	<b><i>Completion Date</i></b>	<b><i>Completed (Y/N)</i></b>
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

<i>Issue No.</i>	012	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2016	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager



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

<i>Issue No.</i>	012	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2016	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
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

<i>Issue No.</i>	012	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2016	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
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	RS	Ongoing	Y
			Laboratory approval for the usage of wastes for treatment	TMc	Ongoing	Yes
6	Optimize the quality of trade effluent	No ELV breaches	Clean 'wet wells' twice a year	TMc	Dec 16	Y
			Clean DAF system twice a year	TMc	Dec 16	Y

<i>Issue No.</i>	012	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2016	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

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

<i>Issue No.</i>	012	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2016	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
8	To Be Energy Efficient	Reduce electricity usage by 5%	<p>Complete targeted energy audit at both 402 and 14A1 sites.</p> <p>Assess findings of audit.</p> <p>Implement findings of audit if economically and practically feasible.</p>	<p>CH</p> <p>CH/SC</p> <p>CH/SC</p>	<p>Aug 16</p> <p>Sept 16</p> <p>Dec 16</p>	

<i>Issue No.</i>	012	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2016	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
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						

<i>Issue No.</i>	012	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2016	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

# **APPENDIX 4**

Schedule proposed Targets and Objectives 2017

**RILTA ENVIRONMENTAL Ltd.**

**EHS MANAGEMENT SYSTEM**

**RILTA**  
*Environmental*  
*Limited*



***EHS MANAGEMENT PLAN***

In accordance with  
***ISO 14001 & OHSAS18001***



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

<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
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	

<i>Issue No.</i>	013	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2017	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
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	

<i>Issue No.</i>	013	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2017	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
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	

<i>Issue No.</i>	013	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2017	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

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

<i>Issue No.</i>	013	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2017	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

<b><i>EMP Ref.</i></b>	<b><i>Objective</i></b>	<b><i>Target</i></b>	<b><i>Environmental Management Programme for the implementation of objectives.</i></b>	<b><i>Responsible Person</i></b>	<b><i>Completion Date</i></b>	<b><i>Completed (Y/N)</i></b>
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	

<i>Issue No.</i>	013	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2017	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

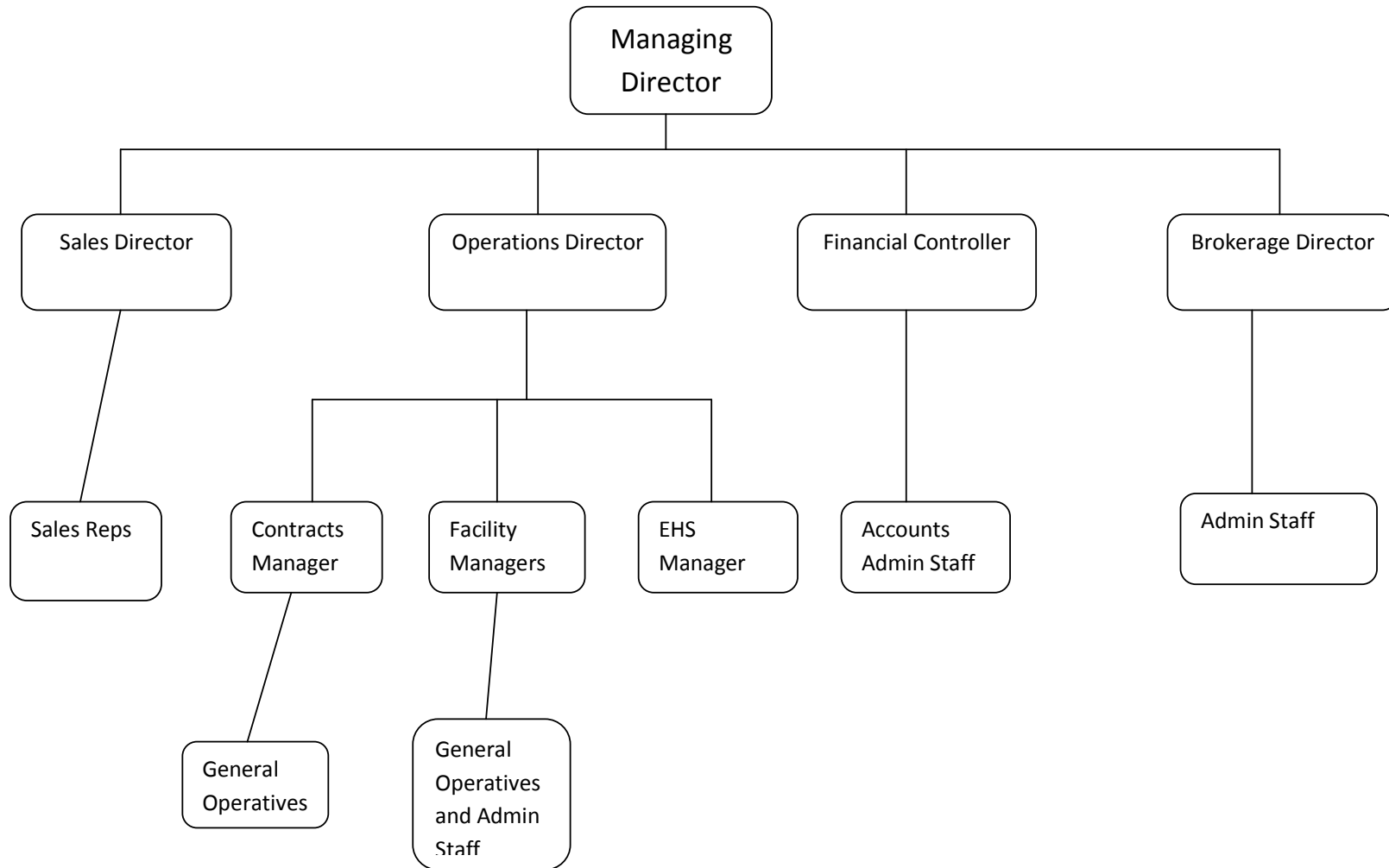
<b>EMP Ref.</b>	<b>Objective</b>	<b>Target</b>	<b>Environmental Management Programme for the implementation of objectives.</b>	<b>Responsible Person</b>	<b>Completion Date</b>	<b>Completed (Y/N)</b>
9	Reduce Process Waste	Reduce filtercake volumes	Optimize the volume of 'dig-out' waste that can be dried.	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	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	

<i>Issue No.</i>	013	<i>Compiled by: Name/Position</i>	Colm Hussey Facility & Environmental Manager
<i>Date:</i>	Feb 2017	<i>Reviewed by: Name/Position</i>	Sean Cotter General manager

# **APPENDIX 5**

Management Structure

# Rilta Environmental Management Structure





# **APPENDIX 6**

Bund Integrity Test Report



**Rilta Environmental Ltd.**

**Bund Integrity Testing  
at Site 14A1,  
Greenogue Business Park,  
Rathcoole, Co. Dublin**

November 2016

Revision: B

**TOBIN CONSULTING ENGINEERS**



# REPORT

**PROJECT:**

**Bund Integrity Testing**

**Site 14A1, Greenogue Business Park  
Rathcoole, Co. Dublin**

**CLIENT:**

**Rilta Environmental Ltd**  
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**DOCUMENT AMENDMENT RECORD**

<b>Client:</b>	<b>Rilta Environmental Ltd.</b>
<b>Project:</b>	<b>10063 – Bund Testing</b>
<b>Title:</b>	<b>Bund Integrity Testing</b>

PROJECT NUMBER: 10063				DOCUMENT REF:10063/Rev A			
A	Bund Integrity Testing	FH	090217	ST	190213	DG	190213
Revision	Description & Rationale	Originated	Date	Checked	Date	Authorised	Date
<b>TOBIN Consulting Engineers</b>							

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### Appendix A

Figure 1 – Bund / Tank Locations for testing (Site 14A1, Greenogue Business Park)

### Appendix B

Site 14A1 (Ref. Cedar Yard) - 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 14A1, Greenogue Business Park, Rathcoole, Co. Dublin under the requirements of the site's EPA Waste Licence (No. W0185-01).

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 15/11/16. A structural survey of the Buildings outlined for assessment was carried out by a TOBIN Engineer on Friday, 25<sup>th</sup> November 2016.

Hydrostatic testing of a number of bunded areas and underground settlement tanks commenced on Saturday, July 23<sup>rd</sup> 2016 and concluded Monday, July 25<sup>th</sup> 2016. A second visit for testing of the underground bund at Site 14A1, Greenogue Business Park commenced Tuesday, 14<sup>th</sup> November 2016 and concluded on Thursday 16<sup>th</sup> November 2016 in order to carry out Testing of four indoor portable bunds.

Areas / Bunds for testing identified within Site 14A1, Greenogue Business Park include:

- Area / Bund No. 12: Large Warehouse
- Area / Bund No. 13: Storage Bay Portable Bunds (2No)
- Area / Bund No. 14: Processing Bay Portable Bunds (2No)
- Area / Bund No. 15: Outdoor Concrete Bund
- Area / Bund No. 16: Underground Concrete Bund

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 over ground 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 SITE 14A1, GREENOGUE BUSINESS PARK

A methodology for the testing of individual bunds and tanks at Site 14A1 is detailed below. The locations of the areas tested at Site 14A1 is shown in Figure 1 in Appendix A.

### 2.1.1 Large Warehouse Building (Area / Bund No. 12)

A structural survey was carried out by a TOBIN Engineer on the Internal Warehouse Building on Friday, 25<sup>th</sup> November, located as shown in Figure 1 of Appendix A. This building is designated as an area for the storage, inspection and processing of incoming electrical transformers. This survey consisted of a visual assessment of all walls, floors and ramps within the building.

### 2.1.2 Storage Bay – Portable Bunds (2 No.) (Area / Bund No. 13)

There are Indoor Portable Bunds/Tanks (2 No.) in the Storage Bay Building at Site 14A1, located as shown in Figure 1 of Appendix A.

It was proposed that over a period when the facility was non-operational, liquid levels within the internal storage bunds would be monitored for a three day period.

The locations of the storage bunds during the testing period and location of the main outdoor storage area are shown in Figure 1 attached.

**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.*

### 2.1.3 Processing Area – Portable Bunds (2No.) (Area / Bund No. 14)

It was proposed to test the Indoor Portable Steel Bunds (2No.) in the Processing Bay Building at Site 14A1, located as shown in Figure 1 of Appendix A. The bunds were thoroughly cleaned out, with any debris and sludge removed from the bunds prior to testing.

Each bund was then incrementally filled with water to a level that is equal to 25% of the overall capacity of each 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 such as welding or repairing any cracks or faults 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 Outdoor Concrete Bund / Loading Bay (Area / Bund No. 15)*

It was proposed to test the Outdoor Concrete Bund / Loading Bay at Site14A1, 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 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 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 Underground Concrete Bund (Area / Bund No. 16)*

Testing was carried out on the Underground Concrete Bund over a 3 day period in July 2016. It was proposed to test the Underground Concrete Bund at Site14A1, 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 container/bund to absorb any initial water and reach an equilibrium state. After this 24hr period had lapsed, the level of water was measured using a data logger to record any changes in water level.

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.*

### 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 disposed of through the surface water drainage system on site.

### 3.3 PROGRAMME FOR TESTING (SITE 14A1)

With the exception of the tests carried out in November for the internal bunds, it was proposed that all testing would be carried out over the same 4-day period<sup>1</sup> in July 2016.

- Day 1: TOBIN staff attended Site 14A1 on Friday, July 22<sup>nd</sup> 2016, before the testing commenced in order to assess the Underground Concrete Bund and Outdoor Concrete Bund for testing and to review the location of the Bunds to be tested (with Rilta staff) and the preparation of test areas including the addition of water to the bund as required for hydrostatic testing (with Rilta staff). Levels were taken by TOBIN staff.
- Day 2-4: TOBIN staff attended Site 14A1 on Saturday, 23<sup>rd</sup> July, Sunday, 24<sup>th</sup> July and Monday, 25<sup>th</sup> July to take levels at the Underground and Outdoor Concrete Bunds. Levels were taken at the same time each day, weather conditions noted and controls checked

A second visit was required to carry out hydrostatic testing on the Over indoor portable bunds at Site 14A1 in November 2016.

- Day 1: TOBIN staff attended Site 14A1 on Monday, 14<sup>th</sup> of November 2016 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). 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 2-4: TOBIN staff attended site on Tuesday, November 15<sup>th</sup>, Wednesday, 16<sup>th</sup> November and Thursday, 17<sup>th</sup> November 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 Friday, 25<sup>th</sup> November.

---

<sup>1</sup> Where this was not practical for Rilta, an alternative programme for testing was agreed (all results are included herein).

## 4 RESULTS

### 4.1 HYDROSTATIC SURVEY RESULTS

Hydrostatic testing was carried out on the Bunded areas & Underground Storage Tanks from Friday, July 22<sup>nd</sup> to Monday, July 25<sup>th</sup> 2016, and for additional Indoor Portable Storage Bunds from Tuesday, 15<sup>th</sup> November to Thursday, 17<sup>th</sup> November 2016.

No fluctuation in liquid levels was noted in the bunds or tanks during the first monitoring period Day 1 to Day 2 (November 15<sup>th</sup> to 16<sup>th</sup> November 2016) and levels remained constant for the second monitoring period Day 2 to Day 3 (16<sup>th</sup> November to 16<sup>th</sup> November 2016). 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 SITE 14A1, GREENOGUE BUSINESS PARK

Testing commenced 'as per methodology' on Saturday 23<sup>rd</sup> July 2016 and concluded on Monday, 25<sup>th</sup> of July 2016. A second visit was required to test the Indoor Portable Bunds bund. This test commenced on Tuesday, 15<sup>th</sup> November 2016 and concluded on Thursday, 17<sup>th</sup> November 2016. 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. See section 4.2.2 below for test results.

#### 4.2.1 *Large Warehouse Building (Area / Bund No. 12)*

As per methodology a structural survey was carried out by a TOBIN Engineer on the Warehouse on Friday, 25<sup>th</sup> November 2016, located as shown on Figure 1 of Appendix A.

This area is generally used to store relatively dry materials. The construction is 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. There is ramped access to the entrances and exits to the bund.

The floor slab and up-stand was generally found to be in good structural condition with no obvious defects. The ramps approaching the external dock – leveller have been damaged by the impact of

the vehicular movements. These require repair with a suitable repair mortar. The make-up of the joint filler material between the 6m x 6m concrete bays is unknown and maybe unsuitable to store the material required. It is recommended that these joints be re-sealed with a suitable sealant that capable of performing with aggressive materials.

#### 4.2.2 Storage Bay - Portable Bunds (2No.) (Area / Bund No. 13)

Testing commenced 'as per methodology' on Monday, 14<sup>th</sup> November 2016. 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 indoor bund monitoring locations, during any of the daily monitoring events (see results below).

As no fluctuation was noted in tank liquid levels during the measurement period, the internal bunds are in good structural condition as detailed below.

#### Storage Bay Portable Bund No. 1:

As per methodology Bund No. 1 was filled with water to an appropriate level (110% tank volume) on Monday the 14<sup>th</sup> November 2016. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Tuesday 15<sup>th</sup> November 2016. Table 4-7 below represents recorded water levels within the bund over the test period. Two levels were taken for each bund as there was a slight slant in some of the storage tanks.

**Table 4-7 Storage Bay Portable Bund No. 1 Test Result**

Measurement Location	Mon 14 <sup>th</sup> Nov	Tues 15 <sup>th</sup> Nov	Wed 16 <sup>th</sup> Nov	Thur 17 <sup>th</sup> Nov	Fluctuation	Pass / Fail
<b>Storage Bay Portable Bund No. 1</b>						
A, Front Left	23.1	23.2	23.2	23.1	-0.1cm	<b>Pass</b>
B, Front Right	23.6	23.6	23.6	23.6	0.0cm	<b>Pass</b>
C, Rear Left	23.7	23.7	23.7	23.7	0.0cm	<b>Pass</b>
D, Rear Right	23.4	23.4	23.4	23.3	-0.1cm	<b>Pass</b>

Testing at this location was not impacted by facility operations

#### Storage Bay Portable Bund No. 2:

As per methodology Bund No. 2 was filled with water to an appropriate level (110% tank volume) on Monday the 14<sup>th</sup> November 2016. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Tuesday 15<sup>th</sup> November 2016. Table 4-8 below represents recorded water levels within the bund over the test

period. Two levels were taken for each bund as there was a slight slant in some of the storage tanks.

Table 4-8 **Storage Bay Portable Bund No. 2 Test Result:**

Measurement Location	Mon 14 <sup>th</sup> Nov	Tues 15 <sup>th</sup> Nov	Wed 16 <sup>th</sup> Nov	Thur 17 <sup>th</sup> Nov	Fluctuation	Pass / Fail
<b>Storage Bay Portable Bund No. 2</b>						
A, Front Left	24.2	24.2	24.2	24.2	0.0cm	<b>Pass</b>
B, Front Right	24.3	24.3	24.3	24.3	0.0cm	<b>Pass</b>
C, Rear Left	24.2	24.3	24.3	24.3	-0.1cm	<b>Pass</b>
D, Rear Right	24.1	24	24	24	-0.1cm	<b>Pass</b>

Testing at this location was not impacted by facility operations.

#### 4.2.3 Processing Area - Portable Bunds (2No.) (Area / Bund No.14)

As per methodology Area / Bund No. 14 was filled with water to an appropriate level (110% tank volume) on Monday the 14<sup>th</sup> November 2016. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Tuesday 15<sup>th</sup> November 2016. Table 4-13 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 4-9 **Bund / Area No. 14 Test Result**

Measurement Location	Tues 15 <sup>th</sup> Nov	Wed 16 <sup>th</sup> Nov	Thur 17 <sup>th</sup> Nov	Fluctuation	Pass / Fail
<b>Main Bund</b>					
A, Front Left	29.4cm	29.4cm	29.3cm	-0.1cm	<b>Pass</b>
B, Front Right	29.6cm	29.6cm	29.6cm	0.0cm	<b>Pass</b>
C, Rear Right	28.6cm	28.6cm	28.5cm	-0.1cm	<b>Pass</b>
D, Rear Left	28.5cm	28.4cm	28.4cm	-0.1cm	<b>Pass</b>
<b>Processing Bund</b>					
E, Front Left	11.7cm	11.7cm	11.7cm	0.0cm	<b>Pass</b>
F, Front Right	9.9cm	9.9cm	9.9cm	0.0cm	<b>Pass</b>

Testing at this location was not impacted by facility operations.

**4.2.4 Outdoor Concrete Bund (Area / Bund No.15)**

As per methodology Area / Bund No. 15 was filled with water to an appropriate level (110% tank volume) on Friday 22<sup>nd</sup> July. A >24hr absorption period was observed (due to weekend period) to allow the bund walls to become saturated. The test commenced on Saturday 23<sup>rd</sup> July. Table 4-14 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 4-14 Bund / Area No. 15 Test Result**

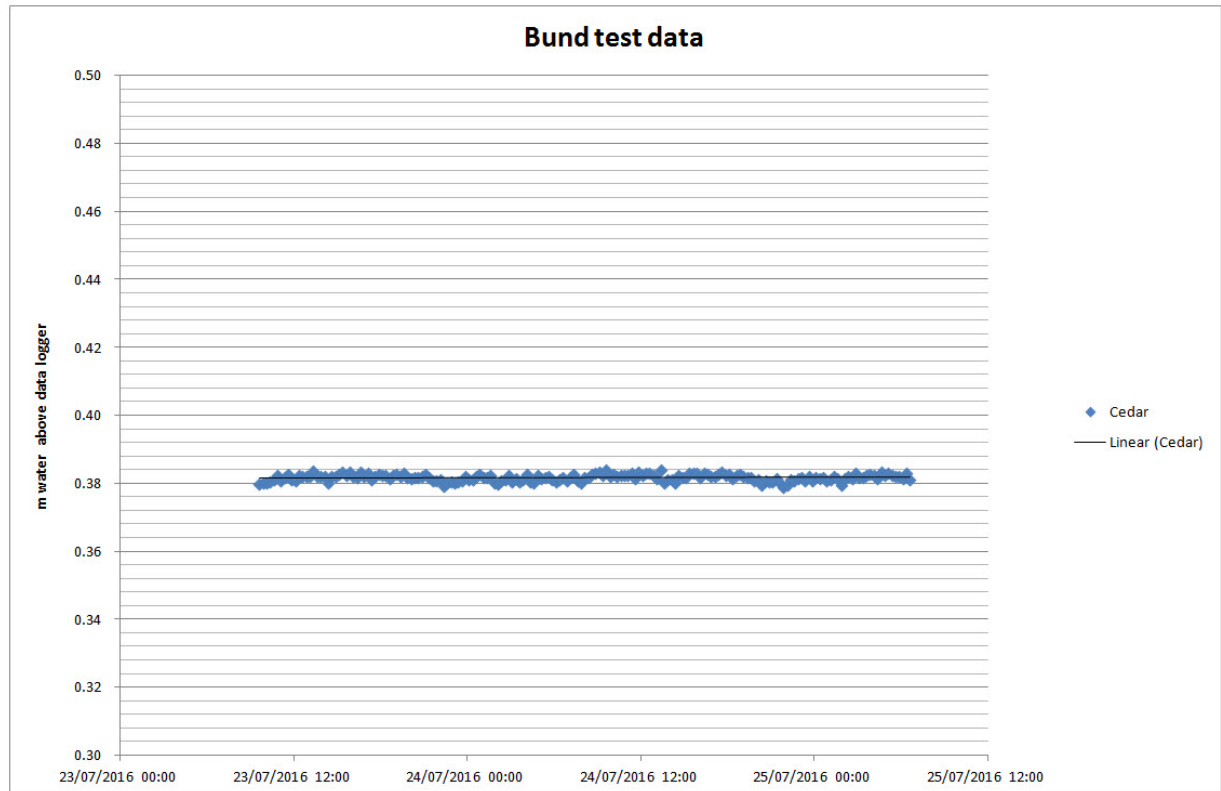
Measurement Location	Sat 23 <sup>rd</sup> Jul (Top of bund to water level)	Sun 24 <sup>th</sup> Jul (Top of bund to water level)	Mon 25 <sup>nd</sup> Jul (Top of bund to water level)	Fluctuation	Pass / Fail
A, Front Right	90cm	90cm	90cm	0.0cm	<b>Pass</b>
B, Rear Right	93cm	93cm	93cm	0.0cm	<b>Pass</b>
C, Rear Centre	113cm	113cm	113cm	0.0cm	<b>Pass</b>
D, Rear Left	94cm	94cm	94cm	0.0cm	<b>Pass</b>
E, Front Left	95cm	95cm	95cm	0.0cm	<b>Pass</b>

Testing at this location was not impacted by facility operations.

**4.2.5 Underground Concrete Bund (Area / Bund No.16)**

As per methodology Area / Bund No. 16 was filled with water to an appropriate level (110% tank volume) on Friday 22<sup>nd</sup> 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 23<sup>rd</sup> July. 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 (November 15<sup>th</sup> to 16<sup>th</sup> November 2016) and levels remained constant for the second monitoring period Day 2 to Day 3 (16<sup>th</sup> November to 16<sup>th</sup> November 2016). 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

## 5 CCTV

### 5.1 CCTV SURVEY

A CCTV drainage inspection was carried out on 5<sup>th</sup> of December 2016 on behalf of Rilta Environmental Ltd. The Inspection Report is included in Appendix B attached.

It was apparent from the CCTV camera inspection that the drainage system is generally in good condition, with some area requiring attention. A summary of defects and recommended remedial works can be found on the final page of Appendix B.

## 6 CONCLUSION

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

**Areas / Bunds for testing identified within Site 14A1, Greenogue Business Park include:**

- Area / Bund No. 12: Large Warehouse = **PASS**
- Area / Bund No. 13: Storage Bay Portable Bunds (2No) = **PASS**
- Area / Bund No. 14: Processing Bay Portable Bunds (2No) = **PASS**
- Area / Bund No. 15: Outdoor Concrete Bund = **PASS**
- Area / Bund No. 16: Underground Concrete Bund = **PASS**
- 

**CCTV Survey** = **Pass** (Remedial works recommended)



# APPENDIX A

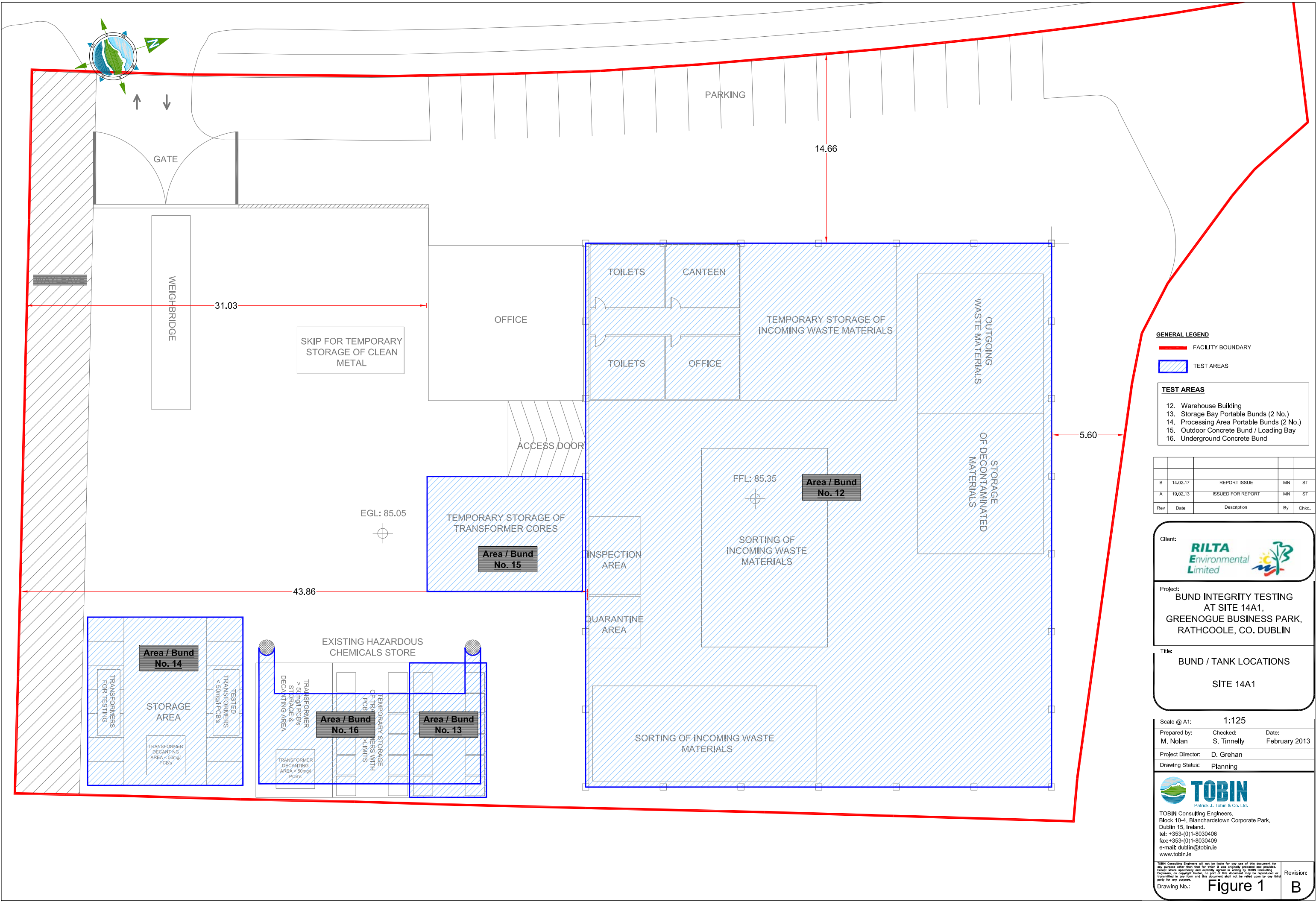
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**Figure 1: Bund / Tank Locations for Testing**  
(Site 14A1, Greenogue Business Park)

# APPENDIX B

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Site 14A1 (Ref. Cedar Yard) - CCTV Drainage Inspection Report



**GENERAL LEGEND**  
 — FACILITY BOUNDARY  
 ▨ TEST AREAS

- TEST AREAS**
- 12. Warehouse Building
  - 13. Storage Bay Portable Bunds (2 No.)
  - 14. Processing Area Portable Bunds (2 No.)
  - 15. Outdoor Concrete Bund / Loading Bay
  - 16. Underground Concrete Bund

Rev	Date	Description	By	Chkd.
B	14.02.17	REPORT ISSUE	MN	ST
A	19.02.13	ISSUED FOR REPORT	MN	ST



Project:  
**BUND INTEGRITY TESTING  
 AT SITE 14A1,  
 GREENOGUE BUSINESS PARK,  
 RATHCOOLE, CO. DUBLIN**

Title:  
**BUND / TANK LOCATIONS  
 SITE 14A1**

Scale @ A1: **1:125**

Prepared by: **M. Nolan**      Checked: **S. Tinnelly**      Date: **February 2013**

Project Director: **D. Grehan**

Drawing Status: **Planning**



Drawing No.: **Figure 1**      Revision: **B**



INTEGRATED HAZARDOUS WASTE MANAGEMENT SOLUTIONS

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## **CCTV DRAINAGE INSPECTION REPORT**

***Block 14A1, Grants Road,  
Greenogue Business Park,  
Rathcoole, Co. Dublin.***

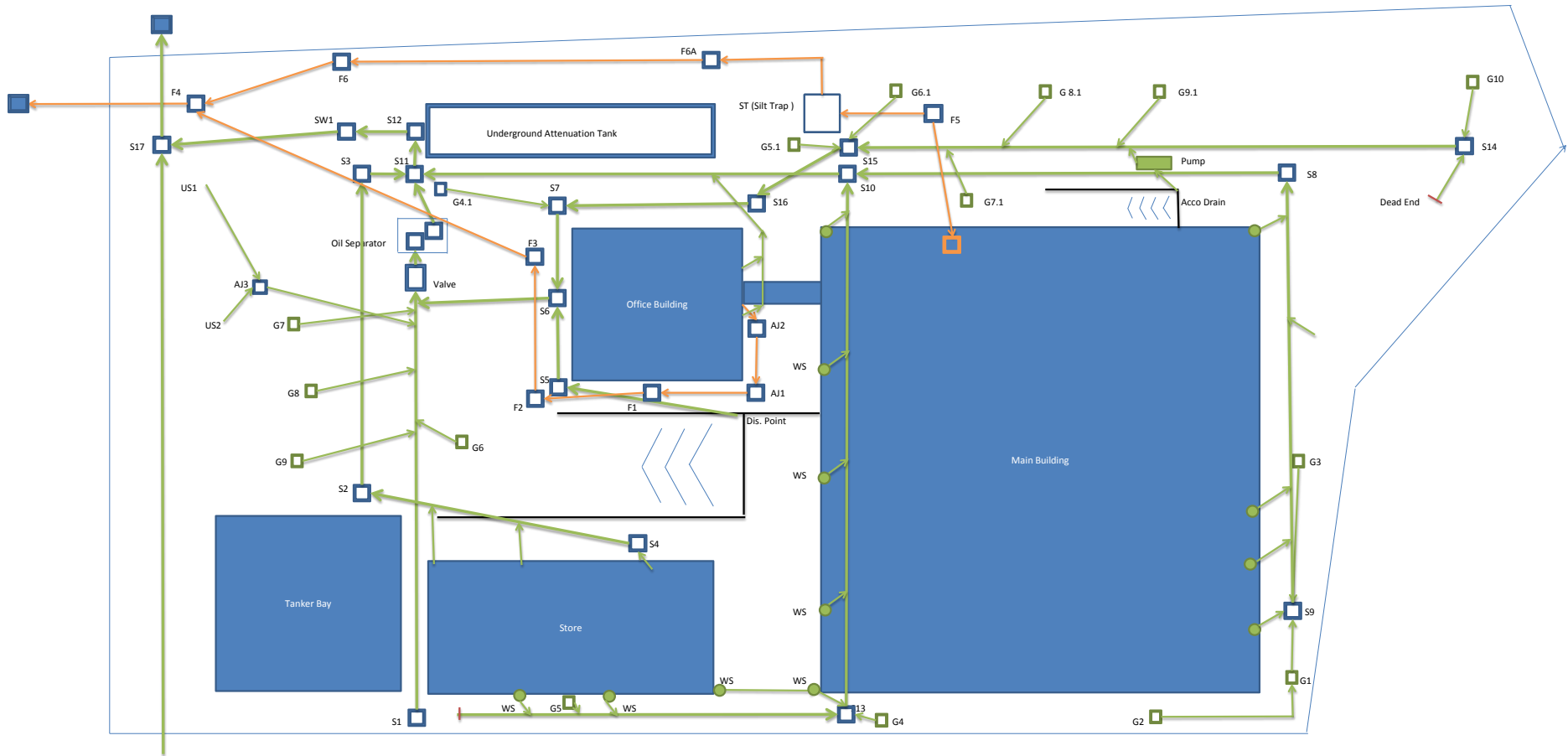
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Block 402, Greenogue Business Park,  
Rathcoole, Co. Dublin  
Tel: +353 (0) 1 401 8000  
Fax: +353 (0) 1 401 8080  
Email: [info@rilta.ie](mailto:info@rilta.ie)  
[www.rilta.ie](http://www.rilta.ie)



EPA WASTE LICENCE NO. W0192-03



**Project-information / Inspection: 1**

Project name :  
**CEDAR**

Project Number :

Contact :

Date :  
**05/12/2016**

Client **CEDAR**  
 Responsible: **Colm Hussey**  
 Department:  
 Street: **Greenogue Business Park**  
 City, St Zip: **Rathcoole**  
 Po Box: **Dublin**  
 Telephone:  
 Fax:  
 Mobile:  
 e-mail:

Proj mgr **CEDAR**  
 Responsible: **Colm Hussey**  
 Department:  
 Street: **Greenogue 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**  
 Fax:  
 Mobile: **0877988574**  
 e-mail: **info@rilta.ie**

## Inspection report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>1</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenogue Busniss Park</b> Property with buildings <b>AJ1 (D/S) F1</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>AJ1</b> <b>F1</b>
Use: Year laid : Purpose : Total length :	<b>Foul</b>  <b>Routine inspection of condition</b> <b>7.71 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular</b> <b>150.00 mm</b> <b>Polyvinyl chloride</b>

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	0.00	IC	Start node type, inspection chamber, reference number : AJ1	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	1.80	SR	Sealing ring intruding, from 5 to 7 o'clock	00:00:18		(Constr) 1
	2.20	LR	Line deviates right Remarks: 90deg.	00:00:23		(Serv) 0
	7.70	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	7.71	MHF	Finish node type, manhole reference number: F1	00:00:00	1_6A	(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	5	0.65	5	1	0	0	0	0	1

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>05/12/2016</b>	Section number : <b>1</b>	PLR Suffix : <b>X</b>
-----------------------------	---	-----------------------------	------------------------------	--------------------------

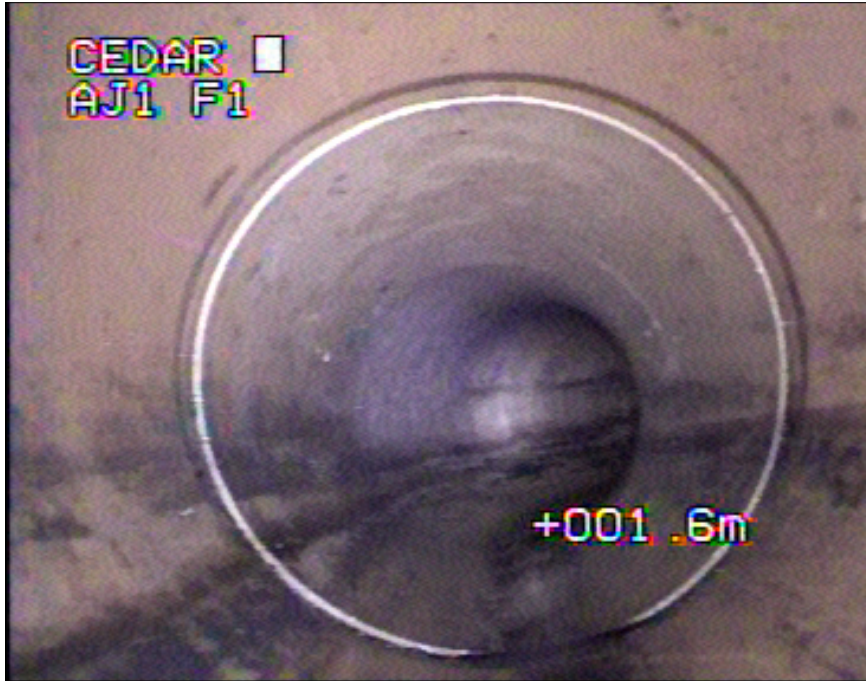


Photo: 1\_6A, MPEG #: 051216\_1, 00:00:00  
7.71m, Finish node type, manhole reference number: F1



## Inspection report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>2</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings AJ2 (D/S) AJ1</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>AJ2 AJ1</b>
Use: Year laid : Purpose : Total length :	<b>Foul  Routine inspection of condition 4.51 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	0.00	IC	Start node type, inspection chamber, reference number : AJ2	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	1.60	CN	Connection other than junction, at 3 o'clock, diameter 150mm	00:00:23		(Constr) 0
	4.50	WL	Water level, 0% of the vertical dimension	00:01:02		(Serv) 0
	4.51	ICF	Finish node type, inspection chamber reference number: AJ1	00:01:02		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>3</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenogue Busniss Park</b> Property with buildings <b>F1 (D/S) F2</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>F1</b> <b>F2</b>
Use: Year laid : Purpose : Total length :	<b>Foul</b>  <b>Routine inspection of condition</b> <b>11.11 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular</b> <b>150.00 mm</b> <b>Polyvinyl chloride</b>

Comment :

1:105	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : F1	00:00:04		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:04		(Serv) 0
	1.30	WL	Water level, 5% of the vertical dimension	00:00:16		(Serv) 0
	4.20	WL	Water level, 0% of the vertical dimension	00:00:48		(Serv) 0
	11.10	WL	Water level, 0% of the vertical dimension	00:01:55		(Serv) 0
	11.11	MHF	Finish node type, manhole reference number: F2	00:01:55		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

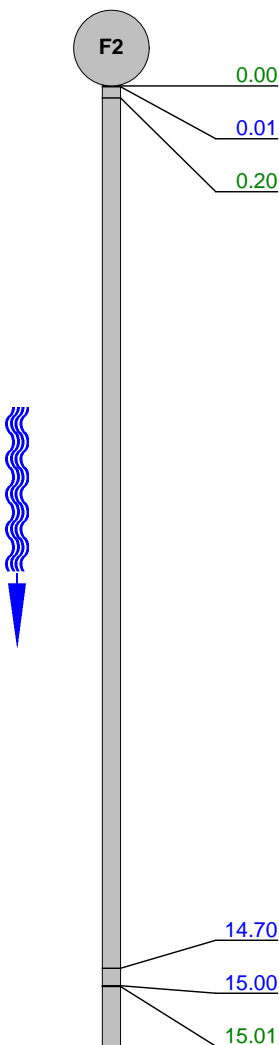
## Inspection report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>4</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenoque Busniss Park Property with buildings F2 (D/S) F3</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>F2 F3</b>
Use: Year laid : Purpose : Total length :	<b>Foul Routine inspection of condition 147.00 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		


Comment :

1:126	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : F2	00:00:05		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:05		(Serv) 0
	0.20	SR	Sealing ring intruding, from 6 to 12 o'clock	00:00:07	4_3A	(Constr) 1
	14.70	LL	Line deviates left	00:03:32		(Serv) 0
	15.00	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	15.01	MHF	Finish node type, manhole reference number: F3	00:00:00		(Constr) 0




## Inspection Report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>4</b>	PLR : <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Grade:

1:126	Position	Code	Observation	MPEG	Photo	Grade
						


## Inspection Report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>4</b>	PLR : <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Grade:

1:126	Position	Code	Observation	MPEG	Photo	Grade
						



## Inspection Report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>4</b>	PLR : <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Grade:

1:126	Position	Code	Observation	MPEG	Photo	Grade
						


## Inspection Report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>4</b>	PLR : <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Grade:

1:126	Position	Code	Observation	MPEG	Photo	Grade
						

## Inspection Report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>4</b>	PLR : <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Grade:

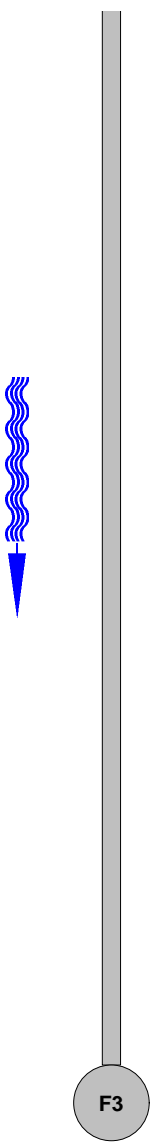
1:126	Position	Code	Observation	MPEG	Photo	Grade
						





## Inspection Report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>4</b>	PLR : <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Grade:

1:126	Position	Code	Observation	MPEG	Photo	Grade
						

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	5	0.03	5	1	0	0	0	0	1

## Inspection pictures / Inspection: 1

 Place :  
**Rathcoole**

 Road :  
**Greenoque Busniss Park**

 Date :  
**05/12/2016**

 Section number :  
**4**

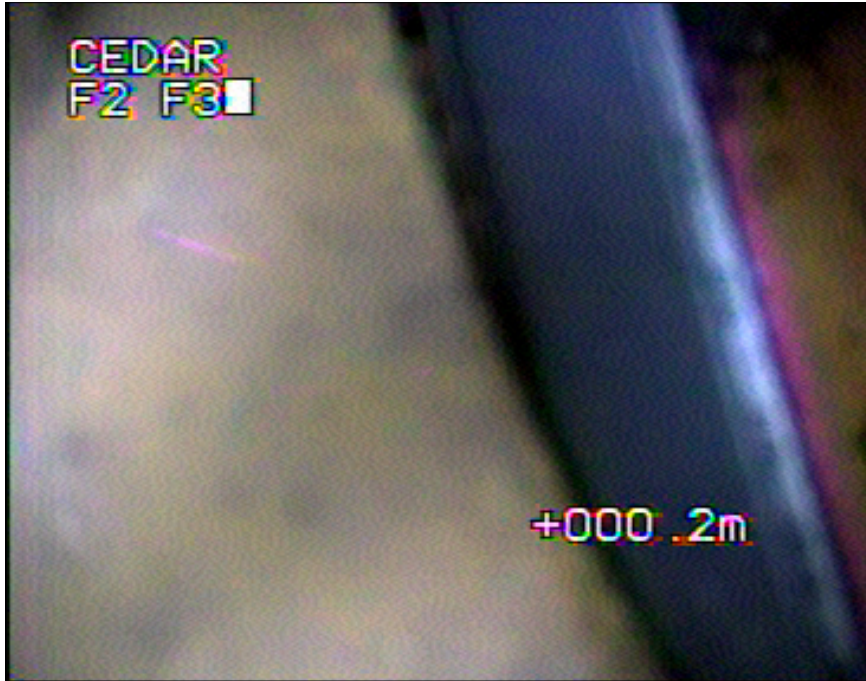
 PLR Suffix :  
**X**


Photo: 4\_3A, MPEG #: 051216\_1, 00:00:07  
 0.2m, Sealing ring intruding, from 6 to 12 o'clock

## Inspection report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>5</b>	PLR SUFFIX: <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings F4 (D/S) DS</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>F4 DS</b>
Use: Year laid : Purpose : Total length :	<b>Foul Routine inspection of condition 6.71 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Concrete</b>		

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : F4	00:00:02		(Constr) 0
	0.01	WLC	Clear water level, 10% of the vertical dimension	00:00:02		(Serv) 0
	3.50	WL	Water level, 15% of the vertical dimension	00:01:05		(Serv) 0
	6.70	WL	Water level, 15% of the vertical dimension	00:01:58		(Serv) 0
	6.71	MHF	Finish node type, manhole reference number: DS Remarks: Manhole on site next to Cedar.	00:01:58		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>05/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>6</b>	PLR SUFFIX: <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings F4 (U/S) F3</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>F3 F4</b>
Use: Year laid : Purpose : Total length :	<b>Foul  Routine inspection of condition 22.51 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Concrete</b>		

Comment :

1:189	Position	Code	Observation	MPEG	Photo	Grade
	<b>F4</b>					
	0.00	MH	Start node type, manhole, reference number : F4	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.20	CN	Connection other than junction, at 6 o'clock, diameter 150mm Remarks: Rodding Eye.	00:00:11		(Constr) 0
	0.70	WLC	Clear water level, 5% of the vertical dimension	00:00:24		(Serv) 0
	3.10	WL	Water level, 0% of the vertical dimension	00:00:46		(Serv) 0
	6.30	WL	Water level, 5% of the vertical dimension	00:01:19		(Serv) 0
	6.80	WL	Water level, 10% of the vertical dimension	00:01:24		(Serv) 0
	7.40	WL	Water level, 15% of the vertical dimension	00:01:32		(Serv) 0
	8.50	WL	Water level, 0% of the vertical dimension	00:01:45		(Serv) 0
	17.60	WL	Water level, 5% of the vertical dimension	00:03:36		(Serv) 0
	22.50	WL	Water level, 0% of the vertical dimension	00:04:09		(Serv) 0
	22.51	MHF	Finish node type, manhole reference number: F3	00:04:09		(Constr) 0
	<b>F3</b>					

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>7</b>	PLR SUFFIX: <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings F4 (U/S) F6</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>F6 F4</b>
Use: Year laid : Purpose : Total length :	<b>Foul  Routine inspection of condition 14.81 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Concrete</b>		

Comment :

1:126	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : F4	00:00:00		(Constr) 0
	0.01	WL	Water level, 15% of the vertical dimension	00:00:00		(Serv) 0
	5.00	WLC	Clear water level, 5% of the vertical dimension	00:00:49		(Serv) 0
	6.80	WL	Water level, 0% of the vertical dimension	00:01:14		(Serv) 0
	8.30	CM	Cracks, multiple, from 4 to 8 o'clock	00:01:22	7_5A	(Struct) 3
	14.30	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss Remarks: A lump of the concrete after building.	00:02:24	7_6A	(Serv) 3
	14.60	WL	Water level, 0% of the vertical dimension	00:02:33		(Serv) 0
	14.80	WL	Water level, 10% of the vertical dimension	00:02:33		(Serv) 0
	14.81	MH	Start node type, manhole, reference number : F4	00:02:33		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>06/12/2016</b>	Section number : <b>7</b>	PLR Suffix : <b>X</b>
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Photo: 7\_5A, MPEG #: 051216\_1, 00:01:22  
8.3m, Cracks, multiple, from 4 to 8 o'clock



Photo: 7\_6A, MPEG #: 051216\_1, 00:02:24  
14.3m, Settled deposits, hard or compacted, 10% cross-sectional area loss

## Inspection report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>8</b>	PLR SUFFIX: <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings F5 (D/S) ST</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>F5  ST</b>
Use: Year laid : Purpose : Total length :	<b>Foul  Routine inspection of condition 8.01 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : F5	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	7.40	REM	General remark Remarks: Dents	00:01:02	8_3A	(Misc) 0
	8.00	WL	Water level, 0% of the vertical dimension	00:01:25		(Serv) 0
	8.01	MHF	Finish node type, manhole reference number: ST Remarks: Silt Trap	00:01:25		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>06/12/2016</b>	Section number : <b>8</b>	PLR Suffix : <b>X</b>
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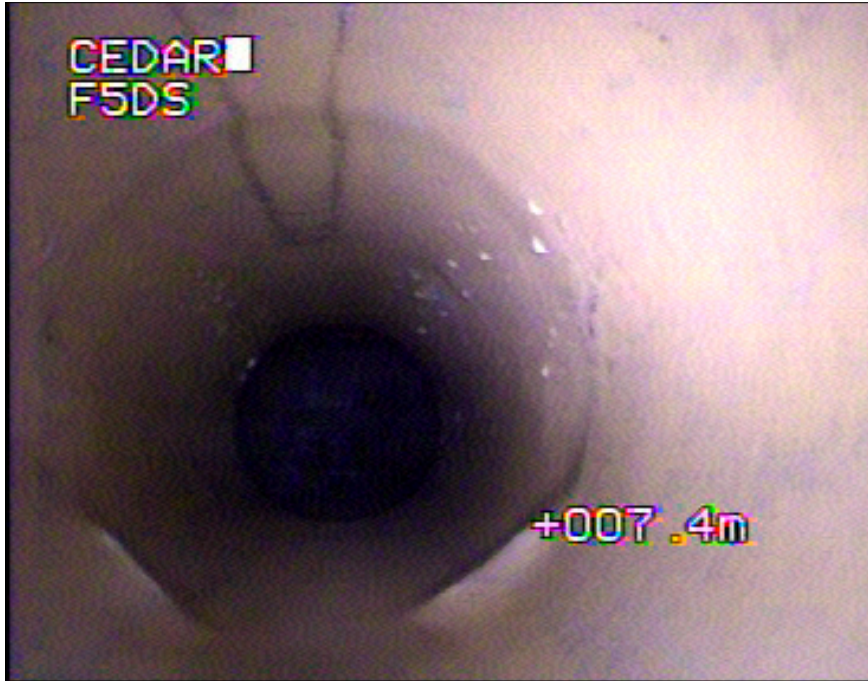


Photo: 8\_3A, MPEG #: 051216\_1, 00:01:02  
7.4m, General remark



## Inspection report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>9</b>	PLR SUFFIX: <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings F5 (U/S) US</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>US F5</b>
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Use: Year laid : Purpose : Total length :	<b>Foul Routine inspection of condition 9.51 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>
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Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : F5	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	3.60	WL	Water level, 5% of the vertical dimension	00:00:40		(Serv) 0
	5.00	WL	Water level, 0% of the vertical dimension	00:01:29		(Serv) 0
	8.20	REM	General remark Remarks: Dents	00:01:55	9_5A	(Misc) 0
	9.40	CN	Connection other than junction, at 12 o'clock, diameter 40mm Remarks: Connection from cabin inside of the buildi	00:02:06		(Constr) 0
	9.50	WL	Water level, 0% of the vertical dimension	00:02:07		(Serv) 0
	9.51	SA	Survey abandoned Remarks: Survey could not be completed due to a wavin pipe in the way.	00:02:07		(Misc) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>06/12/2016</b>	Section number : <b>9</b>	PLR Suffix : <b>X</b>
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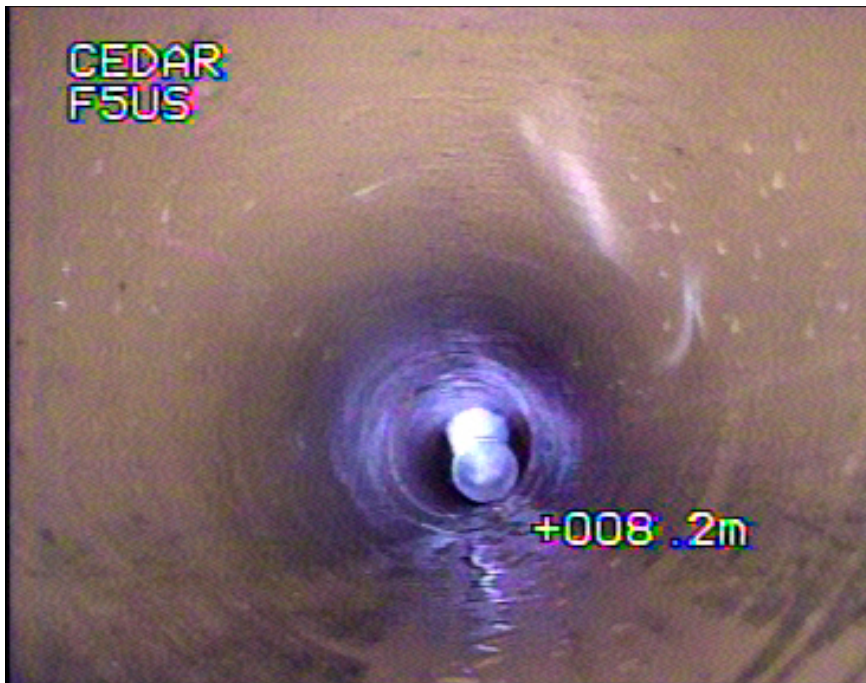


Photo: 9\_5A, MPEG #: 051216\_1, 00:01:55  
8.2m, General remark

## Inspection report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>10</b>	PLR SUFFIX: <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole</b> <b>Greenogue Busniss Park</b> <b>Property with buildings</b> <b>ST (D/S) F6A</b>	Location details: Catchment: Tape number : <b>051216_1</b> Pipe Length	U/S MH : <b>ST</b> U/S Depth : D/S MH : <b>F6A</b> D/S Depth :
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Use: <b>Foul</b> Year laid : Purpose : <b>Routine inspection of condition</b> Total length : <b>1.41 m</b>	Pipe shape : <b>Circular</b> Pipe size : <b>150.00 mm</b> Pipe material : <b>Polyvinyl chloride</b> Lining :
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Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	0.00	CP	Start node type, catchpit, reference number : ST	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.40	LL	Line deviates left Remarks: 90 deg.	00:00:25		(Serv) 0
	1.40	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	1.41	SA	Survey abandoned Remarks: Survey could not be completed due to a bend on the pipe and bad access to thi	00:00:00		(Misc) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

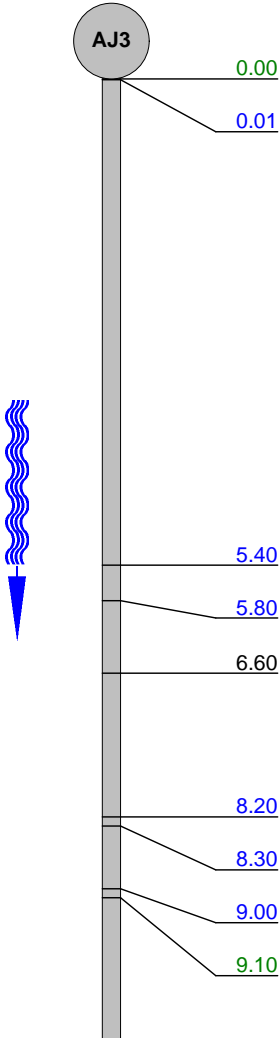
## Inspection report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>11</b>	PLR SUFFIX: <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole</b> <b>Greenogue Busniss Park</b> <b>Property with buildings</b> <b>AJ3 (D/S) DS</b>	Location details: Catchment: Tape number : <b>051216_1</b> Pipe Length	U/S MH : <b>AJ3</b> U/S Depth : D/S MH : <b>DS</b> D/S Depth :
Use: Year laid : Purpose : Total length :	<b>Surface water</b>  <b>Routine inspection of condition</b> <b>11.90 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular</b> <b>100.00 mm</b> <b>Polyvinyl chloride</b>

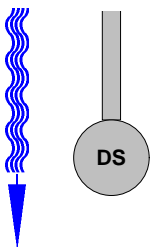
Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
	0.00	IC	Start node type, inspection chamber, reference number : AJ3	00:00:02		(Constr) 0
	0.01	WL	Water level, 5% of the vertical dimension	00:00:01		(Serv) 0
	5.40	WL	Water level, 10% of the vertical dimension	00:03:17		(Serv) 0
	5.80	WL	Water level, 30% of the vertical dimension	00:00:49		(Serv) 0
	6.60	CUW	Loss of vision, camera under water	00:00:57		(Misc) 0
	8.20	LR	Line deviates right Remarks: 45 deg.	00:01:18		(Serv) 0
	8.30	WL	Water level, 30% of the vertical dimension	00:01:20		(Serv) 0
	9.00	WL	Water level, 15% of the vertical dimension	00:01:35		(Serv) 0
	9.10	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:34		(Constr) 0



## Inspection Report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>rain</b>	Operator : <b>Frantisek</b>	Section number : <b>11</b>	PLR : <b>X</b>
Weather <b>rain</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Grade:

1:84	Position	Code	Observation	MPEG	Photo	Grade
						

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>12</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings G1 (U/S) G2</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G2 G1</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 11.91 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		

Comment :

1:105	Position	Code	Observation	MPEG	Photo	Grade
	<b>G1</b>					
	0.00	GY	Start node type, gully, reference number : G1	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	4.50	LR	Line deviates right Remarks: 90 deg.	00:01:33		(Serv) 0
	11.90	WL	Water level, 0% of the vertical dimension	00:03:46		(Serv) 0
	11.91	GYF	Finish node type, gully reference number: G2	00:03:46		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>06/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>13</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenoque Busniss Park</b> Property with buildings <b>AJ3 (U/S) US1</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
Use:	Surface water	Pipe shape :	Circular
Year laid :		Pipe size :	100.00 mm
Purpose :	Routine inspection of condition	Pipe material :	Polyvinyl chloride
Total length :	9.41 m	Lining :	

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
	AJ3					
	0.00	IC	Start node type, inspection chamber, reference number : AJ3	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	00:00:46		(Serv) 0
	7.20	LL	Line deviates left	00:01:14		(Serv) 0
	7.30	WL	Water level, 0% of the vertical dimension	00:01:24		(Serv) 0
	9.30	LU	Line deviates up	00:01:39		(Serv) 0
	9.40	WL	Water level, 0% of the vertical dimension	00:01:35		(Serv) 0
	9.41	GYF	Finish node type, gully reference number: US1 Remarks: Gully underneath the weightbridge.	00:01:35		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>22/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>14</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings AJ3 (U/S) US2</b>	Location details: Catchment: Tape number : Pipe Length		<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>US2 AJ3</b>
Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 2.21 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>			

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	AJ3					
	0.00	IC	Start node type, inspection chamber, reference number : AJ3	00:00:02		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	1.90	LU	Line deviates up	00:00:18		(Serv) 0
	2.20	WL	Water level, 0% of the vertical dimension	00:00:20		(Serv) 0
	2.21	GYF	Finish node type, gully reference number: US2 Remarks: Gully under the weightbridge.	00:00:20		(Constr) 0
	US2					

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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



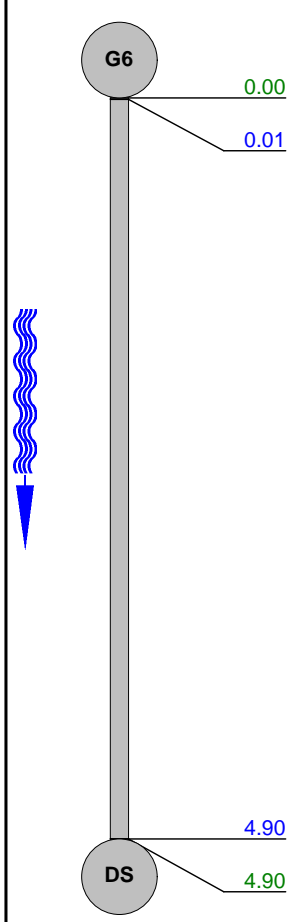
## Inspection report / Inspection: 1

Date : <b>22/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>15</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings G6 (D/S) DS</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G6 DS</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 4.90 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>		

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	<b>G6</b>					
	0.00	GY	Start node type, gully, reference number : G6	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	4.90	WL	Water level, 0% of the vertical dimension	00:01:35		(Serv) 0
	4.90	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:35		(Constr) 0
	<b>DS</b>					



<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

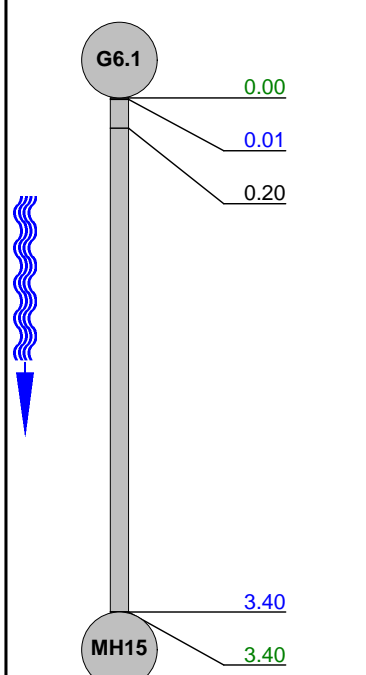
## Inspection report / Inspection: 1

Date : <b>22/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>16</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings G6.1 (D/S) MH15</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G6.1 MH15</b>
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Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 3.40 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>
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Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
						
	0.00	GY	Start node type, gully, reference number : G6.1	00:01:21		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.20	REM	General remark Remarks: Socket are connected up side down.	00:00:05		(Misc) 0
	3.40	WL	Water level, 0% of the vertical dimension	00:00:34		(Serv) 0
	3.40	MHF	Finish node type, manhole reference number: MH15	00:00:34		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>22/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>17</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings G7.1 (D/S) DS</b>	Location details: Catchment: Tape number : Pipe Length		<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G7.1 DS</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 9.81 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>			

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
	0.00	GY	Start node type, gully, reference number : G7.1	00:01:41		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	3.60	WLC	Clear water level, 5% of the vertical dimension	00:00:42		(Serv) 0
	4.40	WLC	Clear water level, 0% of the vertical dimension	00:00:51		(Serv) 0
	9.80	WL	Water level, 0% of the vertical dimension	00:01:41		(Serv) 0
	9.81	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:41		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>22/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>18</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings G7 (D/S) DS</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G7 DS</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 5.01 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>		

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	<b>G7</b>					
	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
	5.00	WL	Water level, 0% of the vertical dimension	00:00:50		(Serv) 0
	5.01	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:00:50		(Constr) 0
	<b>DS</b>					

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>22/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>19</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole Greenogue Busniss Park Property with buildings G8.1 (D/S) DS	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>G8.1</b> <b>DS</b>
Use: Year laid : Purpose : Total length :	Surface water  Routine inspection of condition 2.11 m	Pipe shape : Pipe size : Pipe material : Lining :	Circular 100.00 mm Polyvinyl chloride

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	G8.1					
	0.00	GY	Start node type, gully, reference number : G8.1	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	1.80	LR	Line deviates right	00:00:15		(Serv) 0
	2.10	WL	Water level, 0% of the vertical dimension	00:00:20		(Serv) 0
	2.11	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:00:20		(Constr) 0
	DS					

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>20</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings G8 (D/S) DS</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G8  DS</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 6.41 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>		

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	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
	2.40	CN	Connection other than junction, at 9 o'clock, diameter 100mm	00:00:35		(Constr) 0
	6.10	LR	Line deviates right Remarks: 45 deg.	00:01:18		(Serv) 0
	6.10	WL	Water level, 0% of the vertical dimension	00:01:21		(Serv) 0
	6.40	WL	Water level, 5% of the vertical dimension	00:01:21		(Serv) 0
	6.41	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:21		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>21</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenogue Busniss Park</b> Property with buildings <b>G9.1 (D/S) DS</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>G9.1</b> <b>DS</b>
Use: Year laid : Purpose : Total length :	<b>Surface water</b>  <b>Routine inspection of condition</b> <b>4.81 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular</b> <b>100.00 mm</b> <b>Polyvinyl chloride</b>

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	<b>G9.1</b>					
	0.00	GY	Start node type, gully, reference number : G9.1	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.20	LL	Line deviates left Remarks: 45 deg.	00:00:01		(Serv) 0
	4.30	LD	Line deviates down	00:00:42		(Serv) 0
	4.80	WL	Water level, 0% of the vertical dimension	00:01:03		(Serv) 0
	4.81	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:03		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>22</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings G9 (D/S) DS</b>	Location details: Catchment: Tape number : Pipe Length		<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G9 DS</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 7.41 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>			

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	0.00	GY	Start node type, gully, reference number : G9	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	0.90	SR	Sealing ring intruding, from 5 to 7 o'clock	00:00:12	22_3A	(Constr) 1
	6.30	REM	General remark Remarks: Socket on this pipe are connected against the stream.	00:01:12		(Misc) 0
	7.40	WL	Water level, 0% of the vertical dimension	00:01:25		(Serv) 0
	7.41	BRF	Finish node type, major connection without manhole reference number: DS Remarks: This pipe is connected to	00:01:25		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	5	0.67	5	1	0	0	0	0	1



### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>23/12/2016</b>	Section number : <b>22</b>	PLR Suffix : <b>X</b>
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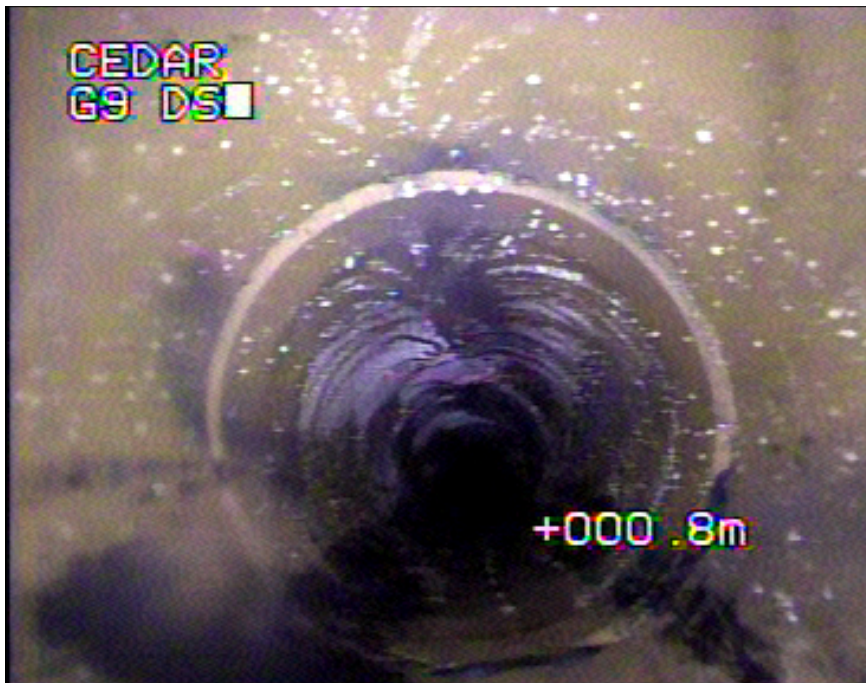


Photo: 22\_3A, MPEG #: 051216\_1, 00:00:12  
0.9m, Sealing ring intruding, from 5 to 7 o'clock

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>23</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S2 (D/S) S3</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>  	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S2  S3</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 31.10 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>		

Comment :

1:252	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S2	00:00:00		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	30.00	SR	Sealing ring intruding, from 11 to 3 o'clock	00:04:31	23_3A	(Constr) 1
	30.50	LR	Line deviates right Remarks: 45 deg.	00:05:02		(Serv) 0
	31.10	WL	Water level, 0% of the vertical dimension	00:05:15		(Serv) 0
	31.10	MHF	Finish node type, manhole reference number: S3	00:05:15		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	5	0.16	5	1	0	0	0	0	1

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>23/12/2016</b>	Section number : <b>23</b>	PLR Suffix : <b>X</b>
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Photo: 23\_3A, MPEG #: 051216\_1, 00:04:31  
30m, Sealing ring intruding, from 11 to 3 o'clock

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>24</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S2 (U/S) S4</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S4  S2</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 18.11 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>		

Comment :

1:147	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S2	00:00:00		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	3.20	CN	Connection other than junction, at 2 o'clock, diameter 100mm	00:00:27		(Constr) 0
	3.20	WL	Water level, 5% of the vertical dimension	00:00:29		(Serv) 0
	4.70	WL	Water level, 0% of the vertical dimension	00:00:43		(Serv) 0
	4.71	LL	Line deviates left Remarks: 45 deg.	00:00:43		(Serv) 0
	9.00	WL	Water level, 5% of the vertical dimension	00:01:23		(Serv) 0
	10.20	WL	Water level, 0% of the vertical dimension	00:01:34		(Serv) 0
	11.10	CN	Connection other than junction, at 3 o'clock, diameter 100mm	00:01:41		(Constr) 0
	13.00	SZ	Surface damage, other, from 8 to 9 o'clock Remarks: A piece of wire damaged surface of this pipe .	00:02:35	24_10A	(Struct) 0
	15.30	WL	Water level, 5% of the vertical dimension	00:03:03		(Serv) 0
	16.20	WL	Water level, 10% of the vertical dimension	00:03:10		(Serv) 0
	17.00	WL	Water level, 0% of the vertical dimension	00:03:43		(Serv) 0
	18.10	WL	Water level, 0% of the vertical dimension	00:03:53		(Serv) 0
	18.11	MHF	Finish node type, manhole reference number: S4	00:03:53		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>23/12/2016</b>	Section number : <b>24</b>	PLR Suffix : <b>X</b>
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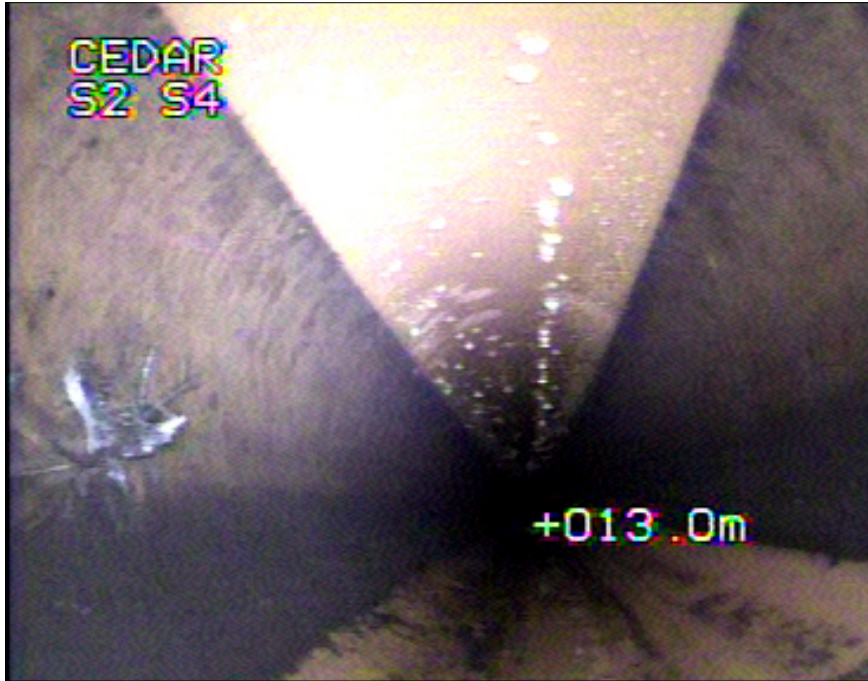


Photo: 24\_10A, MPEG #: 051216\_1, 00:02:35  
13m, Surface damage, other, from 8 to 9 o'clock

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>25</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenoque Busniss Park</b> Property with buildings <b>S3 (D/S) S11</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : 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 :	4.31 m	Lining :	

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S3	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	2.40	WLC	Clear water level, 5% of the vertical dimension	00:00:25		(Serv) 0
	3.50	LL	Line deviates left Remarks: 45 deg.	00:00:33		(Serv) 0
	4.30	WL	Water level, 0% of the vertical dimension	00:00:44		(Serv) 0
	4.31	MHF	Finish node type, manhole reference number: S11	00:00:44		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>26</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S4 (U/S) US</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>US S4</b>
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Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 4.10 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>
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Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S4	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, 0% of the vertical dimension	00:00:19		(Serv) 0
	3.01	BRF	Finish node type, major connection without manhole reference number: US Remarks: Retention Tank.	00:00:19		(Constr) 0
	4.10	LD	Line deviates down Remarks: 45 deg.	00:00:20		(Serv) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>27</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S5 (U/S) DP</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>DP S5</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 15.91 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		

Comment :

1:126	Position	Code	Observation	MPEG	Photo	Grade
	<b>S5</b>					
	0.00	MH	Start node type, manhole, reference number : S5	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.40	LL	Line deviates left Remarks: 45 deg.	00:00:03		(Serv) 0
	1.10	LL	Line deviates left Remarks: 15-30 deg.	00:00:07		(Serv) 0
	4.40	WLC	Clear water level, 5% of the vertical dimension	00:00:32		(Serv) 0
	4.90	WL	Water level, 10% of the vertical dimension	00:00:36		(Serv) 0
	6.30	WL	Water level, 5% of the vertical dimension	00:00:45		(Serv) 0
	8.50	WL	Water level, 0% of the vertical dimension	00:01:09		(Serv) 0
	11.10	OJM	Open joint, medium Remarks: Pipes are not connected fully.	00:01:44	27_9A	(Struct) 1
	11.60	WL	Water level, 5% of the vertical dimension	00:01:47		(Serv) 0
	13.70	WL	Water level, 0% of the vertical dimension	00:02:05		(Serv) 0
	15.40	LR	Line deviates right Remarks: 90 deg.	00:02:23		(Serv) 0
	15.90	WL	Water level, 0% of the vertical dimension	00:02:29		(Serv) 0
	15.91	BRF	Finish node type, major connection without manhole reference number: DP Remarks: Discharging Point of aco	00:02:29		(Constr) 0
	<b>DP</b>					

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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



### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>23/12/2016</b>	Section number : <b>27</b>	PLR Suffix : <b>X</b>
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Photo: 27\_9A, MPEG #: 051216\_1, 00:01:44  
11.1m, Open joint, medium

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>28</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole Greenogue Busniss Park Property with buildings S6 (D/S) OS	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>S6</b> <b>OS</b>

Use: Year laid : Purpose : Total length :	Surface water  Routine inspection of condition 9.01 m	Pipe shape : Pipe size : Pipe material : Lining :	Circular 225.00 mm Polyvinyl chloride
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Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S6	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	00:00:31		(Serv) 0
	3.70	WL	Water level, 10% of the vertical dimension	00:00:37		(Serv) 0
	6.30	WL	Water level, 15% of the vertical dimension	00:00:59		(Serv) 0
	7.60	WL	Water level, 10% of the vertical dimension	00:01:10		(Serv) 0
	9.00	WL	Water level, 10% of the vertical dimension	00:01:22		(Serv) 0
	9.01	BRF	Finish node type, major connection without manhole reference number: OS Remarks: This pipe is connected to	00:01:22		(Constr) 0


<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>29</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S6 (U/S) S5</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S5 S6</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 7.61 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>		

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
						
	0.00	MH	Start node type, manhole, reference number : S6	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	7.60	WL	Water level, 0% of the vertical dimension	00:01:51		(Serv) 0
	7.61	MHF	Finish node type, manhole reference number: S5	00:01:51		(Constr) 0

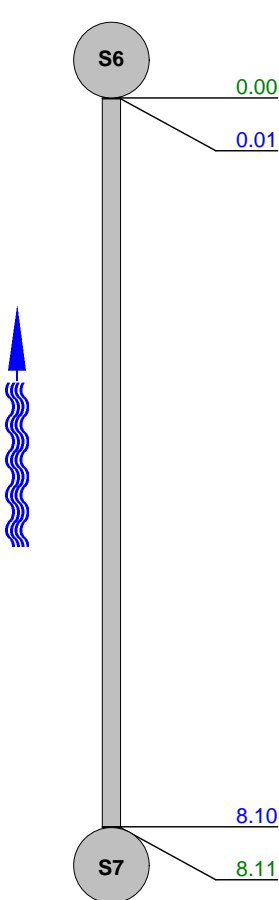
<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>30</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S6 (U/S) S7</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S7  S6</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 8.11 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>		

Comment :

1:84	Position	Code	Observation	MPEG	Photo	Grade
		0.00	MH	Start node type, manhole, reference number : S6	00:00:00	(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	8.10	WLC	Clear water level, 0% of the vertical dimension	00:01:05		(Serv) 0
	8.11	MHF	Finish node type, manhole reference number: S7	00:01:05		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>31</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenogue Busniss Park</b> Property with buildings <b>G4 (D/S) S7</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>G4</b> <b>S7</b>

Use: Year laid : Purpose : Total length :	Surface water  Routine inspection of condition 6.11 m	Pipe shape : Pipe size : Pipe material : Lining :	Circular 150.00 mm Polyvinyl chloride
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Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	<b>G4</b>					
	0.00	GY	Start node type, gully, reference number : G4	00:00:58		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:58		(Serv) 0
	5.90	LR	Line deviates right Remarks: 45 deg.	00:00:58		(Serv) 0
	6.10	WL	Water level, 0% of the vertical dimension	00:01:03		(Serv) 0
	6.11	MHF	Finish node type, manhole reference number: S7	00:01:03		(Constr) 0
	<b>S7</b>					

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>32</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S8 (U/S) S9</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S9 S8</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 37.71 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>		

Comment :

1:315	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S8	00:00:03		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:03		(Serv) 0
	2.90	CN	Connection other than junction, at 2 o'clock, diameter 100mm	00:00:32		(Constr) 0
	4.50	WL	Water level, 5% of the vertical dimension	00:00:49		(Serv) 0
	7.20	CN	Connection other than junction, at 10 o'clock, diameter 100mm	00:01:09		(Constr) 0
	16.30	CN	Connection other than junction, at 2 o'clock, diameter 100mm	00:02:27		(Constr) 0
	25.50	WL	Water level, 0% of the vertical dimension	00:03:57		(Serv) 0
	28.40	CN	Connection other than junction, at 2 o'clock, diameter 100mm	00:03:55		(Constr) 0
	37.70	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	37.71	MHF	Finish node type, manhole reference number: S9	00:00:00		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>33</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S8 (D/S) S10</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S8 S10</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 37.41 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>		

Comment :

1:315	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S8	00:00:01		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	30.60	WL	Water level, 5% of the vertical dimension	00:04:41		(Serv) 0
	31.70	LL	Line deviates left Remarks: 15	00:04:20		(Serv) 0
	31.90	WL	Water level, 0% of the vertical dimension	00:04:26		(Serv) 0
	37.40	WL	Water level, 5% of the vertical dimension	00:04:46		(Serv) 0
	37.41	MHF	Finish node type, manhole reference number: S10	00:04:46		(Constr) 0


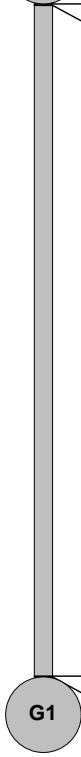

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	0	0	0	0	1

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>34</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S9 (U/S) G1</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G1 S9</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 5.61 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
						
	0.00	MH	Start node type, manhole, reference number : S9	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
						
	5.60	WLC	Clear water level, 0% of the vertical dimension	00:00:57		(Serv) 0
	5.61	GYF	Finish node type, gully reference number: G1	00:00:57		(Constr) 0
						

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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



## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>35</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>no</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S9 (U/S) G3</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G3 S9</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 10.81 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		

Comment :

1:105	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S9	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	3.00	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:27		(Serv) 2
	5.20	WL	Water level, 10% of the vertical dimension	00:00:38		(Serv) 0
	8.50	WL	Water level, 0% of the vertical dimension	00:00:58		(Serv) 0
	10.80	WL	Water level, 0% of the vertical dimension	00:01:12		(Serv) 0
	10.81	GYF	Finish node type, gully reference number: G3	00:01:12		(Constr) 0

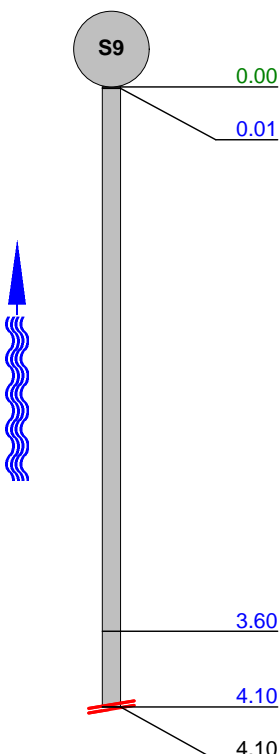
<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	1	1	0.09	1	2

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>36</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>no</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S9 (U/S) US2</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>US2  S9</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 4.10 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>		

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
		S9				
	0.00	MH	Start node type, manhole, reference number : S9	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	3.60	LU	Line deviates up	00:00:30		(Serv) 0
	4.10	WL	Water level, 0% of the vertical dimension	00:00:41		(Serv) 0
	4.10	SA	Survey abandoned Remarks: Survey could not be completed due to Length of this pipe. This pipe is a water s	00:00:41		(Misc) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>37</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenogue Busniss Park</b> Property with buildings <b>S10 (D/S) S11</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>S10</b> <b>S11</b>
Use: Year laid : Purpose : Total length :	<b>Surface water</b>  <b>Routine inspection of condition</b> <b>26.61 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular</b> <b>225.00 mm</b> <b>Polyvinyl chloride</b>

Comment :

1:210	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S10	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	6.00	CN	Connection other than junction, at 10 o'clock, diameter 100mm	00:00:43		(Constr) 0
	26.60	WL	Water level, 0% of the vertical dimension	00:03:04		(Serv) 0
	26.61	MHF	Finish node type, manhole reference number: S11	00:03:04		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>38</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S10 (U/S) S13</b>	Location details: Catchment: Tape number : Pipe Length		<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S13 S10</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 47.71 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>			

Comment :

1:378	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S10	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	2.30	CN	Connection other than junction, at 1 o'clock, diameter 100mm Remarks: Possibly a water spout.	00:00:21		(Constr) 0
	14.30	CN	Connection other than junction, at 1 o'clock, diameter 100mm Remarks: A water spout.	00:01:46		(Constr) 0
	26.70	CN	Connection other than junction, at 2 o'clock, diameter 100mm Remarks: A water spout.	00:03:15		(Constr) 0
	34.70	WL	Water level, 5% of the vertical dimension	00:05:49		(Serv) 0
	37.10	WL	Water level, 0% of the vertical dimension	00:06:39		(Serv) 0
	39.00	CN	Connection other than junction, at 2 o'clock, diameter 100mm Remarks: A water spout.	00:07:27		(Constr) 0
	47.70	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	47.71	MHF	Finish node type, manhole reference number: S13	00:00:00		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>39</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S11 (U/S) OS</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>OS S11</b>
Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 6.21 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>		

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S11	00:00:00		(Constr) 0
	0.01	WLC	Clear water level, 5% of the vertical dimension	00:00:00		(Serv) 0
	5.30	WL	Water level, 0% of the vertical dimension	00:00:40		(Serv) 0
	6.20	WL	Water level, 0% of the vertical dimension	00:00:46		(Serv) 0
	6.21	OSF	Finish node type, oil separator reference number: OS Remarks: Oil Separator.	00:00:46		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>40</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S11 (U/S) S3</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S3 S11</b>
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Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 3.81 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>
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Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S11	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	0.10	LR	Line deviates right Remarks: 45 deg.	00:00:04		(Serv) 0
	1.00	WL	Water level, 5% of the vertical dimension	00:00:11		(Serv) 0
	3.80	WLC	Clear water level, 0% of the vertical dimension	00:00:29		(Serv) 0
	3.81	MHF	Finish node type, manhole reference number: S3	00:00:29		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

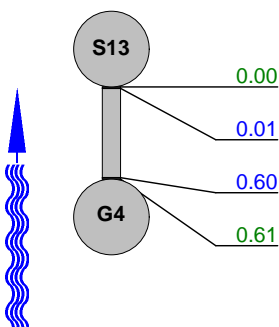
## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>41</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S13 (U/S) G4</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G4 S13</b>
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Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 0.61 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>
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Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
						
	0.00	MH	Start node type, manhole, reference number : S13	00:00:01		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	0.60	WL	Water level, 0% of the vertical dimension	00:00:11		(Serv) 0
	0.61	GYF	Finish node type, gully reference number: G4	00:00:11		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>42</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S13 (U/S) US</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>US S13</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 26.51 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>		

Comment :

1:210	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S13	00:00:00		(Constr) 0
	0.01	WLC	Clear water level, 5% of the vertical dimension	00:00:00		(Serv) 0
	4.10	WL	Water level, 0% of the vertical dimension	00:00:40		(Serv) 0
	7.10	CN	Connection other than junction, at 2 o'clock, diameter 100mm Remarks: A water spout.	00:01:04		(Constr) 0
	14.20	CN	Connection other than junction, at 12 o'clock, diameter 100mm Remarks: A water spout.	00:02:08		(Constr) 0
	14.50	WLC	Clear water level, 5% of the vertical dimension	00:02:12		(Serv) 0
	15.00	WL	Water level, 0% of the vertical dimension	00:02:16		(Serv) 0
	17.50	CN	Connection other than junction, at 12 o'clock, diameter 100mm Remarks: A water spout.	00:02:37		(Constr) 0
	19.80	WL	Water level, 5% of the vertical dimension	00:02:54		(Serv) 0
	21.10	CN	Connection other than junction, at 12 o'clock, diameter 100mm Remarks: A water spout.	00:03:03		(Constr) 0
	22.70	WL	Water level, 0% of the vertical dimension	00:03:16		(Serv) 0
	26.50	WL	Water level, 0% of the vertical dimension	00:03:43		(Serv) 0
	26.51	BRF	Finish node type, major connection without manhole reference number: US Remarks: The end of the pipe.	00:03:43		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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



## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>43</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S13 (U/S) WS</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>WS S13</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 6.41 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>		

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S13	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	1.70	LL	Line deviates left Remarks: 45 deg.	00:00:15		(Serv) 0
	1.71	CN	Connection other than junction, at 12 o'clock, diameter 100mm Remarks: A water spout.	00:00:15		(Constr) 0
	6.40	WL	Water level, 0% of the vertical dimension	00:00:41		(Serv) 0
	6.41	BRF	Finish node type, major connection without manhole reference number: WS Remarks: A water spout.	00:00:41		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>44</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S14 (U/S) G10</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G10 S14</b>
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Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 4.61 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>
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Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S14	00:00:01		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:01		(Serv) 0
	4.60	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	4.61	GYF	Finish node type, gully reference number: G10	00:00:00		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>45</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S14 (U/S) US</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>US S14</b>
Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 3.61 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>		

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S14	00:00:00		(Constr) 0
	0.01	WL	Water level, 5% of the vertical dimension	00:00:00		(Serv) 0
	1.00	WLC	Clear water level, 0% of the vertical dimension	00:00:09		(Serv) 0
	3.60	WL	Water level, 0% of the vertical dimension	00:00:29		(Serv) 0
	3.61	BRF	Finish node type, major connection without manhole reference number: US Remarks: dead End.	00:00:29		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

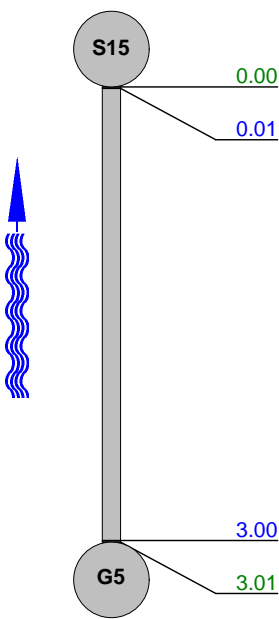
## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>46</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S15 (U/S) G5</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>G5 S15</b>
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Use: Year laid : Purpose : Total length :	<b>Surface water Routine inspection of condition 3.01 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 150.00 mm Polyvinyl chloride</b>
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Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
						
	0.00	MH	Start node type, manhole, reference number : S15	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, 0% of the vertical dimension	00:00:26		(Serv) 0
	3.01	GYF	Finish node type, gully reference number: G5	00:00:26		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>47</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S15 (U/S) S14</b>	Location details: Catchment: Tape number : Pipe Length		<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S14 S15 S15</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 42.51 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>			

Comment :

1:336	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S15	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	6.70	CN	Connection other than junction, at 3 o'clock, diameter 150mm Remarks: Connection from G7.1	00:00:43		(Constr) 0
	16.80	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: Connection from G8.1	00:01:43		(Constr) 0
	19.40	CN	Connection other than junction, at 9 o'clock, diameter 100mm Remarks: Connection from G9.1	00:02:03		(Constr) 0
	24.30	SR	Sealing ring intruding, from 10 to 6 o'clock	00:02:39	47_6A	(Constr) 1
	25.20	CN	Connection other than junction, at 2 o'clock, diameter 80mm Remarks: Connection from Pump beside loading de	00:02:48		(Constr) 0
	42.50	WLC	Clear water level, 0% of the vertical dimension	00:06:44		(Serv) 0
	42.51	MHF	Finish node type, manhole reference number: S14	00:06:44		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	5	0.12	5	1	0	0	0	0	1

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>23/12/2016</b>	Section number : <b>47</b>	PLR Suffix : <b>X</b>
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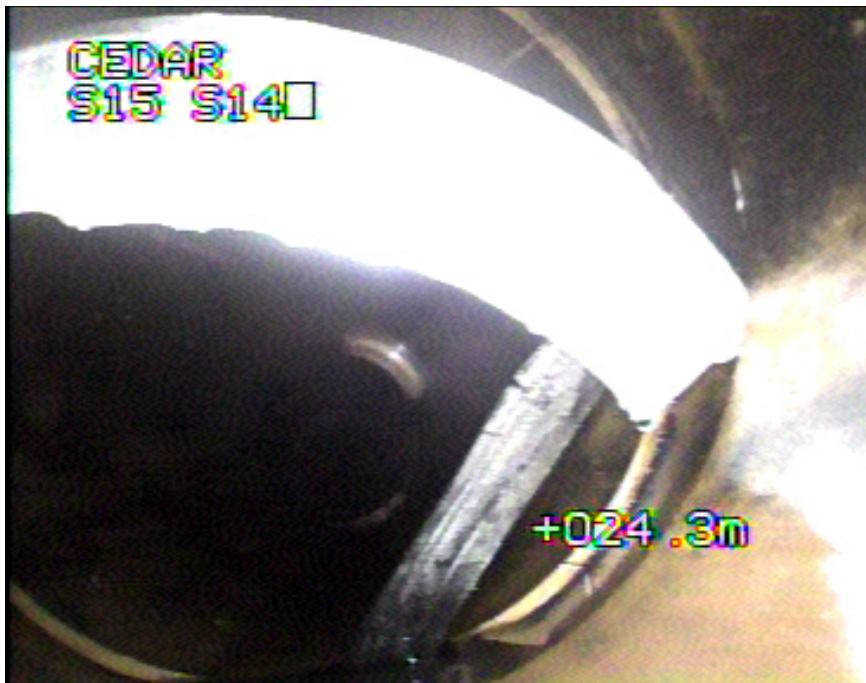


Photo: 47\_6A, MPEG #: 051216\_1, 00:02:39  
24.3m, Sealing ring intruding, from 10 to 6 o'clock

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>48</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S15 (D/S) S16</b>	Location details: Catchment: Tape number : Pipe Length		<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S15 S16 S16</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 7.01 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>			

Comment :

1:63	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S15	00:00:00		(Constr) 0
	0.01	WLC	Clear water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	6.20	LR	Line deviates right	00:00:52		(Serv) 0
	6.40	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	7.00	WL	Water level, 5% of the vertical dimension	00:00:00		(Serv) 0
	7.01	MHF	Finish node type, manhole reference number: S16	00:00:00		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>49</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings S16 (D/S) S7</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>S16 S7</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 15.51 m</b>		Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 225.00 mm Polyvinyl chloride</b>	

Comment :

1:126	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S16	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	13.10	WLC	Clear water level, 5% of the vertical dimension	00:01:52		(Serv) 0
	14.10	WLC	Clear water level, 10% of the vertical dimension	00:02:00		(Serv) 0
	15.00	LL	Line deviates left Remarks: 90 deg.	00:02:07		(Serv) 0
	15.40	JDL	Joint displaced, large Remarks: Poor workmanship.	00:02:41	49_6A	(Struct) 1
	15.50	WL	Water level, 5% of the vertical dimension	00:00:00		(Serv) 0
	15.51	MHF	Finish node type, manhole reference number: S7	00:00:00		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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



## Inspection pictures / Inspection: 1

 Place :  
**Rathcoole**

 Road :  
**Greenoque Busniss Park**

 Date :  
**23/12/2016**

 Section number :  
**49**

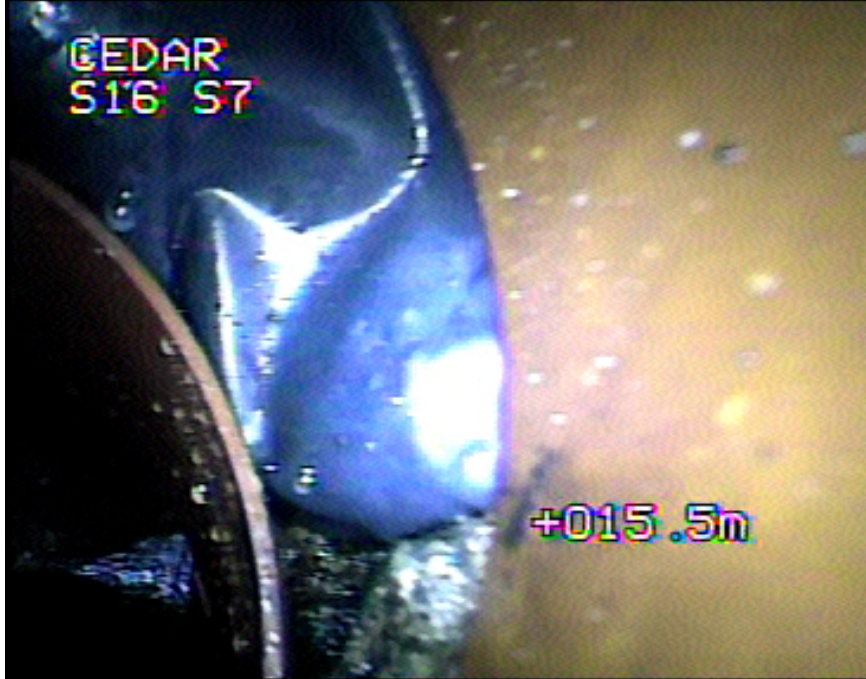
 PLR Suffix :  
**X**


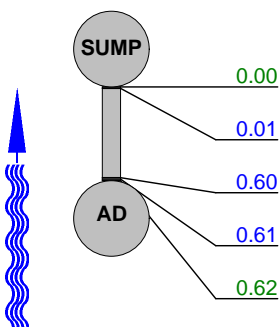
Photo: 49\_6A, MPEG #: 051216\_1, 00:02:41  
 15.4m, Joint displaced, large

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>50</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	<b>Rathcoole Greenogue Busniss Park Property with buildings SUMP (U/S) AD</b>	Location details: Catchment: Tape number : Pipe Length	<b>051216_1</b>	U/S MH : U/S Depth : D/S MH : D/S Depth :	<b>AD SUMP</b>
Use: Year laid : Purpose : Total length :	<b>Surface water  Routine inspection of condition 0.62 m</b>	Pipe shape : Pipe size : Pipe material : Lining :	<b>Circular 100.00 mm Polyvinyl chloride</b>		

Comment :

1:50	Position	Code	Observation	MPEG	Photo	Grade
						
	0.00	CP	Start node type, catchpit, reference number : SUMP	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	0.60	RF	Roots, fine Remarks: These roots come from gap between the end of this pipe and ACCO Drain.	00:00:12	50_3A	(Serv) 2
	0.61	WL	Water level, 0% of the vertical dimension	00:01:15		(Serv) 0
	0.62	BRF	Finish node type, major connection without manhole reference number: AD Remarks: ACCO Drain.	00:01:15		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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	1.61	1	3

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>23/12/2016</b>	Section number : <b>50</b>	PLR Suffix : <b>X</b>
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Photo: 50\_3A, MPEG #: 051216\_1, 00:00:12  
0.6m, Roots, fine

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>51</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenogue Busniss Park</b> Property with buildings <b>SW1 (D/S) S17</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : D/S Depth :
		<b>051216_1</b>	<b>SW1</b> <b>S17</b>
Use: Year laid : Purpose : Total length :	Surface water  Routine inspection of condition 12.31 m	Pipe shape : Pipe size : Pipe material : Lining :	Circular 150.00 mm Polyvinyl chloride

Comment :

1:105	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : SW1 Remarks: Surface water valve.	00:00:02		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:02		(Serv) 0
	8.30	REM	General remark Remarks: Socket connection against the stream	00:01:15		(Misc) 0
	12.30	WL	Water level, 0% of the vertical dimension	00:01:49		(Serv) 0
	12.31	MHF	Finish node type, manhole reference number: S17	00:01:49		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
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

## Inspection report / Inspection: 1

Date : <b>23/12/2016</b>	Job number :	Weather : <b>no rain or snow</b>	Operator : <b>Frantisek</b>	Section number : <b>52</b>	PLR SUFFIX: <b>X</b>
Weather <b>no rain or snow</b>	Vehicle : <b>VEHICLE 1</b>	Camera : <b>camera 1</b>	Preset :	Cleaned : <b>yes</b>	Operator : <b>Frantisek</b>

Place : Road : Location Inspection	Rathcoole <b>Greenogue Busniss Park</b> Property with buildings <b>S1 (D/S) OS</b>	Location details: Catchment: Tape number : Pipe Length	U/S MH : U/S Depth : D/S MH : 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 :	37.81 m	Lining :	

Comment :

1:315	Position	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number : S1	00:00:00		(Constr) 0
	0.01	WL	Water level, 0% of the vertical dimension	00:00:00		(Serv) 0
	14.00	OBI	Other obstacles protuding through wall, from 12 to 6 o'clock, 5% cross-sectional area loss Remarks: A steel bar	00:01:52	52_3A	(Serv) 5
	23.30	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: Connection from G9	00:03:09		(Constr) 0
	27.20	CN	Connection other than junction, at 2 o'clock, diameter 100mm Remarks: Connection from G6	00:03:35		(Constr) 0
	31.70	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: Connection from G8.	00:04:01		(Constr) 0
	36.10	SR	Sealing ring intruding, from 11 to 1 o'clock	00:05:24		(Constr) 1
	36.10	CN	Connection other than junction, at 10 o'clock, diameter 100mm Remarks: Connection from G7	00:05:26	52_8A	(Constr) 0
	36.70	CN	Connection other than junction, at 9 o'clock, diameter 100mm Remarks: Connection from AJ3.	00:05:38		(Constr) 0
	37.20	CN	Connection other than junction, at 3 o'clock, diameter 150mm Remarks: Connection from S6.	00:05:58		(Constr) 0
	37.40	WL	Water level, 0% of the vertical dimension	00:06:05		(Serv) 0
	37.80	WL	Water level, 10% of the vertical dimension	00:06:05		(Serv) 0
	37.81	BRF	Finish node type, major connection without manhole reference number: OS Remarks: Survey stopped just befor	00:06:05		(Constr) 0

<b>Structural Defects</b>					<b>Constructional Features</b>				
<b>Service Defects</b>					<b>Miscellaneous Features</b>				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	5	0.13	5	1	1	10	0.26	10	5

### Inspection pictures / Inspection: 1

Place : <b>Rathcoole</b>	Road : <b>Greenoque Busniss Park</b>	Date : <b>23/12/2016</b>	Section number : <b>52</b>	PLR Suffix : <b>X</b>
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Photo: 52\_3A, MPEG #: 051216\_1, 00:01:52  
14m, Other obstacles protuding through wall, from 12 to 6 o'clock, 5% cross-sectional area loss



Photo: 52\_8A, MPEG #: 051216\_1, 00:05:26  
36.1m, Connection other than junction, at 10 o'clock, diameter 100mm

## ONSITE DRAINAGE – SUMMARY OF DEFECTS

*\*PLEASE REFER TO THE SITE PLAN OVERLEAF*

It was apparent from the CCTV camera inspection that the drainage system is generally in good condition, with some area requiring attention.

For any of the places where a seal ring was found to be intruding, a structural patch lining of all defective sections is recommended in order to reinstate the drainage lines to a watertight condition. Other drainage line defects have been itemised below.

### **Foul Line**

#### **Drainage line: F6 – F4**

<i><b>Location</b></i>	<i><b>Defect</b></i>
8.30m	Multiple cracks in the line. Recommendation repair by installation of liner.
14.30m	Settled deposits in the line. Assumed to be a lump of concrete from the building manufacture. Recommend robotic cutter to break up concrete and the line be flushed.

### **Surface Water Line**

#### **Drainage Line: AD – Sump**

<i><b>Location</b></i>	<i><b>Defect</b></i>
0.60m	Roots located at the end of the pipe at the ACO Drain. Recommend root cutter to dislodge roots and liner to repair line.

#### **Drainage Line: S1 – OS**

<i><b>Location</b></i>	<i><b>Defect</b></i>
14.00m	A steel bar is protruding through the drain wall. Recommend that a robotic cutter cuts the steel bar and that the line is repaired by installation of a liner.

#### **Drainage Line: S16 – S7**

<i><b>Location</b></i>	<i><b>Defect</b></i>
15.40m	Joint displacement. A structural patch liner is required on this defective section in order to bring it to a watertight condition.