

Appendix D

CCTV SURVEYS





Project

Project Name: 2020_07_20 JACKSON CIVILS LIMITED
Project Number: PJ375561
Project Date: 20/07/2020
Project Standard: MSCC4 Sewers & Drainage GB (SRM4 Scoring)





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2020_07_20 JACKSON CIVILS LIMITED	PJ375561	20/07/2020

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Scoring Summary

Project Name
2020_07_20 JACKSON CIVILS LIMITED

Project Number
PJ375561

Project Date
20/07/2020

Structural Defects

Grade 3: Best practice suggests consideration should be given to repairs in the medium term.

Grade 4: Best practice suggests consideration should be given to repairs to avoid a potential collapse.

Grade 5: Best practice suggests that this pipe is at risk of collapse at any time. Urgent consideration should be given to repairs to avoid total failure.

Section	PLR	Grade	Description
4	SW 5X	5	Hole in drain or sewer at a joint from 10 o'clock to 2 o'clock
7	SW 6X	3	Fracture, circumferential from 12 o'clock to 12 o'clock
9	SW 7X	3	Fracture, circumferential from 8 o'clock to 4 o'clock
12	SW 4X	4	Fracture, multiple from 12 o'clock to 12 o'clock
13	SW 11X	5	Hole in drain or sewer from 3 o'clock to 9 o'clock

Service / Operational Condition

Grade 3: Best practice suggests consideration should be given to maintenance activities in the medium term.

Grade 4: Best practice suggests consideration should be given to maintenance activity to avoid potential blockages.

Grade 5: Best practice suggests that this pipe is at a high risk of backing up or causing flooding.

Section	PLR	Grade	Description
1	SW 1X	3	Roots, mass at joint, 10% cross-sectional area loss
3	SW 3X	4	Sealing ring intruding, hanging above centre from 9 o'clock to 3 o'clock
8	SW 8X	5	Multiple defects

Abandoned Surveys

Section	PLR	Description
4	SW 5X	Survey abandoned
5	SW 5X	Survey abandoned
6	SW 6X	Survey abandoned
7	SW 6X	Survey abandoned
8	SW 8X	Survey abandoned
11	SW 12X	Survey abandoned
13	SW 11X	Survey abandoned
14	SW 9X	Survey abandoned
16	U/SX	Survey abandoned

Information

These scoring summaries are based on the SRM grading from the WRc.



Project Information

Project Name	Project Number	Project Date
2020_07_20 JACKSON CIVILS LIMITED	PJ375561	20/07/2020

Client

Company: JACKSONS CIVILS LIMITED
Street: MAGNET HOUSE 30 WHITE HOUSE ROAD
Town or City: IPSWICH
County: SUFFOLK
Post Code: IP1 5LT

Site

Company: JACKSONS CIVILS LIMITED
Street: MAGNET HOUSE 30 WHITE HOUSE ROAD
Town or City: IPSWICH
County: SUFFOLK
Post Code: IP1 5LT

Contractor

Company: Lanes Group Plc
Contact: Matt Griffith
Department: Regional Manager
Street: Unit 2-4 Parham Drive
Town or City: Eastleigh
County: Hampshire
Post Code: SO50 4NU
Phone: 02380 625 750
Fax: 02380 651 511
Email: southcentralops@lanesgroup.co.uk



Section Profile

Project Name 2020_07_20 JACKSON CIVILS LIMITED	Project Number PJ375561	Project Date 20/07/2020
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Circular, 150 mm

Section	Upstream Node	Downstream Node	Date	Road	Pipe Material	Total Length	Inspected Length
4	SW 5	SW 4	20/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	6.48 m	6.48 m
5	SW 5	SW4	20/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	34.89 m	34.89 m
6	SW 6	SW 5	20/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	10.76 m	10.76 m
7	SW 6	SW 5	20/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	34.99 m	34.99 m
8	SW 8	SW 7	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	12.57 m	12.57 m
9	SW 7	SW 8	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	27.53 m	27.53 m
10	SW 7	SW 9	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	0.00 m	0.00 m
11	SW 12	SW 11	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	37.00 m	9.58 m
16	U/S	SW 6	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	18.16 m	18.16 m

Total: 9 Sections x Circular 150 mm = 182.38 m Total Length and 154.96 m Inspected Length

Circular, 200 mm

Section	Upstream Node	Downstream Node	Date	Road	Pipe Material	Total Length	Inspected Length
12	SW 4	SW 11	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	6.97 m	6.97 m

Total: 1 Section x Circular 200 mm = 6.97 m Total Length and 6.97 m Inspected Length

Circular, 225 mm

Section	Upstream Node	Downstream Node	Date	Road	Pipe Material	Total Length	Inspected Length
1	SW 1	SW 2	20/07/2020	A29	Concrete	50.25 m	50.25 m
2	SW 2	SW 3	20/07/2020	A29	Concrete	12.56 m	12.56 m
3	SW 3	SW 4	20/07/2020	A29	Concrete	25.20 m	25.20 m
15	SW 9	D/STREAM	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	57.68 m	57.68 m

Total: 4 Sections x Circular 225 mm = 145.69 m Total Length and 145.69 m Inspected Length

Circular, 300 mm

Section	Upstream Node	Downstream Node	Date	Road	Pipe Material	Total Length	Inspected Length
13	SW 11	SW 10	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	48.00 m	49.69 m
14	SW 9	SW 10	21/07/2020	A29	Vitrified clay pipe (i.e. all clayware)	8.48 m	8.48 m

Total: 2 Sections x Circular 300 mm = 56.48 m Total Length and 58.17 m Inspected Length

Total: 16 Sections = 391.52 m Total Length and 365.79 m Inspected Length

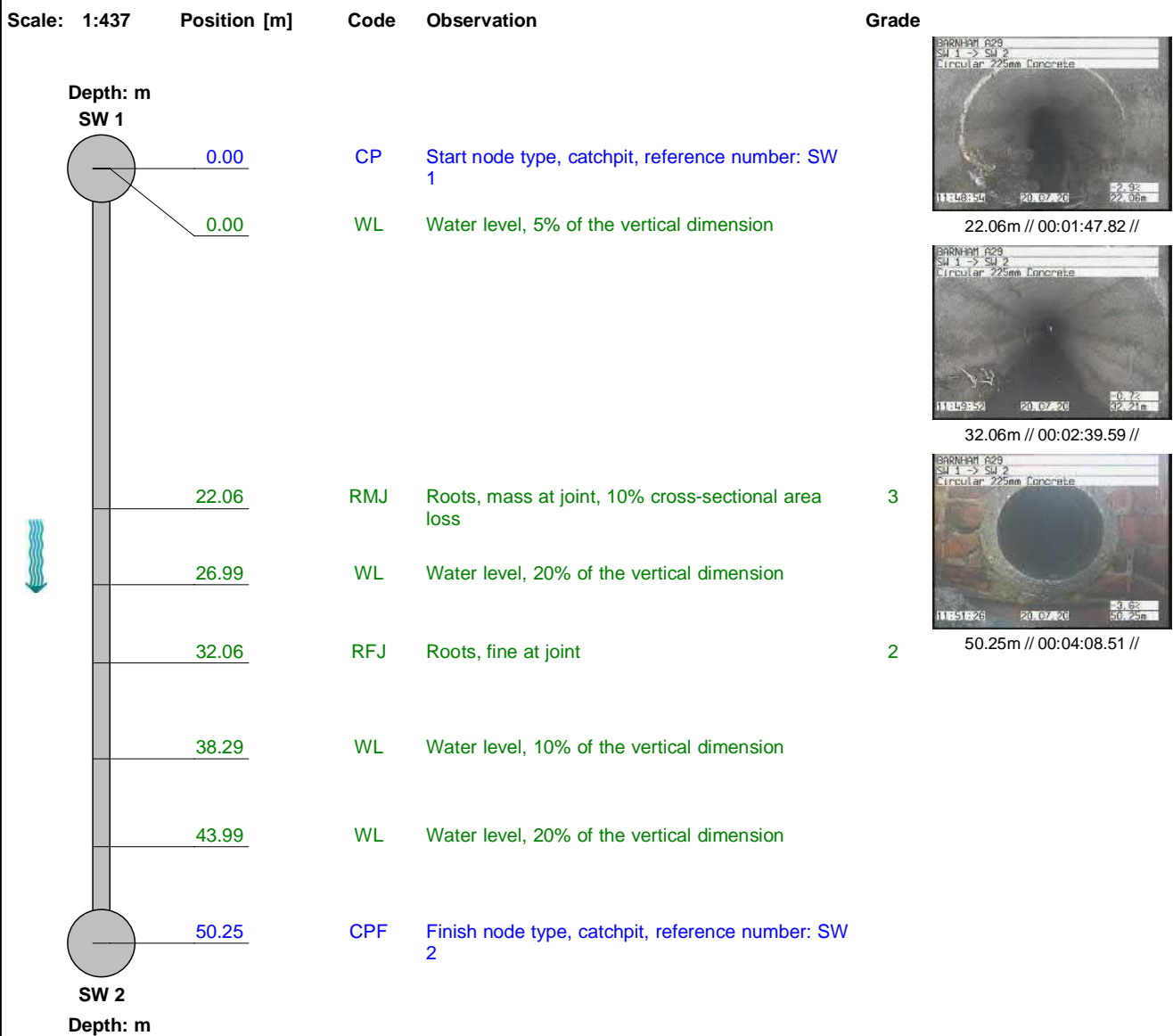


Section Inspection - 20/07/2020 - SW 1X

Section 1	Inspection 1	Date 20/07/20	Time 10:41	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 1X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 1
Road:	A29	Inspected Length:	50.25 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	50.25 m	Downstream Node:	SW 2
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Year Constructed:		Pipe Material:	Concrete		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	2	4.0	0.2	5.0	3.0

Section Pictures - 20/07/2020 - SW 1X

Section 1	Inspection Direction Downstream	PLR SW 1X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 1X_9a1ee07d-49b8-4700-bff9-324346e06c99_20200720_115041_009.jpg, 00:01:47,
 22.06 m

Roots, mass at joint, 10% cross-sectional area loss



SW 1X_bdf26c33-17b5-4a53-9681-10af0f75fa58_20200720_115139_638.jpg, 00:02:39,
 32.06 m

Roots, fine at joint



Section Pictures - 20/07/2020 - SW 1X

Section 1	Inspection Direction Downstream	PLR SW 1X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 1X_5e075df2-8536-40dc-8176-e38cc8cc59e1_20200720_115312_964.jpg, 00:04:08,
50.25 m
Finish node type, catchpit, reference number: SW 2



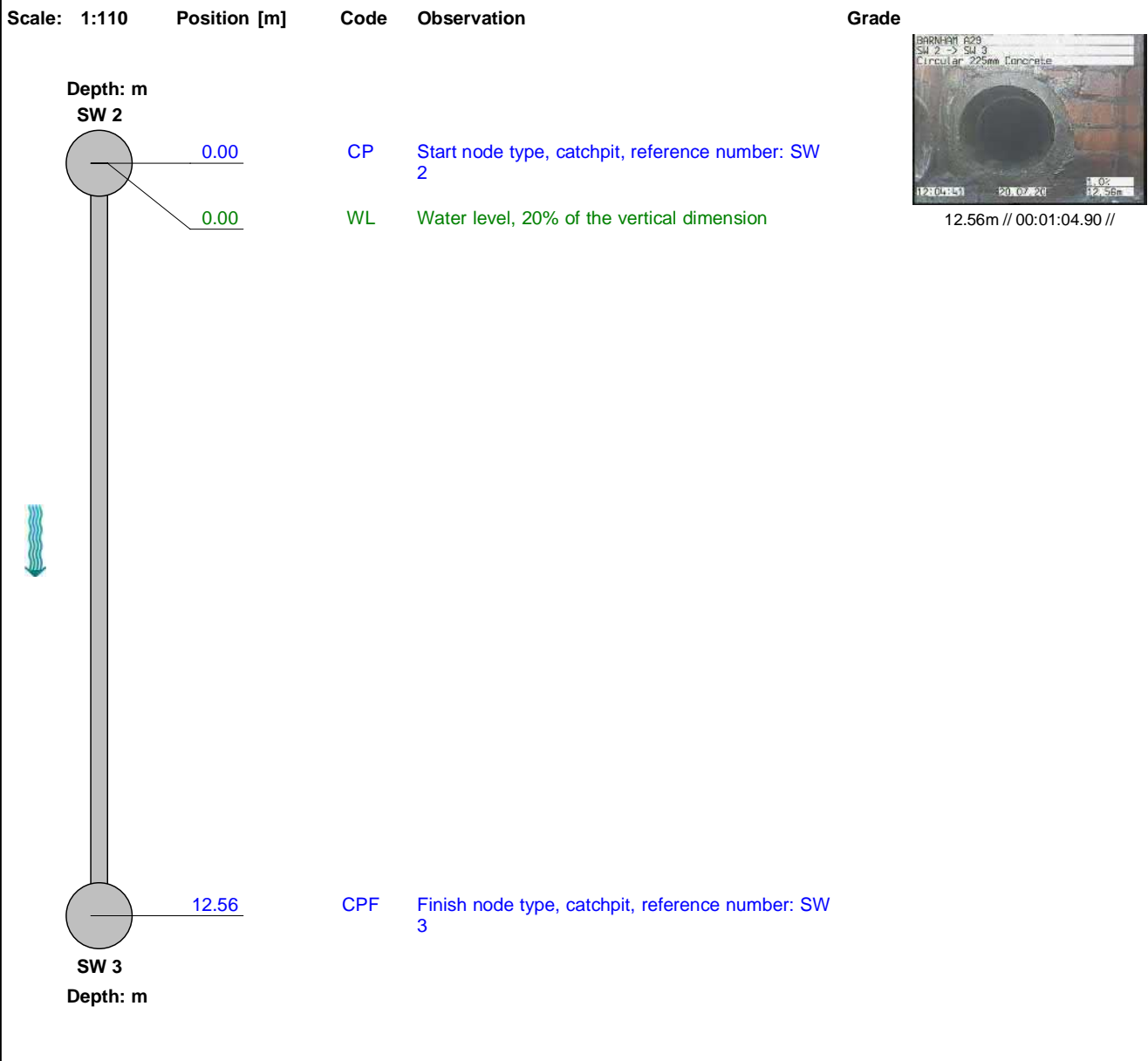
Section Inspection - 20/07/2020 - SW 2X

Section 2	Inspection 1	Date 20/07/20	Time 12:04	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 2X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 2
Road:	A29	Inspected Length:	12.56 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	12.56 m	Downstream Node:	SW 3
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Year Constructed:		Pipe Material:	Concrete		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



Section Pictures - 20/07/2020 - SW 2X

Section 2	Inspection Direction Downstream	PLR SW 2X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 2X_31e142e0-ea80-4abc-82d3-945c55b0aa0d_20200720_120628_026.jpg, 00:01:04,
12.56 m

Finish node type, catchpit, reference number: SW 3



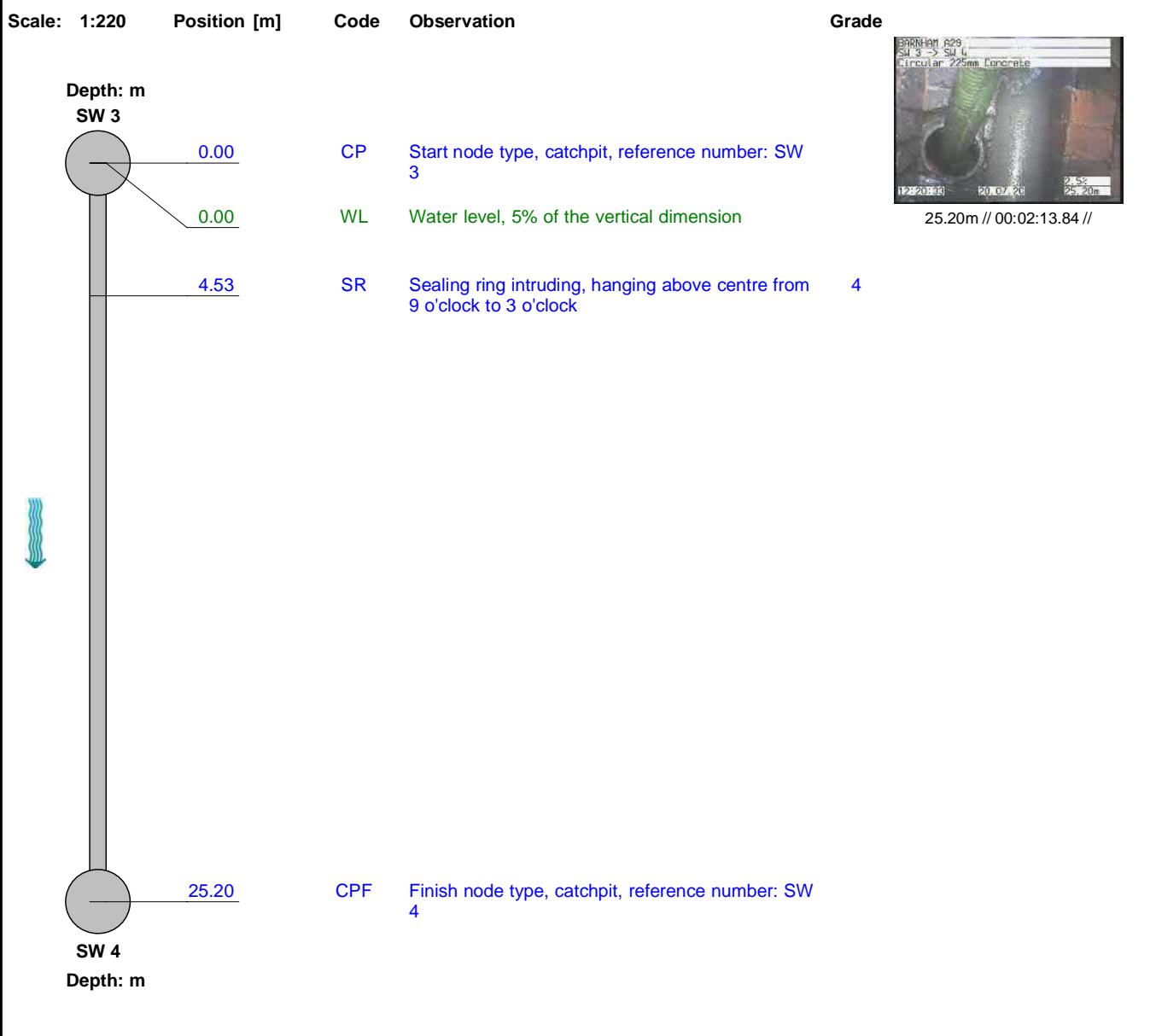
Section Inspection - 20/07/2020 - SW 3X

Section 3	Inspection 1	Date 20/07/20	Time 12:18	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 3X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 3
Road:	A29	Inspected Length:	25.20 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	25.20 m	Downstream Node:	SW 4
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Year Constructed:		Pipe Material:	Concrete		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	1	5.0	0.2	5.0	4.0



Section Pictures - 20/07/2020 - SW 3X

Section 3	Inspection Direction Downstream	PLR SW 3X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 3X_bbb04635-6d12-418a-9ca3-204d8f03c4b9_20200720_122219_736.jpg, 00:02:13,
25.20 m

Finish node type, catchpit, reference number: SW 4

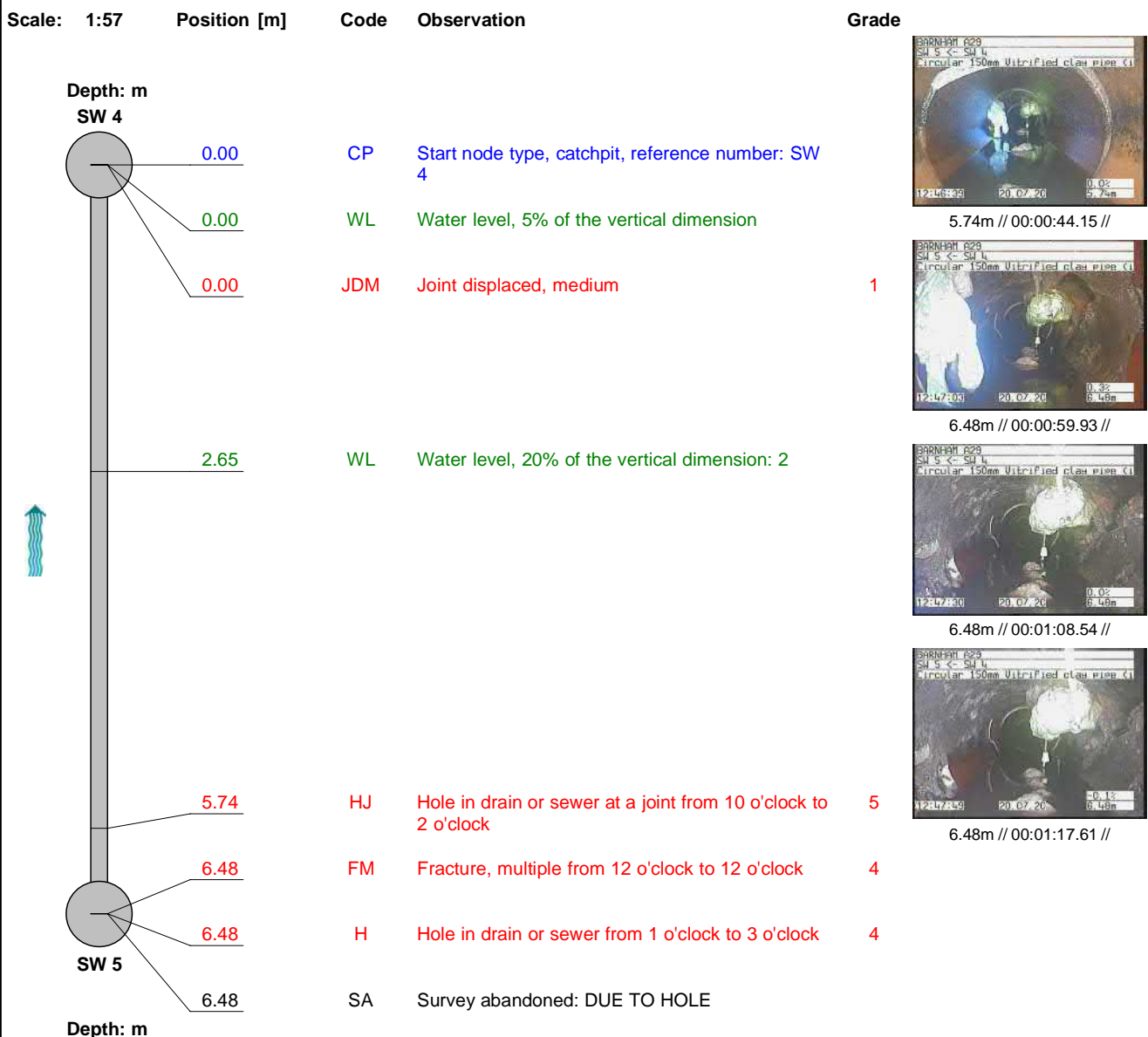


Section Inspection - 20/07/2020 - SW 5X

Section 4	Inspection 1	Date 20/07/20	Time 12:45	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 5X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Upstream	Upstream Node:	SW 5
Road:	A29	Inspected Length:	6.48 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	6.48 m	Downstream Node:	SW 4
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	165.0	56.8	326.0	5.0	0	0.0	0.0	0.0	1.0

Section Pictures - 20/07/2020 - SW 5X

Section 4	Inspection Direction Upstream	PLR SW 5X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 5X_fa211a0f-85cc-4d20-b3ba-f0e25d73c061_20200720_124826_029.jpg, 00:00:44, 5.74 m

Hole in drain or sewer at a joint from 10 o'clock to 2 o'clock

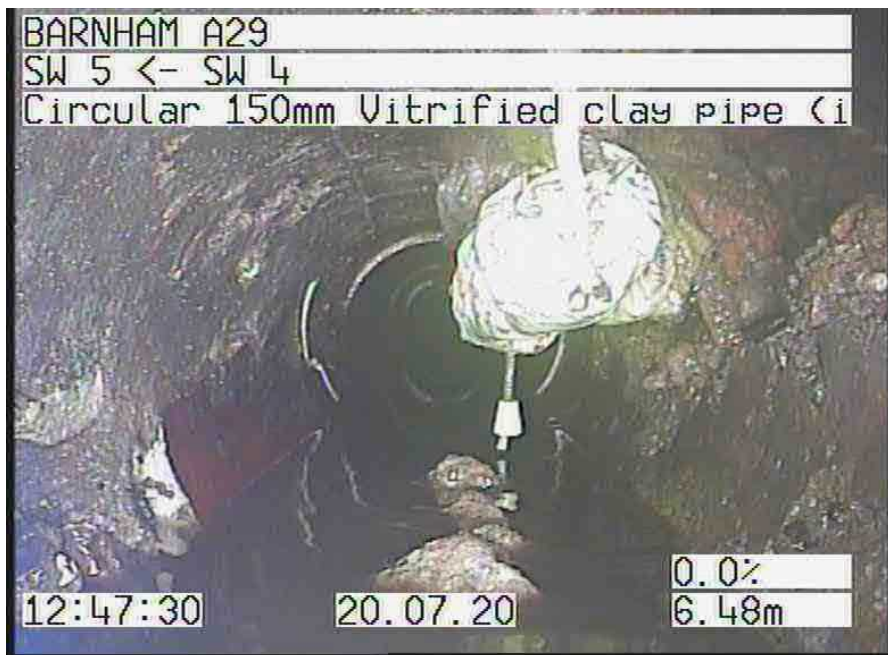


SW 5X_9508c772-46c1-4dc0-9449-e446ea122e05_20200720_124850_300.jpg, 00:00:59, 6.48 m

Fracture, multiple from 12 o'clock to 12 o'clock

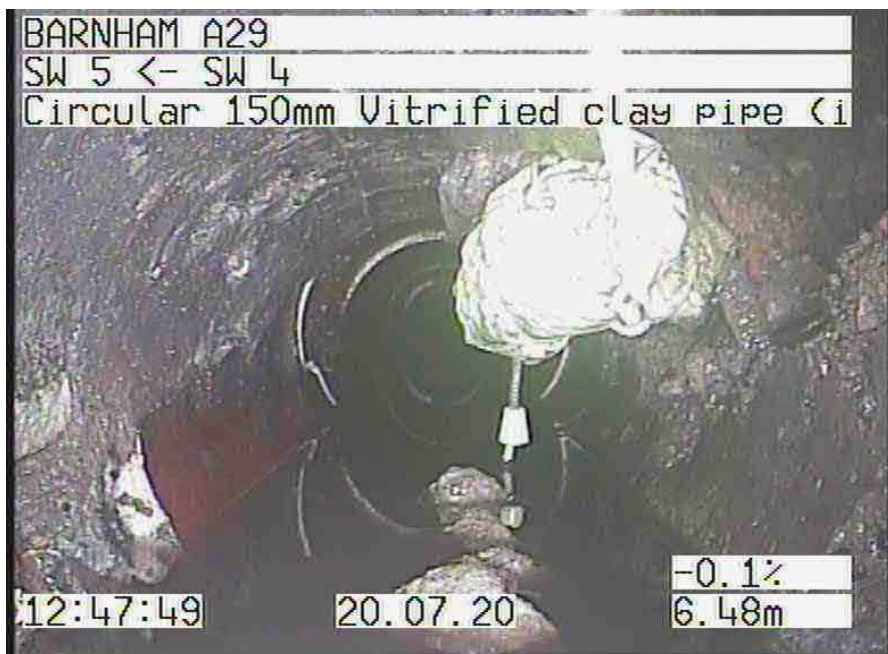
Section Pictures - 20/07/2020 - SW 5X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	Upstream	SW 5X	SS0031/004	PJ375561



SW 5X_04011062-42b9-46bf-8236-edd0a6c52ff8_20200720_124916_932.jpg, 00:01:08, 6.48 m

Hole in drain or sewer from 1 o'clock to 3 o'clock



SW 5X_9002ac09-4809-4e85-9d52-90caf16e5504_20200720_124936_021.jpg, 00:01:17, 6.48 m

Survey abandoned, DUE TO HOLE



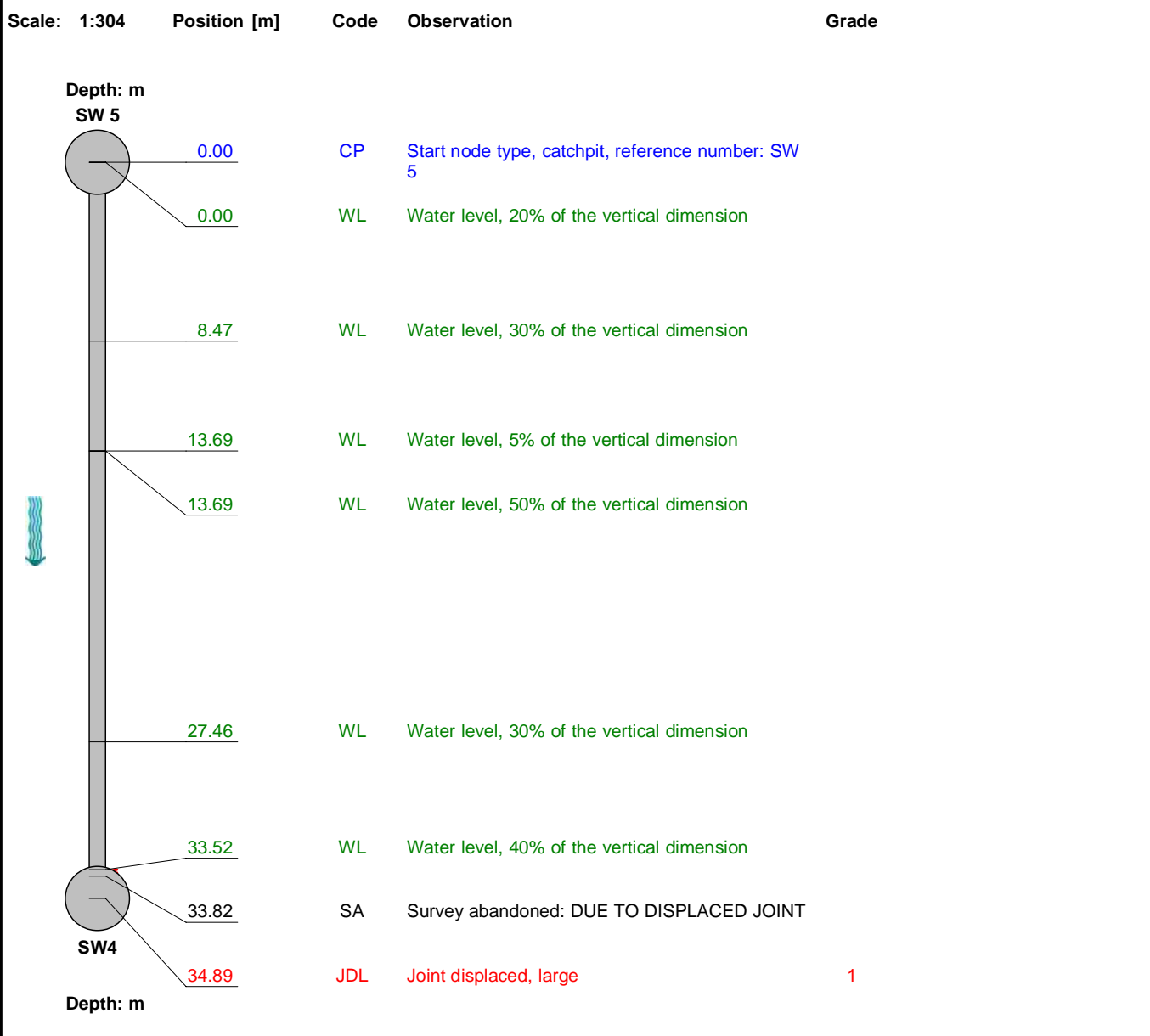
Section Inspection - 20/07/2020 - SW 5X

Section 5	Inspection 1	Date 20/07/20	Time 13:29	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 5X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 5
Road:	A29	Inspected Length:	34.89 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	34.89 m	Downstream Node:	SW4
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects

Construction Features

Service & Operational Observations

Miscellaneous Features

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	0.1	2.0	1.0	0	0.0	0.0	0.0	1.0



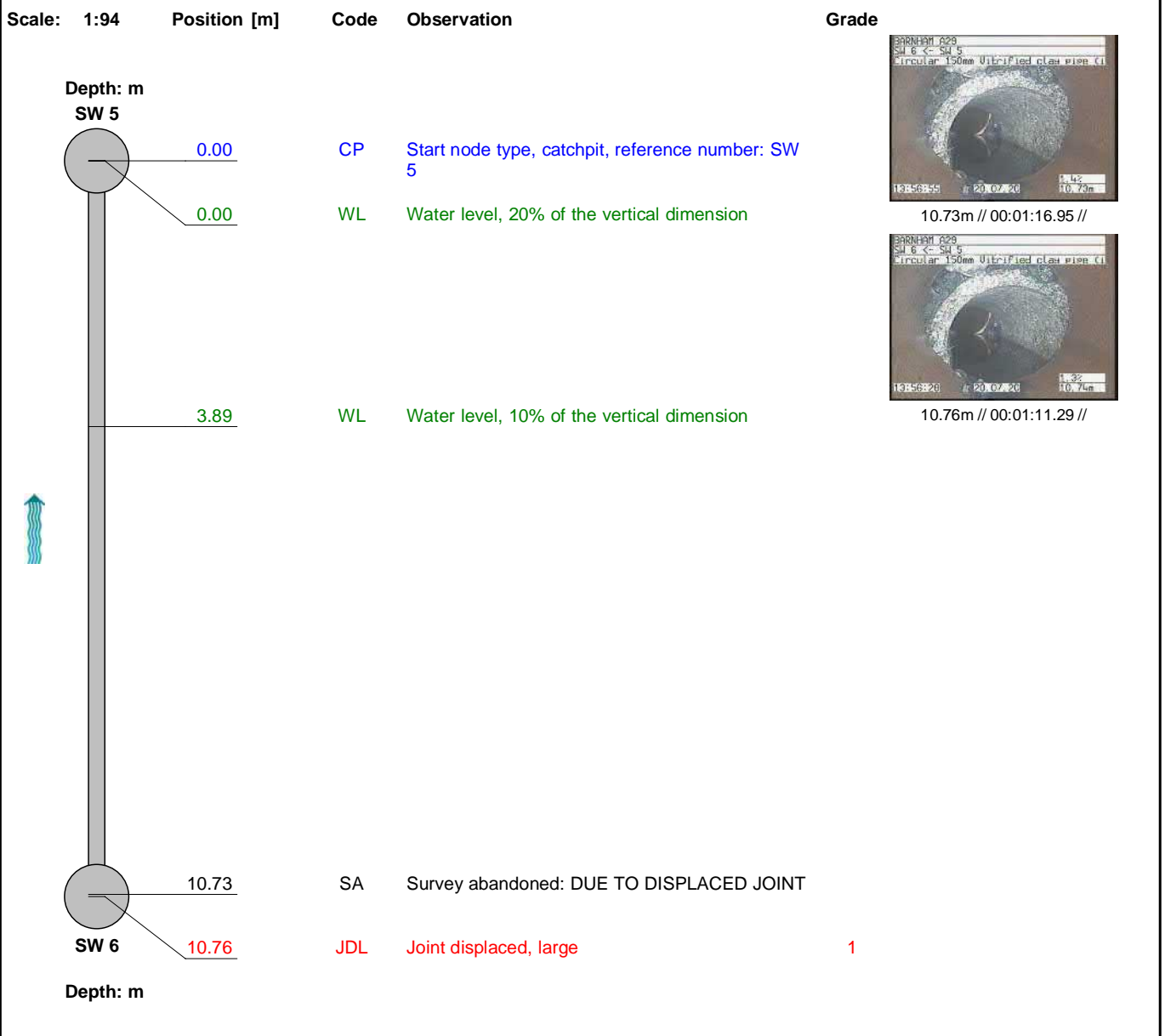
Section Inspection - 20/07/2020 - SW 6X

Section 6	Inspection 1	Date 20/07/20	Time 13:51	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 6X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Upstream	Upstream Node:	SW 6
Road:	A29	Inspected Length:	10.76 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	10.76 m	Downstream Node:	SW 5
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	0.2	2.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 20/07/2020 - SW 6X

Section 6	Inspection Direction Upstream	PLR SW 6X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 6X_bd285a99-d44c-41d8-b85f-d6ec17a81367_20200720_135842_190.jpg, 00:01:16,
 10.73 m
 Survey abandoned, DUE TO DISPLACED JOINT



SW 6X_40db77c5-630e-4145-a098-f774cc199496_20200720_135815_263.jpg, 00:01:11,
 10.76 m
 Joint displaced, large



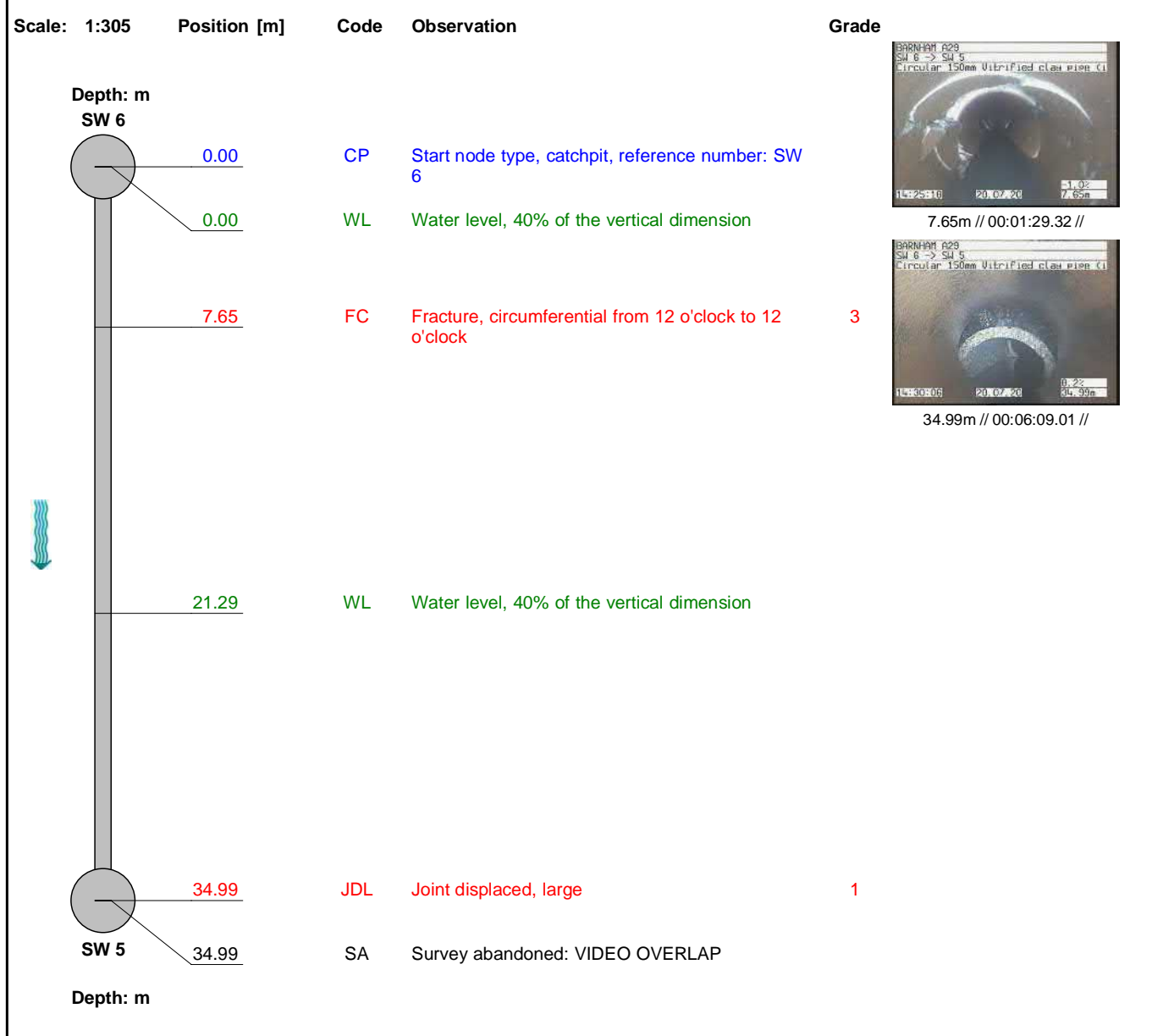
Section Inspection - 20/07/2020 - SW 6X

Section 7	Inspection 1	Date 20/07/20	Time 14:15	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 6X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 6
Road:	A29	Inspected Length:	34.99 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	34.99 m	Downstream Node:	SW 5
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	40.0	5.5	42.0	3.0	0	0.0	0.0	0.0	1.0

Section Pictures - 20/07/2020 - SW 6X

Section 7	Inspection Direction Downstream	PLR SW 6X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 6X_63f9f319-4154-4d30-b2e6-ca79eab7b8b4_20200720_142705_073.jpg, 00:01:29,
7.65 m

Fracture, circumferential from 12 o'clock to 12 o'clock



SW 6X_b29db18e-29ed-47a5-84b9-3fc2ed1f8a4b_20200720_143153_105.jpg, 00:06:09,
34.99 m

Joint displaced, large






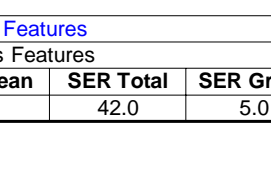


Section Inspection - 21/07/2020 - SW 8X

Section 8	Inspection 1	Date 21/07/20	Time 9:38	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 8X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Upstream	Upstream Node:	SW 8
Road:	A29	Inspected Length:	12.57 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	12.57 m	Downstream Node:	SW 7
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:

Scale: 1:110	Position [m]	Code	Observation	Grade	
	Depth: m SW 7				
	0.00	CP	Start node type, catchpit, reference number: SW 7		
	0.00	WL	Water level, 20% of the vertical dimension		2.09m // 00:00:39.57 //
	1.03	RFJ	Roots, fine at joint	2	
	2.09	RTJ	Roots, tap at joint	4	
	2.87	RTJ	Roots, tap at joint	4	2.87m // 00:00:50.11 //
	5.44	RTJ	Roots, tap at joint	4	
	7.20	WL	Water level, 30% of the vertical dimension		5.44m // 00:01:08.15 //
	7.20	S01 RFJ	Roots, fine at joint, start: MOST JOINTS		
	7.52	CN	Connection other than junction at 12 o'clock, diameter: 150mm		
	10.88	RM	Roots, mass, 30% cross-sectional area loss	5	7.20m // 00:01:24.70 //
	12.33	RMJ	Roots, mass at joint, 30% cross-sectional area loss	5	
	12.57	F01 RFJ	Roots, fine at joint, finish: MOST JOINTS	2	7.52m // 00:01:30.25 //
	12.57	SA	Survey abandoned: DUE TO ROOT MASS		
	Depth: m SW 8				

Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	7	10.0	20.1	42.0	5.0

Section Pictures - 21/07/2020 - SW 8X

Section 8	Inspection Direction Upstream	PLR SW 8X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 8X_1b3da3de-c7a2-4ca9-87bb-f46f9c065640_20200721_094421_060.jpg, 00:00:39, 2.09 m
 Roots, tap at joint



SW 8X_2c402511-4646-4751-b995-ba44b1e1f689_20200721_094434_200.jpg, 00:00:50, 2.87 m
 Roots, tap at joint

Section Pictures - 21/07/2020 - SW 8X

Section 8	Inspection Direction Upstream	PLR SW 8X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 8X_1be65c57-f970-4dd4-a9bd-98954347378e_20200721_094454_109.jpg, 00:01:08,
 5.44 m
 Roots, tap at joint



SW 8X_2aede51-6404-4cd3-bfcf-a823d2e5c3b5_20200721_094539_394.jpg, 00:01:24, 7.20
 m
 Water level, 30% of the vertical dimension

Section Pictures - 21/07/2020 - SW 8X

Section 8	Inspection Direction Upstream	PLR SW 8X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 8X_8c4988ac-d5d1-485b-bb90-dfc661fdb8d7_20200721_094546_267.jpg, 00:01:30, 7.52 m
 Connection other than junction at 12 o'clock, diameter: 150mm



SW 8X_95cd1bcc-af66-4697-abb0-e04089c135fd_20200721_094616_416.jpg, 00:02:01, 10.88 m
 Roots, mass, 30% cross-sectional area loss



Section Pictures - 21/07/2020 - SW 8X

Section 8	Inspection Direction Upstream	PLR SW 8X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 8X_fb604b83-734b-4655-a3ef-4f075f8793a9_20200721_094742_587.jpg, 00:03:03,
12.57 m
Survey abandoned, DUE TO ROOT MASS

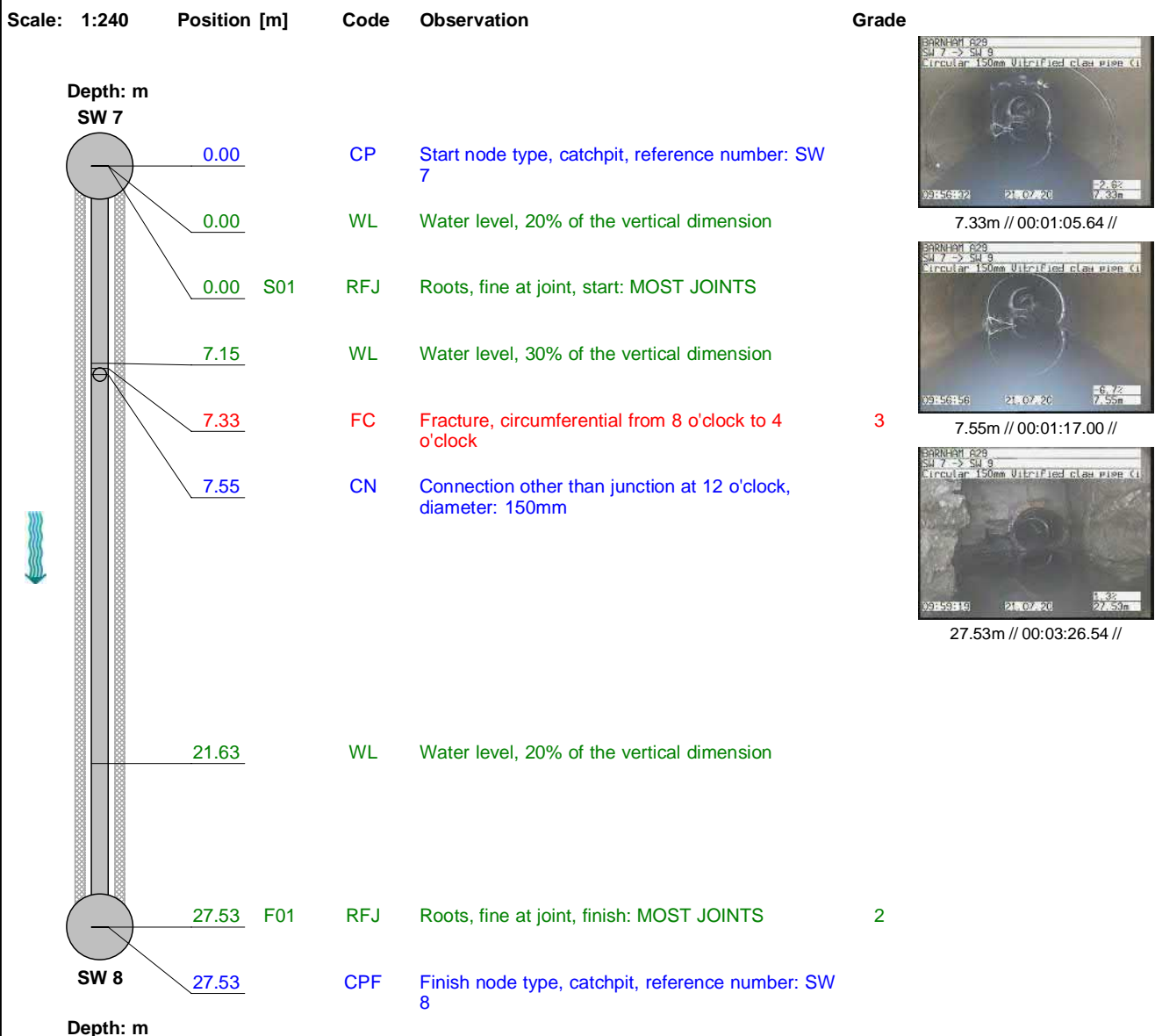


Section Inspection - 21/07/2020 - SW 7X

Section 9	Inspection 1	Date 21/07/20	Time 9:55	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 7X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 7
Road:	A29	Inspected Length:	27.53 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	27.53 m	Downstream Node:	SW 8
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	40.0	5.5	40.0	3.0	1	1.0	3.8	28.0	4.0

Section Pictures - 21/07/2020 - SW 7X

Section 9	Inspection Direction Downstream	PLR SW 7X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 7X_1177ce7f-3eaa-4a5f-8284-e16252b90108_20200721_095821_327.jpg, 00:01:05,
7.33 m

Fracture, circumferential from 8 o'clock to 4 o'clock



SW 7X_6ac5924f-c9a3-43e2-94a5-1aa1ccb459e5_20200721_095845_171.jpg, 00:01:17,
7.55 m

Connection other than junction at 12 o'clock, diameter: 150mm



Section Pictures - 21/07/2020 - SW 7X

Section 9	Inspection Direction Downstream	PLR SW 7X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 7X_5b610056-9909-4757-8a2d-a490c86f7d98_20200721_100108_788.jpg, 00:03:26,
27.53 m

Finish node type, catchpit, reference number: SW 8



Section Inspection - 21/07/2020 - SW 7X

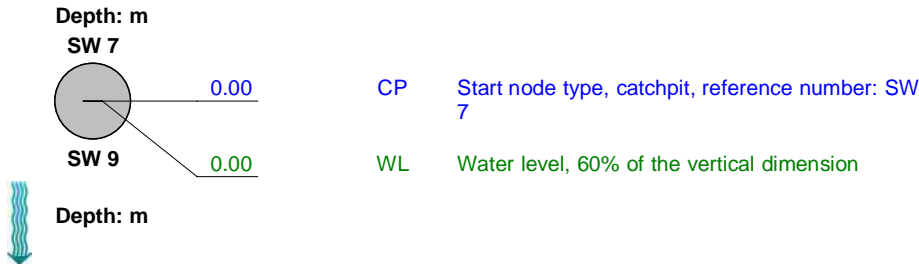
Section 10	Inspection 1	Date 21/07/20	Time 10:12	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 7X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 7
Road:	A29	Inspected Length:	0.00 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	0.00 m	Downstream Node:	SW 9
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:

Scale: 1:50 Position [m] Code Observation Grade



Structural Defects

Construction Features

Service & Operational Observations

Miscellaneous Features

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	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0



Section Inspection - 21/07/2020 - SW 12X

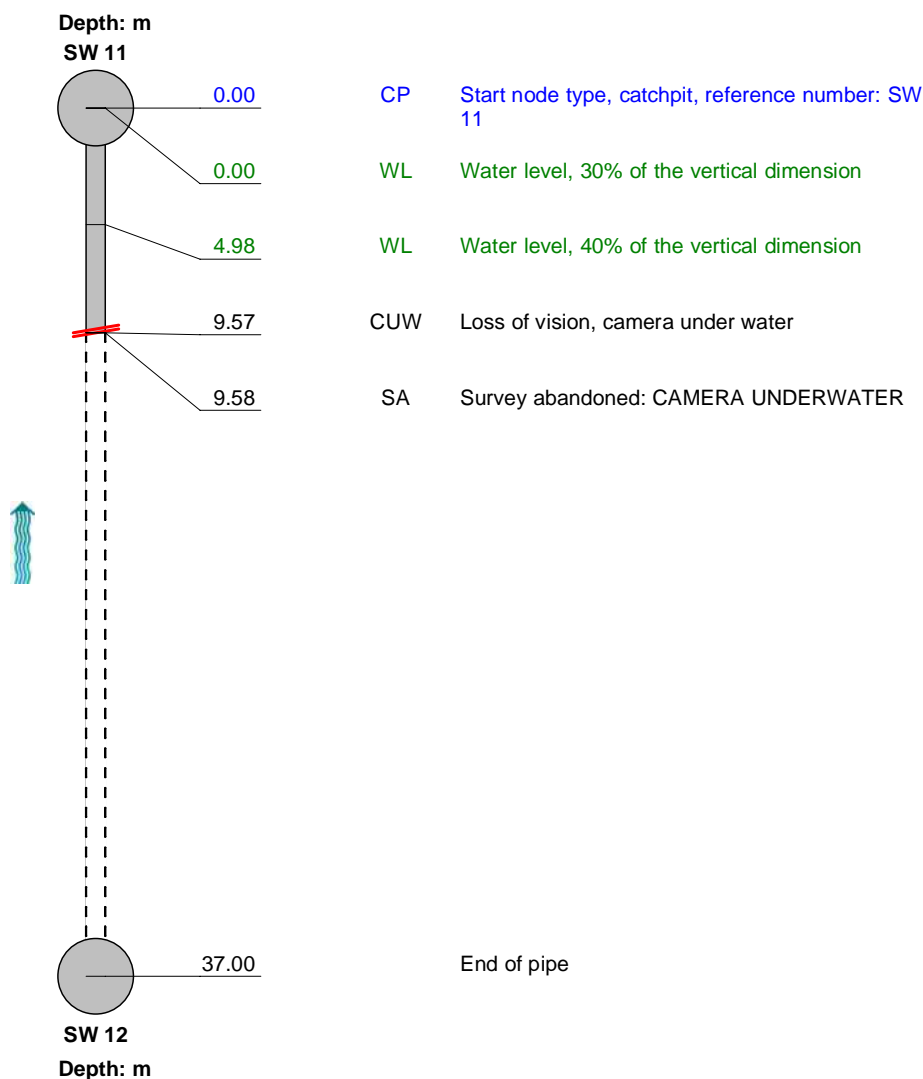
Section 11	Inspection 1	Date 21/07/20	Time 11:20	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 12X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Upstream	Upstream Node:	SW 12
Road:	A29	Inspected Length:	9.58 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	37.00 m	Downstream Node:	SW 11
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:

Scale: 1:322 Position [m] Code Observation Grade



Structural Defects

Construction Features

Service & Operational Observations

Miscellaneous Features

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	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

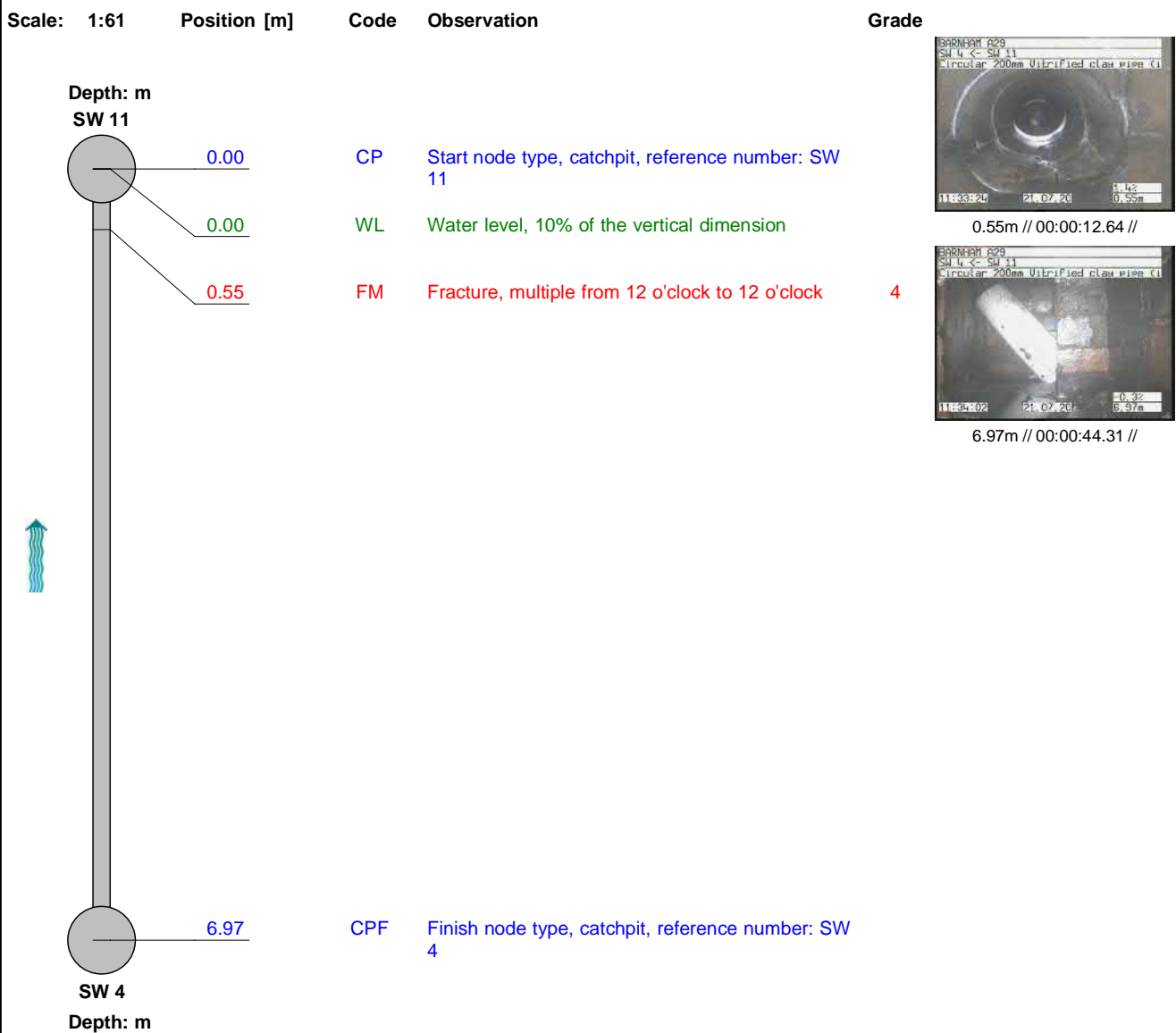


Section Inspection - 21/07/2020 - SW 4X

Section 12	Inspection 1	Date 21/07/20	Time 11:34	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 4X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Upstream	Upstream Node:	SW 4
Road:	A29	Inspected Length:	6.97 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	6.97 m	Downstream Node:	SW 11
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	200 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	80.0	145.5	80.0	4.0	0	0.0	0.0	0.0	1.0

Section Pictures - 21/07/2020 - SW 4X

Section 12	Inspection Direction Upstream	PLR SW 4X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 4X_eca14b63-d889-46cd-8c1e-dc9caf6e32db_20200721_113513_950.jpg, 00:00:12,
 0.55 m

Fracture, multiple from 12 o'clock to 12 o'clock



SW 4X_8fb27e7a-27fc-48b7-8ae2-847e5c5f8fe8_20200721_113551_460.jpg, 00:00:44, 6.97
 m

Finish node type, catchpit, reference number: SW 4



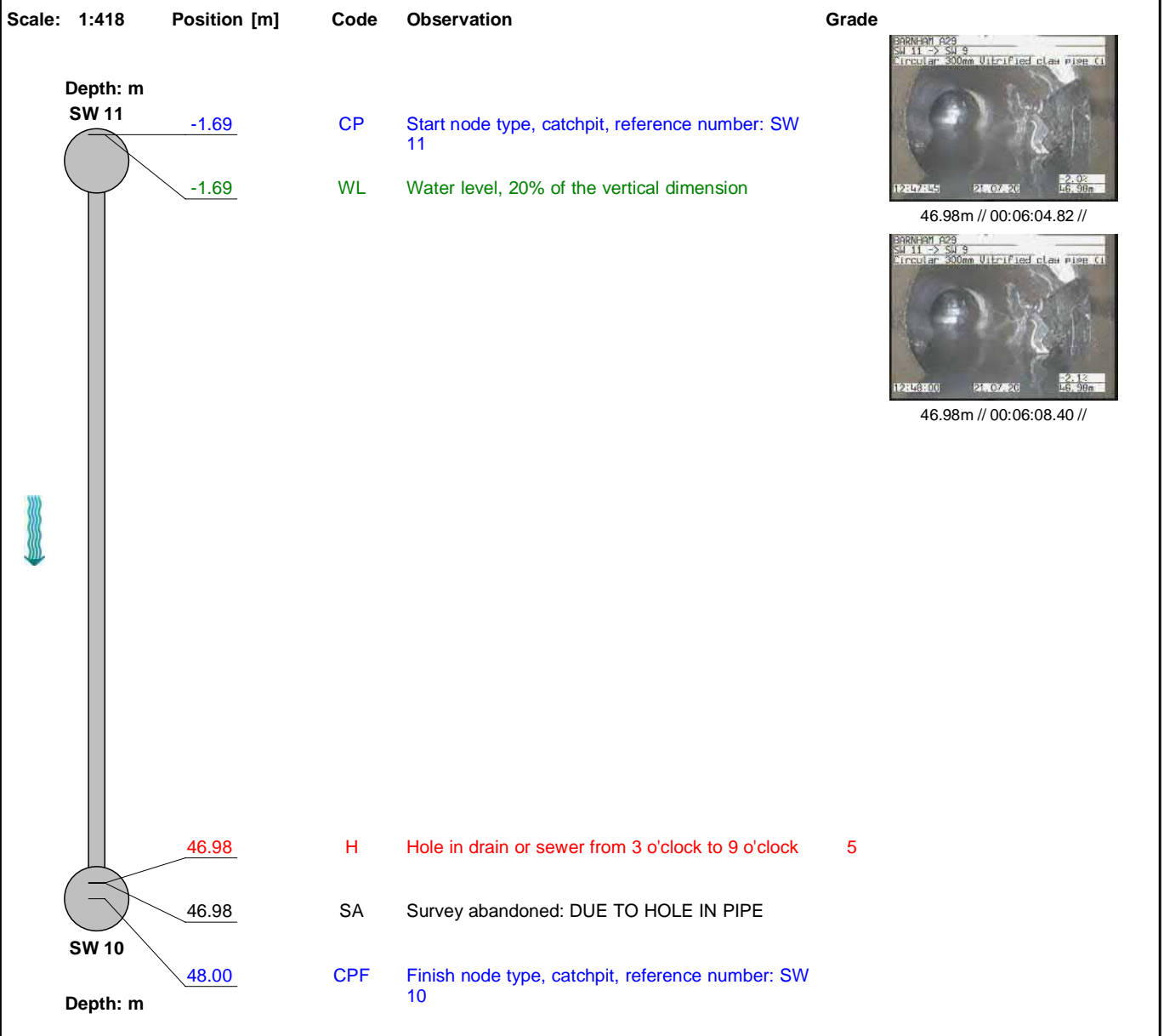
Section Inspection - 21/07/2020 - SW 11X

Section 13	Inspection 1	Date 21/07/20	Time 12:39	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 11X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 11
Road:	A29	Inspected Length:	49.69 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	48.00 m	Downstream Node:	SW 10
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects

Construction Features

Service & Operational Observations

Miscellaneous Features

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	165.0	3.4	165.0	5.0	0	0.0	0.0	0.0	1.0

Section Pictures - 21/07/2020 - SW 11X

Section 13	Inspection Direction Downstream	PLR SW 11X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 11X_7bfeeee0-a072-484f-bdd1-59bc2a841a20_20200721_124934_680.jpg, 00:06:04,
 46.98 m

Hole in drain or sewer from 3 o'clock to 9 o'clock



SW 11X_f8d8b242-2ab3-4230-a66d-9a0b5cc3b6e5_20200721_124949_845.jpg, 00:06:08,
 46.98 m

Survey abandoned, DUE TO HOLE IN PIPE



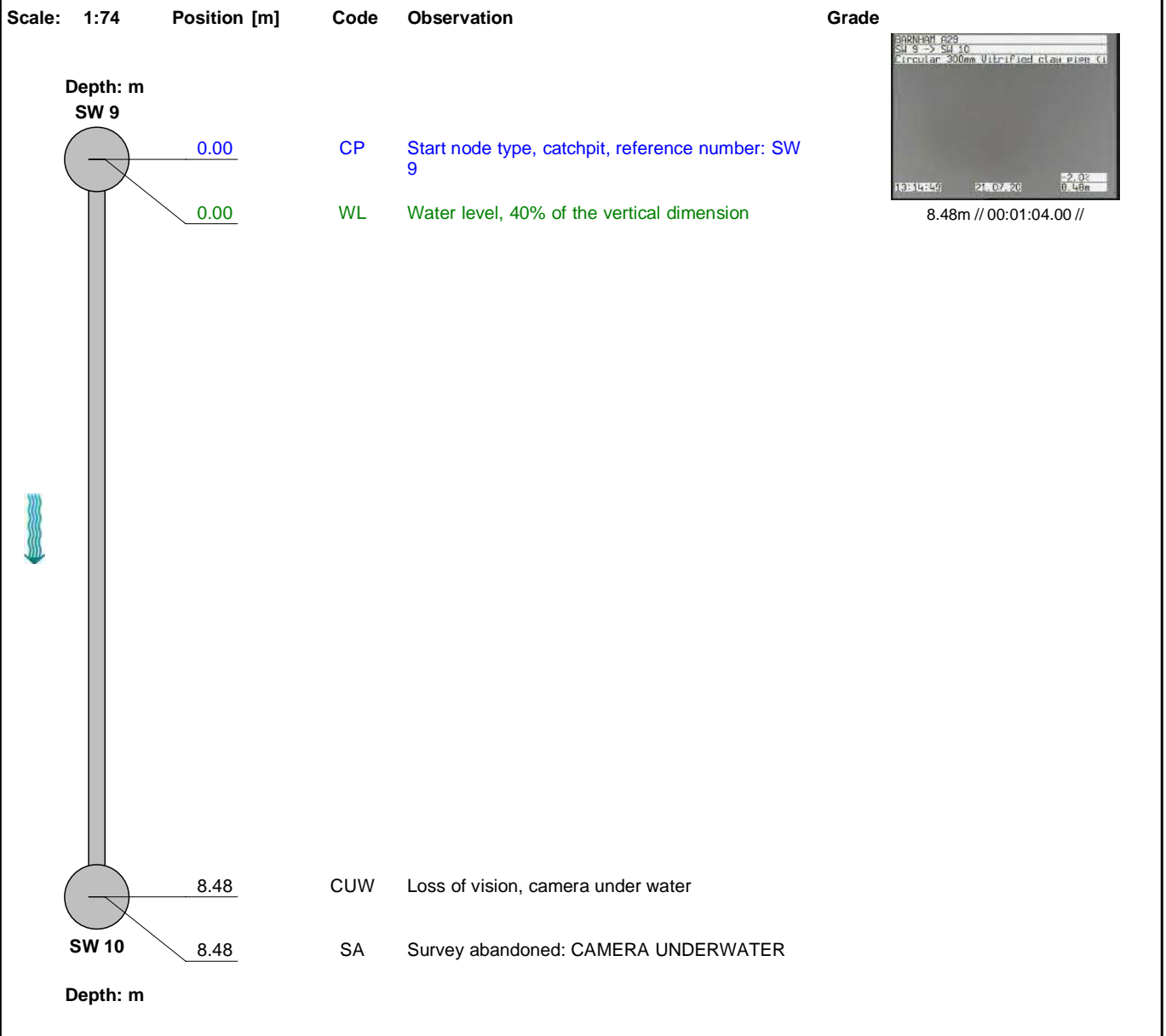
Section Inspection - 21/07/2020 - SW 9X

Section 14	Inspection 1	Date 21/07/20	Time 13:14	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 9X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 9
Road:	A29	Inspected Length:	8.48 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	8.48 m	Downstream Node:	SW 10
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



Section Pictures - 21/07/2020 - SW 9X

Section 14	Inspection Direction Downstream	PLR SW 9X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 9X_c634775f-4e01-412f-bc69-ca71a41e055a_20200721_131639_089.jpg, 00:01:04, 8.48

m
Survey abandoned, CAMERA UNDERWATER



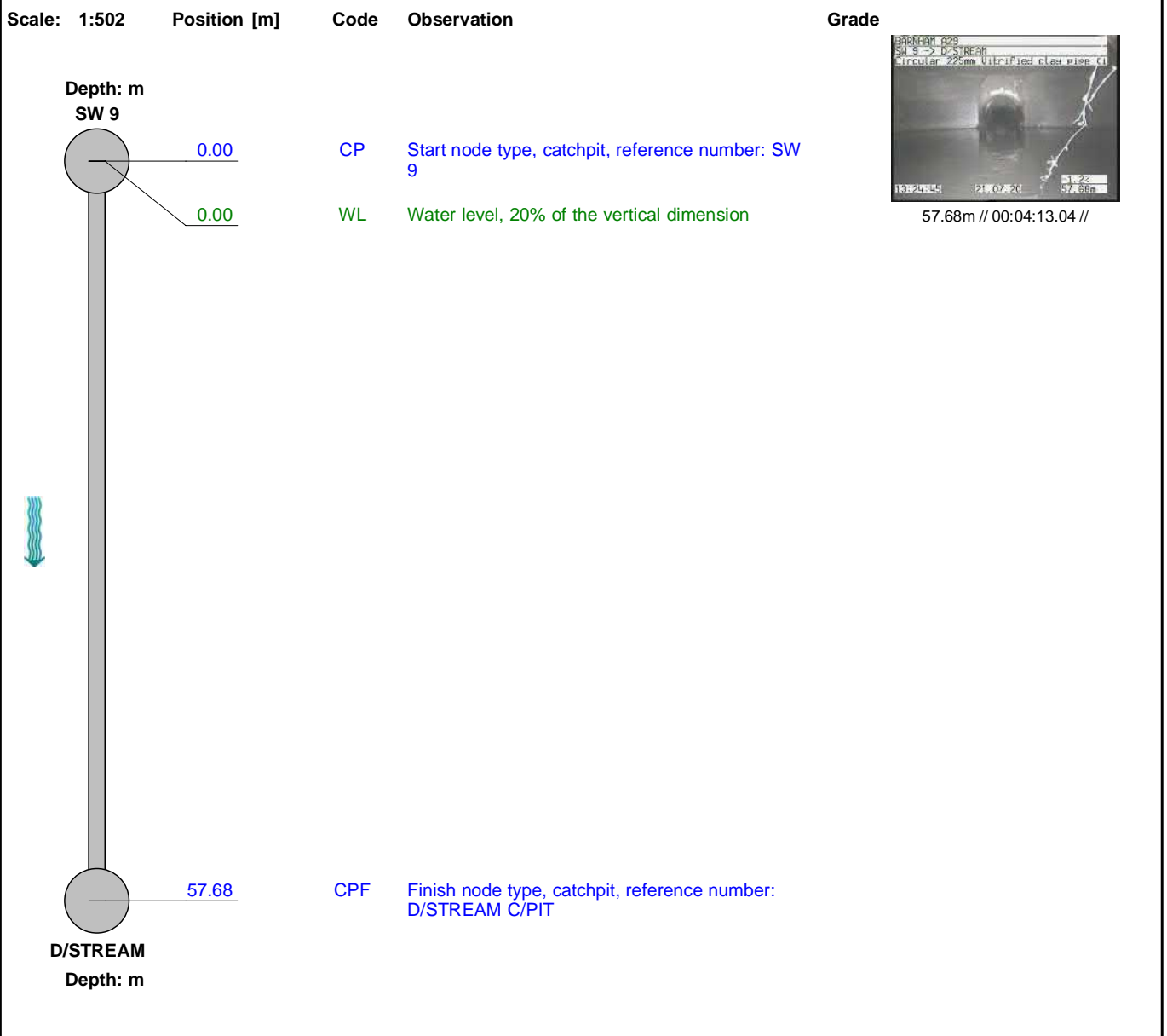
Section Inspection - 21/07/2020 - SW 9X

Section 15	Inspection 1	Date 21/07/20	Time 13:18	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR SW 9X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW 9
Road:	A29	Inspected Length:	57.68 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	57.68 m	Downstream Node:	D/STREAM
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects

Construction Features

Service & Operational Observations

Miscellaneous Features

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	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



Section Pictures - 21/07/2020 - SW 9X

Section 15	Inspection Direction Downstream	PLR SW 9X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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SW 9X_348735ec-404a-4693-8d3e-7548ef775976_20200721_132634_720.jpg, 00:04:13,
57.68 m

Finish node type, catchpit, reference number: D/STREAM C/PIT



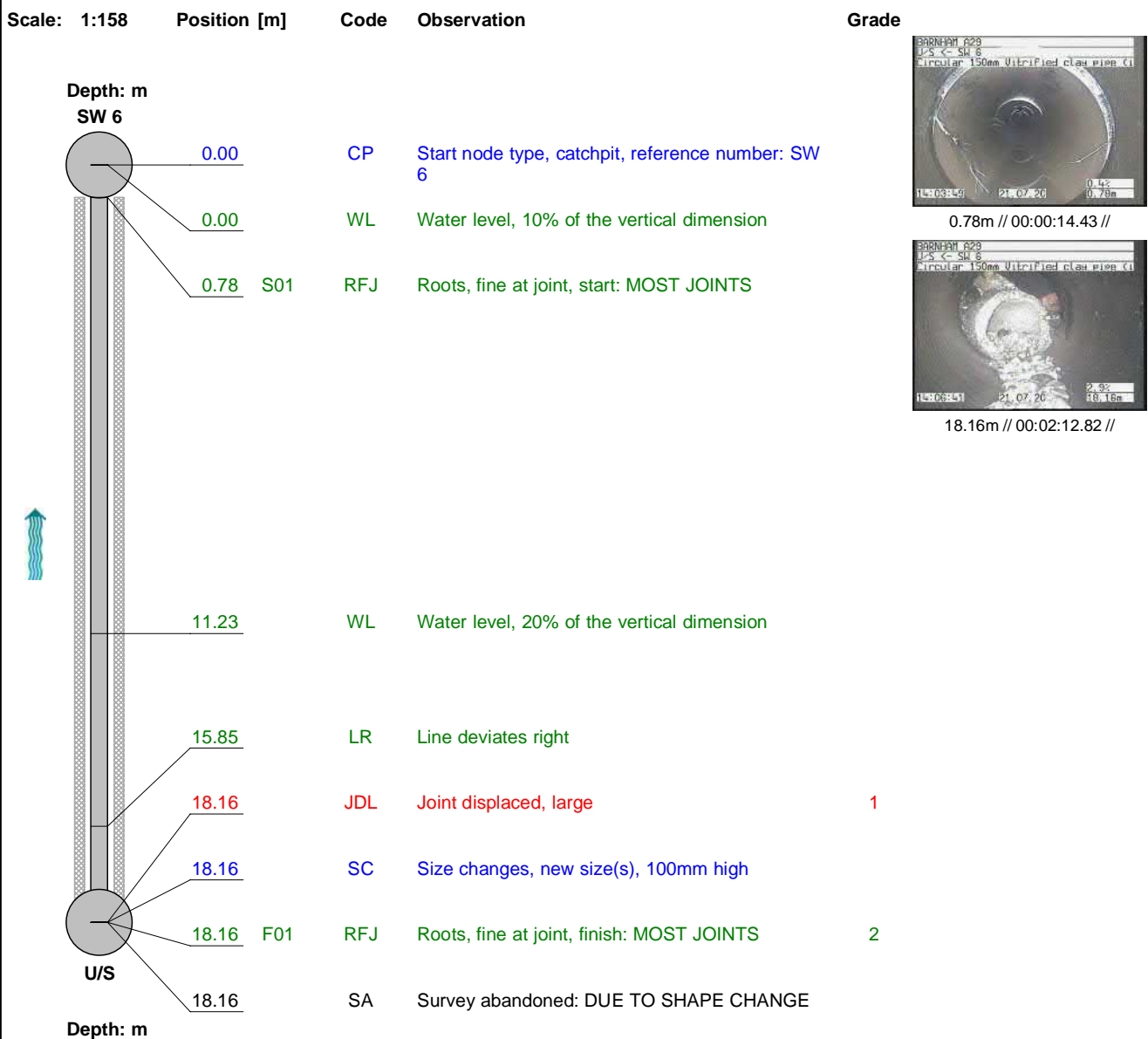
Section Inspection - 21/07/2020 - U/SX

Section 16	Inspection 1	Date 21/07/20	Time 14:04	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR U/SX
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village: Barnham	Inspection Direction: Upstream	Upstream Node: U/S
Road: A29	Inspected Length: 18.16 m	Upstream Pipe Depth:
Location: A footway beside a road	Total Length: 18.16 m	Downstream Node: SW 6
Surface Type:	Joint Length: 0.00 m	Downstream Pipe Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Dia/Height: 150 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Flow Control: No flow control	Lining Type: None	
Inspection Purpose: Routine inspection of condition	Lining Material: None	

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	2.6	2.0	1.0	1	1.0	23.1	18.0	5.0

Section Pictures - 21/07/2020 - U/SX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
16	Upstream	U/SX	SS0031/004	PJ375561



U_SX_b978a558-208b-4ba0-bd13-aea896c693e1_20200721_140539_285.jpg, 00:00:14, 0.78 m

Roots, fine at joint, start, MOST JOINTS



U_SX_225d8742-ac13-48b0-a8ba-e81a50b9e0d9_20200721_140830_680.jpg, 00:02:12, 18.16 m

Size changes, new size(s), 100mm high



Project

Project Name: Jacksons Civils Ltd - A29 Barnham - PJ00375561
Project Status: Complete
Project Date: 24/09/2020



**Lanes
Group Plc**



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Project Information

Project Name	Project Number	Project Date
Jacksons Civils Ltd - A29 Barnham - PJ00375561		24/09/2020

Client

Company: JACKSONS CIVILS LIMITED
Street: MAGNET HOUSE 30 WHITE HOUSE ROAD
Town or City: IPSWICH
County: SUFFOLK
Post Code: IP1 5LT

Site

Company: JACKSONS CIVILS LIMITED
Street: A29 BARNHAM
Town or City: BARNHAM
County: WEST SUSSEX

Contractor

Company: Lanes Group plc
Contact: Keith Oldbury
Department: Unit 2
Street: 4 Parham Drive
Town or City: Boyatt Wood
County: Eastleigh
Post Code: SO50 4NU
Phone: 02380625750
Email: eastleighops@lanesgroup.co.uk

Project Information

Project Name	Project Number	Project Date
Jacksons Civils Ltd - A29 Barnham - PJ00375561		24/09/2020

Project Summary

Dear Customer,

As requested, we have recently carried out a drainage CCTV survey at the site location and our full and detailed findings are contained in the attached CCTV report which you can review at your leisure.

We have identified the need for further works and will provide a quotation which will highlight the areas of concern, the most appropriate remedial technique and all associated costings.

We would like to take this opportunity to thank you for using Lanes Group plc and I hope we can be of service to you again soon. Please visit our website for full details of all services we can provide, follow us on social media or even share details of your customer experience with us:

www.lanesgroup.co.uk

If you require any technical assistance understanding the findings of the CCTV report then please contact us at:

cctv.reports@lanesfordrains.co.uk

Kind regards,
Lanes Group plc

Project Information

Project Name	Project Number	Project Date
Jacksons Civils Ltd - A29 Barnham - PJ00375561		24/09/2020

Project Notes

CCTV reveals issues in pipe work

Section 1: Medium displaced joint, fracture

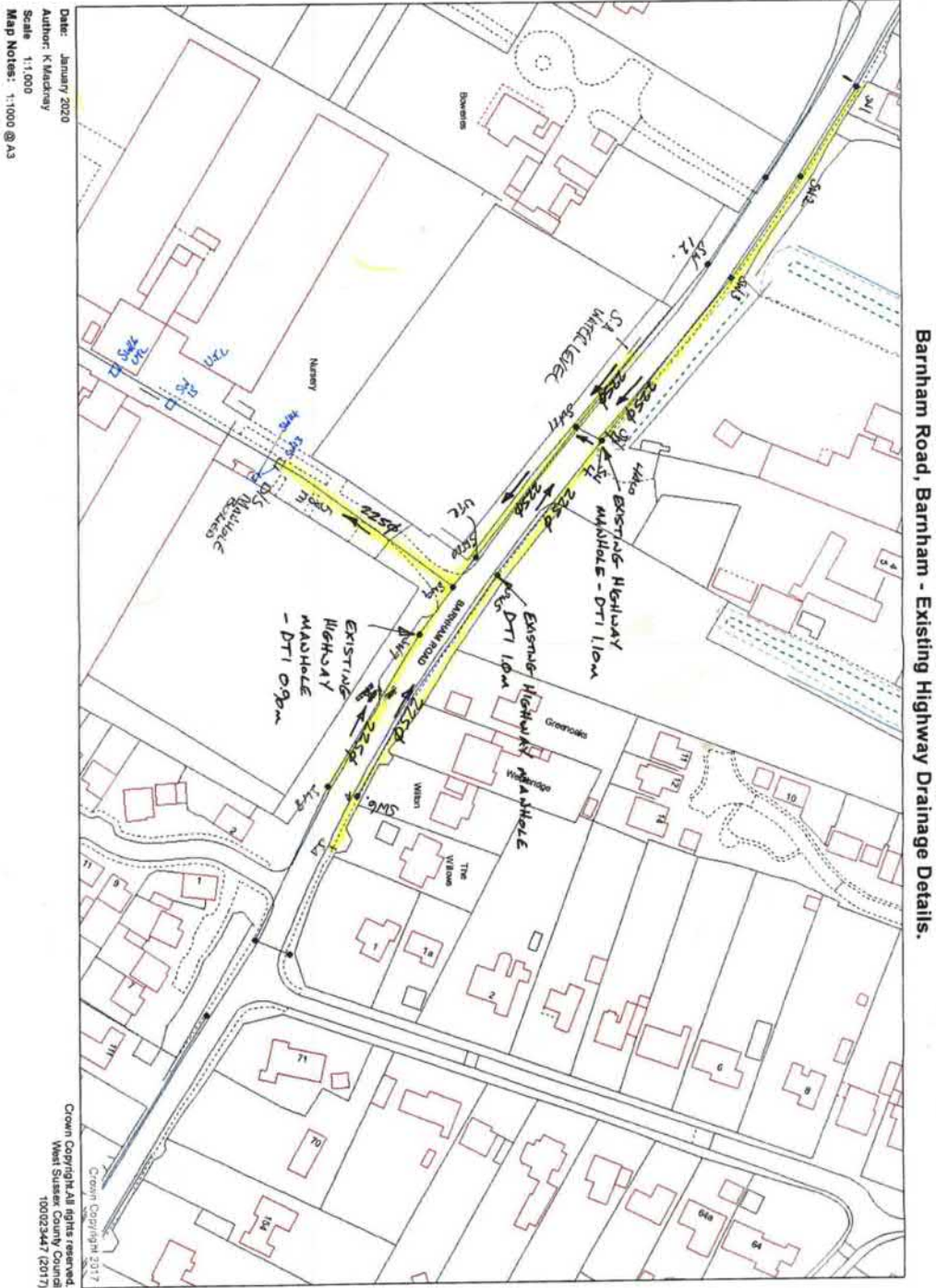
Section 3: Fracture

Section 4: 20% Settled debris, unknown obstruction, multiple fractures, broken pipe

Project Information

Project Name Jacksons Civils Ltd - A29 Barnham - PJ00375561	Project Number	Project Date 24/09/2020
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Project Drawing, Page Jacksons Civils Ltd - A29 Barnham - PJ00375561



Date: January 2020
 Author: K Madhoo
 Scale: 1:1,000
 Map Notes: 1:1000 @ A3

Crown Copyright All rights reserved.
 Ordnance Survey
 West Sussex
 100023447 (2017)

Project Pictures

Project Name	Project Number	Project Date
Jacksons Civils Ltd - A29 Barnham - PJ00375561		24/09/2020



20201001_104725



Section Profile

Project Name Jacksons Civils Ltd - A29 Barnham - PJ00375561	Project Number	Project Date 24/09/2020
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Circular, 225 mm

Section	Upstream Node	Downstream Node	Date	Road	Asset Material	Total Length	Inspected Length
1	SW13	SW14	24/09/2020	A29	Concrete pipe	9.81 m	9.81 m
2	SW14	SW15	24/09/2020	A29	Vitrified clay	74.62 m	74.62 m
3	SW15	SW16	24/09/2020	A29	Concrete pipe	17.19 m	16.98 m
4	SW16	Outfall	01/10/2020	A29	Vitrified clay	62.00 m	62.00 m

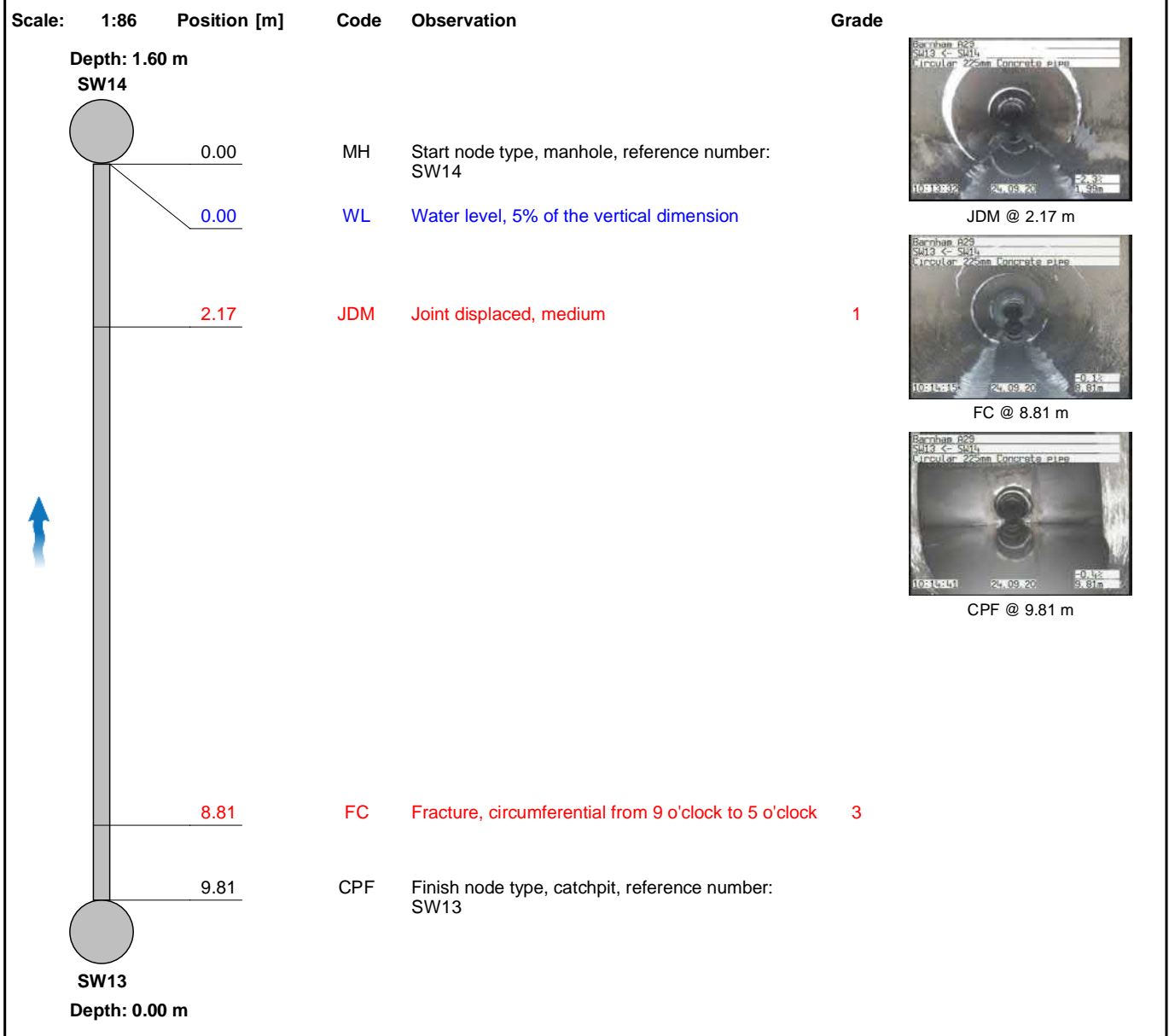
Total: 4 Inspections x Circular 225 mm = 163.62 m Total Length and 163.41 m Inspected Length

Total: 4 Inspections = 163.62 m Total Length and 163.41 m Inspected Length

Section Inspection - 24/09/2020 - SW13X

Section 1	Inspection 1	Date 24/09/20	Time 10:11	Client's Job Ref Not Specified	Weather Light Rain	Pre Cleaned Yes	PLR SW13X
Operator M. Bradley		Vehicle PF17 BGE		Camera Small Crawler	Preset Length Not Specified	Legal Status Highways Drainage	Alternative ID Not Specified

Town or Village: Barnham	Inspection Direction: Upstream	Upstream Node: SW13
Road: A29	Inspected Length: 9.81 m	Upstream Pipe Depth: 0.000 m
Asset Location: Private gardens	Total Length: 9.81 m	Downstream Node: SW14
Surface Type: Soil	Joint Length: 1.50 m	Downstream Pipe Depth: 1.600 m
Asset Use: Surface waste	Asset Shape: Circular	
Asset Type: Gravity drain/sewer	Dia/Height: 225 mm	
Year Constructed:	Asset Material: Concrete pipe	
Flow Control:	Asset Lining Type: No Lining	
Inspection Purpose: Condition survey	Asset Lining Material: No Lining	
Comments: None		
Recommendations: None		



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
3	40.0	8.3	81.0	3.0	0	0.0	0.0	0.0	1.0

Section Pictures - 24/09/2020 - SW13X

Section	Inspection Direction	PLR	Client's Job Ref	Lanes Job Number
1	Upstream	SW13X		PJ375561



1, 00:00:26, 2.17 m
 Joint displaced, medium



2, 00:00:57, 8.81 m
 Fracture, circumferential from 9 o'clock to 5 o'clock

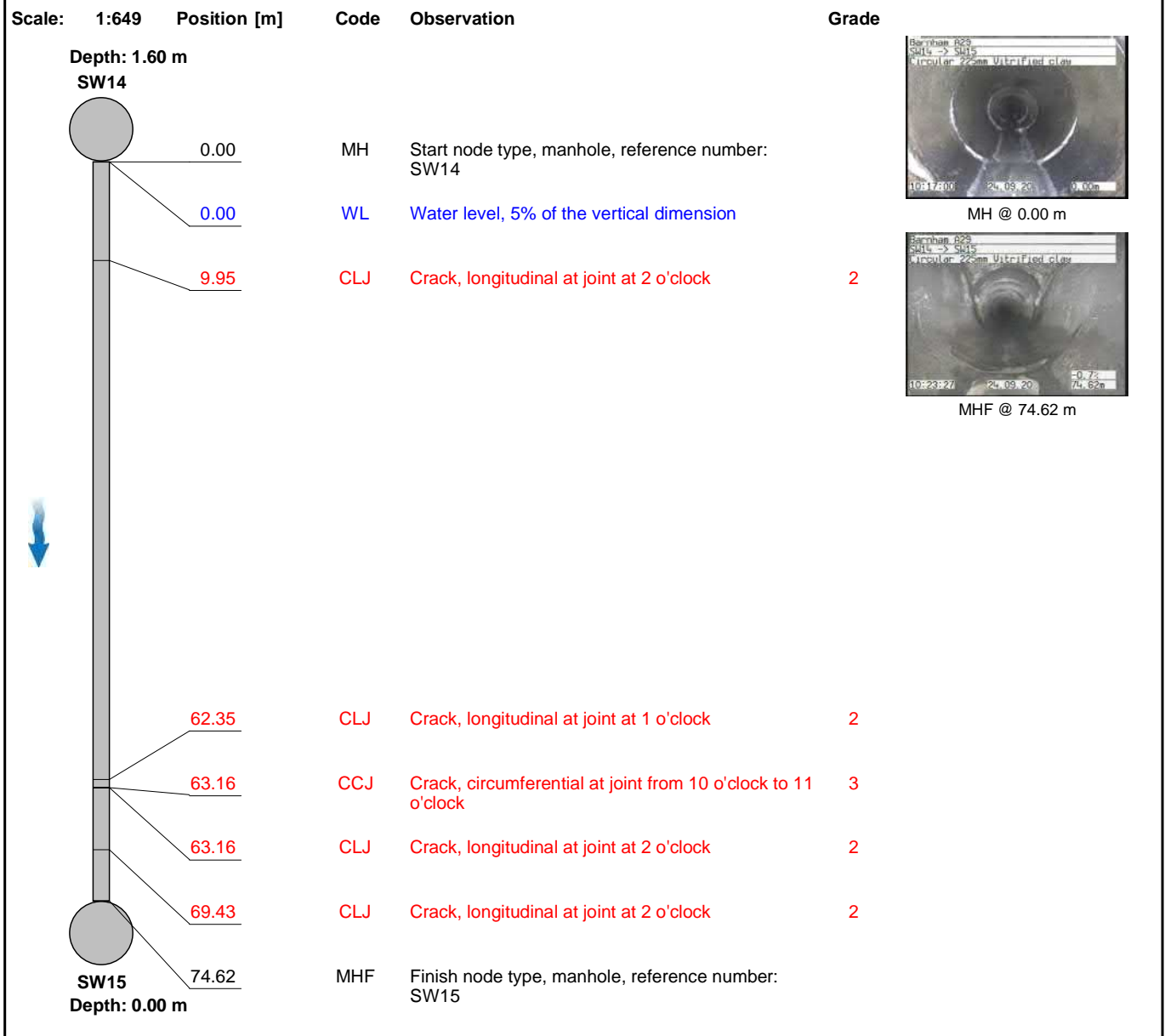


3, 00:01:14, 9.81 m
 Finish node type, catchpit, reference number: SW13

Section Inspection - 24/09/2020 - SW14X

Section 2	Inspection 1	Date 24/09/20	Time 10:16	Client's Job Ref Not Specified	Weather Light Rain	Pre Cleaned Yes	PLR SW14X
Operator M. Bradley		Vehicle PF17 BGE		Camera Small Crawler	Preset Length Not Specified	Legal Status Highways Drainage	Alternative ID Not Specified

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW14
Road:	A29	Inspected Length:	74.62 m	Upstream Pipe Depth:	1.600 m
Asset Location:	Private gardens	Total Length:	74.62 m	Downstream Node:	SW15
Surface Type:	Soil	Joint Length:	1.00 m	Downstream Pipe Depth:	0.000 m
Asset Use:	Surface waste	Asset Shape:	Circular	Asset Type:	Gravity drain/sewer
Asset Type:	Gravity drain/sewer	Dia/Height:	225 mm	Year Constructed:	
Flow Control:		Asset Material:	Vitrified clay	Inspection Purpose:	Condition survey
Inspection Purpose:	Condition survey	Asset Lining Type:	No Lining	Asset Lining Material:	No Lining
Comments:	None				
Recommendations:	None				



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
5	50.0	1.1	80.0	3.0	0	0.0	0.0	0.0	1.0

Section Pictures - 24/09/2020 - SW14X

Section	Inspection Direction	PLR	Client's Job Ref	Lanes Job Number
2	Downstream	SW14X		PJ375561



1, 00:00:11, 0.00 m
 Start node type, manhole, reference number: SW14

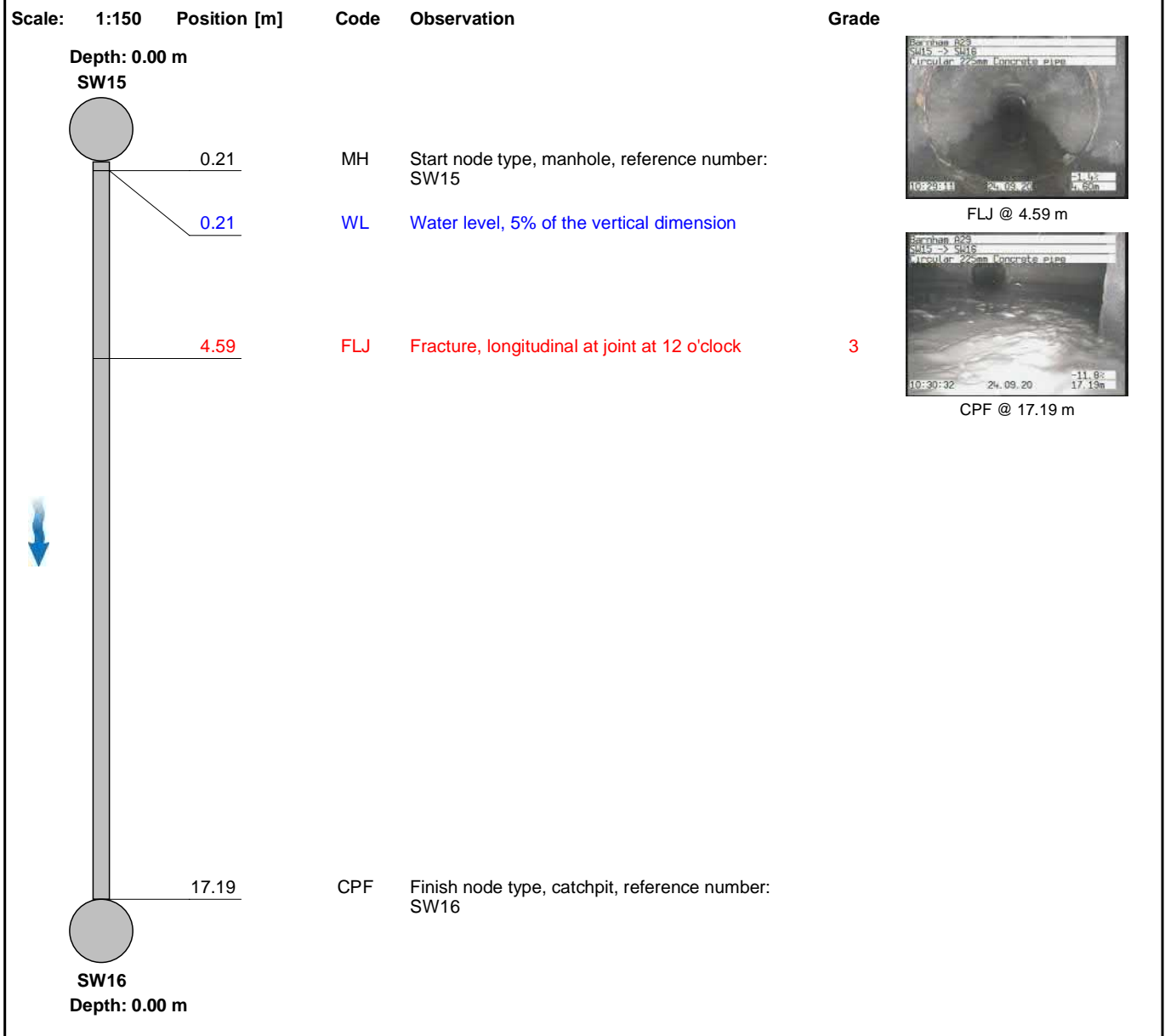


2, 00:06:09, 74.62 m
 Finish node type, manhole, reference number: SW15

Section Inspection - 24/09/2020 - SW15X

Section 3	Inspection 1	Date 24/09/20	Time 10:24	Client's Job Ref Not Specified	Weather Light Rain	Pre Cleaned Yes	PLR SW15X
Operator M. Bradley		Vehicle PF17 BGE		Camera Small Crawler	Preset Length Not Specified	Legal Status Highways Drainage	Alternative ID Not Specified

Town or Village: Barnham	Inspection Direction: Downstream	Upstream Node: SW15
Road: A29	Inspected Length: 16.98 m	Upstream Pipe Depth: 0.000 m
Asset Location: Private gardens	Total Length: 17.19 m	Downstream Node: SW16
Surface Type: Soil	Joint Length: 1.00 m	Downstream Pipe Depth: 0.000 m
Asset Use: Surface waste	Asset Shape: Circular	
Asset Type: Gravity drain/sewer	Dia/Height: 225 mm	
Year Constructed:	Asset Material: Concrete pipe	
Flow Control:	Asset Lining Type: No Lining	
Inspection Purpose: Condition survey	Asset Lining Material: No Lining	
Comments: UNABLE TO LOCATE SW15		
Recommendations: None		



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	40.0	2.3	40.0	3.0	0	0.0	0.0	0.0	1.0



Section Pictures - 24/09/2020 - SW15X

Section	Inspection Direction	PLR	Client's Job Ref	Lanes Job Number
3	Downstream	SW15X		PJ375561



1, 00:00:28, 4.59 m
Fracture, longitudinal at joint at 12 o'clock

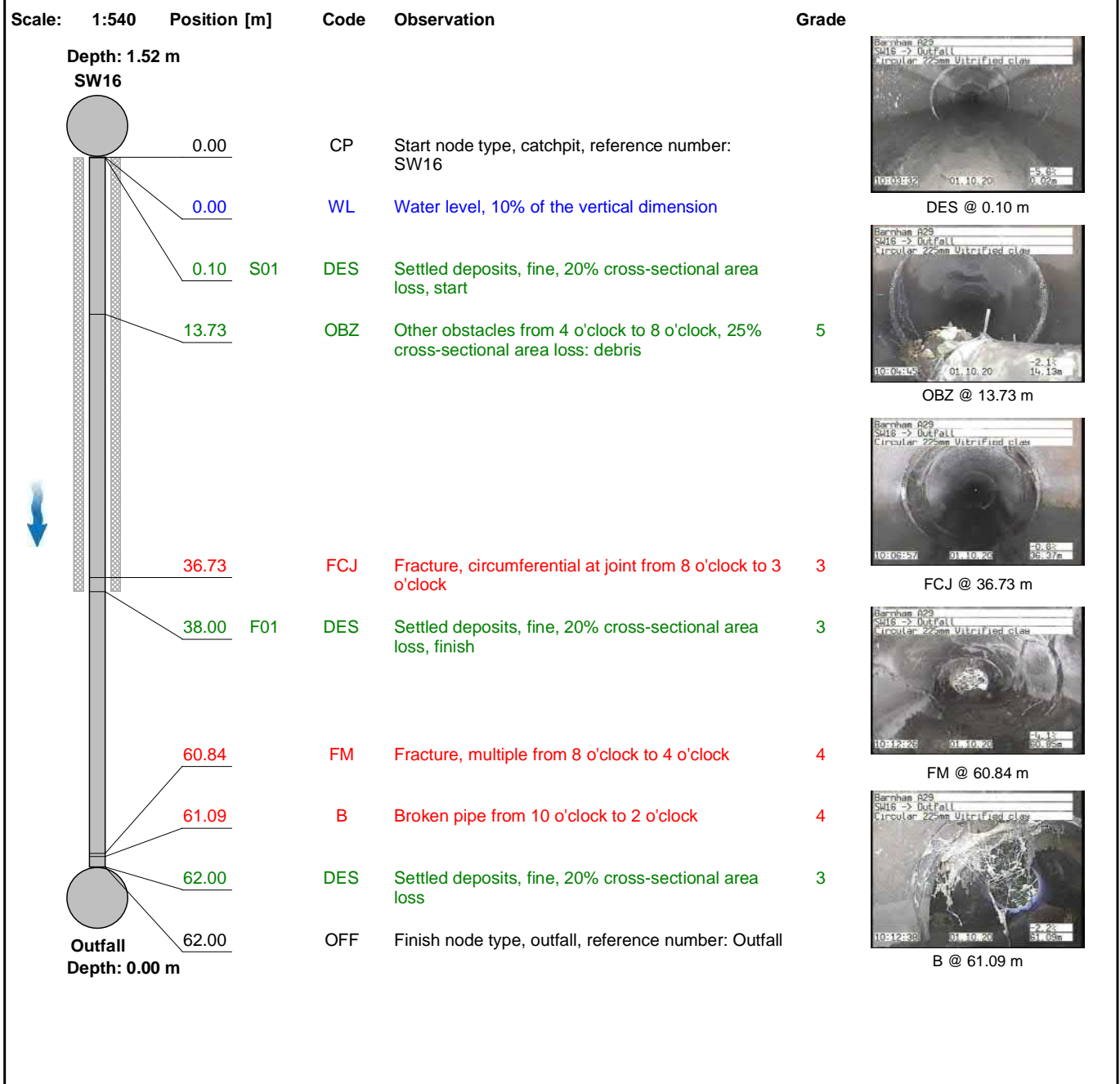


2, 00:01:40, 17.19 m
Finish node type, catchpit, reference number: SW16

Section Inspection - 01/10/2020 - SW16X

Section 4	Inspection 1	Date 01/10/20	Time 9:47	Client's Job Ref Not Specified	Weather Light Rain	Pre Cleaned No	PLR SW16X
Operator M. Bradley		Vehicle PF17 BGE		Camera Small Crawler	Preset Length Not Specified	Legal Status Highways Drainage	Alternative ID Not Specified

Town or Village:	Barnham	Inspection Direction:	Downstream	Upstream Node:	SW16
Road:	A29	Inspected Length:	62.00 m	Upstream Pipe Depth:	1.520 m
Asset Location:	Private gardens	Total Length:	62.00 m	Downstream Node:	OUTFALL
Surface Type:	Concrete Footway	Joint Length:	1.50 m	Downstream Pipe Depth:	0.000 m
Asset Use:	Surface waste	Asset Shape:	Circular	Asset Type:	Gravity drain/sewer
Asset Type:	Gravity drain/sewer	Dia/Height:	225 mm	Year Constructed:	
Flow Control:		Asset Material:	Vitrified clay	Inspection Purpose:	Condition survey
Inspection Purpose:	Condition survey	Asset Lining Type:	No Lining	Asset Lining Material:	No Lining
Comments:	Unable to jet line no access for jetter				
Recommendations:	None				



Section Inspection - 01/10/2020 - SW16X

Section 4	Inspection 1	Date 01/10/20	Time 9:47	Client's Job Ref Not Specified	Weather Light Rain	Pre Cleaned No	PLR SW16X
Operator M. Bradley		Vehicle PF17 BGE		Camera Small Crawler	Preset Length Not Specified	Legal Status Highways Drainage	Alternative ID Not Specified



DES @ 62.00 m



OFF @ 62.00 m

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
3	160.0	3.3	200.0	4.0	3	12.0	1.4	88.0	5.0

Section Pictures - 01/10/2020 - SW16X

Section	Inspection Direction	PLR	Client's Job Ref	Lanes Job Number
4	Downstream	SW16X		PJ375561



1, 00:00:22, 0.10 m
 Settled deposits, fine, 20% cross-sectional area loss, start



2, 00:01:36, 13.73 m
 Other obstacles from 4 o'clock to 8 o'clock, 25% cross-sectional area loss, debris



3, 00:03:48, 36.73 m
 Fracture, circumferential at joint from 8 o'clock to 3 o'clock



4, 00:08:34, 60.84 m
 Fracture, multiple from 8 o'clock to 4 o'clock



5, 00:08:45, 61.09 m
 Broken pipe from 10 o'clock to 2 o'clock



6, 00:08:45, 62.00 m
 Settled deposits, fine, 20% cross-sectional area loss

Section Pictures - 01/10/2020 - SW16X

Section	Inspection Direction	PLR	Client's Job Ref	Lanes Job Number
4	Downstream	SW16X		PJ375561



7, 00:09:09, 62.00 m
Finish node type, outfall, reference number: Outfall



Project

Project Name: 2020_07_22 JACKSONS
Project Number: PJ375561
Project Date: 22/07/2020
Project Standard: MSCC4 Sewers & Drainage GB (SRM4 Scoring)

A large, stylized magenta watermark logo of Lanes Group Plc is centered on the page. It consists of two overlapping circular shapes forming a larger, irregular frame. Inside this frame, the text "Lanes Group Plc" is written in a bold, sans-serif font, with "Lanes" on the top line and "Group Plc" on the bottom line.

Lanes
Group Plc



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2020_07_22 JACKSONS	PJ375561	22/07/2020

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Section: 10; S7 - S9	34



Scoring Summary

Project Name
2020_07_22 JACKSONS

Project Number
PJ375561

Project Date
22/07/2020

Structural Defects

Grade 3: Best practice suggests consideration should be given to repairs in the medium term.

Grade 4: Best practice suggests consideration should be given to repairs to avoid a potential collapse.

Grade 5: Best practice suggests that this pipe is at risk of collapse at any time. Urgent consideration should be given to repairs to avoid total failure.

Section	PLR	Grade	Description
2	S 2X	5	Hole in drain or sewer at a joint from 10 o'clock to 1 o'clock
3	S 3X	4	Multiple defects
4	S 4X	5	Hole in drain or sewer from 10 o'clock to 3 o'clock
5	S 5X	5	Hole in drain or sewer from 7 o'clock to 1 o'clock
6	S 6X	5	Hole in drain or sewer from 10 o'clock to 2 o'clock

Service / Operational Condition

Grade 3: Best practice suggests consideration should be given to maintenance activities in the medium term.

Grade 4: Best practice suggests consideration should be given to maintenance activity to avoid potential blockages.

Grade 5: Best practice suggests that this pipe is at a high risk of backing up or causing flooding.

Section	PLR	Grade	Description
1	S 1X	4	Roots, tap at joint
2	S 2X	3	Connection defective, connecting pipe is intruding at 10 o'clock, diameter: 150mm, intrusion: 20%
3	S 3X	4	Roots, tap at joint
5	S 5X	4	Multiple defects
8	S.7X	3	Attached deposits, encrustation from 2 o'clock to 3 o'clock, 20% cross-sectional area loss
9	S 7X	3	Attached deposits, encrustation from 9 o'clock to 10 o'clock, 20% cross-sectional area loss

Abandoned Surveys

Section	PLR	Description
2	S 2X	Survey abandoned
8	S.7X	Survey abandoned
9	S 7X	Survey abandoned

Information

These scoring summaries are based on the SRM grading from the WRc.



Project Information

Project Name	Project Number	Project Date
2020_07_22 JACKSONS	PJ375561	22/07/2020

Client

Company: JACKSONS CIVILS LIMITED
Street: MAGNET HOUSE 30 WHITE HOUSE ROAD
Town or City: IPSWICH
County: SUFFOLK
Post Code: IP1 5LT

Site

Company: JACKSONS CIVILSLIMITED.
Street: A29 FONTWELL AVE
Town or City: FONWELL
County: WEST SUSSEX

Contractor

Company: Lanes Group Plc
Contact: Matt Griffith
Department: Regional Manager
Street: Unit 2-4 Parham Drive
Town or City: Eastleigh
County: Hampshire
Post Code: SO50 4NU
Phone: 02380 625 750
Fax: 02380 651 511
Email: southcentralops@lanesgroup.co.uk



Section Profile

Project Name
2020_07_22 JACKSONS

Project Number
PJ375561

Project Date
22/07/2020

Circular, 225 mm

Section	Upstream Node	Downstream Node	Date	Road	Pipe Material	Total Length	Inspected Length
8	S.7	S.9	23/07/2020	A 29 FONTWELL AVE.	Cast iron	15.00 m	4.00 m
9	S 7	S 9	23/07/2020	A 29 FONTWELL AVE.	Cast iron	15.00 m	5.86 m
10	S 7	S 9	23/07/2020	A 29 FONTWELL AVE.	Cast iron	10.01 m	10.01 m

Total: 3 Sections x Circular 225 mm = 40.01 m Total Length and 19.87 m Inspected Length

Circular, 300 mm

Section	Upstream Node	Downstream Node	Date	Road	Pipe Material	Total Length	Inspected Length
1	S 1	S 2	22/07/2020	A 29 FONTWELL AVE.	Cast iron	21.72 m	21.72 m
2	S 2	S 3	22/07/2020	A 29 FONTWELL AVE.	Concrete	26.99 m	26.99 m
3	S 3	S4	22/07/2020	A 29 FONTWELL AVE.	Concrete	31.73 m	31.73 m
4	S 4	S 5	23/07/2020	A 29 FONTWELL AVE.	Vitrified clay pipe (i.e. all clayware)	31.82 m	31.82 m
5	S 5	S 6	23/07/2020	A 29 FONTWELL AVE.	Vitrified clay pipe (i.e. all clayware)	45.65 m	45.65 m
6	S 6	S 7	23/07/2020	A 29 FONTWELL AVE.	Vitrified clay pipe (i.e. all clayware)	40.67 m	40.67 m
7	S 7	S 8	23/07/2020	A 29 FONTWELL AVE.	Polyvinyl chloride	9.38 m	9.38 m

Total: 7 Sections x Circular 300 mm = 207.96 m Total Length and 207.96 m Inspected Length

Total: 10 Sections = 247.97 m Total Length and 227.83 m Inspected Length

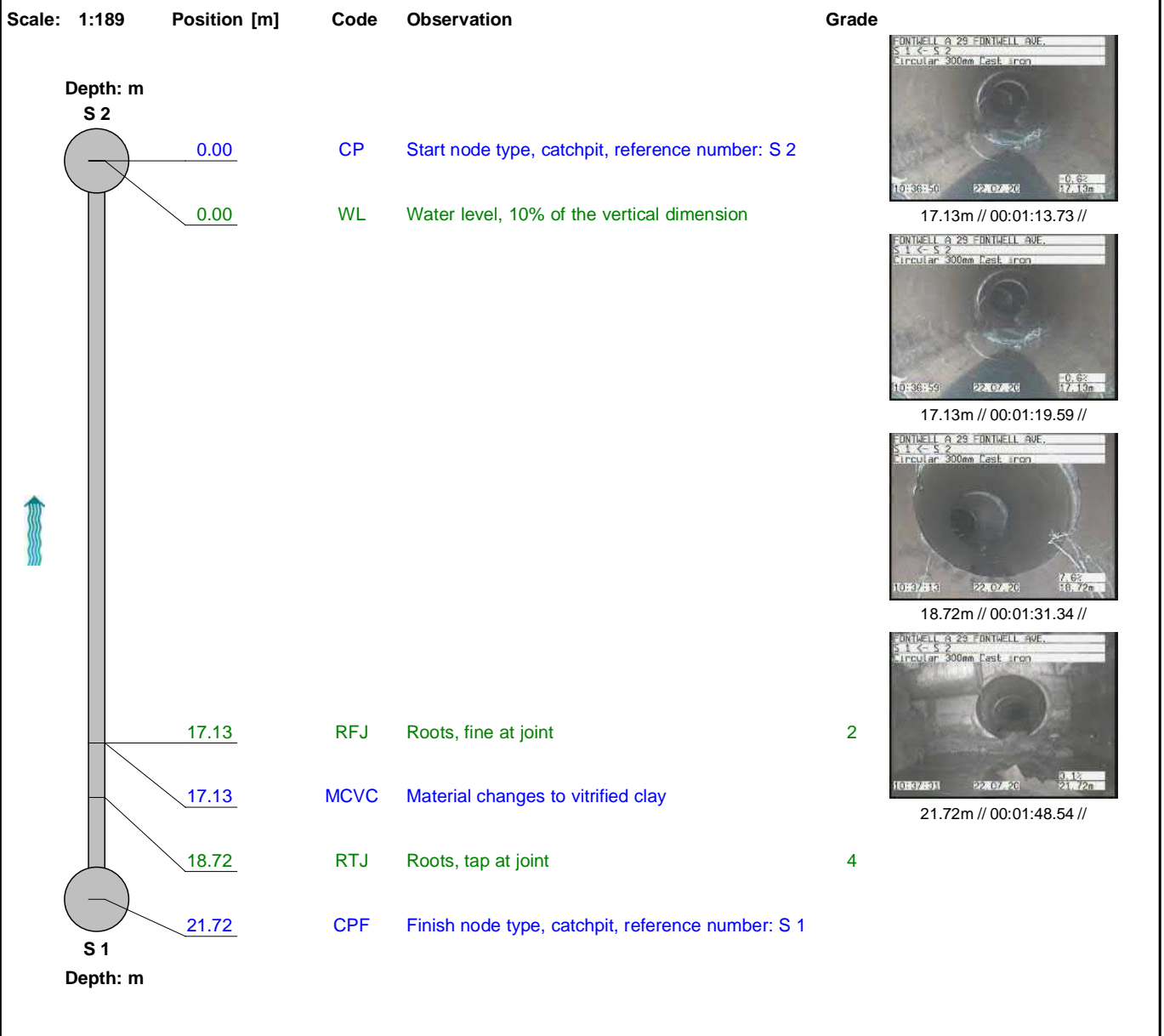


Section Inspection - 22/07/2020 - S 1X

Section 1	Inspection 1	Date 22/07/20	Time 9:26	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 1X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Upstream	Upstream Node:	S 1
Road:	A 29 Fontwell Ave.	Inspected Length:	21.72 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	21.72 m	Downstream Node:	S 2
Surface Type:	Asphalt Highway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Cast iron		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	2	5.0	0.4	6.0	4.0

Section Pictures - 22/07/2020 - S 1X

Section 1	Inspection Direction Upstream	PLR S 1X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 1X_5ea0d0dc-ae2d-4172-9971-a51fbc440884_20200722_103841_992.jpg, 00:01:13, 17.13
 m
 Roots, fine at joint



S 1X_9eb05902-a84d-450c-8bfe-67dbfd30245a_20200722_103850_088.jpg, 00:01:19, 17.13
 m
 Material changes to vitrified clay

Section Pictures - 22/07/2020 - S 1X

Section 1	Inspection Direction Upstream	PLR S 1X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 1X_1d6a4940-240e-46a7-848b-5f165be5c0d1_20200722_103904_219.jpg, 00:01:31, 18.72
 m
 Roots, tap at joint



S 1X_e2bbe1f4-2f57-4af3-9f5a-b69f842627ae_20200722_103922_750.jpg, 00:01:48, 21.72
 m
 Finish node type, catchpit, reference number: S 1








Section Inspection - 22/07/2020 - S 2X

Section 2	Inspection 1	Date 22/07/20	Time 10:46	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 2X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Upstream	Upstream Node:	S 2
Road:	A 29 Fontwell Ave.	Inspected Length:	26.99 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	26.99 m	Downstream Node:	S 3
Surface Type:	Asphalt Highway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Concrete		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:

Scale: 1:214	Position [m]	Code	Observation	Grade	
	0.00	WL	Water level, 10% of the vertical dimension		
	0.64	CP	Start node type, catchpit, reference number: S 3		
	1.81	CN	Connection other than junction at 9 o'clock, diameter: 150mm		
	3.12	HJ	Hole in drain or sewer at a joint from 10 o'clock to 1 o'clock	5	 3.12m // 00:00:39.67 //
	3.12	FC	Fracture, circumferential from 9 o'clock to 3 o'clock	3	 3.12m // 00:00:43.34 //
	3.12	FL	Fracture, longitudinal at 2 o'clock	3	 3.12m // 00:00:47.14 //
	8.60	FC	Fracture, circumferential from 12 o'clock to 12 o'clock	3	 8.60m // 00:01:17.34 //
	9.69	H	Hole in drain or sewer at 12 o'clock	4	 9.69m // 00:01:27.50 //
	9.69	FC	Fracture, circumferential from 12 o'clock to 12 o'clock	3	
	15.66	FL	Fracture, longitudinal at 12 o'clock	3	
	20.32	FL	Fracture, longitudinal at 10 o'clock	3	
	20.32	FL	Fracture, longitudinal at 12 o'clock	3	
	21.34	FL	Fracture, longitudinal at 9 o'clock	3	
	21.34	FL	Fracture, longitudinal at 12 o'clock	3	
	22.23	FM	Fracture, multiple from 9 o'clock to 3 o'clock	4	



Section Inspection - 22/07/2020 - S 2X

Section 2	Inspection 1	Date 22/07/20	Time 10:46	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 2X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Scale: 1:214	Position [m]	Code	Observation	Grade
<p style="margin-left: 20px;">Depth: m</p>	26.99	CXI	Connection defective, connecting pipe is intruding at 10 o'clock, diameter: 150mm, intrusion: 20%	3
	26.99	SA	Survey abandoned: DUE TO INTRUDING PIPE	

Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
12	245.0	219.6	685.0	5.0	1	2.0	0.6	2.0	3.0

Section Pictures - 22/07/2020 - S 2X

Section 2	Inspection Direction Upstream	PLR S 2X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 2X_4ef9c108-99cd-47cf-80b5-e90472ab2468_20200722_124734_730.jpg, 00:00:39, 3.12 m

Hole in drain or sewer at a joint from 10 o'clock to 1 o'clock



S 2X_08ebe699-ae42-4afd-ba5e-1620552b3292_20200722_124746_524.jpg, 00:00:43, 3.12 m

Fracture, circumferential from 9 o'clock to 3 o'clock

Section Pictures - 22/07/2020 - S 2X

Section 2	Inspection Direction Upstream	PLR S 2X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 2X_8c6e3851-3c61-4e4d-b5a9-4a37fac715a1_20200722_124757_959.jpg, 00:00:47, 3.12 m

Fracture, longitudinal at 2 o'clock



S 2X_f77ccb20-a914-4af1-ab59-3e44fb45e56f_20200722_124833_240.jpg, 00:01:17, 8.60 m
 Fracture, circumferential from 12 o'clock to 12 o'clock

Section Pictures - 22/07/2020 - S 2X

Section 2	Inspection Direction Upstream	PLR S 2X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 2X_05743cde-0a51-4426-b771-72a0ad369a01_20200722_124857_702.jpg, 00:01:27, 9.69
 m

Hole in drain or sewer at 12 o'clock



S 2X_e6d01b7c-f88c-4553-b80e-21952c5785a2_20200722_124911_516.jpg, 00:01:31, 9.69
 m

Fracture, circumferential from 12 o'clock to 12 o'clock

Section Pictures - 22/07/2020 - S 2X

Section 2	Inspection Direction Upstream	PLR S 2X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 2X_63a01a65-f631-48db-947e-15d36b19dba8_20200722_124950_044.jpg, 00:02:04, 15.66 m

Fracture, longitudinal at 12 o'clock



S 2X_b1e20b50-5e9f-4bf6-8dfd-f60614a5db96_20200722_125048_065.jpg, 00:02:37, 21.34 m

Fracture, longitudinal at 12 o'clock

Section Pictures - 22/07/2020 - S 2X

Section 2	Inspection Direction Upstream	PLR S 2X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 2X_2fab1903-e4c6-4d92-a59d-f7d854a79db2_20200722_125107_721.jpg, 00:02:47, 22.23
 m

Fracture, multiple from 9 o'clock to 3 o'clock



S 2X_3a3472bf-b4b7-46c5-981a-94c42e413e26_20200722_125223_288.jpg, 00:03:16, 26.99
 m

Survey abandoned, DUE TO INTRUDING PIPE

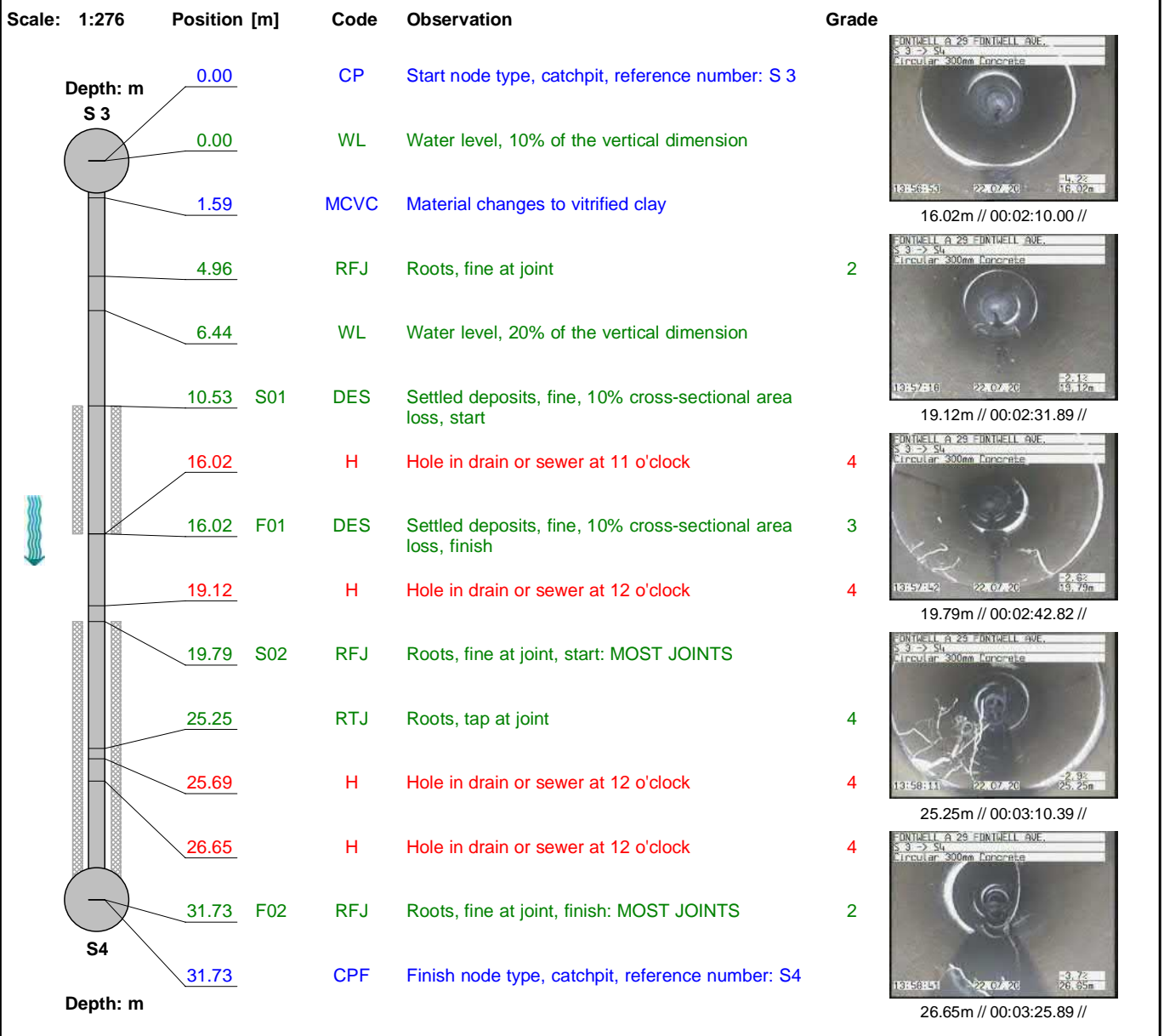


Section Inspection - 22/07/2020 - S 3X

Section 3	Inspection 1	Date 22/07/20	Time 13:45	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 3X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Downstream	Upstream Node:	S 3
Road:	A 29 Fontwell Ave.	Inspected Length:	31.73 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	31.73 m	Downstream Node:	S 4
Surface Type:	Grass	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Concrete		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	80.0	20.0	320.0	4.0	4	5.0	1.9	30.0	4.0

Section Pictures - 22/07/2020 - S 3X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Downstream	S 3X	SS0031/004	PJ375561



S 3X_aa978d16-91d5-4a28-b23f-0800ae9dce64_20200722_135830_494.jpg, 00:02:10, 16.02 m

Hole in drain or sewer at 11 o'clock



S 3X_ac290a74-d233-4a48-927b-aede5263fc22_20200722_135855_205.jpg, 00:02:31, 19.12 m

Hole in drain or sewer at 12 o'clock

Section Pictures - 22/07/2020 - S 3X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Downstream	S 3X	SS0031/004	PJ375561



S 3X_33408f43-064d-4692-832e-9bc4f0e4d5ba_20200722_135919_237.jpg, 00:02:42, 19.79
 m

Roots, fine at joint, start, MOST JOINTS



S 3X_53340216-b99e-4f5e-ae2e-f51e63c3ada8_20200722_135948_054.jpg, 00:03:10, 25.25
 m

Roots, tap at joint

Section Pictures - 22/07/2020 - S 3X

Section 3	Inspection Direction Downstream	PLR S 3X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 3X_c9aaf483-d7fb-402c-9b98-ad468d006810_20200722_140017_628.jpg, 00:03:25, 26.65 m

Hole in drain or sewer at 12 o'clock



S 3X_ed137543-b4fa-45cc-aafc-17240f47b796_20200722_140102_246.jpg, 00:04:06, 31.73 m

Finish node type, catchpit, reference number: S4

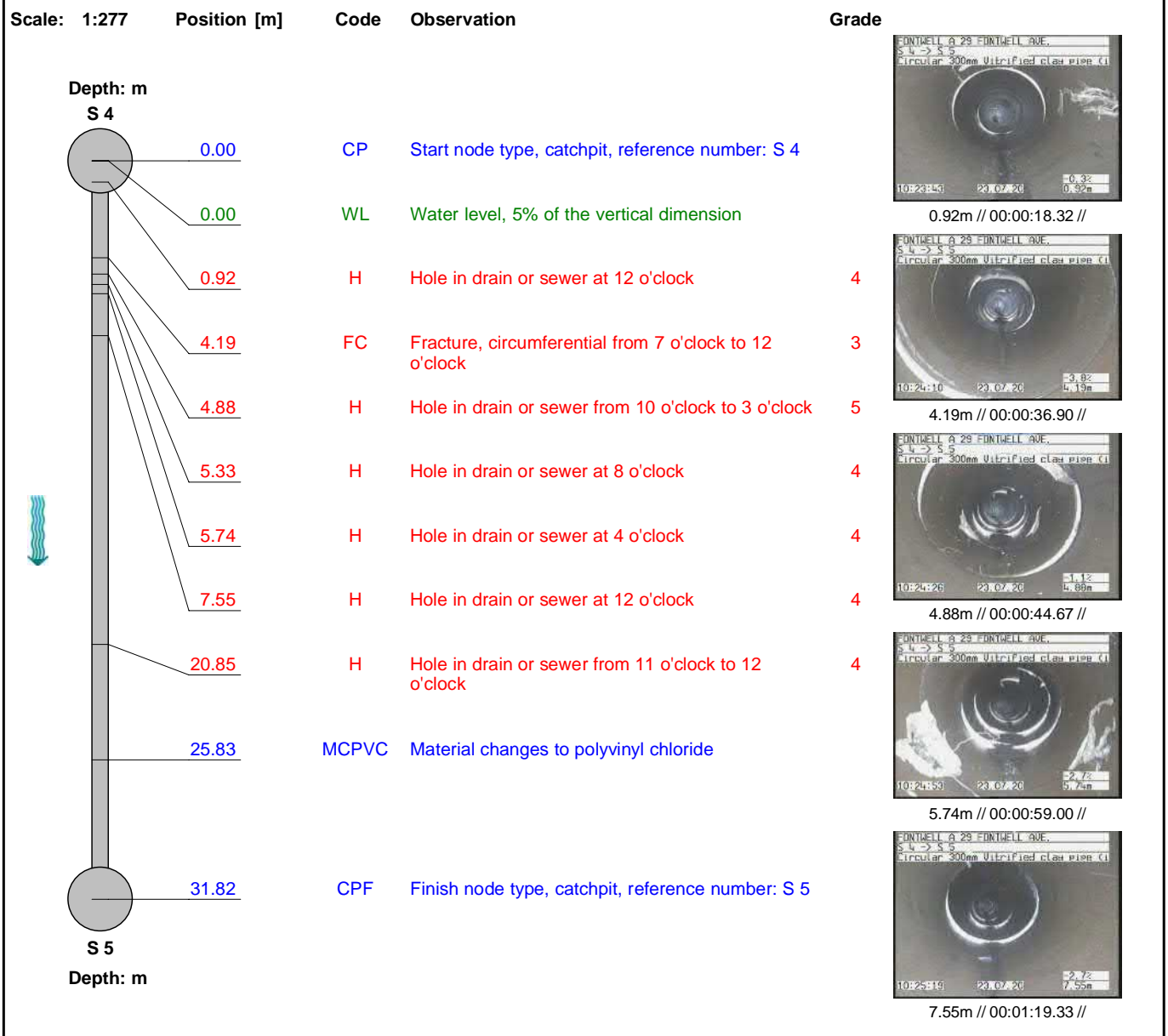


Section Inspection - 23/07/2020 - S 4X

Section 4	Inspection 1	Date 23/07/20	Time 10:08	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 4X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Downstream	Upstream Node:	S 4
Road:	A 29 Fontwell Ave.	Inspected Length:	31.82 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	31.82 m	Downstream Node:	S 5
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:



Section Pictures - 23/07/2020 - S 4X

Section 4	Inspection Direction Downstream	PLR S 4X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 4X_3f8464b3-710c-4c99-9f9a-7b74153a84ca_20200723_102522_303.jpg, 00:00:18, 0.92 m

Hole in drain or sewer at 12 o'clock



S 4X_e8687c64-3f97-495e-9180-552d6f4f3cce_20200723_102549_074.jpg, 00:00:36, 4.19 m
 Fracture, circumferential from 7 o'clock to 12 o'clock

Section Pictures - 23/07/2020 - S 4X

Section 4	Inspection Direction Downstream	PLR S 4X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 4X_98175ffa-e169-4917-a40b-1aa9542d5a26_20200723_102604_790.jpg, 00:00:44, 4.88 m

Hole in drain or sewer from 10 o'clock to 3 o'clock



S 4X_b8b2736c-6b08-4d55-820e-55066b9e6e7b_20200723_102631_648.jpg, 00:00:59, 5.74 m

Hole in drain or sewer at 4 o'clock

Section Pictures - 23/07/2020 - S 4X

Section 4	Inspection Direction Downstream	PLR S 4X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 4X_1be84700-5cd3-446b-98b5-bc7b26c62438_20200723_102657_927.jpg, 00:01:19, 7.55
 m

Hole in drain or sewer at 12 o'clock

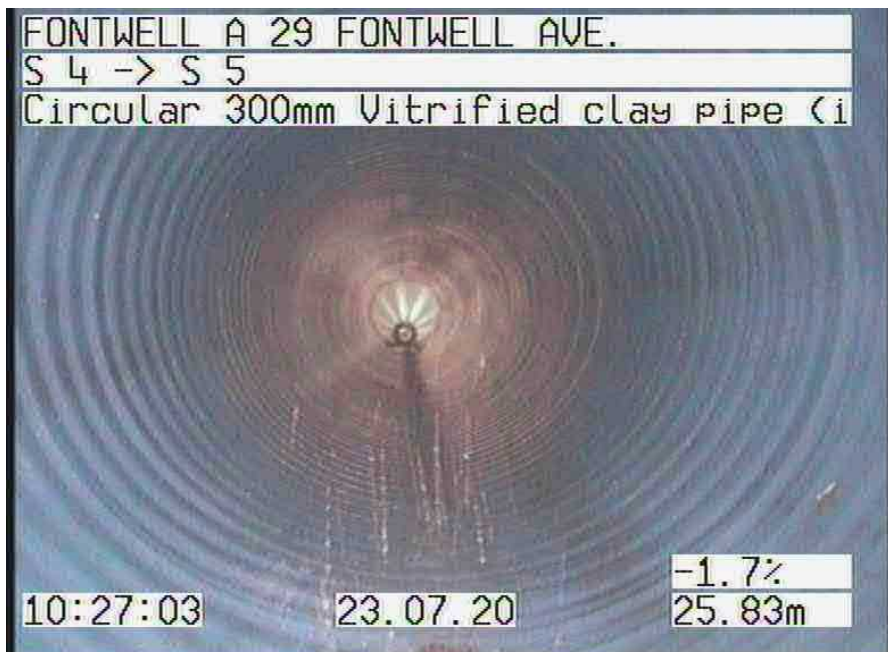


S 4X_ef5adade-e1f0-4cd7-b198-1a8e8e5f0cdd_20200723_102800_794.jpg, 00:02:16, 20.85
 m

Hole in drain or sewer from 11 o'clock to 12 o'clock

Section Pictures - 23/07/2020 - S 4X

Section 4	Inspection Direction Downstream	PLR S 4X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 4X_a9aad891-82f7-4cfa-8696-39e0266f6f0c_20200723_102842_424.jpg, 00:02:39, 25.83 m

Material changes to polyvinyl chloride



S 4X_9d80214d-8087-4503-8dd5-6d2e747d0cc8_20200723_102914_152.jpg, 00:03:12, 31.82 m

Finish node type, catchpit, reference number: S 5

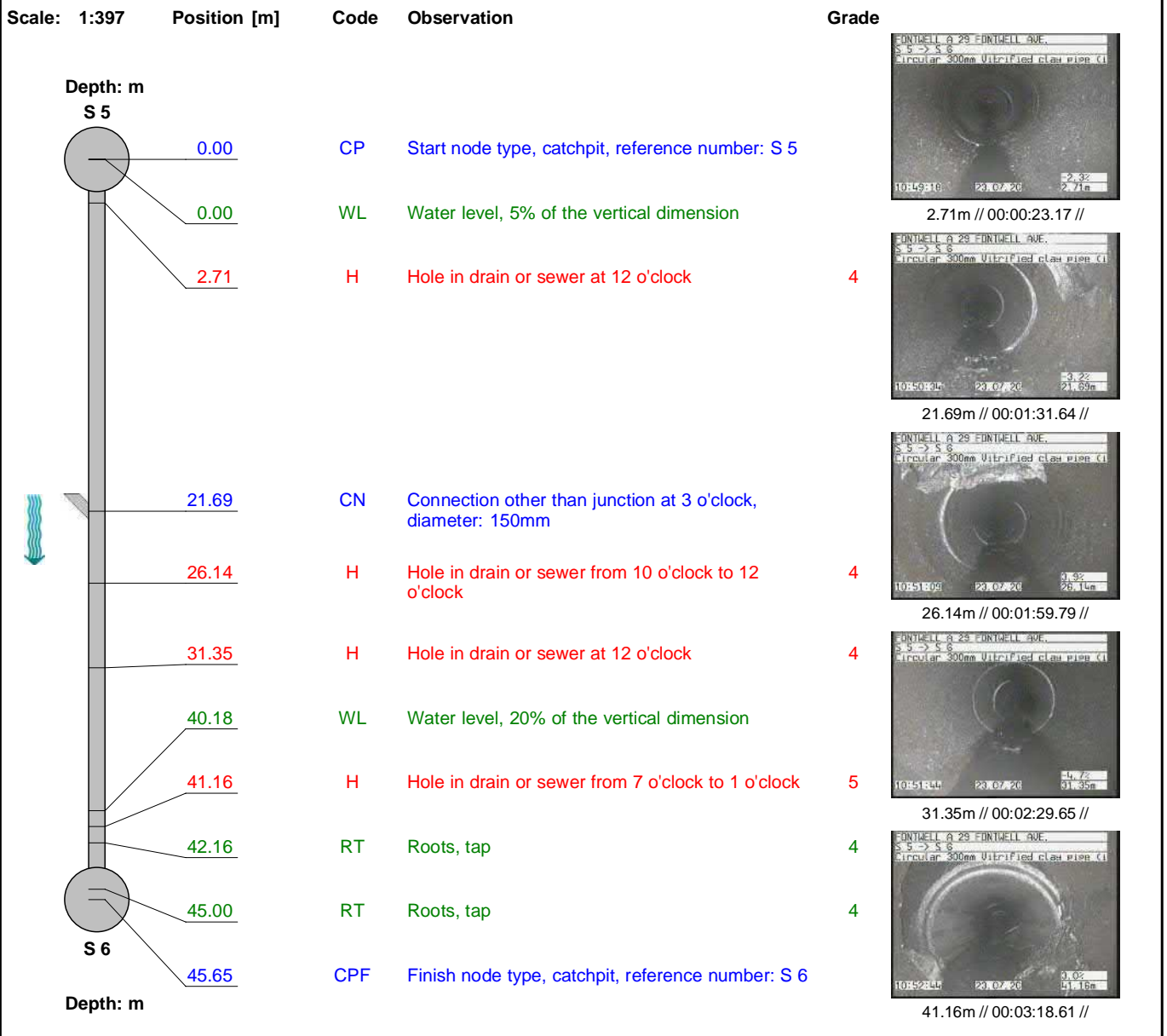


Section Inspection - 23/07/2020 - S 5X

Section 5	Inspection 1	Date 23/07/20	Time 10:49	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 5X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Downstream	Upstream Node:	S 5
Road:	A 29 Fontwell Ave.	Inspected Length:	45.65 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	45.65 m	Downstream Node:	S 6
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	165.0	149.4	405.0	5.0	2	5.0	3.7	10.0	4.0

Section Pictures - 23/07/2020 - S 5X

Section 5	Inspection Direction Downstream	PLR S 5X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 5X_a9b8138b-f5b7-4906-9384-e0eeeb86effb_20200723_105056_556.jpg, 00:00:23, 2.71 m

Hole in drain or sewer at 12 o'clock



S 5X_929cfaea-bc56-463a-8745-745465bc3586_20200723_105212_803.jpg, 00:01:31, 21.69 m

Connection other than junction at 3 o'clock, diameter: 150mm

Section Pictures - 23/07/2020 - S 5X

Section 5	Inspection Direction Downstream	PLR S 5X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 5X_25ebad10-72e5-4286-9079-02d7ede54310_20200723_105248_188.jpg, 00:01:59,
 26.14 m

Hole in drain or sewer from 10 o'clock to 12 o'clock



S 5X_b48b0b57-f860-4e15-8ca7-694b1fbabf70_20200723_105323_066.jpg, 00:02:29, 31.35
 m

Hole in drain or sewer at 12 o'clock

Section Pictures - 23/07/2020 - S 5X

Section 5	Inspection Direction Downstream	PLR S 5X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 5X_88eb2311-d04c-4157-9865-fe6d3bfae336_20200723_105423_467.jpg, 00:03:18, 41.16 m

Hole in drain or sewer from 7 o'clock to 1 o'clock



S 5X_1f2b06a8-d146-4298-893f-c60d2f44cee2_20200723_105504_280.jpg, 00:03:49, 45.65 m

Finish node type, catchpit, reference number: S 6






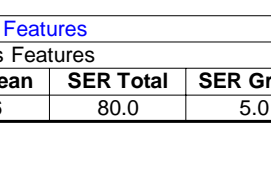


Section Inspection - 23/07/2020 - S 6X

Section 6	Inspection 1	Date 23/07/20	Time 11:23	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 6X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Downstream	Upstream Node:	S 6
Road:	A 29 Fontwell Ave.	Inspected Length:	40.67 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	40.67 m	Downstream Node:	S 7
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:
 Recommendations:

Scale: 1:354	Position [m]	Code	Observation	Grade	
	Depth: m S 6				
	0.00	CP	Start node type, catchpit, reference number: S 6		
	0.00	WL	Water level, 5% of the vertical dimension		5.47m // 00:00:49.23 //
	0.00	H	Hole in drain or sewer at 12 o'clock	4	
	2.15	RT	Roots, tap	4	
	5.47	H	Hole in drain or sewer at 12 o'clock	4	13.01m // 00:01:31.29 //
	13.01	H	Hole in drain or sewer at 12 o'clock	4	
	15.14	H	Hole in drain or sewer at 11 o'clock	4	15.14m // 00:01:59.01 //
	21.64	H	Hole in drain or sewer at 12 o'clock	4	
	25.55	RT	Roots, tap	4	
	27.10	S01 RT	Roots, tap, start	4	
	35.05	H	Hole in drain or sewer from 10 o'clock to 2 o'clock: HAS BEEN REPAIRED	5	21.64m // 00:02:58.93 //
	40.66	CPF	Finish node type, catchpit, reference number: S 7		
	40.67	F01 RT	Roots, tap, finish	4	25.55m // 00:03:55.85 //
	Depth: m S 7				

Structural Defects

Construction Features

Service & Operational Observations

Miscellaneous Features

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
6	165.0	103.3	565.0	5.0	3	5.0	14.6	80.0	5.0

Section Pictures - 23/07/2020 - S 6X

Section 6	Inspection Direction Downstream	PLR S 6X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 6X_cab79376-a58b-4a32-9e07-2ec8959dd169_20200723_112601_738.jpg, 00:00:49, 5.47
 m

Hole in drain or sewer at 12 o'clock



S 6X_23eca4da-d491-4334-92f0-2b839fe11615_20200723_112645_976.jpg, 00:01:31, 13.01
 m

Hole in drain or sewer at 12 o'clock

Section Pictures - 23/07/2020 - S 6X

Section 6	Inspection Direction Downstream	PLR S 6X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 6X_20e5e42f-d214-462d-ae3a-a7277b04ff96_20200723_112721_561.jpg, 00:01:59, 15.14 m

Hole in drain or sewer at 11 o'clock



S 6X_1a10f9d8-f317-4d13-b953-18147d85f377_20200723_112916_441.jpg, 00:02:58, 21.64 m

Hole in drain or sewer at 12 o'clock

Section Pictures - 23/07/2020 - S 6X

Section 6	Inspection Direction Downstream	PLR S 6X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 6X_8f772b69-20ca-403e-a337-5509ce129081_20200723_113020_892.jpg, 00:03:55, 25.55
 m
 Roots, tap



S 6X_d43505a4-c358-430b-9d72-d3a2464fef57_20200723_113441_080.jpg, 00:07:32, 40.66
 m
 Finish node type, catchpit, reference number: S 7



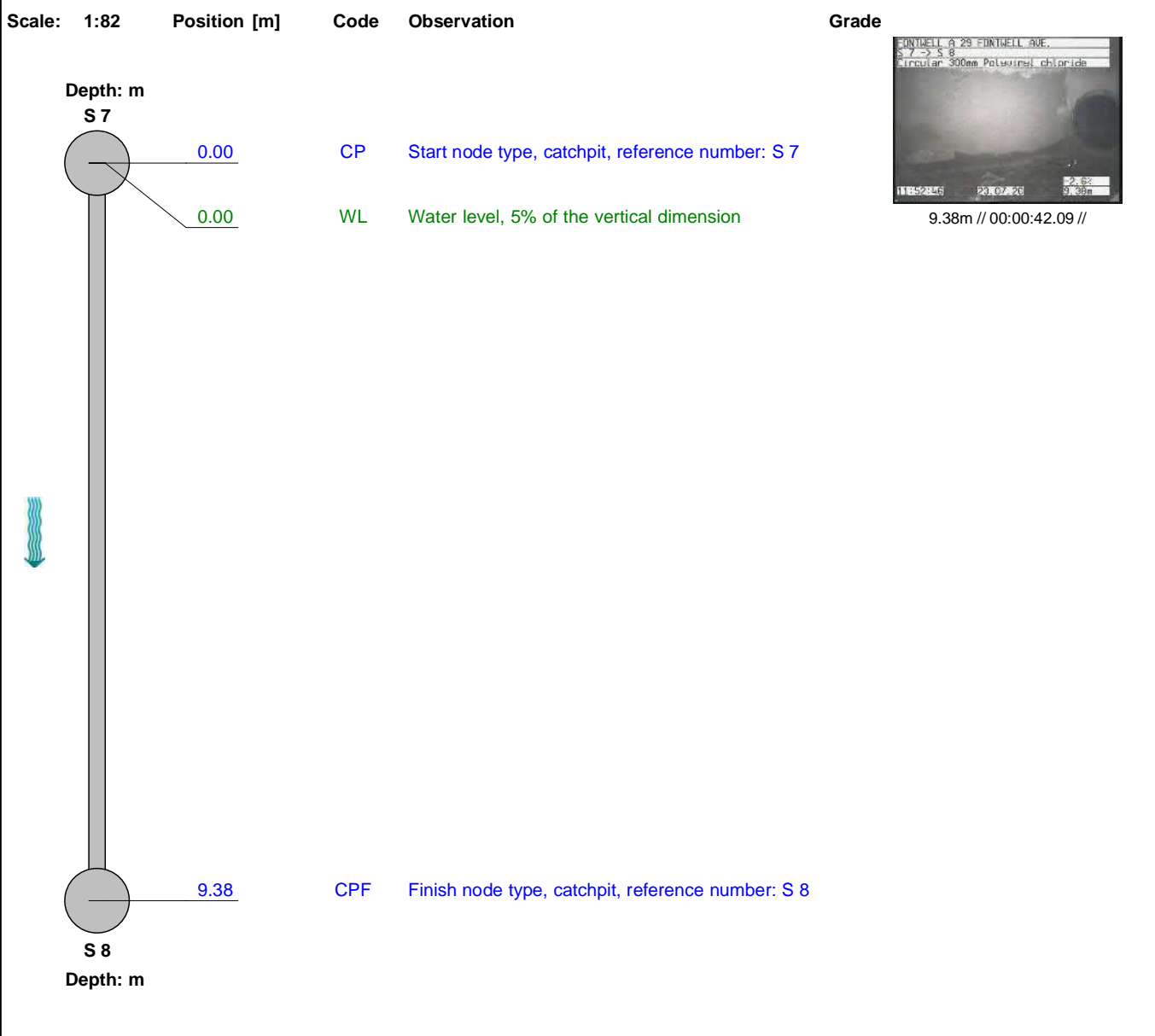
Section Inspection - 23/07/2020 - S 7X

Section 7	Inspection 1	Date 23/07/20	Time 11:52	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 7X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Downstream	Upstream Node:	S 7
Road:	A 29 Fontwell Ave.	Inspected Length:	9.38 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	9.38 m	Downstream Node:	S 8
Surface Type:	Asphalt Footway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Year Constructed:		Pipe Material:	Polyvinyl chloride		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



Section Pictures - 23/07/2020 - S 7X

Section 7	Inspection Direction Downstream	PLR S 7X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 7X_a846a659-43e7-4a61-b0e6-f7cdb50b64b3_20200723_115425_136.jpg, 00:00:42, 9.38
m

Finish node type, catchpit, reference number: S 8

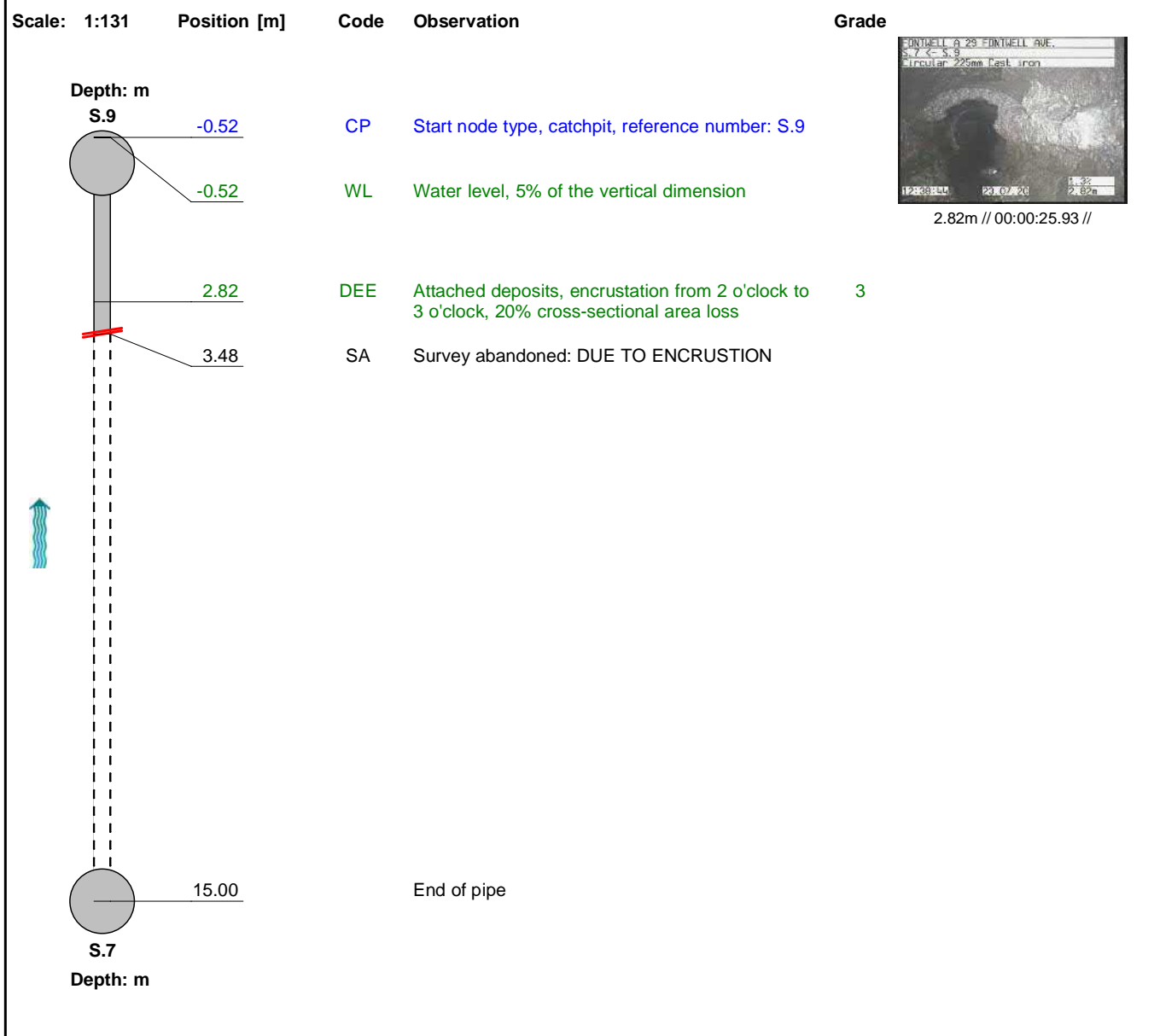


Section Inspection - 23/07/2020 - S.7X

Section 8	Inspection 1	Date 23/07/20	Time 12:31	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S.7X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Upstream	Upstream Node:	S.7
Road:	A 29 Fontwell Ave.	Inspected Length:	4.00 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	15.00 m	Downstream Node:	S.9
Surface Type:	Asphalt Highway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Year Constructed:		Pipe Material:	Cast iron		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments: PIPE 1
Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	1	2.0	0.6	2.0	3.0



Section Pictures - 23/07/2020 - S.7X

Section 8	Inspection Direction Upstream	PLR S.7X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S.7X_cdd52aac-e82f-4337-acb2-3fc99a6120d2_20200723_124022_998.jpg, 00:00:25, 2.82
m

Attached deposits, encrustation from 2 o'clock to 3 o'clock, 20% cross-sectional area loss



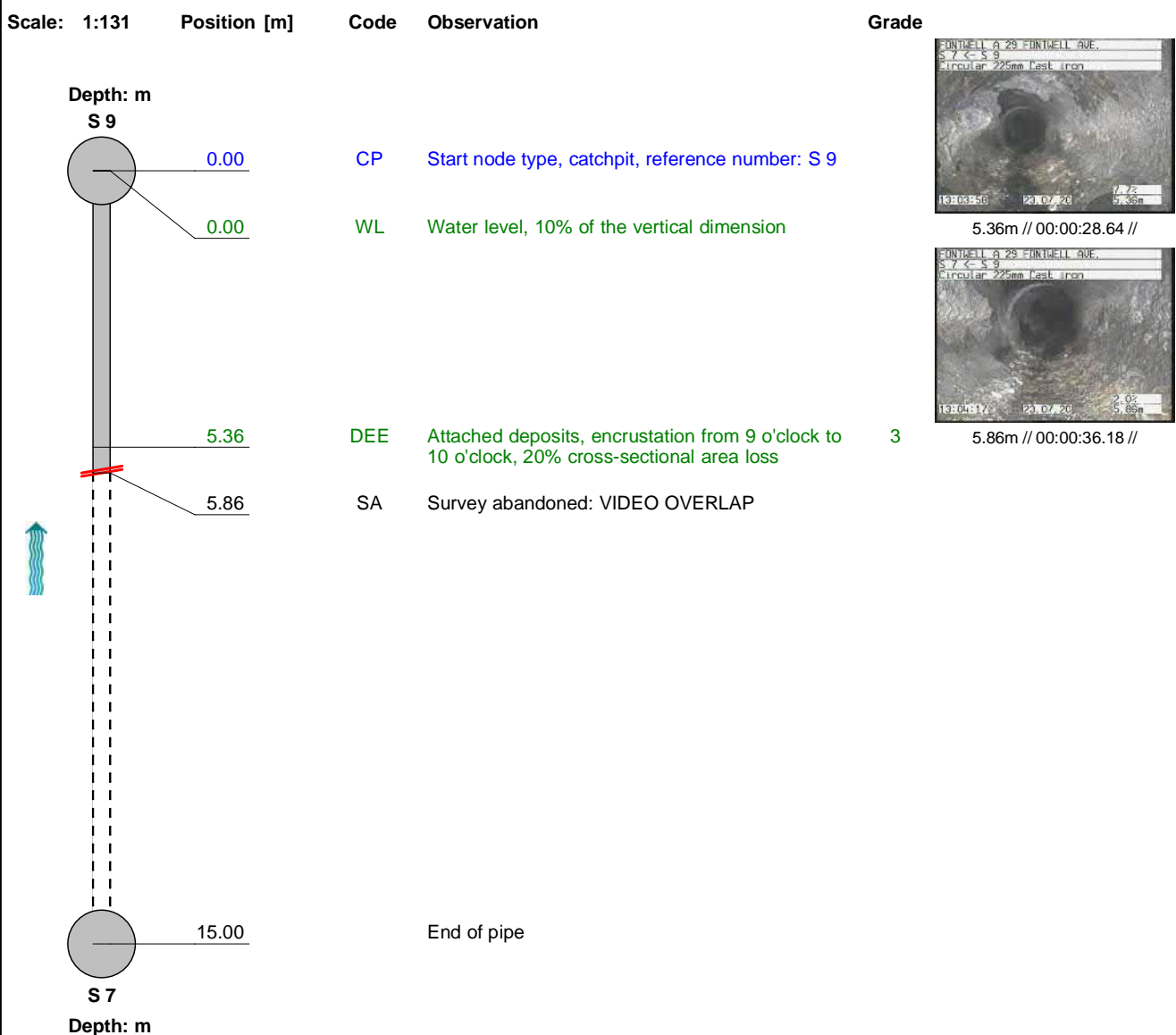
Section Inspection - 23/07/2020 - S 7X

Section 9	Inspection 1	Date 23/07/20	Time 13:03	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 7X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Upstream	Upstream Node:	S 7
Road:	A 29 Fontwell Ave.	Inspected Length:	5.86 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	15.00 m	Downstream Node:	S 9
Surface Type:	Asphalt Highway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Year Constructed:		Pipe Material:	Cast iron		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
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	0.0	0.0	1.0	1	2.0	0.4	2.0	3.0

Section Pictures - 23/07/2020 - S 7X

Section 9	Inspection Direction Upstream	PLR S 7X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 7X_35ac63c3-dec3-455f-8215-92d252d94c64_20200723_130537_508.jpg, 00:00:28, 5.36
 m
 Attached deposits, encrustation from 9 o'clock to 10 o'clock, 20% cross-sectional area loss



S 7X_e398988f-3583-4ed7-83a3-206903a6e557_20200723_130556_333.jpg, 00:00:36, 5.86
 m
 Survey abandoned, VIDEO OVERLAP



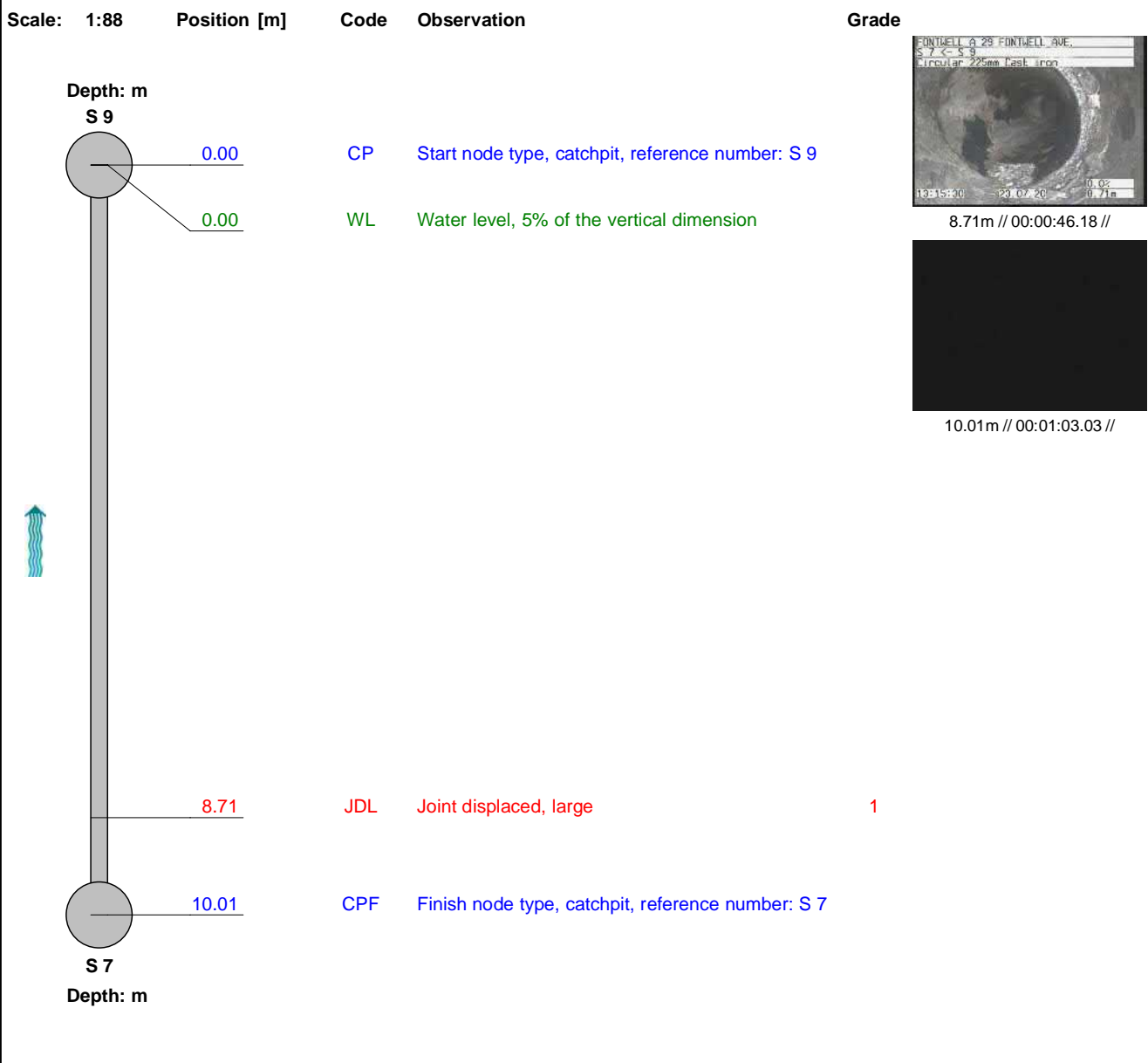
Section Inspection - 23/07/2020 - S 7X

Section 10	Inspection 1	Date 23/07/20	Time 13:07	Client's Job Ref SS0031/004	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S 7X
Operator M BRADLEY		Vehicle PF17 BGE		Camera Crawler	Preset Length	Criticality Grade	Alternative ID

Town or Village:	Fontwell	Inspection Direction:	Upstream	Upstream Node:	S 7
Road:	A 29 Fontwell Ave.	Inspected Length:	10.01 m	Upstream Pipe Depth:	
Location:	A footway beside a road	Total Length:	10.01 m	Downstream Node:	S 9
Surface Type:	Asphalt Highway	Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Year Constructed:		Pipe Material:	Cast iron		
Flow Control:	No flow control	Lining Type:	None		
Inspection Purpose:	Routine inspection of condition	Lining Material:	None		

Comments:

Recommendations:



Structural Defects					Construction Features				
Service & Operational Observations					Miscellaneous Features				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	0.2	2.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 23/07/2020 - S 7X

Section 10	Inspection Direction Upstream	PLR S 7X	Client's Job Ref SS0031/004	Contractor's Job Ref PJ375561
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S 7X_1d069ccc-2753-4800-850e-0dc77471c39a_20200723_131709_472.jpg, 00:00:46, 8.71
 m

Joint displaced, large

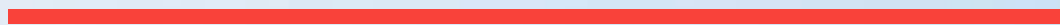


S 7X_5cc3ecad-ec95-4e2a-86ae-7f3e6fa6b50a_20200723_132757_324.jpg, 00:01:03, 10.01
 m

Finish node type, catchpit, reference number: S 7

Appendix E

GROUND INVESTIGATIONS



Appendix E.1

GROUND INVESTIGATION



14 September 2018

Your ref:
Planning ref:
Our ref: J16123/DB/c03

Malcolm Westcott
BDW Southampton
Tollbar House
Tollbar Way
Hedge End
Southampton
Hampshire
SO30 2UH

Dear Mr Westcott,

**RE: LAND NORTH OF BARNHAM ROAD, EASTERGATE, WEST SUSSEX
PRELIMINARY DUE DILLIGENCE DESK STUDY AND GROUND
INVESTIGATION LETTER REPORT**

Further to instruction from BDW Southampton, we have carried out an initial phase of due diligence desk study and ground investigation that has included a site walkover, review of statutory environmental databases, review of historical mapping records and a limited scope intrusive investigation within accessible parts of this site.

The results of the exploratory boreholes together with the soil test results and site plan indicating the locations of the exploratory boreholes are enclosed with this letter report and the findings of these works are discussed below in accordance with our normal terms, limitations and conditions of contract.

Development Proposals

Consideration is being given to the development of this greenfield site through the construction of a residential housing scheme comprising a range of predominantly two storey traditional residential housing together with access roads, hard standing for car parking, communal soft landscaping and areas of private domestic garden, although detailed layout and design proposals are not currently available. As part of this residential development it is understood that there is an obligation to construct or contribute to the construction of a new section of bypass that will be formed at the northern and eastern boundary of the site.

Scope of Work

A site walkover survey, pre-purchase desk study and pre-purchase ground investigation has been carried out to provide information to assist with the preliminary concept design of foundations, floor slabs, road pavements and drainage strategy, and to facilitate inspection of soils and recovery of a samples for laboratory geotechnical and contaminated land testing.

In accordance with current best practice the desk study has been used to guide the scope of the ground investigation and the findings of both the desk study and the ground investigation have been used to formulate a conceptual model for the site and facilitate a preliminary qualitative risk assessment. This assessment has been used as the basis of a discussion of the implications of any identified issues of potential concern with regards to ground contamination in order to determine the requirement for further assessment or remedial action as part of the redevelopment of this site for residential purposes.

An initial phase of ground investigation was carried out in 2017 to install a series of water monitoring standpipes in locations across the site in order to facilitate winter water level monitoring during the winter of 2017/2018.

The subsequent phase of ground investigation carried out in summer 2018 comprised a series of 18 small diameter boreholes drilled to depths of up to 4.45 m in selected representative locations across the accessible parts of the main residential development area. A further series of 11 small diameter boreholes were drilled at approximate 100m centres along the proposed bypass route.

A further series of water and soil gas monitoring boreholes were installed as part of this second phase of works and repairs were carried out to the initial monitoring standpipes which had become damaged during the past year.

It is proposed that monitoring of all standpipes will be carried out during the winter of 2018/2019 and reported as an addendum to this report.

Site Description

The site comprises an irregularly shaped parcel of land that comprises predominantly open agricultural land in the eastern part and predominantly densely overgrown woodland and former orchards within the western part. The site has approximate maximum dimensions of 900m by 400m and is sensibly level with a change in elevation of less than about 4m across the entire site.

The eastern part of the site is currently lain to grass and used as grazing and for growing silage and hay crops. The western part of the site is currently overgrown and locally very overgrown with dense scrub vegetation and woodland with the remains of mature orchard trees and planted wind break tree belts and hedges. The northern boundary to the site is formed by further areas of open agricultural land and houses to the east and areas of densely overgrown orchards to the west. The western site boundary is formed by the extent of adjoining land ownership, gardens to houses fronting onto Fontwell Avenue to the west and other areas of densely overgrown vegetation. The southern boundary to the site is formed by the extent of further areas of land ownership and the extent of gardens to houses fronting onto Barnham Lane to the south, together with a small industrial estate accessed off Barnham Road which forms the eastern part of the southern boundary. Vehicular access to the site is currently provided through this industrial estate and through adjoining land to the north accessed from Eastergate Lane.

Site History and Environmental Site Setting Summary

A review of available historical maps indicates that the site has not been previously developed and has been in use as open agricultural land since at least 1896, the date of the first map studied. During the post-war period, the site is shown to have been bisected by a network of tracks and to have been planted with rows of orchard trees, although by 1970 these are no longer marked as being present.

Information provided by the British Geological Survey indicates the site to be underlain by River Terrace Deposits and Raised Beach Deposits overlying clay soils of the London Clay Formation. Information provided by the Environment Agency indicates the site and the surrounding area to be underlain by a Secondary 'A' Superficial Aquifer but that the site is not shown to be located within the source protection zone of any registered abstraction wells.

Data searches indicate the site to be located within an area of concern with regards to the potential ingress of Radon gas at 1-3% of homes being affected, although detailed enquiries indicate that, there is not a requirement for radon protection to proposed new buildings at this site.

Preliminary Conceptual Site Model Summary and Risk Assessment

The historical use of the site as open agricultural land is not considered to be of concern with regards to potential ground contamination although the use as a commercial orchard could present the potential historical use of a wide range of chemicals such as pesticides and herbicides. Whilst the majority of these chemicals are not biologically persistent in the open environment, there is a perhaps limited potential for some relic pesticide and herbicide contamination at this site. The site is located remove from any farm yards or agricultural centres, such that risk of other contaminants associated with the refueling, repair and servicing of agricultural equipment is considered negligible.

Ground Investigation Sampling Strategy

The ground investigation has comprised a series of small diameter boreholes drilled across the site to depths of up to 4.45 m below ground level. The locations of the boreholes have been selected to provide an acceptable pre-purchase coverage of the site together, including the installation of combined soil gas and groundwater monitoring standpipes along field boundaries where they do not present an obstacle or risk to the ongoing agricultural use of the site.

The soils encountered in the boreholes were inspected by a Chartered Geologist and representative soil samples were recovered for subsequent laboratory testing for geotechnical properties and for contaminated land soil analyses to determine the presence of a wide range of potential soil contaminants. Soil samples were screened for the presence of VOCs by means of headspace testing using a PID. Following headspace screening, samples for soil contamination testing were placed into appropriate brown glass jars with Teflon coated lids that were provided by the MCERTS accredited soils testing laboratory before being placed into a chilled cool box for courier collection and transportation directly to the testing laboratory.

For this investigation the analytical suite of testing was selected to comprise routine metallic contaminants, polyaromatic hydrocarbons (PAHs) speciated hydrocarbons (TPH CWG) and screening for the presence of asbestos carried out as part of the second phase of investigation.

Ground Conditions

The ground conditions have been found to comprise a variable depth of topsoil underlain by a soft Brickearth silty clay with occasional to abundant flint gravel and occasional cobbles has been encountered to depths of between 1.10 m and 2.20 m below ground level.

Beneath these clay soils a variable chalk derived Raised Beach Deposit has been encountered comprising an initially pale brown and brown becoming pale brown and off white silty sand and sandy silt with variable flint gravel, chalk fragments and occasional flint cobbles. These soils locally graded into a pale brown and brown off white silty sandy flint gravel with variable chalk fragments. These granular soils were proved to the maximum depth of investigation with no indications of the anticipated underlying London Clay encountered as part of this ground investigation.

Groundwater was encountered in each exploratory hole at depths of between about 2.50 m and 3.00 m below ground level in the majority of the boreholes, although it is important to note that these boreholes were drilled in the peak of an exceptionally prolonged dry period during one of the hottest summers on record in England, so may not be representative of more normal groundwater conditions.

No visual or olfactory indications of ground contamination were noted as part of the ground investigation works. Selected soil samples were recovered from the near surface soils and topsoil and submitted for laboratory testing at an independent MCERTS accredited laboratory. The results of the soil contamination testing are enclosed together with the records of the exploratory holes and a site plan.

Groundwater Winter Water Level Monitoring

The records of the winter water monitoring programme carried out during the winter of 2017 / 2018 are presented below;

Date	BH No M1 (12.0 mOD)	BH No M2 (11.8 mOD)	BH No M3 (12.7 mOD)	BH No M4 (13.3 mOD)	BH No M5 (14.1 mOD)
15/10/2016	1.98 m bgl (10.02mOD)	1.81 m bgl (9.99mOD)	2.12 m bgl (10.58mOD)	1.88 m bgl (11.42mOD)	1.93 m bgl (12.17mOD)
26/11/2016	1.78 m bgl (10.22mOD)	1.73 m bgl (10.07mOD)	2.05 m bgl (10.65mOD)	1.49 m bgl (11.81mOD)	1.62 m bgl (12.48mOD)
15/12/2016	1.55 m bgl (10.45mOD)	1.52 m bgl (10.28mOD)	1.68 m bgl (11.02mOD)	1.23 m bgl (12.07mOD)	1.46 m bgl (12.64mOD)
20/01/2017	1.65 m bgl (10.35mOD)	1.49 m bgl (10.31mOD)	1.52 m bgl (11.18mOD)	1.02 m bgl (12.28mOD)	1.52 m bgl (12.58mOD)
26/02/2017	1.95m bgl (10.05mOD)	1.67 m bgl (10.13mOD)	1.83 m bgl (10.87mOD)	1.11 m bgl (12.19mOD)	1.61 m bgl (12.49mOD)
16/03/2017	2.18 m bgl (9.82mOD)	2.20 m bgl (9.60mOD)	2.35 m bgl (10.35mOD)	1.95 m bgl (11.35mOD)	1.85 m bgl (12.35mOD)

Further monitoring of these original monitoring standpipes and the subsequently installed additional monitoring standpipes will be carried out during the forthcoming winter of 2018/2019.

Soil Gas Monitoring

Limited soil gas monitoring carried out to date has not indicated any elevated concentrations of potentially hazardous or noxious soil gasses.

Foundation Design Discussion

In areas remote from trees it is anticipated that spread foundations may be generally viable, although there is a risk that during winter months or during prolonged period of heavy rainfall that may occur during the traditionally wetter times of the year, groundwater could be encountered in foundation excavations.

In the vicinity of trees it is anticipated that piled foundations may provide a more sensible foundation approach as a results of the effects of trees upon the near surface clay soils which would render them unsuitable to support spread foundations. Deepened spread foundations extending to the underlying granular soils could be considered at depths of up to about 2.50 m below ground level, although in winter months these are likely to be below the depth of groundwater and therefore not practical as a foundation solution.

Where viable, spread foundations formed within the soft to firm clay soils may be designed on the basis of a preliminary assumed net allowable bearing capacity of 75 kPa, whilst within the underlying net allowable medium dense sand and gravel soils a preliminary assumed net allowable bearing capacity of 125 kPa with a minimum foundation width of 0.60 m. . In the unlikely event that large or closely spaced foundations are required, additional settlement analyses should be carried out to check anticipated settlements remain within normally tolerable limits.

These preliminary bearing capacities include a suitable factor of safety to help ensure that anticipated settlements remain within normally acceptable limits, although these will need to be reviewed in the light of subsequent more detailed ground investigation necessary in due course to support the detailed design of foundations at this site.

Road Pavement Design

MEXE cone assessment of CBR values has been carried out and indicates a low CBR value of between about 3% is provided by the existing soils at this site below the near surface desiccated soils.

In situ CBR testing has been carried out, although the results are considered to be excessively high and affected by the deep desiccation identified as part of the site works and as such are not considered representative of the true equilibrium conditions.

Laboratory soaked CBR testing has been carried out on selected soil samples and indicate a CBR value of up to 5% may be achievable.

Surface Water Management Strategy

Falling head testing has been carried out in a number of the boreholes and it is proposed to carry out further falling head testing within boreholes as part of the winter water level monitoring proposed for the winter of 2018/2019.

Preliminary results indicate infiltration rates in the order of 103-6m/s within the granular soils underlying the near surface clay soils that are assumed to have a negligible permeability. It is important to note however that soakaways formed into the granular soils at depth could result in a direct discharge of surface water to saturated soils during the winter months, which may not be an acceptable condition

Potable Water Supply

The requirement for protection of underground sections of potable water supplies will need to be confirmed through discussions with the proposed statutory provider of mains water to the site, although precautions are not likely to be required for the development at this site.

Soil Contamination Test Results

The determination of contaminated sites is based on a “suitable for use” approach which involves managing the risks posed by contaminated land by making risk-based decisions. This risk assessment is carried out on the basis of a source-pathway-receptor approach.

The significance of the measured concentrations of any chemicals of concern has been assessed in relation to the available C4SLs for a residential with plant uptake end use, together with the revised and updated S4ULs that have been adopted by the Chartered Institute of Environmental Health (CIEH). Whilst the values that have been adopted by the CIEH are not statutory, they are widely accepted as providing a suitable initial screening value against which measured concentrations of potential contaminants can be assessed to determine the requirement for site specific quantitative risk assessment. From a review of the enclosed results it is apparent that ground contamination has not been identified. Screening for the presence of asbestos has also not indicated the presence of detectable fibres.

Testing of selected samples for a range of pesticides and herbicides has also not indicated the presence of detectable concentrations.

Contaminated Land Discussion

The current and historical use of the site as open agricultural land is not considered to pose a risk of ground contamination. The historical use of the site as an orchard presents the potential of relic pesticide and herbicide contamination, although through soil analyses this potential risk may be discounted.

The ground investigation has not identified any visual or olfactory indications of ground contaminants and elevated concentrations of a wide range of potential soil contaminants have not been detected within the selected representative soil samples recovered from the site.

As with any site however, there remains a perhaps limited potential for localized contaminants to be present at this site and as such it is considered that the ground works for the proposed redevelopment at this site should be carried out under a geo-environmental watching brief in order that should any

suspicious or contaminated soils be encountered, they can be appropriately investigated by a geo-environmental engineer and appropriately dealt with in consultation with the regulatory authorities.

Site workers should be made aware of the perhaps limited potential for contamination to be present and a programme of working should be identified to protect workers handling any soil. The method of site working should be in accordance with guidelines set out by HSE¹ and CIRIA² and the requirements of the Local Authority Environmental Health Officer (EHO).

Waste Disposal

On the basis of the laboratory testing it is anticipated that the arisings of made ground and underlying natural superficial soils would be classified as Inert Waste, although confirmatory WAC testing may be required by hauliers and licensed landfill operators once the works are underway.

It is considered that providing it can be appropriately segregated as part of the initial site strip the topsoil recovered from site should be suitable for reuse on site.

Further Work

Further monitoring of the groundwater during the coming winter of 2018/2019 is strongly recommended in order to inform the assessment of the site.

Once the detailed design proposals have been progressed, further phase specific ground investigation will be required to provide a sufficiently comprehensive coverage of the site and to inform the detailed design of foundations and the site drainage strategy.

We trust that this letter provides sufficient information although please do not hesitate to contact me should you have any questions or queries.

Yours sincerely
Wilson Bailey Partnership

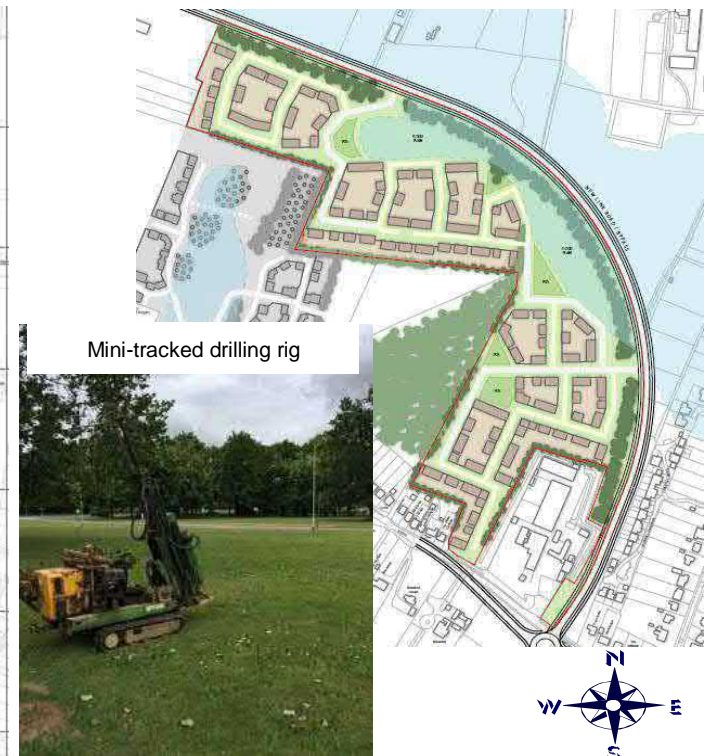
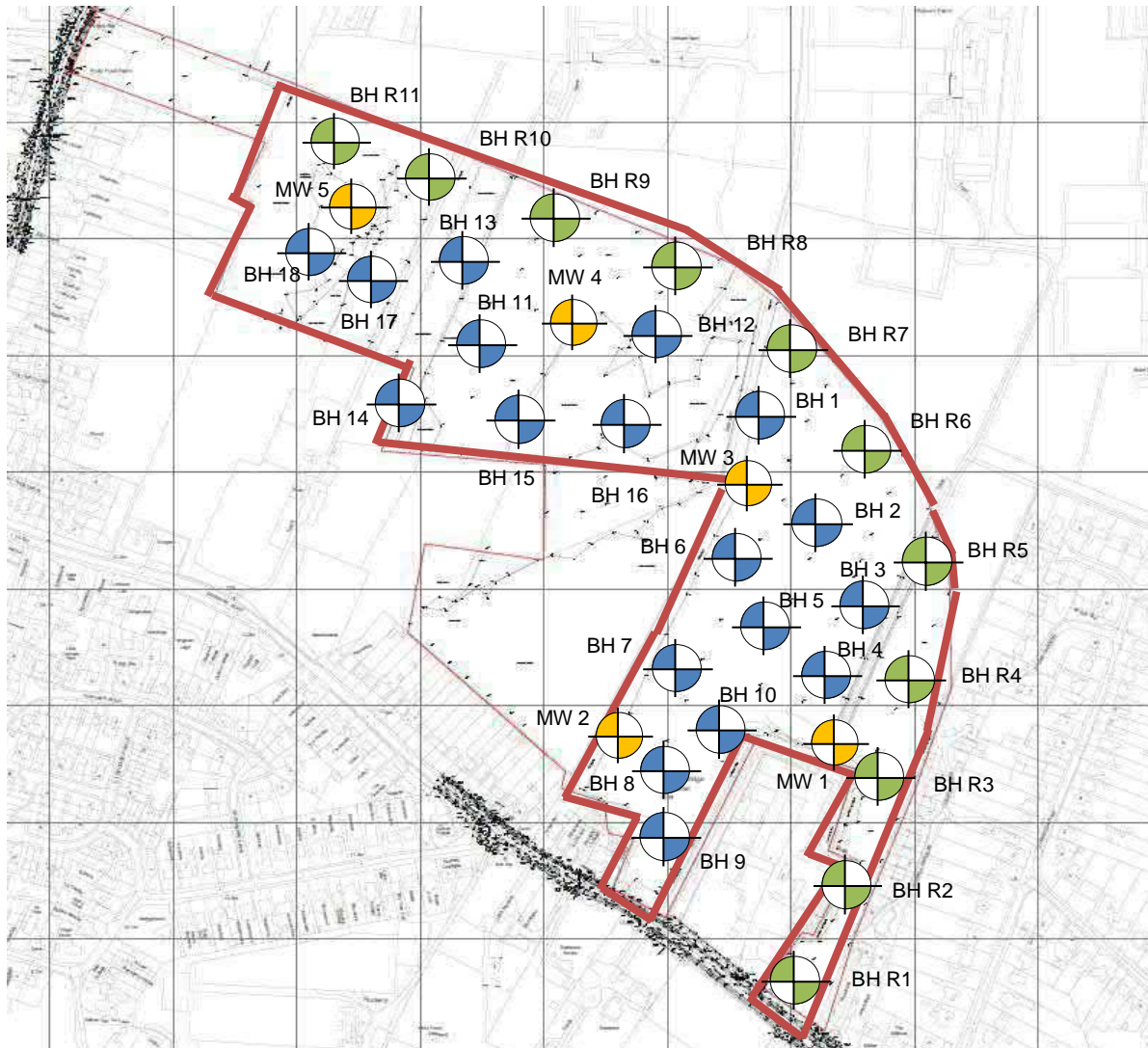
Dominic Brightman
BSc MSc DIC FGS CGeol ARSM
Encs

¹ HSE (1992) HS(G)66 Protection of workers and the general public during the development of contaminated land HMSO

² CIRIA (1996) A guide for safe working on contaminated site Report 132, Construction Industry Research & Information Association




Site Eastergate Site, Barnham, Chichester, West Sussex

Client BDW Southampton



Mini-tracked drilling rig



-  Boreholes drilled along the proposed road corridor
-  Boreholes drilled across the main residential development area
-  previous monitoring well locations that were monitored during winter of 2017/2018 - subsequently repaired following damage



Approximate Scale in metres

Borehole Log

Borehole No.

BH1

Sheet 1 of 1

 Project Name: Eastergate Development Site
 Residential Site

 Project No.
 J18025

Co-ords:

 Hole Type
 WLS

Location: Barnham, West Sussex

Level:

 Scale
 1:50

Client: BDW Southampton

Dates: 02/07/2018

Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							TOPSOIL		
		0.50	D		0.40			0.5	
		1.00	D		1.20		Orange-brown and dark orange-brown silty sandy very clayey fine to medium flint GRAVEL	1.0	
		1.50	D				Brown silty clayey sandy fine to medium coarse flint GRAVEL	1.5	
		2.00	D					2.0	
		2.50	D					2.5	
		3.00	D					3.0	
	▼	3.50	D		3.30		Pale brown and off white very silty sandy clayey fine to medium GRAVEL with layers of soft pale yellowish brown off white and pale grey very silty sandy clay	3.5	
		4.00	D					4.0	
		4.50	D					4.5	
		5.00	D		5.00			5.0	
End of Borehole at 5.00m								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 3.30m.

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex	Level:		Scale	1:50	Logged By	
Client:	BDW Southampton	Dates:	02/07/2018				


Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							TOPSOIL		
		0.50	D		0.45			0.5	
		1.00 1.00	D SPT	N=7 (1,1/1,2,2,2)			Firm brown slightly silty sandy CLAY with occasional fine flint gravel	1.0	
		1.50	D					1.5	
		2.00 2.00	D SPT	N=40 (5,10/10,10,10,10)	1.95		Pale yellowish brown and off white sandy SILT with abundant fine to medium chalk gravel and scattered becoming abundant fine to medium flint gravel	2.0	
		2.50	D					2.5	
	▼	3.00 3.00	D SPT	N=9 (2,4/3,2,2,2)				3.0	
		3.50	D		3.50		Pale brown silty sandy clayey fine to medium flint GRAVEL	3.5	
		4.00 4.00	D SPT	N=19 (3,3/4,4,5,6)	4.00		End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10.0	

Remarks

Groundwater encountered at 3.00m.

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	03/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30		TOPSOIL		
		0.50	D				Firm brown and dark orange-brown silty sandy CLAY with occasional becoming abundant fine to medium flint gravel	0.5	
		1.00	D					1.0	
		1.50	D					1.5	
	▼	2.00	D		1.90		Pale off white very sandy SILT with abundant free white chalk gravel and scattered fine to medium flint gravel <i>Poor recovery 2.00m to 3.00m.</i>	2.0	
					3.00		End of Borehole at 3.00m	3.0	
								3.5	
								4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks	Groundwater encountered at 2.00m. Poor recovery 2.00m to 3.00m.	
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Borehole Log

Borehole No.

BH12

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	03/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.40		TOPSOIL		
		0.50			0.80		"Stiff" brown and dark brown silty CLAY with scattered fine to medium flint gravel - desiccated	0.5	
		1.00	D		1.10		Brown and dark brown silty sandy clayey fine to medium flint GRAVEL	1.0	
		1.50	D				Pale yellowish brown and off white sandy SILT with abundant fine white chalk gravel and scattered fine to medium flint gravel and occasional cobbles	1.5	
		2.00	D					2.0	
		2.50	D					2.5	
	▼	3.00	D					3.0	
		3.50	D					3.5	
		4.00	D		4.00		End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 3.00m.



Borehole Log

Borehole No.

BH13

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	03/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.25		TOPSOIL		
		0.50	D				Firm brown and dark orange-brown silty sandy CLAY with scattered fine to medium flint gravel	0.5	
		1.00	D		1.10			1.0	
		1.50	D				Orange-brown an dark brown silty sandy clayey fine to medium flint GRAVEL	1.5	
		2.00	D					2.0	
		2.50	D		2.40		Off white silty SAND with abundant white fine to medium chalk gravel and abundant fine to medium flint gravel	2.5	
		3.00	D		3.00			3.0	
							End of Borehole at 3.00m	3.30	
								3.5	
								4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks
 Groundwater not encountered.



Borehole Log

Borehole No.

BH14

Sheet 1 of 1

 Project Name: Eastergate Development Site
 Residential Site

 Project No.
 J18025

Co-ords:

 Hole Type
 WLS

Location: Barnham, West Sussex

Level:

 Scale
 1:50

Client: BDW Southampton

Dates: 03/07/2018

Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.40		TOPSOIL		
		0.50	D				Firm brown silty CLAY with occasional becoming abundant fine to medium flint gravel	0.5	
		1.00	D					1.0	
		1.50	D					1.5	
		2.00	D		2.00		Off white and pale yellowish brown sandy SILT with abundant fine white chalk gravel and scattered fine to medium flint gravel	2.0	
	▼						<i>Poor recovery 2.50m to 4.00m</i>	2.5	
					4.00		End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered, at 2.80m. Poor recovery 2.50m to 4.00m.



Borehole Log

Borehole No.

BH15

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	03/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							TOPSOIL		
		0.50	D		0.30		Firm brown and dark orange-brown silty sandy CLAY	0.5	
		1.00	D		0.90		Brown and dark orange-brown silty sandy clayey fine to medium flint GRAVEL with occasional flint cobbles	1.0	
		1.50	D					1.5	
		2.00	D		1.80		Pale off white and yellowish brown sandy SILT with abundant fine white chalk gravel and abundant fine to medium flint gravel and occasional flint cobbles	2.0	
	▼	2.50	D					2.5	
		3.00	D					3.0	
		3.50	D					3.5	
		4.00	D		4.00		End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 2.80m.



Borehole Log

Borehole No.

BH16

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	03/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							TOPSOIL		
		0.50	D		0.45			0.5	
					0.70		Firm dark orange-brown and brown silty CLAY with occasional rootlets and fine flint gravel		
		1.00	D				Dark orange-brown silty sandy clayey fine to medium flint GRAVEL with occasional flint cobbles	1.0	
		1.50	D		1.30			1.5	
		2.00	D				Brown and off white silty locally clayey SAND with abundant fine to medium white chalk gravel and abundant fine to medium flint gravel and occasional flint cobbles	2.0	
		2.50	D					2.5	
		3.00	D					3.0	
		3.50	D					3.5	
		4.00	D		4.00			4.0	
							End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks
Groundwater not encountered.



Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex	Level:		Scale	1:50	Logged By	
Client:	BDW Southampton	Dates:	03/07/2018				

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30		TOPSOIL		
		0.50	D				Firm brown and dark orange-brown silty CLAY	0.5	
		1.00 1.00	D SPT	N=27 (1,2/7,4,8,8)	0.90		Medium dense dark orange-brown and brown silty sandy clayey fine to medium flint GRAVEL	1.0	
		1.50	D		1.50		Pale yellowish brown and off white sandy SILT with abundant fine chalk gravel and occasional locally abundant fine to medium flint gravel and occasional flint cobbles	1.5	
		2.00 2.00	D SPT	N=17 (3,4/4,4,4,5)				2.0	
		2.50	D					2.5	
		3.00 3.00	D SPT	N=33 (2,3/7,10,9,7)				3.0	
		3.50	D					3.5	
		4.00	D		4.00		End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 2.80m.

Borehole Log

Borehole No.

BH18

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	03/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30		TOPSOIL		
		0.50	D				Firm brown and dark orange-brown silty sandy CLAY		0.5
		1.00	D		1.10				1.0
		1.50	D		1.60		Brown and dark orange-brown silty sandy clayey fine to medium flint GRAVEL		1.5
		2.00	D				Off white and pale yellowish brown silty SAND with abundant white fine chalk gravel, abundant fine to medium flint gravel and occasional flint cobbles		2.0
		2.50	D						2.5
	▼	3.00	D						3.0
		3.50	D						3.5
		4.00	D		4.00				4.0
							End of Borehole at 4.00m		4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10.0

Remarks

Groundwater encountered at 3.20m.

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	02/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30		TOPSOIL		
		0.50	D				Firm dark orange-brown silty slightly sandy CLAY with occasional fine to medium flint gravel	0.5	
		1.00 1.00	D SPT	N=12 (3,4/4,3,2,3)	1.10			1.0	
		1.50	D				Pale yellowish brown and off white very silty very sandy locally slightly clayey fine to medium flint GRAVEL	1.5	
		2.00 2.00	D SPT	N=12 (4,4/4,4,2,2)	1.80		Dark orange-brown and brown silty sandy locally clayey fine to medium flint GRAVEL	2.0	
	▼	2.50	D		2.30		Pale brown and pale yellowish brown locally off white very silty SAND in abundant fine flint chalk gravel	2.5	
		3.00 3.00	D SPT	N=23 (4,5/6,5,6,6)				3.0	
		3.50	D					3.5	
		4.00 4.00	D SPT	N=36 (4,7/8,9,10,9)	4.00		End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 2.30m.

Borehole Log

Borehole No.

BH3

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex	Level:		Scale	1:50	Logged By	
Client:	BDW Southampton	Dates:	02/07/2018				

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30		TOPSOIL		
		0.50	D				Firm pale yellowish brown silty slightly sandy CLAY		0.5
		1.00	D						1.0
		1.50	D		1.30		Pale yellowish brown and off white locally brown and orange-brown silty very sandy locally silty clayey fine to medium coarse flint GRAVEL		1.5
	▼	2.00	D						2.0
		2.50	D						2.5
		3.00	D						3.0
		3.50	D		3.20		Pale yellowish brown and off white silty SAND with scattered fine to medium flint gravel		3.5
		4.00	D		4.00			End of Borehole at 4.00m	4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10

Remarks

Groundwater encountered at 2.00m.



Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	02/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							TOPSOIL		
		0.50	D		0.40		"Stiff" brown slightly silty slightly sandy CLAY with occasional becoming abundant fine to medium flint gravel - desiccated	0.5	
		1.00 1.00	D SPT	N=8 (2,2/2,2,2,2)				1.0	
		1.50	D		1.70		Pale yellowish brown and off white silty SAND with abundant fine to medium flint and chalk gravel	1.5	
	▼	2.00 2.00	D SPT	N=6 (1,1/1,1,2,2)				2.0	
		2.50	D					2.5	
		3.00 3.00	SPT	N=12 (3,3/3,3,3,3)	3.00		End of Borehole at 3.00m	3.0	
								3.5	
								4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 2.30m.

Borehole Log

Borehole No.

BH5

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	02/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.40		TOPSOIL		
		0.50	D				Firm orange-brown silty sandy CLAY with scattered flint gravel	0.5	
		1.00 1.00	D SPT	N=11 (1,1/2,3,3,3)	1.30			1.0	
		1.50	D				Off white and pale yellowish brown silty locally clayey SAND with abundant fine chalk gravel and locally abundant and scattered fine to medium flint gravel	1.5	
		2.00 2.00	D SPT	N=23 (6,6/5,6,5,7)				2.0	
		2.50	D					2.5	
	▼	3.00 3.00	D SPT	N=13 (2,3/3,4,3,3)				3.0	
		3.50	D					3.5	
		4.00 4.00	D SPT	N=18 (3,4/4,4,5,5)	4.00			4.0	
							End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10.0	

Remarks

Groundwater encountered at 3.00m.

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	02/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30		TOPSOIL		
		0.50	D				Firm dark orange-brown and brown silty locally sandy CLAY with scattered flint gravel	0.5	
		1.00 1.00	D SPT	N=7 (2,2/2,1,2,2)				1.0	
		1.50	D		1.40		Pale yellowish brown / off white silty SAND with abundant fine chalk gravel and scattered fine to medium flint gravel	1.5	
		2.00 2.00	D SPT	N=21 (5,5/5,5,6,5)				2.0	
		2.50	D					2.5	
	▼	3.00 3.00	D SPT	N=19 (4,4/4,5,6,4)				3.0	
		3.50	D		3.50		Yellowish brown silty sandy CLAY with scattered flint and chalk gravel	3.5	
		4.00 4.00	D SPT	N=10 (2,2/3,2,2,3)	4.00		End of Borehole at 4.00m	4.0	
		5.00	SPT	N=14 (4,3/4,3,4,3)				5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 3.10m.

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	02/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.50	D		0.45		MADE GROUND (reworked topsoil with occasional tile fragments)	0.5	
		1.00 1.00	D SPT	N=14 (2,2/4,4,4)	0.85		Firm brown and dark orange-brown silty slightly sandy CLAY	1.0	
		1.50	D		1.40		Firm brown and dark brown silty sandy CLAY with abundant fine to medium flint gravel	1.5	
		2.00 2.00	D SPT	N=27 (5,7/7,8,7,5)			Pale yellowish brown and off white silty SAND with abundant flint and chalk gravel	2.0	
		2.50	D					2.5	
	▼	3.00 3.00	D SPT	N=9 (2,2/3,2,2,2)	3.30			3.0	
		3.50	D				Firm yellowish silty sandy CLAY with abundant fine chalk gravel and scattered fine to medium flint gravel	3.5	
		4.00 4.00	D SPT	N=21 (4,3/5,5,5,6)	4.00		End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 3.00m.

Borehole Log

Borehole No.

BH8

Sheet 1 of 1

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	02/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							TOPSOIL		
		0.50	D		0.35		Firm dark orange-brown silty sandy CLAY		0.5
		1.00	D						1.0
		1.50	D		1.50		Firm dark brown and brown silty sandy CLAY with abundant fine to medium flint gravel		1.5
		2.00	D						2.0
		2.50	D		2.20		Off white and yellowish brown silty SAND with abundant fine chalk gravel and abundant fine to medium flint gravel with occasional soft clayey layers		2.5
	▼	3.00	D						3.0
		3.40	D						3.5
		4.00	D		4.00		End of Borehole at 4.00m		4.0
									4.5
									5.0
									5.5
									6.0
									6.5
									7.0
									7.5
									8.0
									8.5
									9.0
									9.5
									10

Remarks

Groundwater encountered at 3.00m.

Project Name:	Eastergate Development Site Residential Site	Project No.	J18025	Co-ords:		Hole Type	WLS
Location:	Barnham, West Sussex			Level:		Scale	1:50
Client:	BDW Southampton			Dates:	02/07/2018	Logged By	

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.40		TOPSOIL		
		0.50	D				Firm brown silty sandy CLAY with scattered fine to medium flint gravel	0.5	
		1.00 1.00	D SPT	N=4 (1,0/1,1,1,1)	1.40		Firm brown silty sandy CLAY with abundant fine to medium flint gravel	1.0	
		1.50	D				Firm brown silty sandy CLAY with abundant fine to medium flint gravel	1.5	
	▼	2.00 2.00	D SPT	N=8 (1,1/2,2,2,2)	2.20		Off white and pale yellowish brown silty SAND with abundant chalk gravel and scattered but locally abundant fine to medium flint gravel;	2.0	
		2.50	D					2.5	
		3.00 3.00	D SPT	N=9 (2,2/2,2,2,3)	4.00			3.0	
		3.50	D					3.5	
		4.00 4.00	SPT	N=13 (2,3/3,3,3,4)			End of Borehole at 4.00m	4.0	
								4.5	
								5.0	
								5.5	
								6.0	
								6.5	
								7.0	
								7.5	
								8.0	
								8.5	
								9.0	
								9.5	
								10	

Remarks

Groundwater encountered at 2.00m