

Drainage Investigation Report

For Subsidence Management Services

Policyholder: Mr and Mrs Redhead

Risk Address: 89 West End, March, PE15 8DJ

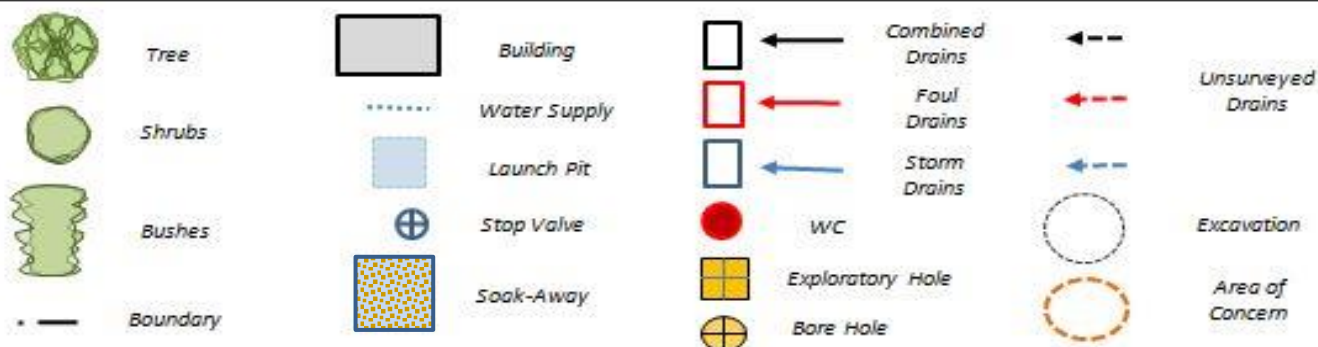
Visit Date: Wednesday 18th December 2019

Client Reference: IFS-LBG-SUB-19-0084888

Our Reference: C53129D17303

Report Date: 27th December 2019

Report Content: Front Page
Site Plan
CCTV Coding
Drain Overview
Quote



Classification: General

RUN	Start From :	CWMH1	Finish at :	Upstream Node	Pipe Ø:	100mm
A	Invert Level (m):	1.14	Invert Level (m):	N/A	Material:	Clay
FOUL	Condition grade:	B	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Fail</i>				
0.00	SN	Start Node from CWMH1				
0.38	JDM	Joint Displaced (Medium)				
0.38	RFJ	Roots Fine at Joint				
0.38	CC	Crack Circumferential				
1.52	FC	Fracture Circumferential				
2.77	FC	Fracture Circumferential				
3.53	DES	Settled Deposits (fine) 30%				
4.10	DER	Settled Deposits (coarse) 20%				
4.90	DES	Settled Deposits (fine) 30%				
4.98	FC	Fracture Circumferential				
5.21	FC	Fracture Circumferential				
5.21	BP	Broken Pipe				
5.36	DES	Settled Deposits (fine) 80%				
5.36	SA	Survey Abandoned - Unable to push past blockages				
RUN	Start From :	CWMH1	Finish at :	CWG2	Pipe Ø:	100mm
B	Invert Level (m):	1.14	Invert Level (m):	N/A	Material:	Clay
COMBINED	Condition grade:	B	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Fail</i>				
0.00	SN	Start Node from CWMH1				
3.04	FC	Fracture Circumferential				
3.34	DES	Settled Deposits (fine) 40%				
3.46	JN	Junction at 9 o'clock				
3.80	JDM	Joint Displaced (Medium)				
3.80	DES	Settled Deposits (fine) 60%				
4.33	DES	Settled Deposits (fine) 40%				
4.64	DES	Settled Deposits (fine) 40%				
4.64	JDM	Joint Displaced (Medium)				
4.90	LL	Line of drain deviates left 15°				
4.90	DES	Settled Deposits (fine) 40%				
5.05	SA	Survey Abandoned - Unable to push past blockages at trap of gully				
RUN	Start From :	CWMH1	Finish at :	SVP	Pipe Ø:	100mm
C	Invert Level (m):	1.14	Invert Level (m):	N/A	Material:	Clay
FOUL	Condition grade:	B	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Fail</i>				
0.00	SN	Start Node from CWMH1				
1.82	JDM	Joint Displaced (Medium)				
2.43	FC	Fracture Circumferential				
2.43	RFJ	Roots Fine at Joint				
3.72	FC	Fracture Circumferential				
4.94	FC	Fracture Circumferential				
5.59	DEE	Attached Deposits (encrustation)				
5.59	CM	Cracks Multiple				
6.50	FN	Finish Node at SVP				

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Following the receipt of your instruction, we attended site to carry out a CCTV survey.

The CCTV survey was undertaken in general accordance with the Manual of Sewer Classification and the WRc Drain Repair Book.

The following presents a summary of the findings with recommendations to repair and/or return the drains to a serviceable state, where necessary.

Drain Run A: CWMH1 Upstream

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: FAIL

CCTV Survey Result: Structural Damage

Recommended Repair:

- 1) Excavate and replace FWG including 1m of pipe and junction to Run A
- 2) Carry out high pressure water jetting up and downstream of junction excavation
- 3) To prepare the drain line and insert 5m of structural liner to cover defects downstream to CWMH1
- 4) To carry out a further look-see CCTV survey upstream of excvaton and report findings.

Drain Run B: CWMH1 Upstream to CWG1

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: FAIL

CCTV Survey Result: Structural Damage

Recommended Repair:

- 1) To excavate and replace existing gully including 1m of adjacent pipework.
- 2) Carry out high pressure water jetting prior to lining
- 3) To prepare the drain line and insert 5m of structural liner to cover defects.

Drain Run C: CWMH1 Upstream to SVP

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: FAIL

CCTV Survey Result: Structural Damage

Recommended Repair:

- 1) To excavate and replace existing Rest bend at base of SVP including 1m of adjacent pipework.
- 2) To prepare the drain line and insert 6m of structural liner to cover defects.

Drain Run D: CWMH1 Upstream to WC

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: FAIL

CCTV Survey Result: Structural Damage

Recommended Repair:

- 1) Excavate and replace rest bend to WC including 1m of pipework
- 2) Carry out high pressure water jetting prior to lining
- 3) To prepare the drain line and insert 7m of structural liner to cover defects.

Please Note: Enablong contractor required to remove WC prior to our attendance including taking up floor coverings around the WC. When works have been completed, enabler required to re-fit the above.

Water Main Test	Water Meter	Result	Notes
		PASS	No movement found on water meter

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RUN / LOCATION: RUN A

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK1120155	32/40mm waste pipes. Remove existing and replace with new PVCu. Fixed to masonry.	m	£9.60	1.00	£9.60
UK1120165	32/40mm waste pipes. Shoes / bends.	nr	£10.81	2.00	£21.61
UK0595	Gully, 225mm x 225mm. Remove existing and replace with new PVCu item. Bed, surround and backfill .	nr	£146.43	1.00	£146.43
UK0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	£131.47	1.00	£131.47
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu.	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete.	m	£14.40	1.00	£14.40
UK0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average thick.	m	£35.35	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	£45.30	1.00	£45.30
UK1045	Removal, set aside and reinstatement of concrete slab paving n.e 100mm thick.	m2	£24.61	1.00	£24.61
UK0890	Junction. Remove existing item and replace with new 110mm PVCu.	nr	£21.74	1.00	£21.74
UK1133	Van pack HPWJ & CCTV in preparation of lining	nr	£148.44	1.00	£148.44
UK1135	Drain Lining - Initial Set-Up Fee (0-3.0m)	nr	£332.64	1.00	£332.64
UK1140	Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain. 3mm Wall thickness.	m	£55.52	2.00	£111.03
	CCTV survey of underground drainage & report (where undertaken as part of other drainage works on site)	nr	£165.00	1.00	£165.00
Total (Excl VAT)					£1,240.99

RUN / LOCATION: RUN B

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0010	Remove existing UPVC pipework in isolated lengths, refix with new 69mm UPVC pipework (incl. brackets).	nr	£14.25	1.00	£14.25
UK0015	Extra over for bends.	nr	£8.31	1.00	£8.31
UK1120155	32/40mm waste pipes. Remove existing and replace with new PVCu. Fixed to masonry.	m	£9.60	1.00	£9.60
UK1120165	32/40mm waste pipes. Shoes / bends.	nr	£10.81	2.00	£21.61
UK0595	Gully, 225mm x 225mm. Remove existing and replace with new PVCu item. Bed, surround and backfill .	nr	£146.43	1.00	£146.43
UK0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep.	nr	£131.47	1.00	£131.47
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu.	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete.	m	£14.40	1.00	£14.40
UK0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average thick.	m	£35.35	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	£45.30	1.00	£45.30
UK1045	Removal, set aside and reinstatement of concrete slab paving n.e 100mm thick.	m2	£24.61	1.00	£24.61
UK1140	Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain. 3mm Wall	m	£55.52	5.00	£277.58
Total (Excl VAT)					£762.28

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RUN / LOCATION: RUN C

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0650	Rest-bend. Remove existing and replace with new PVCu item. Bed, surround and backfill.	nr	£96.02	1.00	£96.02
UK0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm	nr	£131.47	1.00	£131.47
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu.	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete.	m	£14.40	1.00	£14.40
UK0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average thick.	m	£35.35	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	£45.30	1.00	£45.30
UK1045	Removal, set aside and reinstatement of concrete slab paving n.e 100mm thick.	m2	£24.61	1.00	£24.61
UK1140	Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain. 3mm Wall thickness.	m	£55.52	6.00	£333.09
Total (Excl VAT)					£713.62

RUN / LOCATION: RUN D

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0650	Rest-bend. Remove existing and replace with new PVCu item. Bed, surround and backfill.	nr	£96.02	1.00	£96.02
UK0605	Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm	nr	£131.47	1.00	£131.47
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu.	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete.	m	£14.40	1.00	£14.40
UK0025	Protection Temporary works to floors, 1000 gauge polythene.	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average thick.	m	£35.35	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	£45.30	1.00	£45.30
UK1050	Removal, disposal and reinstatement of concrete path / hardstanding n.e 100mm thick.	m2	£54.19	1.00	£54.19
UK1140	Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain. 3mm Wall	m	£55.52	7.00	£388.61
Total (Excl VAT)					£798.71

REPAIR ESTIMATE TOTALS:

Run / Location	Amount (£)
RUN A	£1,240.99
RUN B	£762.28
RUN C	£713.62
RUN D	£798.71
Total (Excl VAT)	£3,515.60

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