Drainage Report

Prepared For

Kennedy Redford Limited
20 Market Street
Altrincham
UK
WA14 1PF

Site

Lon Cae Darbi
Caernarfon
Wales

SUBSITE SURVEYS
Surveyor: Peter Smith

07427401344

Total Defects for Project

2	1	6	0	0

Total DRB Grades for Project

15	6	0

3220 Gwyneed Skip & plant Hire Drainage AREA 2 - CCTV Survey Report : 02/05/22

Name :	SUBSITE SURVEYS
Contact :	Peter Smith
Location :	Willow House, Low Lane
Town :	Braithwaite
Region :	UK
Postcode :	DN7 5SS
Email :	
Contact Number :	07427401344
Surveyor :	Peter Smith
Valid Certification No :	

Client Information

Name :	Kennedy Redford Limited
Contact :	
Location :	20 Market Street
Town :	Altrincham
Region :	UK
Postcode :	WA14 1PF
Tel :	
Mobile :	
Email :	
Fax :	

Site Information

Name :	
Contact :	
Location :	Lon Cae Darbi
Town :	Caernarfon
Region :	Wales
Postcode :	
Tel :	
Mobile :	
Email :	
Fax :	

Total Defects for Project

2	1	6	0	0

Total DRB Grades for Project

15	6	0

Report interpretation.

Overview:

Each section of the drainage system is allocated a score indicating areas that require attention. These areas are detailed in the Overview section on the following page and also at the bottom right of the first few pages. We use colour coding as an indicator of severity. Additional information concerning rehabilitation options/recomendations is included in the Overview page, which can also be used as an, "at a glance" indication of system condition. More in depth information for each section, Including images can be found later in the report. Grade indicators are as follows:

Grade A: Drain is serviceable no recommendations required

Grade B: There is an issue that might require remedial works

Grade C: There is a defect that requires remedial works, the drain is not serviceable.

Observations:

Each section of drainage reported on (manhole to manhole for example), contains detailed information about that drain and any observations made concerning condition are detailed below the header section. The observations are colour coded and given a severity score, with more significant defects being given a higher score, using a scale from 1 to 5 as detailed below:

Severity 1 to 2: These defects may require remedial monitoring

Severity 3: These defects probably require some form of remedial works

Severity 4 to 5: Defects that will require remedial repair or replacement

General:

The information provided is relevant at the time of survey. The coding system in this report is based on the Manual of Sewer Condition Classification, 5th edition (MSCC5) domestic codes (BS EN 13508-1:2003). This is the official standard for the water industry.

The severity system is based on significant experience in general practice and the 1 -5 grades represent the severity of individual defects: 5 representing a more serious defect.

Please feel free to contact us for further explanation or pricing for remedial works required.

Overview

Section: 1 **From: MH01** **To: MH04?**	Grade B	**DRB Grade: B** **Pipe Size: 225** **Material: Vitrified Clay (i.e. all clayware)** **Use: Surface Water**
Section: 2 **From: MH01** **To:**	Grade B	**DRB Grade: B** **Pipe Size: 150** **Material: Vitrified Clay (i.e. all clayware)** **Use: Surface Water**
Section: 3 **From: MH01** **To:**	Grade A	**DRB Grade: A** **Pipe Size: 150** **Material: Vitrified Clay (i.e. all clayware)** **Use: Surface Water**
Section: 4 **From: MH02** **To: MH03**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 5 **From: MH02** **To: OSA**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 6 **From: MH02** **To: RWP**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 7 **From: MH03** **To: Main**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 8 **From: MH03** **To:**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**

Total Defects for Project

2 1 6 0 0

Total DRB Grades for Project

15 6 0

Section: 9 **From: MH03** **To: MH02**	Grade B	**DRB Grade: B** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 10 **From: MH04** **To: Broken**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 11 **From: MH05** **To:**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 12 **From: MH05** **To:**	Grade A	**DRB Grade: A** **Pipe Size: 150** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 13 **From: MH05** **To:**	Grade B	**DRB Grade: B** **Pipe Size: 150** **Material: Polyvinyl Chloride** **Use: Surface Water**
Section: 14 **From: MH06** **To: MH07**	Grade A	**DRB Grade: A** **Pipe Size: 150** **Material: Polyvinyl Chloride** **Use: Foul**
Section: 15 **From: MH06** **To: BD**	Grade B	**DRB Grade: B** **Pipe Size: 150** **Material: Polyvinyl Chloride** **Use: Foul**
Section: 16 **From: MH06** **To: BD**	Grade A	**DRB Grade: A** **Pipe Size: 150** **Material: Polyvinyl Chloride** **Use: Foul**
Section: 17 **From: MH07** **To: MH08**	Grade A	**DRB Grade: A** **Pipe Size: 150** **Material: Polyvinyl Chloride** **Use: Foul**

Total Defects for Project

2 1 6 0 0

Total DRB Grades for Project

15 6 0

Section: 18 **From: MH07** **To: MH06**	Grade A	**DRB Grade: A** **Pipe Size: 150** **Material: Polyvinyl Chloride** **Use: Foul**
Section: 19 **From: MH08** **To: OSA**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Foul**
Section: 20 **From: MH08** **To: MH07**	Grade A	**DRB Grade: A** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Foul**
Section: 21 **From: MH08** **To: BD**	Grade B	**DRB Grade: B** **Pipe Size: 100** **Material: Polyvinyl Chloride** **Use: Foul**

Site: Lon Cae Darbi, Caernarfon

Section 1

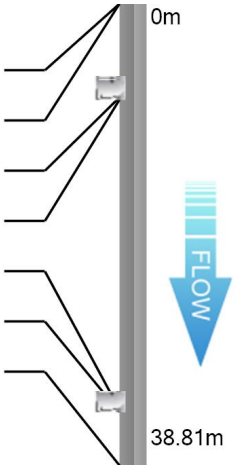
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH01	Finish Node Ref:	MH04?	Direction:	D	Height/Dia:	225
Start Node Depth:	1.55	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	VC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	38.81	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		0_0	
00.00m	WL	Water level 0%			0:00:00
07.87m	CX	Defective connection 02 : 100mm Diameter		0_2	0:01:08
08.06m	JN	Junction 03 : 100mm Diameter		0_3	0:01:12
34.12m	WL	Water level 5%		0_4	0:03:12
34.33m	JN	Junction 03 : 150mm Diameter		0_5	0:03:13
38.81m	MHF	Finish node type, manhole		0_99	



Total Defects for section

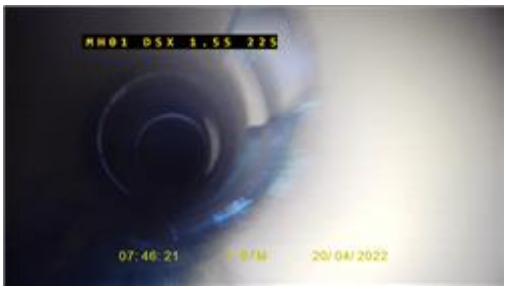
0	0	1	0	0

DRB Grade for Section

B

Descriptive Report with Remarks and Observation Images

Section 1

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH01	Image Provided - Ref: 0_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
07.87m	0:01:08	CX	Defective connection at 02 o'clock: 100mm Diameter - Severity 3	Image Provided - Ref: 0_2 
08.06m	0:01:12	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 0_3 
34.12m	0:03:12	WL	Water level: 5% Height/Diameter	Image Provided - Ref: 0_4 

Total Defects for section

0 | 0 | 1 | 0 | 0

DRB Grade for Section

B

Pos	Video Ref	Code	Description	Image
34.33m	0:03:13	JN	Junction at 03 o'clock: 150mm Diameter	Image Provided - Ref: 0_5 
38.81m		MHF	Finish node type, manhole MH04? unable to push camera any further due to distance and size of pipe	Image Provided - Ref: 0_9999 

Site: Lon Cae Darbi, Caernarfon

Section 2

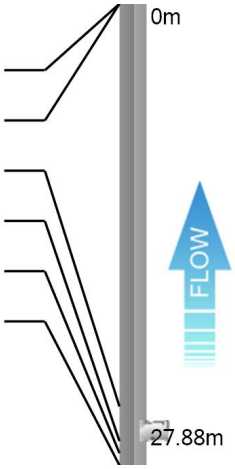
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH01	Finish Node Ref:		Direction:	U	Height/Dia:	150
Start Node Depth:	1.50	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	VC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	27.88	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		1_0	
00.00m	WL	Water level 0%			0:00:00
24.33m	JDM	Joint displaced medium		1_2	0:02:47
26.42m	JN	Junction 09 : 100mm Diameter		1_3	0:03:00
27.15m	CM	Cracks, multiple 12-12		1_4	0:03:08
27.88m	GYF	Finish node type Gully		1_99	



Total Defects for section

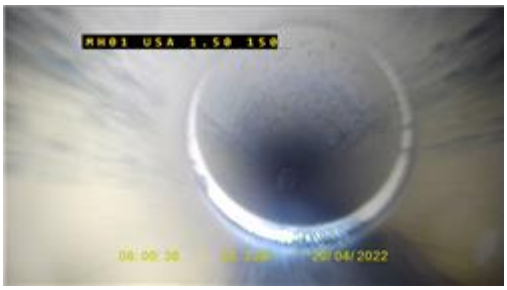
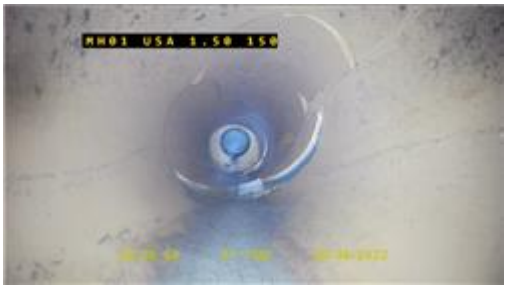
0	1	1	0	0

DRB Grade for Section

B

Descriptive Report with Remarks and Observation Images

Section 2

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH01	Image Provided - Ref: 1_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
24.33m	0:02:47	JDM	Joint displaced medium - Severity 3	Image Provided - Ref: 1_2 
26.42m	0:03:00	JN	Junction at 09 o'clock: 100mm Diameter	Image Provided - Ref: 1_3 
27.15m	0:03:08	CM	Cracks, multiple from 12 o'clock to 12 o'clock - Severity 2	Image Provided - Ref: 1_4 

Pos	Video Ref	Code	Description	Image
27.88m		GYF	Finish node type Gully	Image Provided - Ref: 1_9999 

Site: Lon Cae Darbi, Caernarfon

Section 3

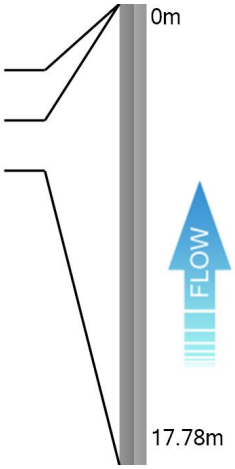
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH01	Finish Node Ref:		Direction:	U	Height/Dia:	150
Start Node Depth:	1.50	Finish Node Depth:	0.42	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	VC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	17.78	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		2_0	
00.00m	WL	Water level 0%			0:00:00
17.78m	GYF	Finish node type Gully		2_99	



Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 3

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH01	Image Provided - Ref: 2_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
17.78m		GYF	Finish node type Gully	Image Provided - Ref: 2_9999 

Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Site: Lon Cae Darbi, Caernarfon

Section 4

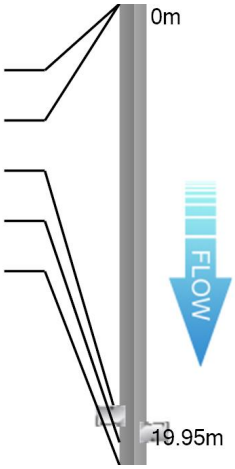
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH02	Finish Node Ref:	MH03	Direction:	D	Height/Dia:	100
Start Node Depth:	0.51	Finish Node Depth:	0.55	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Inadequate ✗	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	19.95	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		3_0	
00.00m	WL	Water level 0%			0:00:00
18.26m	JN	Junction 03 : 100mm Diameter		3_2	0:01:40
18.96m	JN	Junction 09 : 100mm Diameter		3_3	0:01:43
19.95m	MHF	Finish node type, manhole		3_99	



Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 4

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH02	Image Provided - Ref: 3_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
18.26m	0:01:40	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 3_2 
18.96m	0:01:43	JN	Junction at 09 o'clock: 100mm Diameter	Image Provided - Ref: 3_3 
19.95m		MHF	Finish node type, manhole MH03	Image Provided - Ref: 3_9999 

Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Site: Lon Cae Darbi, Caernarfon

Section 5

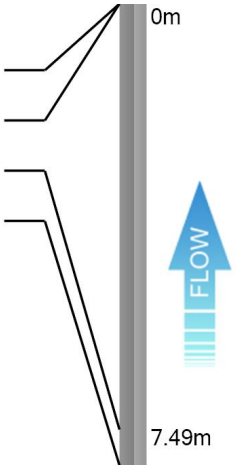
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH02	Finish Node Ref:	OSA	Direction:	U	Height/Dia:	100
Start Node Depth:	0.44	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Inadequate ✗	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	7.49	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		4_0	
00.00m	WL	Water level 0%			0:00:00
06.91m	LDQ	Line of drain/sewer deviates down [quarter]		4_2	0:00:14
07.49m	MHF	Finish node type, manhole		4_99	



Total Defects for section

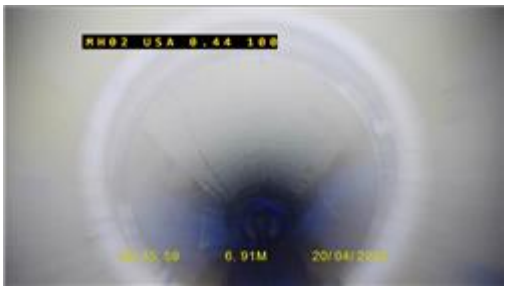
0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 5

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH02	Image Provided - Ref: 4_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
06.91m	0:00:14	LDQ	Line of drain/sewer deviates down [quarter]	Image Provided - Ref: 4_2 
07.49m		MHF	Finish node type, manhole OSA	Image Provided - Ref: 4_9999 

Site: Lon Cae Darbi, Caernarfon

Section 6

Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH02	Finish Node Ref:	RWP	Direction:	U	Height/Dia:	100
Start Node Depth:	0.50	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Inadequate ✗	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	0	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		5_0	
00.00m	WL	Water level 0%			0:00:00
00.00m	GYF	Finish node type Gully		5_99	

Total Defects for section

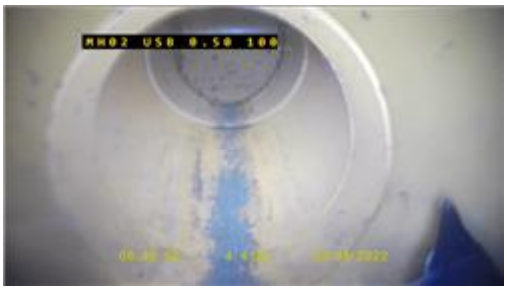
0	0	0	0	0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 6

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH02	Image Provided - Ref: 5_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
00.00m		GYF	Finish node type Gully RWP	Image Provided - Ref: 5_9999 

Site: Lon Cae Darbi, Caernarfon

Section 7

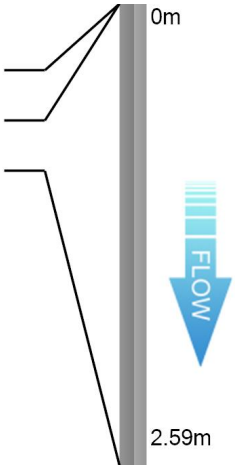
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH03	Finish Node Ref:	Main	Direction:	D	Height/Dia:	100
Start Node Depth:	0.56	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:	100	Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	2.59	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		6_0	
00.00m	WL	Water level 0%			0:00:00
02.59m	MHF	Finish node type, manhole		6_99	



Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 7

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH03	Image Provided - Ref: 6_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
02.59m		MHF	Finish node type, manhole Main	Image Provided - Ref: 6_9999 

Site: Lon Cae Darbi, Caernarfon

Section 8

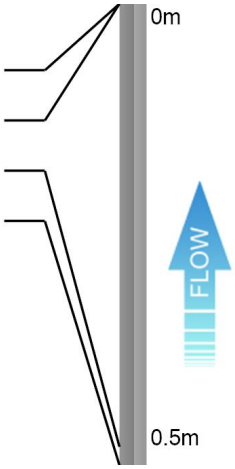
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH03	Finish Node Ref:		Direction:	U	Height/Dia:	100
Start Node Depth:	0.30	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	0.5	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		7_0	
00.00m	WL	Water level 0%			0:00:00
00.48m	CU	Loss of vision			0:00:06
00.50m	GYF	Finish node type Gully			



Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 8

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH03	Image Provided - Ref: 7_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
00.48m	0:00:06	CU	Loss of vision	
00.50m		GYF	Finish node type Gully	

Site: Lon Cae Darbi, Caernarfon

Section 9

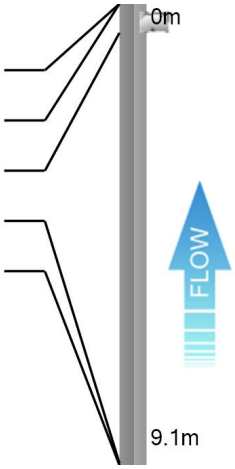
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH03	Finish Node Ref:	MH02	Direction:	U	Height/Dia:	100
Start Node Depth:	0.55	Finish Node Depth:	0.51	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	9.1	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		8_0	
00.00m	WL	Water level 0%			0:00:00
00.57m	JN	Junction 09 : 100mm Diameter		8_2	0:00:06
09.06m	OB	Other obstacles 100%		8_3	0:00:34
09.10m	MHF	Finish node type, manhole			



Total Defects for section

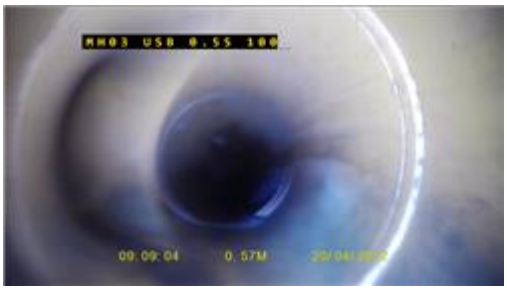
0	0	1	0	0

DRB Grade for Section

B

Descriptive Report with Remarks and Observation Images

Section 9

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH03	Image Provided - Ref: 8_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
00.57m	0:00:06	JN	Junction at 09 o'clock: 100mm Diameter	Image Provided - Ref: 8_2 
09.06m	0:00:34	OB	Other obstacles: 100% Cross sectional area loss - Severity 3	Image Provided - Ref: 8_3 
09.10m		MHF	Finish node type, manhole MH02	

Total Defects for section

0	0	1	0	0

DRB Grade for Section

B

Site: Lon Cae Darbi, Caernarfon

Section 10

Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH04	Finish Node Ref:	Broken	Direction:	U	Height/Dia:	100
Start Node Depth:	0.00	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Inadequate			Manhole Broken

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	0	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		9_0	
00.00m	WL	Water level 0%			0:00:00
00.00m	MHF	Finish node type, manhole			

Total Defects for section

0	0	0	0	0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 10

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH04	Image Provided - Ref: 9_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
00.00m		MHF	Finish node type, manhole Broken	

Site: Lon Cae Darbi, Caernarfon

Section 11

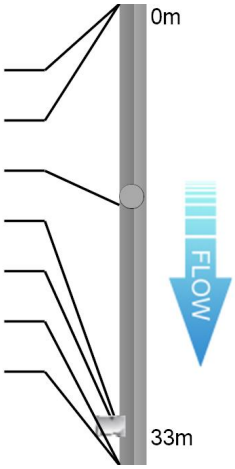
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH05	Finish Node Ref:		Direction:	D	Height/Dia:	100
Start Node Depth:	0.75	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	33	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		10_0	
00.00m	WL	Water level 0%			0:00:00
14.39m	JN	Junction 12 : 100mm Diameter		10_2	0:00:29
30.55m	LLH	Line of drain/sewer deviates left [half]		10_3	0:01:19
30.96m	JN	Junction 02 : 100mm Diameter		10_4	0:01:20
32.95m	REM	General remark		10_5	0:01:33
33.00m	GYF	Finish node type Gully			



Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 11

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH05	Image Provided - Ref: 10_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
14.39m	0:00:29	JN	Junction at 12 o'clock: 100mm Diameter	Image Provided - Ref: 10_2 
30.55m	0:01:19	LLH	Line of drain/sewer deviates left [half]	Image Provided - Ref: 10_3 
30.96m	0:01:20	JN	Junction at 02 o'clock: 100mm Diameter	Image Provided - Ref: 10_4 

Pos	Video Ref	Code	Description	Image
32.95m	0:01:33	REM	General remark Manhole in side Building	Image Provided - Ref: 10_5 
33.00m		GYF	Finish node type Gully	

Site: Lon Cae Darbi, Caernarfon

Section 12

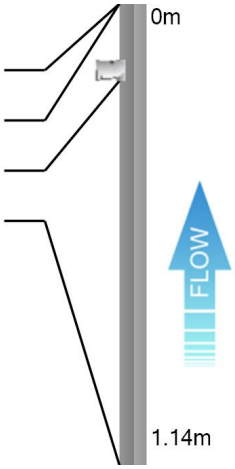
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH05	Finish Node Ref:		Direction:	U	Height/Dia:	150
Start Node Depth:	0.75	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	1.14	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		11_0	
00.00m	WL	Water level 0%			0:00:00
00.19m	JN	Junction 03 : 100mm Diameter		11_2	0:00:02
01.14m	GYF	Finish node type Gully		11_9	



Total Defects for section

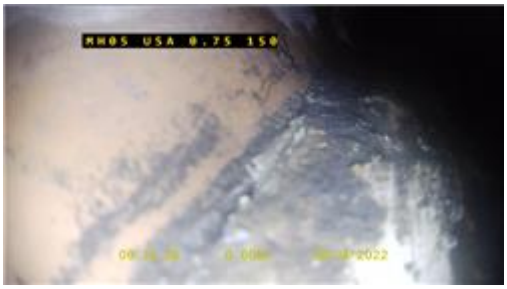
0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 12

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH05	Image Provided - Ref: 11_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
00.19m	0:00:02	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 11_2 
01.14m		GYF	Finish node type Gully	Image Provided - Ref: 11_9999 

Site: Lon Cae Darbi, Caernarfon

Section 13

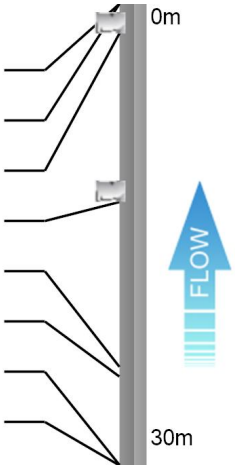
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH05	Finish Node Ref:		Direction:	U	Height/Dia:	150
Start Node Depth:	0.75	Finish Node Depth:	0.00	Use:	S	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	30	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		12_0	
00.00m	WL	Water level 0%			0:00:00
01.92m	JN	Junction 03 : 100mm Diameter		12_2	0:00:09
12.88m	JN	Junction 03 : 100mm Diameter		12_3	0:00:39
23.60m	DES	Settled deposits fine 15%		12_4	0:01:37
24.23m	LRQ	Line of drain/sewer deviates right [quarter]		12_5	0:01:49
29.97m	CR	Crack, radiates from 12		12_6	0:02:42
30.00m	GYF	Finish node type Gully		12_9	



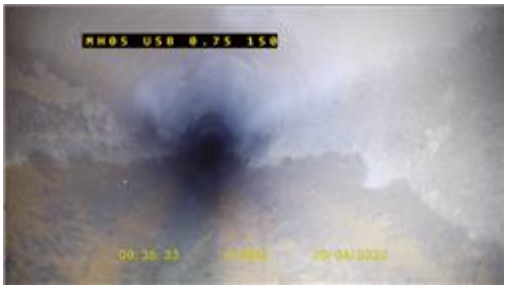
Total Defects for section

1	0	1	0	0

DRB Grade for Section

B

Descriptive Report with Remarks and Observation Images — Section 13

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH05	Image Provided - Ref: 12_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
01.92m	0:00:09	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 12_2 
12.88m	0:00:39	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 12_3 
23.60m	0:01:37	DES	Settled deposits fine: 15% Cross sectional area loss - Severity 3	Image Provided - Ref: 12_4 

Pos	Video Ref	Code	Description	Image
24.23m	0:01:49	LRQ	Line of drain/sewer deviates right [quarter]	Image Provided - Ref: 12_5 
29.97m	0:02:42	CR	Crack, radiates from 12 o'clock - Severity 1	Image Provided - Ref: 12_6 
30.00m		GYF	Finish node type Gully	Image Provided - Ref: 12_9999 

Site: Lon Cae Darbi, Caernarfon

Section 14

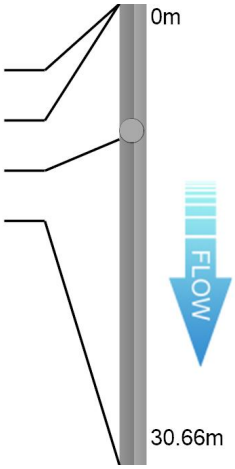
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH06	Finish Node Ref:	MH07	Direction:	D	Height/Dia:	150
Start Node Depth:	0.48	Finish Node Depth:	0.81	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	30.66	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		13_0	
00.00m	WL	Water level 0%			0:00:00
09.00m	JN	Junction 12 : 100mm Diameter		13_2	0:00:04
30.66m	MHF	Finish node type, manhole		13_9	



Total Defects for section

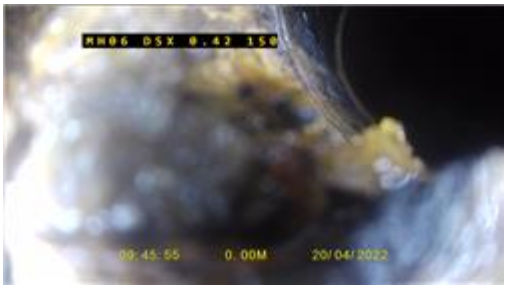
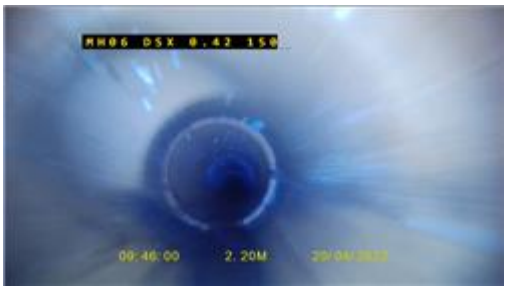
0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 14

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH06	Image Provided - Ref: 13_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
09.00m	0:00:04	JN	Junction at 12 o'clock: 100mm Diameter	Image Provided - Ref: 13_2 
30.66m		MHF	Finish node type, manhole MH07	Image Provided - Ref: 13_9999 

Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Site: Lon Cae Darbi, Caernarfon

Section 15

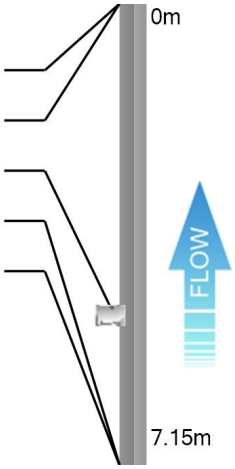
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH06	Finish Node Ref:	BD	Direction:	U	Height/Dia:	150
Start Node Depth:	0.40	Finish Node Depth:	0.00	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	7.15	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		14_0	
00.00m	WL	Water level 0%			0:00:00
04.99m	JN	Junction 03 : 100mm Diameter		14_2	0:00:19
07.14m	DER	Settled deposits coarse 100%		14_3	0:00:33
07.15m	MHF	Finish node type, manhole			



Total Defects for section

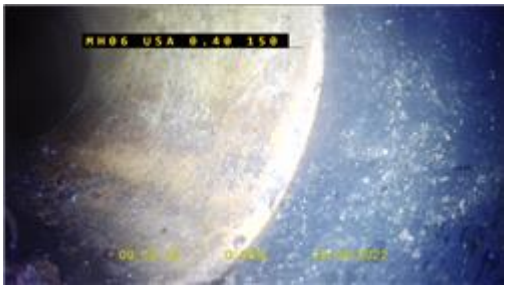
0	0	1	0	0

DRB Grade for Section

B

Descriptive Report with Remarks and Observation Images

Section 15

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH06	Image Provided - Ref: 14_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
04.99m	0:00:19	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 14_2 
07.14m	0:00:33	DER	Settled deposits coarse: 100% Cross sectional area loss - Severity 3	Image Provided - Ref: 14_3 
07.15m		MHF	Finish node type, manhole BD	

Site: Lon Cae Darbi, Caernarfon

Section 16

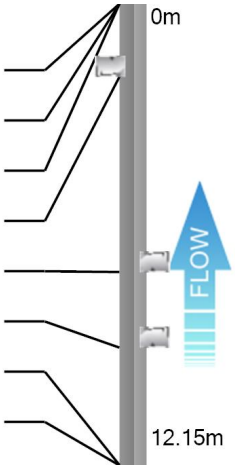
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH06	Finish Node Ref:	BD	Direction:	U	Height/Dia:	150
Start Node Depth:	0.46	Finish Node Depth:	0.00	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	12.15	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		15_0	
00.00m	WL	Water level 0%			0:00:00
00.00m	LLQ	Line of drain/sewer deviates left [quarter]			0:00:01
01.92m	JN	Junction 03 : 100mm Diameter		15_3	0:00:05
07.06m	JN	Junction 09 : 100mm Diameter		15_4	0:00:14
09.05m	JN	Junction 09 : 100mm Diameter		15_5	0:00:19
12.14m	LUF	Line of drain/sewer deviates up [full]		15_6	0:00:25
12.15m	MHF	Finish node type, manhole			



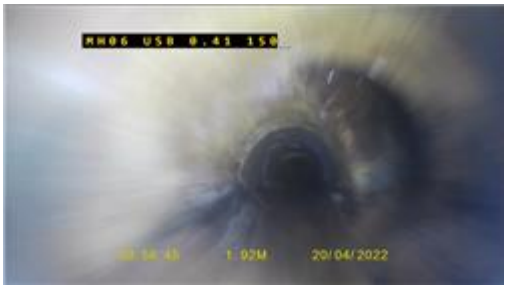
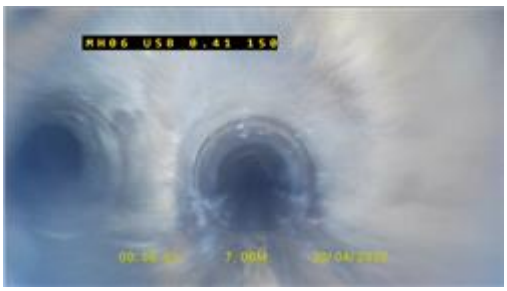
Total Defects for section

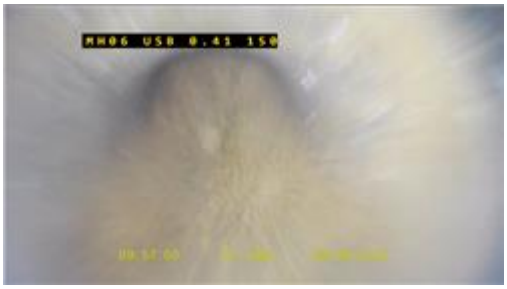
0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images — Section 16

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH06	Image Provided - Ref: 15_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
00.00m	0:00:01	LLQ	Line of drain/sewer deviates left [quarter]	
01.92m	0:00:05	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 15_3 
07.06m	0:00:14	JN	Junction at 09 o'clock: 100mm Diameter	Image Provided - Ref: 15_4 
09.05m	0:00:19	JN	Junction at 09 o'clock: 100mm Diameter	Image Provided - Ref: 15_5 

Pos	Video Ref	Code	Description	Image
12.14m	0:00:25	LUF	Line of drain/sewer deviates up [full]	Image Provided - Ref: 15_6 
12.15m		MHF	Finish node type, manhole BD	

Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Site: Lon Cae Darbi, Caernarfon

Section 17

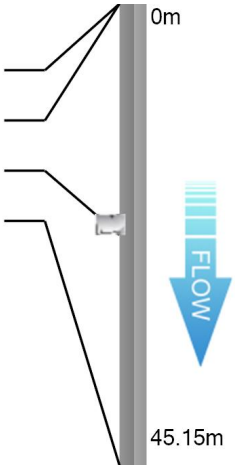
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH07	Finish Node Ref:	MH08	Direction:	D	Height/Dia:	150
Start Node Depth:	0.82	Finish Node Depth:	2.26	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	45.15	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		16_0	
00.00m	WL	Water level 0%			0:00:00
22.62m	JN	Junction 03 : 100mm Diameter		16_2	0:00:52
45.15m	MHF	Finish node type, manhole		16_9	



Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 17

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH07	Image Provided - Ref: 16_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
22.62m	0:00:52	JN	Junction at 03 o'clock: 100mm Diameter	Image Provided - Ref: 16_2 
45.15m		MHF	Finish node type, manhole MH08	Image Provided - Ref: 16_9999 

Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Site: Lon Cae Darbi, Caernarfon

Section 18

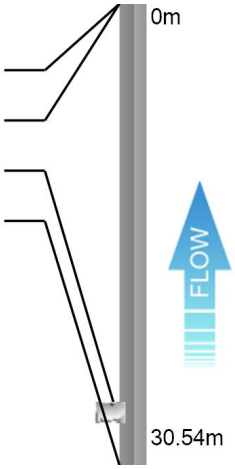
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH07	Finish Node Ref:	MH06	Direction:	U	Height/Dia:	150
Start Node Depth:	0.81	Finish Node Depth:	0.48	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	30.54	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		17_0	
00.00m	WL	Water level 0%			0:00:00
27.72m	JN	Junction 01 : 100mm Diameter		17_2	0:00:36
30.54m	MHF	Finish node type, manhole		17_9	



Total Defects for section

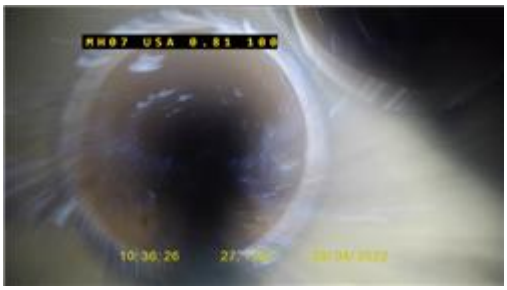
0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 18

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH07	Image Provided - Ref: 17_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
27.72m	0:00:36	JN	Junction at 01 o'clock: 100mm Diameter	Image Provided - Ref: 17_2 
30.54m		MHF	Finish node type, manhole MH06	Image Provided - Ref: 17_9999 

Site: Lon Cae Darbi, Caernarfon

Section 19

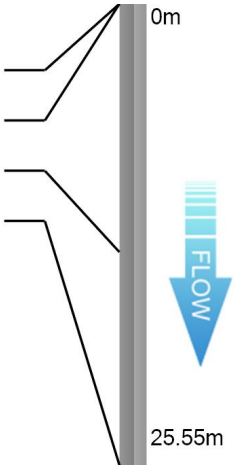
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH08	Finish Node Ref:	OSA	Direction:	D	Height/Dia:	100
Start Node Depth:	2.30	Finish Node Depth:	0.00	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	25.55	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		18_0	
00.00m	WL	Water level 0%			0:00:00
13.75m	CL	Crack, longitudinal 09		18_2	0:00:45
25.55m	MHF	Finish node type, manhole		18_9	



Total Defects for section

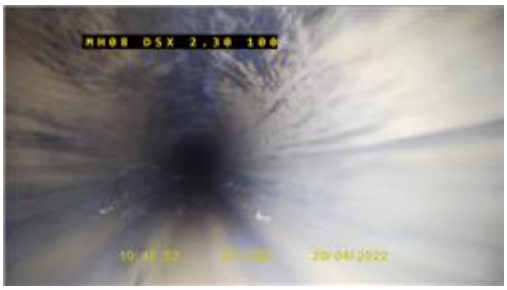
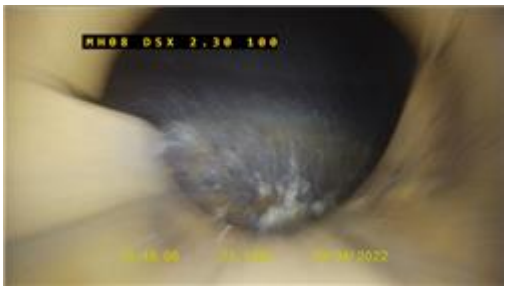
1	0	0	0	0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 19

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH08	Image Provided - Ref: 18_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
13.75m	0:00:45	CL	Crack, longitudinal at 09 o'clock - Severity 1	Image Provided - Ref: 18_2 
25.55m		MHF	Finish node type, manhole OSA	Image Provided - Ref: 18_9999 

Site: Lon Cae Darbi, Caernarfon

Section 20

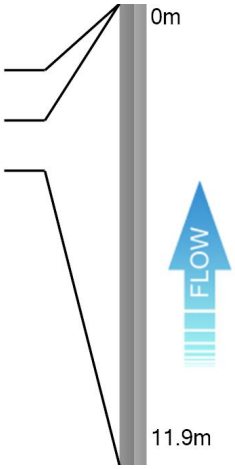
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH08	Finish Node Ref:	MH07	Direction:	U	Height/Dia:	100
Start Node Depth:	2.26	Finish Node Depth:	0.82	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	11.9	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		19_0	
00.00m	WL	Water level 0%			0:00:00
11.90m	MHF	Finish node type, manhole		19_9	



Total Defects for section

0 0 0 0 0

DRB Grade for Section

A

Descriptive Report with Remarks and Observation Images

Section 20

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH08	Image Provided - Ref: 19_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
11.90m		MHF	Finish node type, manhole MH07 Camera got stuck for some reason unable to push further	Image Provided - Ref: 19_9999 

Site: Lon Cae Darbi, Caernarfon

Section 21

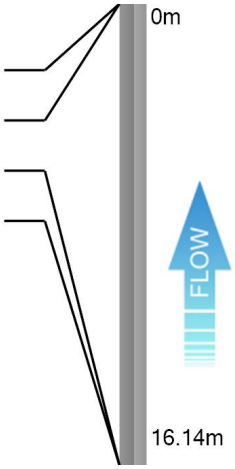
Client:	Location (Street Name):	City/Town/Village	Cust Job Ref.	Surveyors Name:	Date:
Kennedy Redford Limited	Lon Cae Darbi	Caernarfon		Peter Smith	02/05/2022

Start Node Ref:	MH08	Finish Node Ref:	BD	Direction:	U	Height/Dia:	100
Start Node Depth:	0.44	Finish Node Depth:	0.00	Use:	F	Shape:	C
Start Node Coordinate:		Finish Node Coordinate:		Material:	PVC	Cleaned	N

Node Type	Cover Condition	Benching Condition	1/2 Channel Condition	Node Condition Remarks
MH	Good ✓	Good ✓	Good ✓	

Drain Type	Lining Type	Lining Mat.	Year Const.	Weather	Flow Cont.	Length	General Remarks
A				D	N	16.14	

Position	Code	Description	CD	Pic	Video Ref
00.00m	MH	Start node type, manhole		20_0	
00.00m	WL	Water level 0%			0:00:00
16.14m	OB	Other obstacles 100%		20_2	0:00:35
16.14m	MHF	Finish node type, manhole			



Total Defects for section

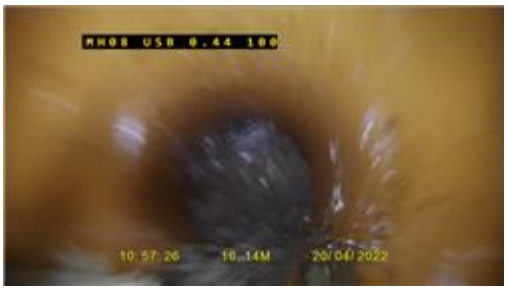
0	0	1	0	0

DRB Grade for Section

B

Descriptive Report with Remarks and Observation Images

Section 21

Pos	Video Ref	Code	Description	Image
00.00m		MH	Start node type, manhole MH08	Image Provided - Ref: 20_0 
00.00m	0:00:00	WL	Water level: 0% Height/Diameter	
16.14m	0:00:35	OB	Other obstacles: 100% Cross sectional area loss - Severity 3 Bloocked	Image Provided - Ref: 20_2 
16.14m		MHF	Finish node type, manhole BD	

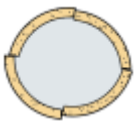
A guide to defects and other observations in drainage systems

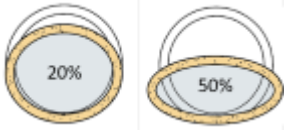
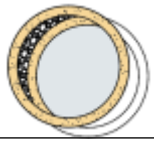
More detailed information can be found in the National Standard (BS EN 13508-1:2003) and in the Manual of Sewer Condition Classification (MSCC) 5th Edition, written by the Water Research Centre (WRc).

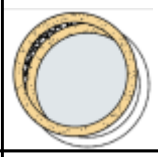
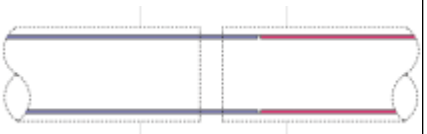
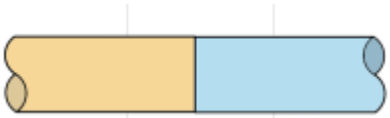
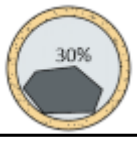
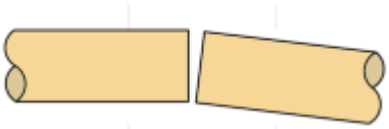
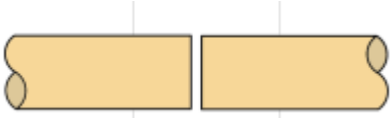
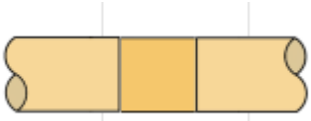
Use	
Code	**Description**
C	Combined
F	Foul
S	Surface Water
T	Trade Effulent
W	Culverted Watercourse
Z	Other

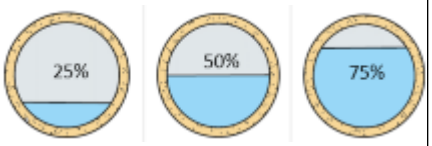
Common Materials	
Code	**Description**
VC	Vitrified Clay
PVC	Polyvinyl Chloride
CO	Concrete
CI	Cast Iron
PF	Pitch Fibre
PE	Polyethylene
DI	Ductile Iron

Start Node	Description	Finish Node
MH	Manhole	MHF
IC	Inspection Chamber	ICF
GY	Gulley	GYF
RE	Rodding Eye	REF
SK	Soakaway	SKF
BN	Buchan Trap	BNF
BR	Major Connection without Ref	BRF
CP	Cacth Pit	CPF
OC	Other Special Chamber	OCF
OF	Outfall	OFF
OS	Oil Seperator	OSF
WR	Major Connection without mh	WRF
LH	Lamphole	LHF

Code	Observation	Description	Attributes	
B	Broken	Pieces pipe have visibly moved	Defined by clock references. Associated with deformity in rigid pipe	
CC CL CM CR	Cracks	Cracks are break lines that are not visibly open	Defined by clock reference position/s. Longitudinal and radiating cracks attract only one clock reference	
CN	Connection	Lateral pipe has been connected after original construction	Described by clock reference position and diameter	

CX(I)	Defective Connection (Intruding)	Defective by intrusion or damage due to factors including: cracks, fractures, obstruction, position etc	Described by clock reference position and diameter (+ % intrusion)	
CU	Loss of Vision	Lens of camera is obscured by debris, water etc. Operator is unable to see drain clearly	'W' can be added if loss of vision is due to wate	
D	Deformed	Pipe has lost its structure	Described by percentage loss of height or width. Recorded in 5% increments	
DEE	Deposits Encrustation	Eg. Attached scale deposits evident	Described by clock referenced position and percentage loss of cross-sectional area (5% increments)	
DEG	Deposits Grease	Attached grease deposits evident	Described by clock referenced position and percentage loss of cross-sectional area (5% increments)	
DER DES	Deposits Coarse/Fine	Settled deposits on the invert of the pipe.	Described by percentage loss of height or diameter. Recorded in 5% increments.	
FC FL FM FR	Fractures	Fractures are visibly open. Pieces of pipe have not moved	Defined by clock reference position/s. Longitudinal and radiating fractures attract only one clock reference	
H	Holes	Section of pipe fabric is missing	Defined by clock reference location. Normally two clock references	
I	Infiltration	Water is infiltrating the pipe, normally via a joint but could be via another defect	Can be described in Remarks using terms such as Seeper, Dripper and Runner	
JDL	Joint Displaced Large	Pipe has moved at joint, perpendicular to axis of pipe	More than 1.5 times the pipe wall thickness must be visible	

JDM	Joint Displaced Medium	Pipe has moved at joint, perpendicular to axis of pipe	Between 1 and 1.5 times the pipe wall thickness must be visible	
JN	Junction	Lateral pipe was installed at construction	Described by clock reference position and diameter	
JX	Defective Junction	Lateral pipe was installed at construction but is defective in some way	Joint can be defective due to factors including: cracks, fractures, obstruction, position etc	
LD **LU** **LL** **LR**	Line Deviation	LD = Line Down, LU = Line Up, LL = Line Left, LR = Line Right. Not related to CIPP lining.	Additional modifiers are added: Q = Quarter (22.5), H = Half (45), F = Full (90). In degrees.	
LC	Lining Changes	If the drain is lined, the lining material has changed	Position of lining material change	
MC	Material Change	The pipe material has changed	Position of change is noted. Type of material change can be defined	
OB	Obstruction/Obstacle	An obstruction or obstacle is affecting the flow through the pipe	Described in percentage loss of cross-sectional area	
OJL	Open Joint Large	Pipe has moved at joint, along the axis of pipe	More than 1.5 times the pipe wall thickness must be visible	
OJM	Open Joint Medium	Pipe has moved at joint, along the axis of pipe	Between 1 and 1.5 times the pipe wall thickness must be visible	
PC	Pipe Length Changes	Length of individual pipe changes	New length described at this position	

R	Roots	Evidence of root ingress	Roots will normally infiltrate via bad joints, cracks, fractures, breaks etc	
REM	Remark	General remark	Used for additional information	
S	Surface Damage	This might include corrosion, spalling and chemical attack	Position only. Additional information can be added in Remarks	
SA	Survey Abandoned	Used when a survey cannot continue for any reason	The reason for abandoning a survey should be noted in the remarks area	
SC	Shape Changes	Dimension of drain changes	Diameter dimension change recorded. Second dimension is recorded for no circular pipe changes	
SR	Sealing Ring	Sealing ring intrudes into pipe at joint	Described by clock reference position	
V	Vermin	Evidence of Vermin in pipe	Can also be used for evidence within manhole etc	
WL	Water Level	Used to record changes in water level. Always shown at the beginning of every survey, if dry noted as 00.	Described by percentage of height or diameter. Recorded in 5% increments	
XP	Collapsed	Drain is suffering from complete loss of structural integrity. Always followed by SA - Survey Abandoned	Percentage loss of cross-sectional area is recorded. Other related structural defects are not recorded