



Client:
G.Bruss GmbH DICHTUNGSTECHNIK
Finisklin Road
Sligo, Ireland

Site: Bruss Sligo

Contact: Anna Garvey

10th July 2012

RE: Summary Report of CCTV Drain Survey

Dear Anna

Overview

Horizon Environmental have completed a survey and cleaning of the drainage system and we can confirm that generally it is in good condition however there are some service and structural conditions we need to highlight.

It is as follows

- We recommend that the system is cleaned once annually going forward.
- MH 4305 d/s to MH4294 (Mains), There are 2no dislocated joints on this line that will require repair. We recommend a part liner on each section. It would be prudent to treat this work as priority.
- Price: €3450.00
A risk assessment and method statement can be provided.
- MH 4345 u/s to MH4301 from 7m the line dips and is holding water to 70%, however it is running freely we recommend that over the next 3 years that line is renewed.
- MH 4345 down stream is connected to MH 4305. We carried out a dye test as the camera could not access the flexibly pipe work used to run the drain around underground tanks.

Please find the report enclosed and the DVD which can be played on most Media Player formats.

Assuring you of our best endeavours at all times.

Yours sincerely,



Matthew Kilcawley B.Eng
Operations Manager
Horizon Environmental

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**Project-information**

Project name:

Contract number:

Contact:

Date:
03/07/2013

Client **BRUSS GmbH**
Contact: **ANNE GARVEY**
Position: **ENVIRONMENTAL OFFICER**
Road **FINISKLIN ROAD**
Town **SLIGO**
County **CO SLIGO**
Telephone: **071 9156300**
Fax: **071 916 9352**
Mobile:
E-Mail:

Site **BRUSS SLIGO**
Contact:
Position:
Road
Town
County
Telephone:
Fax:
Mobile:
E-Mail:

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Contractor **HORIZON ENVIRONMENTAL LTD.**
Contact: **MATTHEW KILCAWLEY**
Position: **OPERATION MANAGER**
Road **ADVANCED BUSINESS PARK**
Town **OLD AIRPORT ROAD CLOUGHARAN**
County **CO. DUBLIN**
Telephone: **01 5166537**
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Mobile: **087 1444434**
E-Mail: **INFO@HORIZONENVIRONMENTAL.IE**



Defect Grade Description

Project name:	Contract number:	Contact:	Date: 03/07/2013
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1:

Brick: No Structural Defects
 Pipe: No Structural Defects

Acceptable Structural Condition

2:

Brick: Minor cracking, Surface mortar loss, Spalling slight, wear slight
 Pipe: Circumfrential crack, Moderate joint defects, Spalling slight, Wear slight

Minor collapse risk in short term but potential for further deterioration

3:

Brick: Total mortarloss without other defects, Single brick displaced, Deformation up to 5%,
 Spalling medium, Wear medium
 Pipe: Fractures with deformation up to 5%, Longitudinal cracking or mulitple cracking, Minor
 loss of level, More severe joint defects, Spalling medium, Wear medium

I Collapse unlikely in near future but future deterioration likely I

4:

Brick: Total mortarloss with deformation greater than 10%, Deformation up to 10% and
 fractured, Displaced/hanging brickwork, Small number of missing bricks
 Pipe: Broken, Deformation up to 10% and broken,, Fractured with deformation 5 - 10%,
 Multiple fractures, Serious loss of level, spalling large, wear large

II Collapse likely in foreseeable future II

5:

Brick: Already Collapsed, Missing invert, Deformation over 10% and fractured,
 Displaced/hanging brickwork and deformation over 10%, Extensive missing bricks
 Pipe: Already collapsed, Deformation over 10% and broken, Extensive areas of fabric
 missing, Fractured with deformation over 10%

III Collapsed or collapse imminent III



Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 1	PLR: MH 4307 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH 4291
Place:	District:	end MH: MH 4307
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 26.9 m

Purpose: Asset condition	Shape/Size: Circular 225
Use: Surface water	Material: Concrete Pipe length:
Catchment:	Lining:
	Category:

Comment:

Location details:

1:500	position	code	observation	MPEG	photo	grade
	0.00	ST	Start of Survey			0
	13.50	CN	Connection, at 09 o'clock, dia 100 mm			0
	26.90	FH	Finish Survey			0



Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 2	PLR: MH 5390 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH 5390
Place:	District:	end MH: MH 4307
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 22.5 m

Purpose: Asset condition	Shape/Size: Circular 225
Use: Surface water	Material: Concrete Pipe length:
Catchment:	Lining:
	Category:

Comment:

Location details:

1:500	position	code	observation	MPEG	photo	grade
	3.50	CN	Connection, at 02 o'clock, dia 100 mm			0
	8.50	CN	Connection, at 03 o'clock, dia 100 mm			0
	22.50	FH	Finish Survey			0

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Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 3	PLR: MH4290 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH4306
Place:	District:	end MH: MH4290
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 25 m

Purpose: Asset condition	Shape/Size: Circular 225
Use: Surface water	Material: Polyvinyl chloride Pipe length:
Catchment:	Lining:
	Category:

Comment:

Location details:

1:500	position	code	observation	MPEG	photo	grade
	0.00	ST	Start of Survey			0
	9.60	CN	Connection, at 02 o'clock, dia 150 mm		3_3a	0
	20.90	CN	Connection, at 01 o'clock, dia 150 mm		3_4a	0
	25.00	FH	Finish Survey COMPLETE FROM MANHOLE 4290			0



Inspection photos

Place:

Road:

Date:

03/07/2013

section number:

3

PLR:

MH4290 X

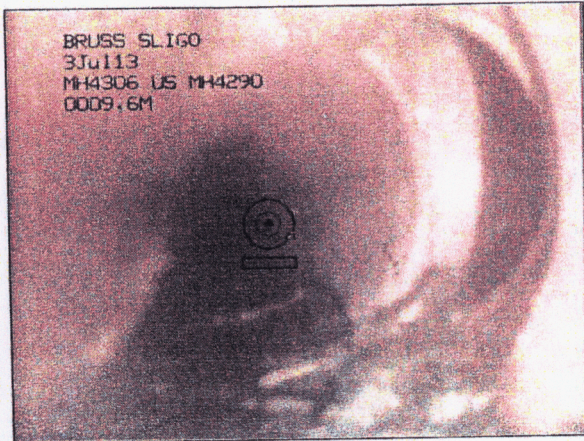


Photo: 3_3a, Tape No.: 1
9.6m, Connection, at 02 o'clock, dia 150 mm

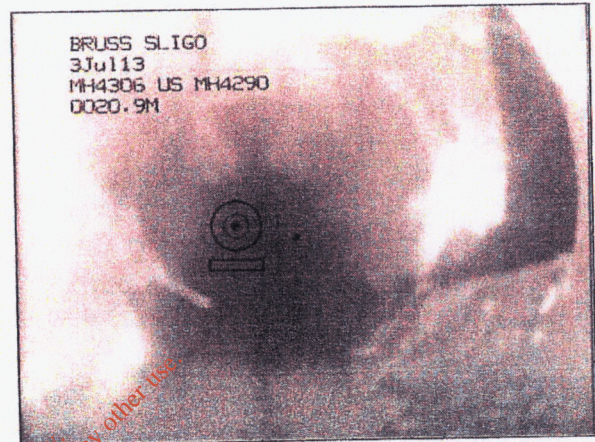


Photo: 3_4a, Tape No.: 1
20.9m, Connection, at 01 o'clock, dia 150 mm

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Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 4	PLR: MH4306 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH4290
Place:	District:	end MH: MH4306
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 26.1 m
Purpose: Asset condition	Shape/Size: Circular 225	Material: Polyvinyl chloride Pipe length:
Use: Surface water	Material:	
Catchment:	Lining:	
Category:		
Comment:		
Location details:		

1:500	position	code	observation	MPEG	photo	grade
		ST	Start of Survey			0
		CN	Connection, at 10 o'clock, dia 150 mm			0
		FH	Finish Survey			0



Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 5	PLR: MH4308 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH4306
Place:	District:	end MH: MH4308
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 11.5 m

Purpose: Asset condition	Shape/Size: Circular 150
Use: Foul	Material: Polyvinyl chloride Pipe length:
Catchment:	Lining:
	Category:

Comment:

Location details:

1:500	position	code	observation	MPEG	photo	grade
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	0.00	ST	Start of Survey			0
	11.50	FH	Finish Survey DIFFICULT ACCESS FOR CCTV CAMERA LINE RUNNING WELL			0

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Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 6	PLR: MH 4345 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH 4345
Place:	District:	end MH: MH 4294 4305
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 3.9 m

Purpose: Asset condition	Shape/Size: Circular 150
Use: Surface water	Material: Polyvinyl chloride Pipe length:
Catchment:	Lining:
	Category:

Comment:

Location details:

1:500 position code observation MPEG photo grade

MH 4345	0.00	ST	Start of Survey			0
	3.80	DC	Dimension of sewer changes, new dimension dia 100 mm. Remark: NO ASSESS FOR CAMERA			0
MH 4294	3.90	FH	Finish Survey		19_2a	0

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Inspection photos

Place:

Road:

Date:

03/07/2013

section number:

6

PLR:

MH 4345 X

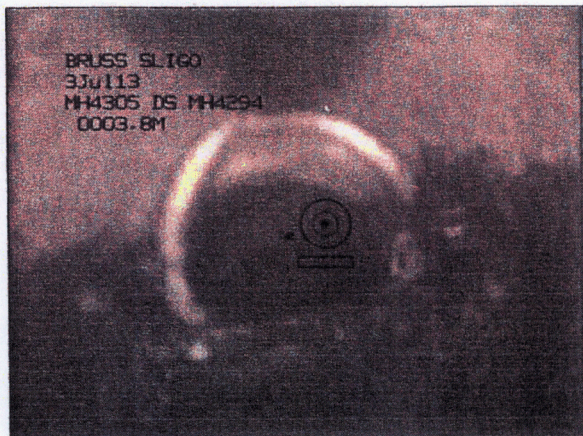


Photo: 19_2a, Tape No.: 1
3.9m, Finish Survey

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Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 7	PLR: MH4301 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH4345
Place:	District:	end MH: MH4301
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 7.1 m

Purpose: Asset condition	Shape/Size: Circular 150
Use: Surface water	Material: Polyvinyl chloride Pipe length:
Catchment:	Lining:
	Category:

Comment:
Location details:

1:500	position	code	observation	MPEG	photo	grade
	0.00	ST	Start of Survey			0
	2.80	CN	Connection, at 02 o'clock, dia 150 mm			0
	4.50	CN	Connection, at 09 o'clock, dia 150 mm			0
	5.00	JDM	Joint displaced. Medium		7_5a	2
	7.00	X	Collapsed Pipe, 60 % cross-sectional loss		7_6a	5
	7.10	FH	Finish Survey			0

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Inspection photos

Place:	Road:	Date: 03/07/2013	section number: 7	PLR: MH4301 X
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Photo: 7_5a, Tape No.: 1
5m, Joint displaced. Medium

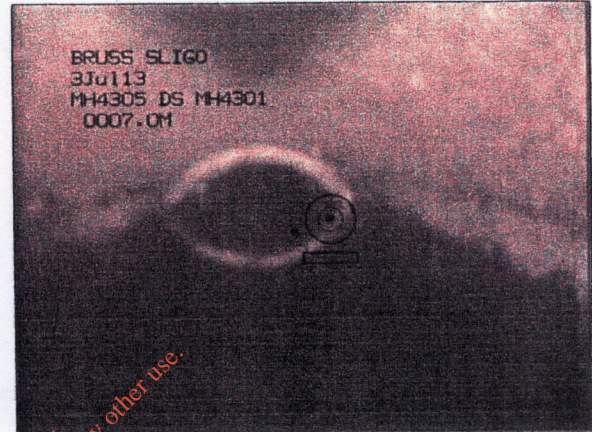


Photo: 7_6a, Tape No.: 1
7m, Collapsed Pipe, 60 % cross-sectional area loss

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HORIZON ENVIRONMENTAL LTD.
 OLD AIRPORT ROAD CLOUGHARAN
 CO. DUBLIN
 Tel: 01 516537, Fax:

Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 8	PLR: MH4291 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH4291
Place:	District:	end MH: MH4290
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 20 m

Purpose: Asset condition	Shape/Size: Circular 225
Use: Surface water	Material: Polyvinyl chloride Pipe length:
Catchment:	Lining:
	Category:

Comment:
Location details:

1:500	position	code	observation	MPEG	photo	grade
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MH4291	0.00	ST	Start of Survey			0
MH4290	20.00	FH	Finish Survey			0

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Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 9	PLR: MH4290 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start.MH:	MH4290
Place:	District:	end MH:	MH4305
Location: OUTSIDE BUILDING	Tape No.: 1	Total length:	12.2 m
Purpose: Asset condition	Shape/Size: Circular 225		
Use: Surface water	Material: Polyvinyl chloride	Pipe length:	
Catchment:	Lining:		
	Category:		
Comment:			
Location details:			

1:500	position	code	observation	MPEG	photo	grade
	0.00	ST	Start of Survey			0
	12.20	FH	Finish Survey			0

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HORIZON ENVIRONMENTAL LTD.
 OLD AIRPORT ROAD CLOUGHRAN
 CO. DUBLIN
 Tel: 01 5166537, Fax:

Inspection report

Date: 03/07/2013	Job N°:	Weather:	Operator: MK	section number: 10	PLR: MH4305 X
Present:	Vehicle:	Camera:	Preset:	Cleaned:	Grade:

Road:	Division:	start MH: MH4305
Place:	District:	end MH: MH4294
Location: OUTSIDE BUILDING	Tape No.: 1	Total length: 0 m

Purpose: Asset condition	Shape/Size: Circular 225
Use: Surface water	Material: Polyvinyl chloride Pipe length:
Catchment:	Lining:
	Category:

Comment:
 Location details:

1:500	position	code	observation	MPEG	photo	grade
		ST	Start of Survey			0

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Inspection photos

Place:	Road:	Date: 03/07/2013	section number: 10	PLR: MH4305 X
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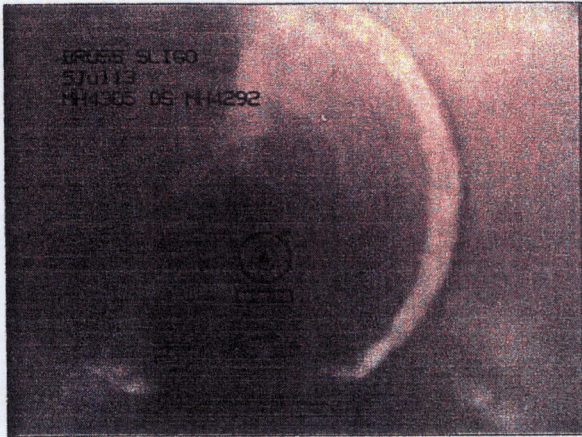


Photo: 11_3a, Tape No.: 1
10.5m, Joint displaced. Medium

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Client:
G.Bruss GmbH DICHTUNGSTECHNIK
Finisklin Road
Sligo, Ireland

Site: Bruss Sligo

Contact: Anna Garvey

10th July 2012

RE: Summary Report of CCTV Drain Survey

Dear Anna

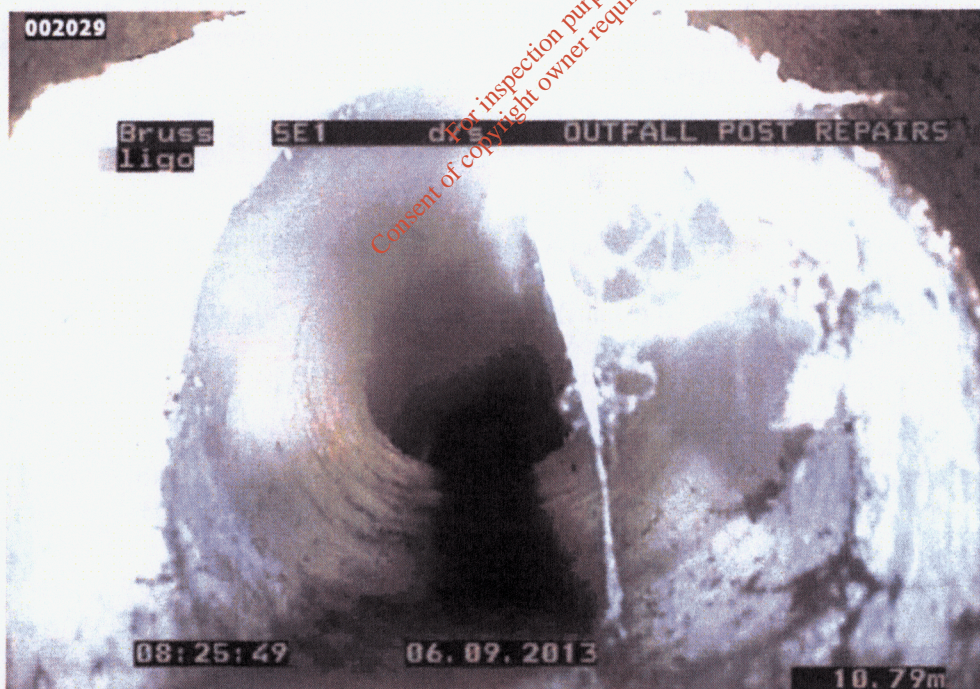
Overview

Horizon Environmental have completed a survey and cleaning of the drainage system and we can confirm that generally it is in good condition however there are some service and structural conditions we need to highlight.

It is as follows

- We recommend that the system is cleaned once annually going forward.
- MH 4305 d/s to MH4294 (Mains), There are 2no dislocated joints on this line that will require repair. We recommend a part liner on each section. It would be prudent to treat this work as priority.
- Price: €3450.00
A risk assessment and method statement can be provided.
- MH 4345 u/s to MH4301 from 7m the line dips and is holding water to 70%, however it is running freely we recommend that over the next 3 years that line is renewed.
- MH 4345 down stream is connected to MH 4305. We carried out a dye test as the camera could not access the flexibly pipe work used to run the drain around underground tanks.

Fig 1,2 MH 4305 to MH 4294 2no dislocated joints - Liner inserts completed.



Work carried out 27th August 2013

gf 16/12/13 -

Fig 1,2 MH 4345 7m of pipework to be replaced



Work in progress 29th Nov 2013

16/12/13

Fig 1 New Pipework in place – MH 4301 – MH 4345 7 m



HORIZON Drain Survey 10.07.2013 on behalf of Bruss GmbH PO465-01

Work carried out 29 Nov – 01 Dec 2013

1/8. 16/12/13