

## Drainage Investigation Report

### For Subsidence Management Services

**Client:** Mr G Lindley

**Risk Address:** 36 Yeomead, Bristol, BS48 1JA

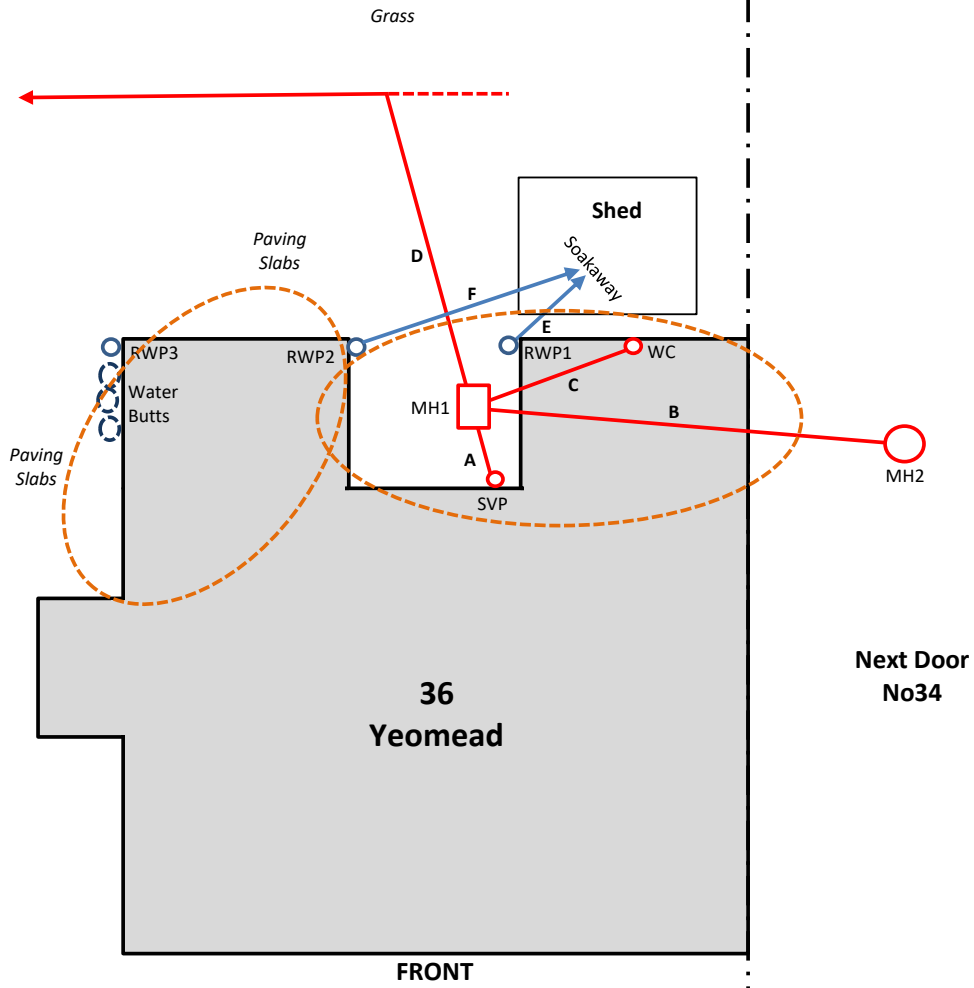
**Visit Date:** 18th November 2022

**Client Reference:** IFS-AVI-SUB-22-0101951

**Our Reference:** C67595 D23713

**Report Date:** 23rd November 2022

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



Key

	Tree		Building		Combined Drains		Unsurveyed Drains
	Shrubs		Water Supply		Foul Drains		Excavation
	Bushes		Launch Pit		Storm Drains		Area of Concern
	Boundary		Stop Valve		WC		
			Soak-Away		Exploratory Hole		
					Bore Hole		

Notes:

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<b>RUN</b>	<b>Start From :</b>	MH1	<b>Finish at :</b>	SVP	<b>Pipe Ø:</b>	100mm
<b>A</b>	<b>Invert Level (m):</b>	0.2	<b>Invert Level (m):</b>	N/a	<b>Material:</b>	Clay
<b>FOUL</b>	<b>Condition grade:</b>	<b>A</b>	<b>Direction:</b>	Upstream	<b>Responsibility:</b>	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
0.80	FN	Finish node at SVP				
<b>RUN</b>	<b>Start From :</b>	MH1	<b>Finish at :</b>	MH2	<b>Pipe Ø:</b>	100mm
<b>B</b>	<b>Invert Level (m):</b>	0.2	<b>Invert Level (m):</b>	N/a	<b>Material:</b>	Clay
<b>FOUL</b>	<b>Condition grade:</b>	<b>A</b>	<b>Direction:</b>	Upstream	<b>Responsibility:</b>	Local Authority
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Pass</i>				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
11.30	FN	Finish node at MH2				
<b>RUN</b>	<b>Start From :</b>	MH1	<b>Finish at :</b>	WC	<b>Pipe Ø:</b>	100mm
<b>C</b>	<b>Invert Level (m):</b>	0.2	<b>Invert Level (m):</b>	N/a	<b>Material:</b>	Clay
<b>FOUL</b>	<b>Condition grade:</b>	<b>B</b>	<b>Direction:</b>	Upstream	<b>Responsibility:</b>	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Fail</i>				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
0.20	JDM	Joint Displaced (Medium)				
0.40	JDM	Joint Displaced (Medium)				
2.40	FN	Finish Node at WC				
<b>RUN</b>	<b>Start From :</b>	MH1	<b>Finish at :</b>	Downstream Node	<b>Pipe Ø:</b>	100mm
<b>D</b>	<b>Invert Level (m):</b>	0.2	<b>Invert Level (m):</b>	N/a	<b>Material:</b>	Clay
<b>FOUL</b>	<b>Condition grade:</b>	<b>B</b>	<b>Direction:</b>	Downstream	<b>Responsibility:</b>	Local Authority
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
0.15	CC	Crack Circumferential				
6.00	FN	Finish Node - Beyond Area of Concern				
<b>RUN</b>	<b>Start From :</b>	RWP1	<b>Finish at :</b>	Soakaway	<b>Pipe Ø:</b>	100mm
<b>E</b>	<b>Invert Level (m):</b>	N/a	<b>Invert Level (m):</b>	N/a	<b>Material:</b>	Clay
<b>STORM</b>	<b>Condition grade:</b>	<b>A</b>	<b>Direction:</b>	Downstream	<b>Responsibility:</b>	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from RWP1				
0.00	WL	Water Level 0%				
1.60	FN	Finish node at Soakaway				
<b>RUN</b>	<b>Start From :</b>	RWP2	<b>Finish at :</b>	Soakaway	<b>Pipe Ø:</b>	100mm
<b>F</b>	<b>Invert Level (m):</b>	N/a	<b>Invert Level (m):</b>	N/a	<b>Material:</b>	Clay
<b>STORM</b>	<b>Condition grade:</b>	<b>A</b>	<b>Direction:</b>	Downstream	<b>Responsibility:</b>	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from RWP2				
0.00	WL	Water Level 0%				
1.60	FN	Finish node at Soakaway				

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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: MH1 Upstream to SVP**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Not Tested

**CCTV Survey Result:** No structural damage

**Recommended Repair:**

No repairs have been recommended as the drain line was found to be free from defects.

**Drain Run B: MH1 Upstream to MH2**

**Pipe Diameter:** 100mm

**Responsibility:** LWA

**Hydraulic Pressure Test:** Pass

**CCTV Survey Result:** No structural damage

**Recommended Repair:**

No repairs have been recommended as the drain line is shared and is therefore a transferred asset. The responsibility and maintenance of this drain falls with the Local Water Authority.

**Drain Run C: MH1 Upstream to WC**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Fail

**CCTV Survey Result:** Structural damage

**Recommended Repair:**

Prepare the drain and line from MH1 upstream to WC, approx 2.5m

**Drain Run D: MH1 to Downstream**

**Pipe Diameter:** 100mm

**Responsibility:** LWA

**Hydraulic Pressure Test:** Not tested

**CCTV Survey Result:** Structural damage

**Recommended Repair:**

No repairs have been recommended as the drain line is shared and is therefore a transferred asset. The responsibility and maintenance of this drain falls with the Local Water Authority.

**Drain Run E: RWP1 Downstream to Soakaway**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Not Tested

**CCTV Survey Result:** No structural damage

**Recommended Repair:**

No repairs have been recommended as the drain line was found to be free from defects.

**Drain Run F: RWP2 Downstream to Soakaway****Pipe Diameter:** 100mm**Responsibility:** Home Owner**Hydraulic Pressure Test:** Not Tested**CCTV Survey Result:** No structural damage**Recommended Repair:**

No repairs have been recommended as the drain line was found to be free from defects.

*NOTE: The re-instatement will be carried out on a like-for-like basis but where concrete or tarmac has been re-instated these surfaces will not match to the existing surface and will be seen as its new material.*

**NOTES**

RWP3 is discharging into a water butt - see photos

Water Main Test		Result	Notes
		PASS	

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**RUN / LOCATION: Run C**

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK1135	Drain Lining - Initial Set-Up Fee (0-3.0m)	nr	£332.64	1.00	£332.64
UK1133	Van pack HPWJ & CCTV in preparation of lining	nr	£148.44	1.00	£148.44
				Total (Excl VAT)	£481.08

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Following your instruction we attended site on 5th September 2023 to carry out further investigations works. We had attended in December 2022 to complete the works to Run C.

We have been advised that there are Storm drains that have been missed off the original investigations.

We found there is a gully at the base of RWP3 and another downpipe close by. These are noted as Runs G&H in the updated report/site plan

We also noted there is a gully at the neighbouring property (RWG2) which is in the area of concern.

Permission would be needed from the owners of the neighbouring property to be able to survey this pipework. Please note an excavation may be required.

**Drain Run G: RWP1 to Downstream Node Point**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Not tested

**CCTV Survey Result:** Structural damage

**Recommended Repair:**

Excavate and replace the rest bend at the base of RWP1 together with upto 1m of pipework

Survey from excavation and report on findings

**Drain Run H: RWG1 to Downstream Node Point**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Not tested

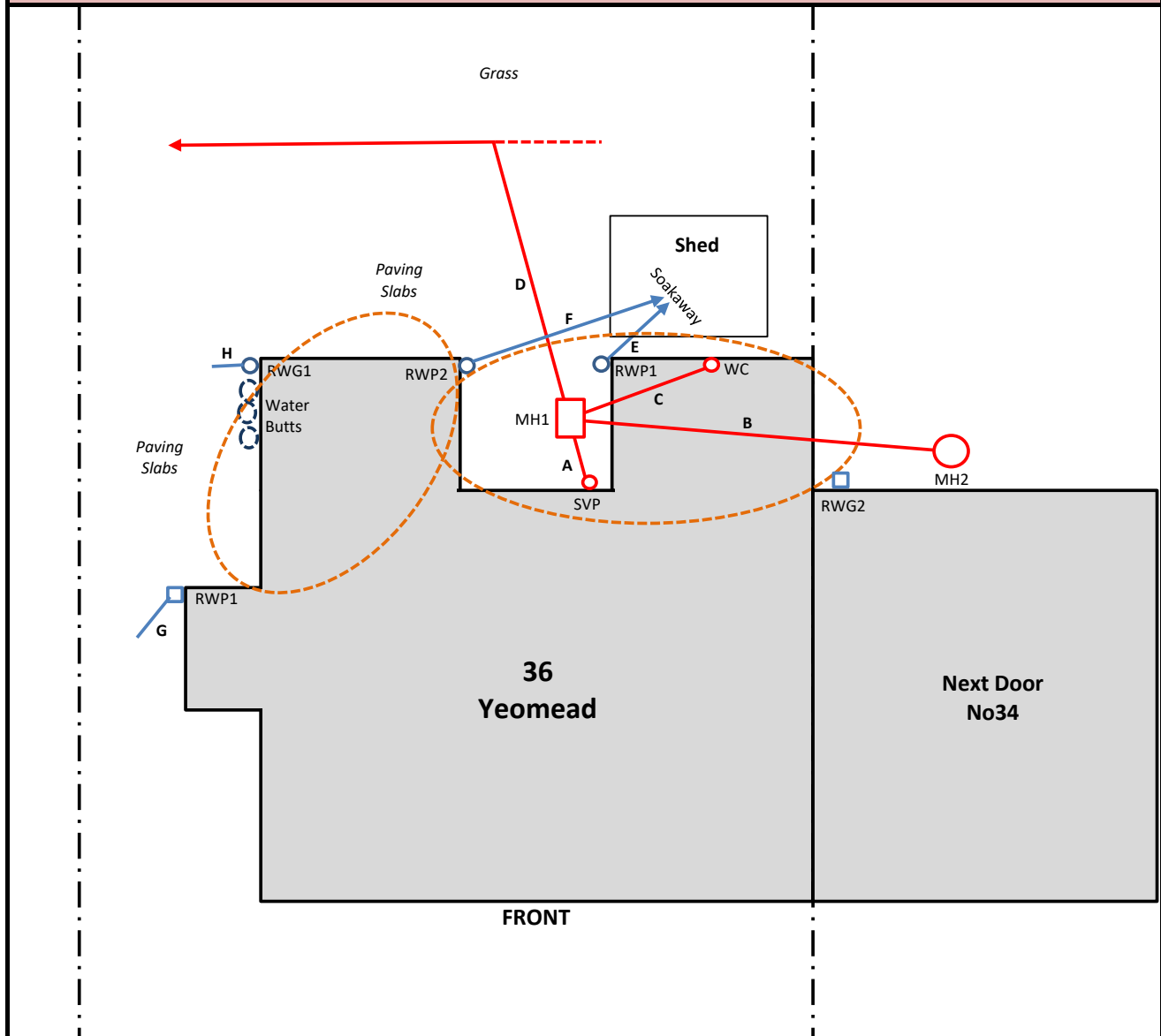
**CCTV Survey Result:** Structural damage

**Recommended Repair:**

Excavate and replace RWG1 together with upto 1m of pipework

Survey from excavation and report on findings





Key

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**RUN / LOCATION: Further Surveys**

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
	CCTV survey of underground drainage & report <small>(customer undertake aspect of other drains works)</small>	nr	£165.00	1.00	£165.00
Total (Excl VAT)					£165.00

**RUN / LOCATION: Run G**

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0650	Rest-bend. Remove existing and replace with new <small>UPVC item. Bed surround and backfill</small>	nr	£96.02	1.00	£96.02
UK1120155	32/40mm waste pipes. Remove existing and replace <small>with new UPVC. Fixed to manhole</small>	m	£9.60	1.00	£9.60
UK1120165	32/40mm waste pipes. Shoes / bends.	nr	£10.81	2.00	£21.61
UK0605	Excavate & remove isolated length. Replace in new <small>110mm UPVC. Bed surround &amp; backfill to 1000mm</small>	nr	£131.47	1.00	£131.47
UK0880	Short Radius Bend. Remove existing item and replace <small>with new 110mm UPVC</small>	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in <small>100mm thick concrete</small>	m	£14.40	1.00	£14.40
UK0025	Protection Temporary works to floors, 1000 gauge <small>metal mesh</small>	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average <small>depth</small>	m	£35.35	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated <small>material off site</small>	m3	£45.30	1.00	£45.30
UK1045	Removal, set aside and reinstatement of concrete <small>slab having a 100mm thick</small>	m2	£24.61	1.00	£24.61
Total (Excl VAT)					£411.73

**RUN / LOCATION: Run H**

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0010	Remove existing UPVC pipework in isolated lengths, <small>replace with new 60mm UPVC pipework (bed, brackets)</small>	nr	£14.25	1.00	£14.25
UK0015	Extra over for bends.	nr	£8.31	1.00	£8.31
UK0595	Gully, 225mm x 225mm. Remove existing and replace <small>with new UPVC item. Bed surround and backfill</small>	nr	£146.43	1.00	£146.43
UK0605	Excavate & remove isolated length. Replace in new <small>110mm UPVC. Bed surround &amp; backfill to 1000mm</small>	nr	£131.47	1.00	£131.47
UK0880	Short Radius Bend. Remove existing item and replace <small>with new 110mm UPVC</small>	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in <small>100mm thick concrete</small>	m	£14.40	1.00	£14.40
UK0025	Protection Temporary works to floors, 1000 gauge <small>metal mesh</small>	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average <small>depth</small>	m	£35.35	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated <small>material off site</small>	m3	£45.30	1.00	£45.30
UK1045	Removal, set aside and reinstatement of concrete <small>slab having a 100mm thick</small>	m2	£24.61	1.00	£24.61
Total (Excl VAT)					£453.49

**REPAIR ESTIMATE TOTALS:**

Run / Location	Amount (£)
<b>Further Survey</b>	£165.00
<b>Run G</b>	£411.73
<b>Run H</b>	£453.49
<b>Total (Excl VAT)</b>	<b>£1,030.22</b>

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