



CCTV Inspection Report

JEFFERSON PARK ADDITIONAL SURVEYS LOW ROAD WHITEHAVEN

22/11/2021
Approved By: S. OAKES
Job Number: SK-S 256/2021

SK Drainage Solutions

31 Adams Road, Workington, Cumbria, CA14 3YS

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Project Information

Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
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Client Details:

THOMAS ARMSTRONG CONSTRUCTION LTD
WORKINGTON ROAD
FLIMBY
MARYPORT
CA15 8AY

Client Contact Name: JONATHAN TIBBITTS

Site Details:

JEFFERSON PARK ADDITIONAL SURVEYS
LOW ROAD
WHITEHAVEN

Site Contact Name: Troy Melhuish

Contractor Details:

SK Drainage Solutions Ltd
31 Adams Road
Workington
Cumbria
CA14 3YS

Office Contact Name: S. OAKES
Office Contact Number: 01900268189

Purpose of Survey:

Conduct a survey of::

Inspect manholes SW20 and SW15, providing sizes and depths to ILs (note that SW15 is c. 7m deep)

CCTV between SW20 to SW15 "we think this is a 1200 dia. pipe"

CCTV downstream from SW15 to the manhole in Low Road (450 dia. pipe we think) and if possible continue the survey downstream towards Pow Beck

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This sketch is not to scale and does not represent the exact routing of the drainage system



Report Summary

Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
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Job Information

Total Distance Surveyed: **45.65 metres**
 Engineer: **B.HUGHES**
 Number of Surveys: **3**
 Number of Surveys grade 4 or above: **0**

Job Comments

The survey downstream towards Pow Beck could not not be completed as the pipe enters the manhole on Low Road via a back drop connection.

Section 1 Overview (22/11/2021)

Manholes: **SW15 to OFF SITE**
 Pipe Length: **25.86 metres**
 Structural Grade: **1**
 Service Grade: **0**
 Material: **Vitrified clay**
 Pipe Size: **450mm**
 Use: **Surface water**

DISPLACED JOINT AT 12.66M HOLDING A SMALL AMOUNT OF FLOW.

Section 2 Overview (22/11/2021)

Manholes: **SW20 to SW15/A**
 Pipe Length: **15.2 metres**
 Structural Grade: **0**
 Service Grade: **3**
 Material:
 Pipe Size: **1200mm**
 Use: **Surface water**

DEBRIS NOTED IN MH SW15.

Section 3 Overview (22/11/2021)

Manholes: **SW15/A to SW15**
 Pipe Length: **4.59 metres**
 Structural Grade: **0**
 Service Grade: **2**
 Material:
 Pipe Size: **525mm**
 Use: **Surface water**

SMALL AMOUNT OF DEBRIS THROUGHOUT.

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Surveyed by (Operator) B.HUGHES	Job Number SK-S 256/2021	Pipe Length Reference(PLR) SW15	Date 22/11/2021	Pre Cleaned Flushed through to enable survey
Weather 1 - Dry	Customer Present	Service Grade/Structural Grade 0/1	Base Unit VJ7B51U7GO	Section Number 1
Road JEFFERSON PARK ADDITIONAL SURVEYS Place LOW ROAD Location WHITEHAVEN		Division District Location Details		
Purpose Duty Surface water Catchment	Shape/Size 450mm Material Vitrified clay Category		Start Node SW15 End Node OFF SITE Total length 25.86 metres	
Scale 1:1.31 Direction Downstream				

Start Node Ref:SW15 | I/L : metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference SW15	5764725	Comment / 0
0.00	WL	Water level 5% height/diameter	5764726	Comment / 0
12.66	JD	Joint displaced 10mm	5766344	Structural / 1
17.97	WL (S1)	Water level 10% height/diameter, Start	5766345	Comment / 0
20.53	WL (F1)	Water level 10% height/diameter, Finished	5766346	Comment / 0
25.86	MHF	Finish node type, manhole, reference OFF SITE BACKDROP FINISH	5764727	Comment / 0

End Node Ref:OFF SITE | I/L : metres

CCTV Inspection Photos

Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
 <p>Start node type, manhole, reference SW15</p>			
 <p>Water level 5% height/diameter</p>			
 <p>Joint displaced 10mm</p>			
 <p>Water level 10% height/diameter, Start</p>			
 <p>Water level 10% height/diameter, Finished</p>			
 <p>Finish node type, manhole, reference OFF SITE BACKDROP FINISH</p>			

CCTV Inspection Report






Surveyed by (Operator) B.HUGHES	Job Number SK-S 256/2021	Pipe Length Reference(PLR) SW20	Date 22/11/2021	Pre Cleaned Flushed through to enable survey
Weather 1 - Dry	Customer Present	Service Grade/Structural Grade 3/0	Base Unit VJ7B51U7GO	Section Number 2
Road JEFFERSON PARK ADDITIONAL SURVEYS Place LOW ROAD Location WHITEHAVEN		Division District Location Details		
Purpose Duty Surface water Catchment	Shape/Size 1200mm Material Category		Start Node SW20 End Node SW15/A Total length 15.2 metres	
Scale 1:0.79 Direction Downstream				

Start Node Ref:SW20 | I/L : metres

Position	Code	Description	Photo	Type/Grade
0.00	MH	Start node type, manhole, reference SW20	5764728	Comment / 0
0.00	WL	Water level 00% height/diameter	5764729	Comment / 0
8.08	DEC	Settled deposits hard or compacted 5% cross-sectional area loss	5766347	Service / 2
13.86	DER	Settled deposits coarse 20% cross-sectional area loss - Remark: DEBRIS IN MANHOLE.	5766348	Service / 3
15.20	MHF	Finish node type, manhole, reference SW15/A	5764730	Comment / 0

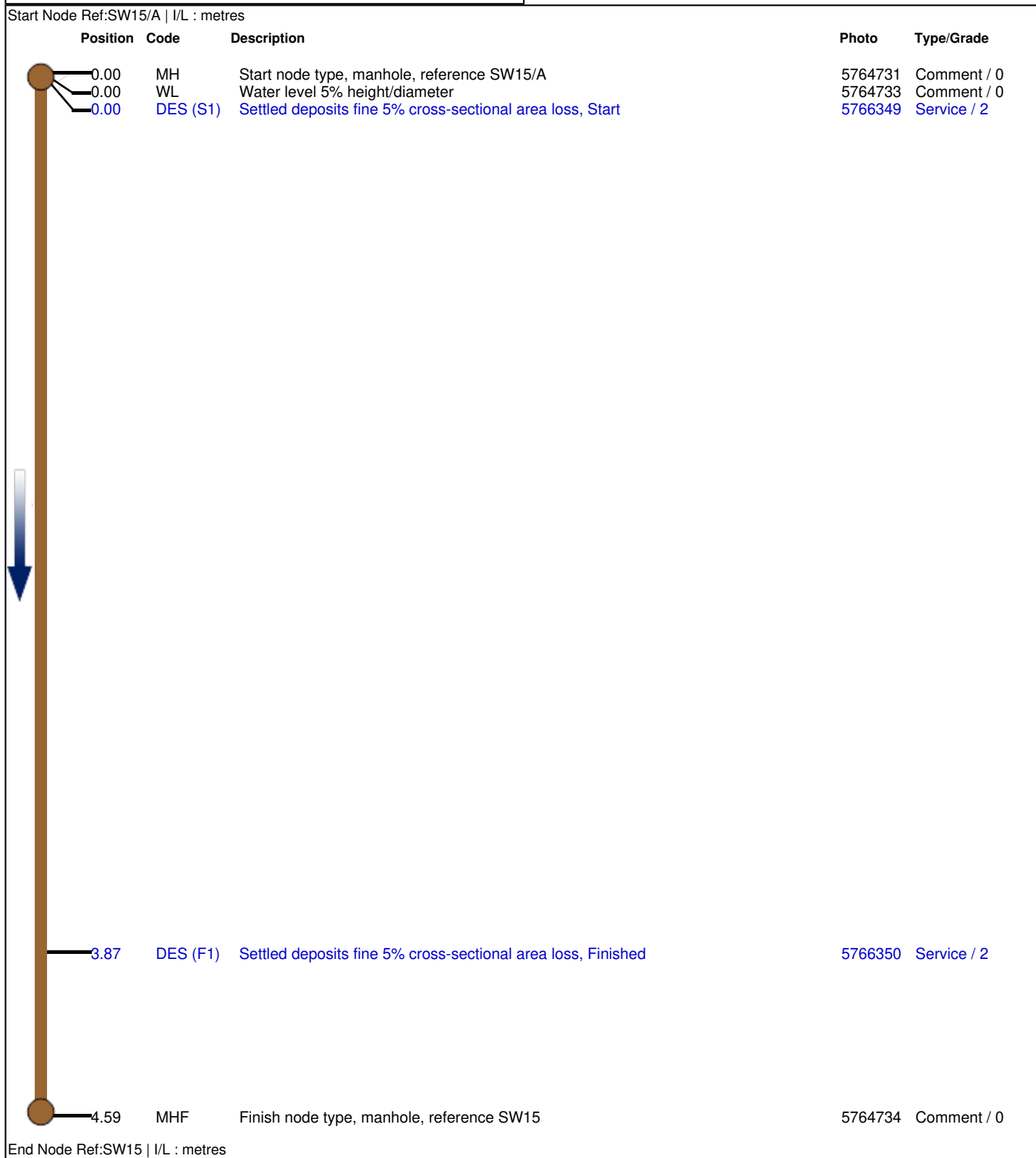
End Node Ref:SW15/A | I/L : metres






CCTV Inspection Photos

Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
 <p>Start node type, manhole, reference SW20</p>			
 <p>Water level 00% height/diameter</p>			
<p>From: Sw20 / To: Sw15 Size: 1200</p>  <p>Settled deposits hard or compacted 5% cross-sectional area loss</p>			
<p>From: Sw20 / To: Sw15 Size: 1200</p>  <p>Settled deposits coarse 20% cross-sectional area loss - Remark: DEBRIS IN MANHOLE.</p>			
<p>From: Sw20 / To: Sw15 Size: 1200</p>  <p>Finish node type, manhole, reference SW15/A</p>			

CCTV Inspection Report

Surveyed by (Operator) B.HUGHES	Job Number SK-S 256/2021	Pipe Length Reference(PLR) SW15/A	Date 22/11/2021	Pre Cleaned Flushed through to enable survey
Weather 1 - Dry	Customer Present	Service Grade/Structural Grade 2/0	Base Unit VJ7B51U7GO	Section Number 3
Road JEFFERSON PARK ADDITIONAL SURVEYS Place LOW ROAD Location WHITEHAVEN		Division District Location Details		
Purpose Duty Surface water Catchment	Shape/Size 525mm Material Category	Start Node SW15/A End Node SW15 Total length 4.59 metres		
Scale 1:0.21 Direction Downstream				



Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
 <p>Start node type, manhole, reference SW15/A</p>			
 <p>Water level 5% height/diameter</p>			
<p>From: Sw15/A / To: Sw15 Size: 525</p>  <p>Settled deposits fine 5% cross-sectional area loss, Start</p>			
<p>From: Sw15/A / To: Sw15 Size: 525</p>  <p>Settled deposits fine 5% cross-sectional area loss, Finished</p>			
<p>From: Sw15/A / To: Sw15 Size: 525</p>  <p>Finish node type, manhole, reference SW15</p>			

STC25 Computerised Sewer Records

Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
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Forms for use with

STC25

**Computerised
Sewer Records**

Node Reference:

Grid Reference:	<input type="text" value="SW20"/>			Survey Date:	<input type="text" value="23/11/2021"/>									
Location:	<input type="text" value="AS PER DRAWING"/>			Drainage Area Code:	<input type="text" value="DAC"/>									
Year Laid:	<input type="text" value="J"/>	Status:	<input type="text" value="PU"/>	Function:	<input type="text" value="S"/>	Node Type:	<input type="text" value="M"/>							
Evidence of surcharge:	<input type="text" value="M"/>													
<u>Cover Detail</u>	Shape:	<input type="text" value="S"/>	Hinged:	<input type="text" value="N"/>	Lockable:	<input type="text" value="Y"/>	Cover Duty:	<input type="text" value="M"/>	Size (mm):	<input type="text" value="600"/>	x	<input type="text" value="600"/>	Toxic Atmosphere:	<input type="text" value="N"/>
<u>Shaft Detail</u>	Side Entry:	<input type="text" value="N"/>	Regulating Brick courses:	<input type="text" value="0"/>	Shaft Depth (mm):	<input type="text" value="2100"/>			Size (mm):	<input type="text" value="2500"/>	x	<input type="text" value="2500"/>	Evidence of Vermin:	<input type="text" value="N"/>
<u>Chamber Detail</u>	Soffit:	<input type="text" value="S"/>	No of Steps:	<input type="text" value="8"/>	No of Ladders:	<input type="text" value="0"/>	Landings:	<input type="text" value="1"/>	Size (mm):	<input type="text" value="2500"/>	x	<input type="text" value="2500"/>	Chamber Construction:	<input type="text" value="P"/>
Depth of Flow (mm):	<input type="text" value="20"/>		Depth of Silt (mm):	<input type="text" value="0"/>		Height of Surcharge (mm):	<input type="text" value="0"/>		Cover Level (mm):	<input type="text" value="100"/>				

	Upstream Reference	Pipe Shape	Pipe Size/Dia (mm)	Backdrop Diameter (mm)	Pipe Material	Lining Material	Depth from Cover	Invert Level
A	SW43	Circular	450	0	CO	Not Lined	2100	2100
B								
C								
D								
E								
F								

	Downstream Reference	Pipe Shape	Pipe Size/Dia (mm)	Trap	Rodding Eye (Dia)	Pipe Material	Lining Material	Depth from Cover	Invert Level
X	SW15/A	Circular	1200	No	0	PVC	Not Lined	2100	2100
Y									

Condition Issues Cover Irons/Ladders Shaft Chamber Benching Other

(Y) if attention required. Specific details in general remarks below

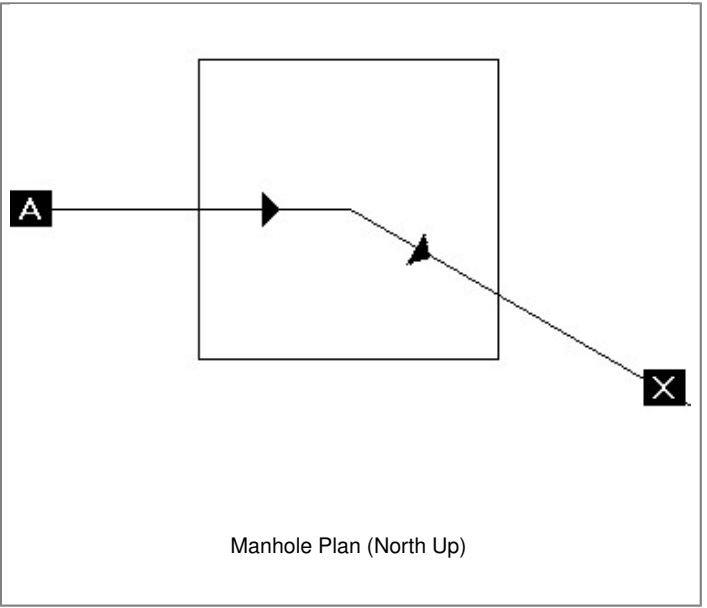
General Remarks

Other: MH LID BOTTED DOWN

STC25 Computerised Sewer Records

Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
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Location Sketch



Manhole Plan (North Up)

Manhole Location

Manhole Internal

STC25 Computerised Sewer Records

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Forms for use with

STC25

**Computerised
Sewer Records**

Node Reference:

Grid Reference: <input type="text" value="SW15"/>				Survey Date: <input type="text" value="23/11/2021"/>			
Location: <input type="text" value="AS PER UPDATED DRAWING"/>				Drainage Area Code: <input type="text" value="DAC"/>			
Year Laid: <input type="text" value="J"/>	Status: <input type="text" value="PU"/>	Function: <input type="text" value="S"/>	Node Type: <input type="text" value="M"/>	Evidence of surcharge: <input type="text" value="M"/>			
<u>Cover Detail</u>	Shape: <input type="text" value="S"/>	Hinged: <input type="text" value="N"/>	Lockable: <input type="text" value="Y"/>	Cover Duty: <input type="text" value="H"/>	Size (mm): <input type="text" value="950"/> x <input type="text" value="950"/>	Toxic Atmosphere: <input type="text" value="N"/>	
<u>Shaft Detail</u>	Side Entry: <input type="text" value="N"/>	Regulating Brick courses: <input type="text" value="0"/>	Shaft Depth (mm): <input type="text" value="6500"/>	Size (mm): <input type="text" value="2200"/> x <input type="text" value="2200"/>	Evidence of Vermin: <input type="text" value="N"/>		
<u>Chamber Detail</u>	Soffit: <input type="text" value="S"/>	No of Steps: <input type="text" value="23"/>	No of Ladders: <input type="text" value="0"/>	Landings: <input type="text" value="1"/>	Size (mm): <input type="text" value="2200"/> x <input type="text" value="2200"/>	Chamber Construction: <input type="text" value="S"/>	
Depth of Flow (mm): <input type="text" value="40"/>		Depth of Silt (mm): <input type="text" value="0"/>		Height of Surcharge (mm): <input type="text" value="0"/>		Cover Level (mm): <input type="text" value="0"/>	

	Upstream Reference	Pipe Shape	Pipe Size/Dia (mm)	Backdrop Diameter (mm)	Pipe Material	Lining Material	Depth from Cover	Invert Level
A	SW15/A	Circular	525	5000	PVC	Not Lined	0	6500
B								
C								
D								
E								
F								

	Downstream Reference	Pipe Shape	Pipe Size/Dia (mm)	Trap	Rodding Eye (Dia)	Pipe Material	Lining Material	Depth from Cover	Invert Level
X	OFFSITE MH	Circular	450	Yes	225	VC	Not Lined	6500	6500
Y									

Condition Issues Cover Irons/Ladders Shaft Chamber Benching Other

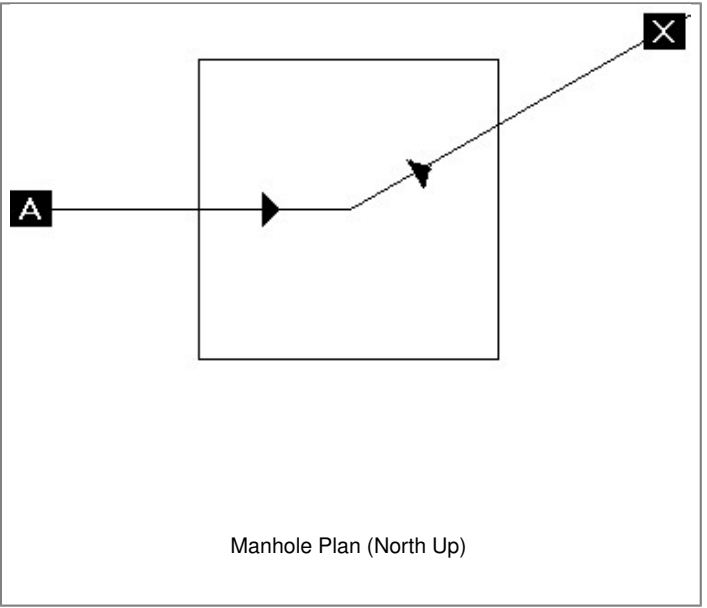
(Y) if attention required. Specific details in general remarks below

General Remarks

Other: LID BOLTED DOWN

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Location Sketch



Manhole Plan (North Up)

Manhole Location

Manhole Internal

Structural Defects (SRM 4)

Job Number SK-S 256/2021				Surveyed by (Operator) B.HUGHES			Base Unit VJ7B51U7GO			Date 22/11/2021			
No.	PLR	Dir.	Use	Shape/Size	Date	Mat.	Total Length	Inspection Length	Cat.	Peak Score	Grade	Mean Score	Total Score
1	SW15	D	S	450	22/11/2021	Vitrified clay	25.86 metres	25.86		2	1	0.08	2
2	SW20	D	S	1200	22/11/2021		15.2 metres	15.2		0	1	0	0
3	SW15/A	D	S	525	22/11/2021		4.59 metres	4.59		0	1	0	0

Service Defects (SRM 4)

Job Number SK-S 256/2021				Surveyed by (Operator) B.HUGHES			Base Unit VJ7B51U7GO			Date 22/11/2021			
No.	PLR	Dir.	Use	Shape/Size	Date	Mat.	Total Length	Inspection Length	Cat.	Peak Score	Grade	Mean Score	Total Score
1	SW15	D	S	450	22/11/2021	Vitrified clay	25.86 metres	25.86		0	1	0	0
2	SW20	D	S	1200	22/11/2021		15.2 metres	15.2		2	3	0.20	3
3	SW15/A	D	S	525	22/11/2021		4.59 metres	4.59		1	2	0.44	2

Defect Grade Descriptions

Job Number SK-S 256/2021	Surveyed by (Operator) B.HUGHES	Base Unit VJ7B51U7GO	Date 22/11/2021
<p>1: Occurences without damage. For example, laterals, joints,etc.</p> <p>NO DEFECTS WERE DETECTED.</p>			
<p>2: Constructional deficiencies or occurences with insignificant influence to tightness, hydraulic or static pressure or pipe: Eg. wide joints, badly torched intakes, minor deformation of plastic pipes, minor erosions etc.</p> <p>REHABILITATION CAN BE SCHEDULED LONG-TERM.</p>			
<p>3: Constructional deficiencies diminishing static, hydraulic and tightness: Eg. untorched intakes, cracks, minor drainage obstructions such as calcite build ups, protruding laterals, minor damages to pipe wall, individual root penetrations, corroded pipe walls etc.</p> <p>REHABILITATION IS NECESSARY MEDIUM-TERM WITHIN 3 TO 5 YEARS.</p>			
<p>4: Constructional damages with insufficient static safety, hydraulic or tightness: Eg. axial/radial pipe bursts, pipe deformations, visually noticeable infiltration/exfiltration, cavities, in pipe-wall, severe protruding, laterals severe root penetrations, severe corrosion of pipe wall etc.</p> <p>REHABILITATION PROCEDURE IS URGENT AND HAS TO BE COMPLETED WITHIN 1 TO 2 YEARS. NECESSITY FOR EMERGENCY OPERATIONS HAS TO BE EXAMINED.</p>			
<p>5: Pipe is already or will shortly be impermeable: Eg. collapsed pipe, deeply rooted pipe or other drainage obstructions. Pipe loses water or danger of backwater in basements etc.</p> <p>REHABILITATION IS URGENT AND SHORT-TERM. IN ORDER TO PREVENT FURTHER DAMAGE, NECESSARY TEMPORARY SPOT REPAIR HAS TO BE CONDUCTED ON EMERGENCY LEVEL.</p>			