

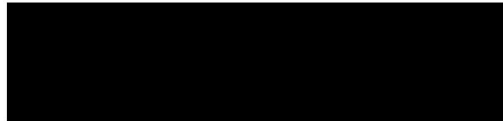
# Drainage Investigation Report

## For Subsidence Management Services

**Client** Mr G Hardy

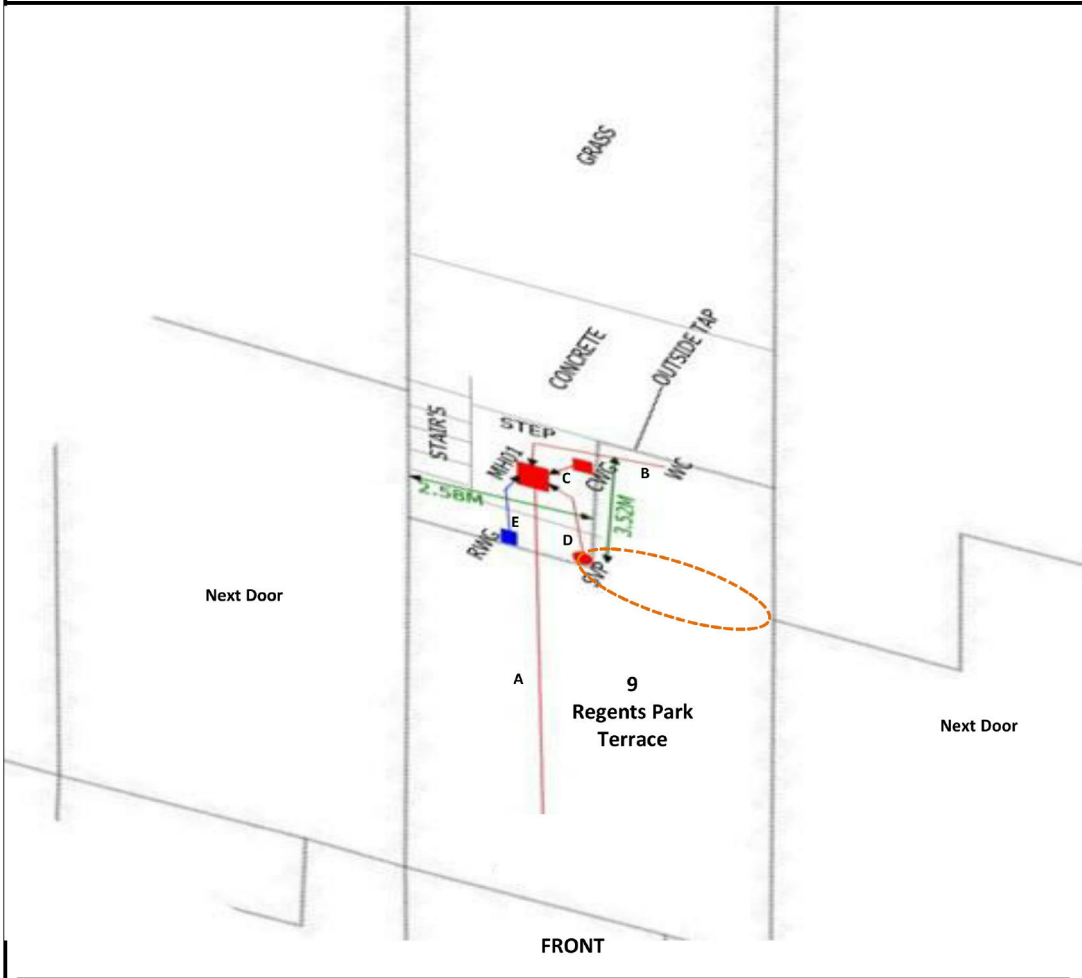
**Risk Address:** 9 Regents Park Terrace, London, NW1 7EE

**Visit Date:** 7th January 2019



**Report Date:** 30th January 2019

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

Address:

9 Regents Park Terrace, London, NW1 7EE

| SubsNetUK       |                          | CCTV Survey  |                          |                 | SubsNetUK              |            |
|-----------------|--------------------------|--|--------------------------|-----------------|------------------------|------------|
| <b>RUN</b>      | <b>Start From :</b>      | MH1  | <b>Finish at :</b>       | Downstream Node | <b>Pipe Ø:</b>         | 150mm      |
| <b>A</b>        | <b>Invert Level (m):</b> | 0.78   | <b>Invert Level (m):</b> | N/a             | <b>Material:</b>       | Clay       |
| <b>FOUL</b>     | <b>Condition grade:</b>  | A  | <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 MH1                                |                          |                 |                        |            |
| 0.00            | WL                       | Water Level 5%                                     |                          |                 |                        |            |
| 6.00            | FN                       | Finish Node - Beyond Area of Concern               |                          |                 |                        |            |
| <b>RUN</b>      | <b>Start From :</b>      | MH1  | <b>Finish at :</b>       | WC              | <b>Pipe Ø:</b>         | 100mm      |
| <b>B</b>        | <b>Invert Level (m):</b> | 0.78   | <b>Invert Level (m):</b> | N/a             | <b>Material:</b>       | Clay       |
| <b>FOUL</b>     | <b>Condition grade:</b>  | 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 5%                                     |                          |                 |                        |            |
| 0.00            | LR                       | Line of drain deviates right °                     |                          |                 |                        |            |
| 0.85            | FC                       | Fracture Circumferential                           |                          |                 |                        |            |
| 0.85            | R                        | Roots  |                          |                 |                        |            |
| 1.85            | FC                       | Fracture Circumferential                           |                          |                 |                        |            |
| 2.00            | JDL                      | Joint Displaced (Large)                            |                          |                 |                        |            |
| 2.25            | LR                       | Line of drain deviates right °                     |                          |                 |                        |            |
| 2.90            | FC                       | Fracture Circumferential                           |                          |                 |                        |            |
| 3.20            | CC                       | Crack Circumferential                              |                          |                 |                        |            |
| 3.60            | LU                       | Line of drain deviates up °                        |                          |                 |                        |            |
| 4.10            | FN                       | Finish Node at WC                                  |                          |                 |                        |            |
| <b>RUN</b>      | <b>Start From :</b>      | MH1  | <b>Finish at :</b>       | CWG             | <b>Pipe Ø:</b>         | 100mm      |
| <b>C</b>        | <b>Invert Level (m):</b> | 0.78   | <b>Invert Level (m):</b> | N/a             | <b>Material:</b>       | Clay       |
| <b>FOUL</b>     | <b>Condition grade:</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 5%                                     |                          |                 |                        |            |
| 0.00            | LU                       | Line of drain deviates up °                        |                          |                 |                        |            |
| 0.55            | OJM                      | Open Joint (medium)                                |                          |                 |                        |            |
| 0.55            | MC                       | Material of drain changes at this point to Plastic |                          |                 |                        |            |
| 0.75            | FN                       | Finish Node at CWG                                 |                          |                 |                        |            |
| <b>RUN</b>      | <b>Start From :</b>      | MH1  | <b>Finish at :</b>       | SVP             | <b>Pipe Ø:</b>         | 100mm      |
| <b>D</b>        | <b>Invert Level (m):</b> | 0.78   | <b>Invert Level (m):</b> | N/a             | <b>Material:</b>       | Clay       |
| <b>FOUL</b>     | <b>Condition grade:</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 5%                                     |                          |                 |                        |            |
| 0.55            | LR                       | Line of drain deviates right °                     |                          |                 |                        |            |
| 0.65            | FC                       | Fracture Circumferential                           |                          |                 |                        |            |
| 1.75            | FC                       | Fracture Circumferential                           |                          |                 |                        |            |
| 1.75            | JDM                      | Joint Displaced (Medium)                           |                          |                 |                        |            |
| 2.15            | LU                       | Line of drain deviates up °                        |                          |                 |                        |            |
| 2.45            | FN                       | Finish Node at SVP                                 |                          |                 |                        |            |
|                 |                          |  |                          |                 |                        |            |
|                 |                          |  |                          |                 |                        |            |
|                 |                          |  |                          |                 |                        |            |
| <b>Address:</b> |                          | 9 Regents Park Terrace, London, NW1 7EE            |                          |                 |                        |            |



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.

All runs were cleaned by high pressure water jetting prior to the CCTV survey.

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 to Downstream Node Point**

**Pipe Diameter:** 150mm

**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 WC**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Not Tested

**CCTV Survey Result:** Structural Damage

**Recommended Repair:**

To prepare the drain line and insert 4.1m of flexi-liner upstream from MH1.

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

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** FAIL

**CCTV Survey Result:** Structural Damage

**Recommended Repair:**

To excavate and replace existing gully including 1m of adjacent pipework.

**Drain Run D: MH1 Upstream to SVP**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Not Tested

**CCTV Survey Result:** Structural Damage

**Recommended Repair:**

To prepare the drain line and insert 2.5m of flexi-liner upstream from MH1

**Drain Run E: MH1 Upstream to RWG**

**Pipe Diameter:** 100mm

**Responsibility:** Home Owner

**Hydraulic Pressure Test:** Not Tested

**CCTV Survey Result:** Structural Damage

**Recommended Repair:**

To prepare the drain line and insert 2.15m of flexi-liner upstream from MH1

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| Water Main Test | Water Meter | Result | Notes |
|-----------------|-------------|--------|-------|
|                 |             | PASS   |       |

*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.*

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**RUN / LOCATION: RUN B**

| Repair Item | Description  | Unit |
|-------------|--|------|
| UK1133      | Van pack HPWJ & CCTV in preparation of lining  | nr   |
| UK1135      | Drain Lining - Initial Set-Up Fee (0-3.0m)   | nr   |
| UK1140      | Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain, 3mm Wall | m    |
| *           | Extra-Over for flexi-Liner   | nr   |

**RUN / LOCATION: RUN C**

| Repair Item | Description  | Unit |
|-------------|--|------|
| UK0010      | Remove existing UPVC pipework in isolated lengths, refix with new 69mm UPVC pipework (incl. brackets). | nr   |
| UK0015      | Extra over for bends.  | nr   |
| UK1120155   | 32/40mm waste pipes. Remove existing and replace with new PVCu. Fixed to masonry.                      | m    |
| UK1120165   | 32/40mm waste pipes. Shoes / bends.  | nr   |
| UK0595      | Gully, 225mm x 225mm. Remove existing and replace with new PVCu item. Bed, surround and backfill .     | nr   |
| UK0605      | Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 100mm     | nr   |
| UK0880      | Short Radius Bend. Remove existing item and replace with new 110mm PVCu.                               | nr   |
| UK1060      | Extra over pipework for surrounding drain run in 100mm thick concrete.                                 | m    |
| UK0025      | Protection Temporary works to floors, 1000 gauge polythene.  | m2   |
| UK8120300   | Hardcore Filling to excavations over 250 mm average thick.   | m    |
| UK2050005   | Disposal by hand excavated contaminated/saturated material off site.                                   | m3   |
| UK1050      | Removal, disposal and reinstatement of concrete path / hardstanding n.e 100mm thick.                   | m2   |

**RUN / LOCATION: RUN D**

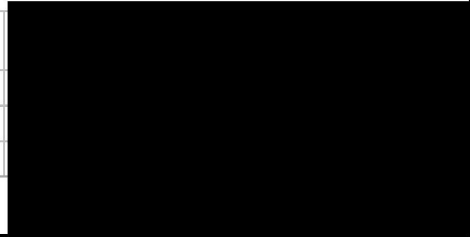
| Repair Item | Description  | Unit |
|-------------|--|------|
| UK1133      | Van pack HPWJ & CCTV in preparation of lining  | nr   |
| UK1140      | Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain. 3mm Wall | m    |
| *           | Extra-Over for flexi-Liner   | nr   |

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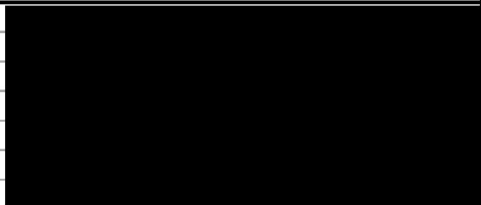
**RUN / LOCATION: RUN E**

| Repair Item | Description  | Unit |
|-------------|--|------|
| UK1133      | Van pack HPWJ & CCTV in preparation of lining  | nr   |
| UK1140      | Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain. 3mm Wall | m    |
| *           | Extra-Over for flexi-Liner   | nr   |



**REPAIR ESTIMATE TOTALS:**

|                |
|----------------|
| Run / Location |
| <b>RUN B</b>   |
| <b>RUN C</b>   |
| <b>RUN D</b>   |
| <b>RUN E</b>   |



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