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## 1. Introduction

Heyne Tillett Steel have been commissioned by Channing School to undertake a Flood Risk Assessment (FRA) and develop a Sustainable Drainage (SuDS) Strategy for the proposed redevelopment of Brunner House on the Channing Senior School site. This report has been prepared to support the planning application submitted to the London borough of Haringey (LBH) for this development.

The report aims to incorporate and demonstrate compliance with the following national, regional and local planning policy guidance and statutory requirement as far as reasonably possible.

- + National Planning Policy Framework (NPPF), 2023
- + Planning Practice Guidance, 2021
- + The London Plan, 2021
- + Draft London Regional Flood Risk Appraisal, 2018
- + LBH Local Plan Strategic Policies, 2013
- + LBH SuDS Design Requirements for LLFA Technical Assessment, 2016
- + LBH Sustainable Drainage Design and Evaluation Guide, 2018
- + Draft LBH Strategic Flood Risk Assessment (SFRA), 2015
- + LBH Local Flood Risk Management Strategy
- + LBH Surface Water Management Plan, 2011

## 2. Site Description

### 2.1 Site Location

The development is located at the National Grid reference of 528715E, 187337E with the postcode N6 5HF. It is bounded by Cholmeley Park to the West and Highgate Hill High Street to the South. The site is located within the London borough of Haringey (LBH) with the minor development consisting of an approximate area of 0.14 ha or 1460m<sup>2</sup>. The location of the site is shown in image 01.

### 2.2 Existing Development

Channing School is an independent secondary school for girls. Historic maps suggest the Brunner House site sits within the former gardens of the buildings located along The Bank. The gardens appear to have stepped regularly at boundary lines following the slope of the hill.

The site remained gardens within the grounds of Channing School until four independent buildings appear on the maps from the 1960s. These buildings were eventually replaced by the single storey Brunner House in 1991 prior to a 1-storey extension completed in 2003.

A copy of the existing architectural general arrangements are shown in Appendix A.

### 2.3 Proposed Development

The proposals include the redevelopment of the existing building of Brunner House with the construction of a two-storey extension along with a single storey basement. The project is a minor development.

### 2.4 Site Topography and Geology

A topographical survey was conducted at the site during August 2023. The survey shows the site to be relatively flat, with an average ground level of 114m. However, there is a steep slope towards the northeast of the building, with a maximum drop of 8m. The extension is proposed to be built within this area. A copy of the topographical survey is shown in Appendix B.

Historic borehole logs from the British Geological Survey (BGS) were accessed to understand the geology of the site. This showed that the ground conditions comprise of Made Ground, underlain with sandy clay (Bagshot Formation). The BGS logs showed sandy clay was encountered between 1 – 15m below ground level (bgl).

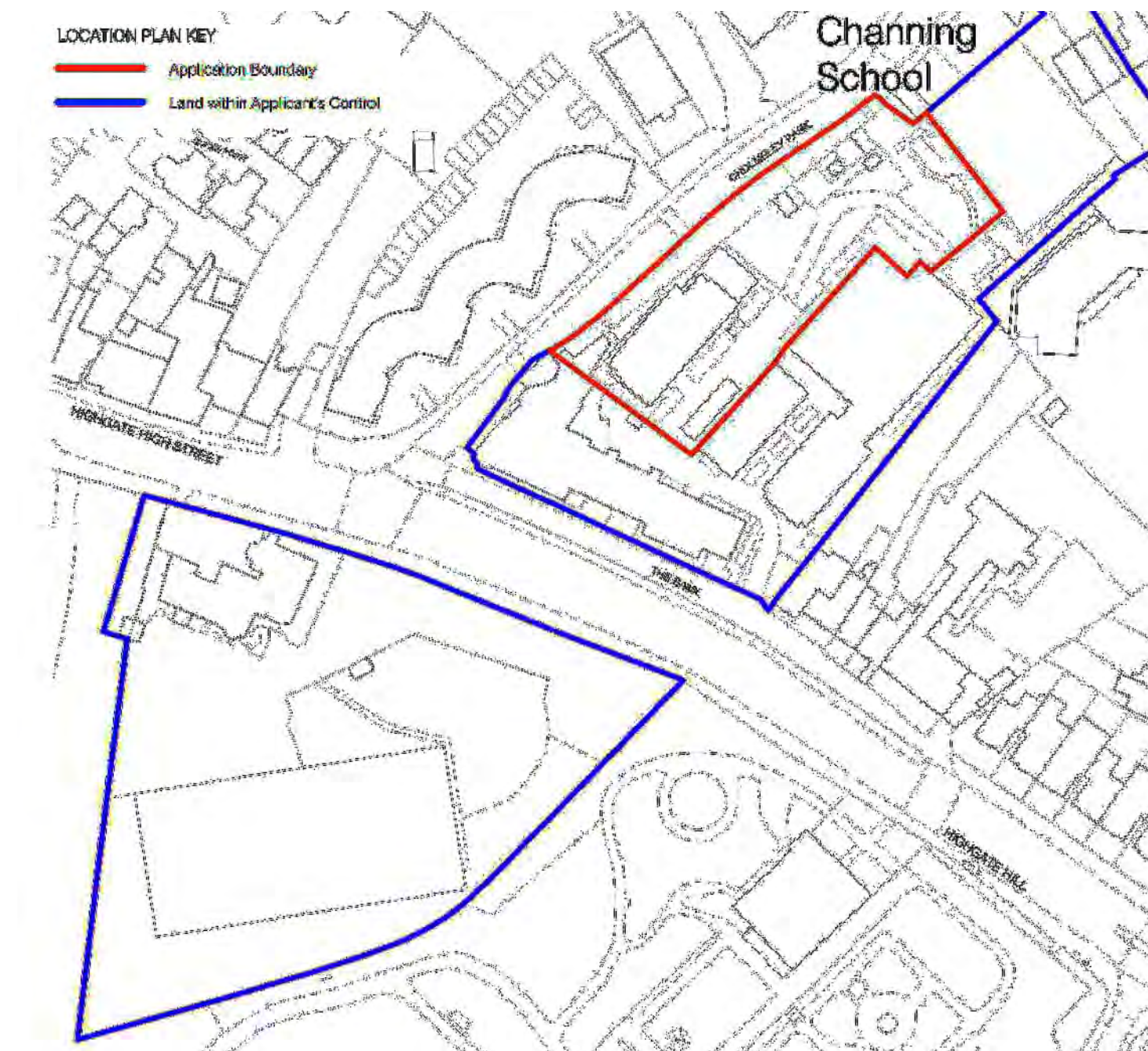


Image 1 - Site Location Plan

3. Flood Risk Assessment

The risk of flooding to the site will be assessed in accordance with the technical guidance document to the NPPF and the NPPG for flood risk and coastal change. Sources including the Environment Agency (EA)’s flood maps and the London Borough of Haringey (LBH) will be referenced to determine the flood risk within the development.

3.1 Flooding from Rivers and Sea

As presented in Image 2, the Environmental Agency (EA)’s Flood Map for Planning shows that the site is located in Flood Zone 1. An extract from this map shown in Image 2. Table 1 is an extract from the technical guidance document to the NPPF which has been used to determine the flood risk vulnerability classification for the proposed development. This proposed development is classed as “More Vulnerable”.

Table 2 has also been extracted from the NPPF and it sets out the compatibility of different land uses based on their flood risk vulnerability. As the proposed development falls in Flood Zone 1 and is classified as “More Vulnerable”, the proposed use is acceptable, with no exception test required to justify the proposed development.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>More Vulnerable</b></p> <ul style="list-style-type: none"><li>+ Hospitals</li><li>+ Residential institutions such as residential care homes, children’s homes, social services homes, prisons and hostels.</li><li>+ Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels.</li><li>+ Non-residential uses for health services, nurseries and <u>educational establishments</u>.</li><li>+ Landfill* and sites used for waste management facilities for hazardous waste.</li><li>+ Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.</li></ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Table 1 - Flood risk vulnerability classification

| Flood risk vulnerability classification | Essential infrastructure | Water compatible | Highly vulnerable       | More vulnerable         | Less vulnerable |
|-----------------------------------------|--------------------------|------------------|-------------------------|-------------------------|-----------------|
| Zone 1                                  | ✓                        | ✓                | ✓                       | ✓                       | ✓               |
| Zone 2                                  | ✓                        | ✓                | Exception Test required | ✓                       | ✓               |
| Zone 3a                                 | Exception Test required  | ✓                | ✗                       | Exception Test required | ✓               |
| Zone 3b functional floodplain           | Exception Test required  | ✓                | ✗                       | ✗                       | ✗               |

Key: ✓ Development is appropriate.  
✗ Development should not be permitted.

Table 2 - Flood risk vulnerability and flood zone ‘compability’

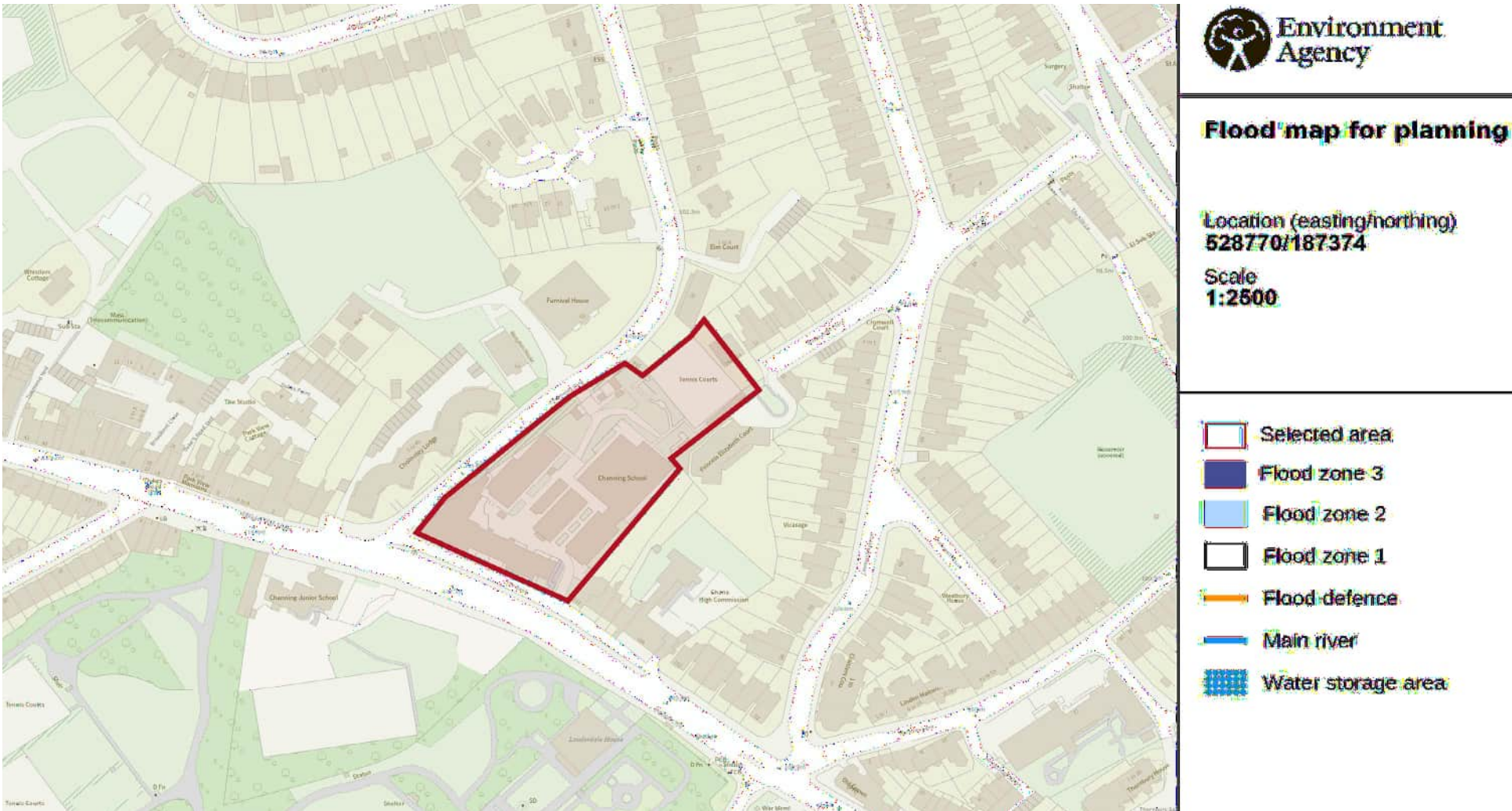


Image 2 - Flood Map for Planning

### 3.2 Flooding from Fluvial/Tidal Sources

Fluvial flooding is flooding caused by rivers, watercourses or ditches overflowing. Tidal flooding is flooding caused by elevated sea levels or overtopping by wave action. In estuarine areas, flooding might arise from either fluvial or tidal flooding, or a combination of the two.

Although the London borough of Haringey contains areas that are situated within Flood Zones 2 and 3, the site is located east in the borough which is within Flood Zone 1. Flood Zone 1 is defined as land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%). Therefore, this confirms that the risk of flooding from rivers and sea is considered to be low for the site.

### 3.3 Flooding from Surface Water

Surface water flooding occurs when the volume of rainwater during storm events exceeds the capacity of infiltrating ground media or overwhelms the existing drainage network but forms overland flow routes and/or ponding instead. This is typically associated with topographical low points.

The EA's long term surface water flood risk map is shown in Image 3. The site is shown to be at very low risk of surface water flooding as illustrated on Image 3.

The development proposals will include the provision of sustainable drainage systems (SuDS) which will provide a betterment of the surface water management of the site with allowance for climate change.

This source of flooding is assessed to be low risk.

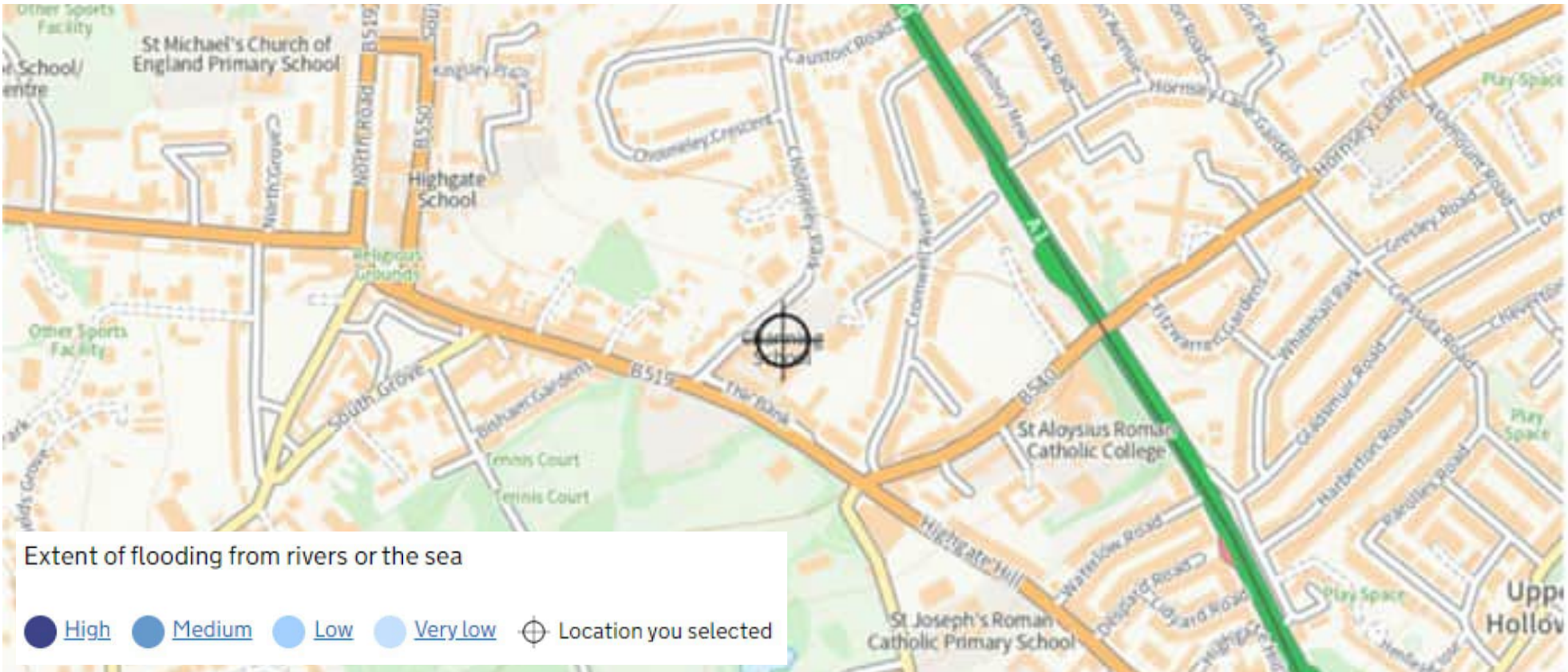


Image 3 - Extent of fluvial flooding (extract from EA website)

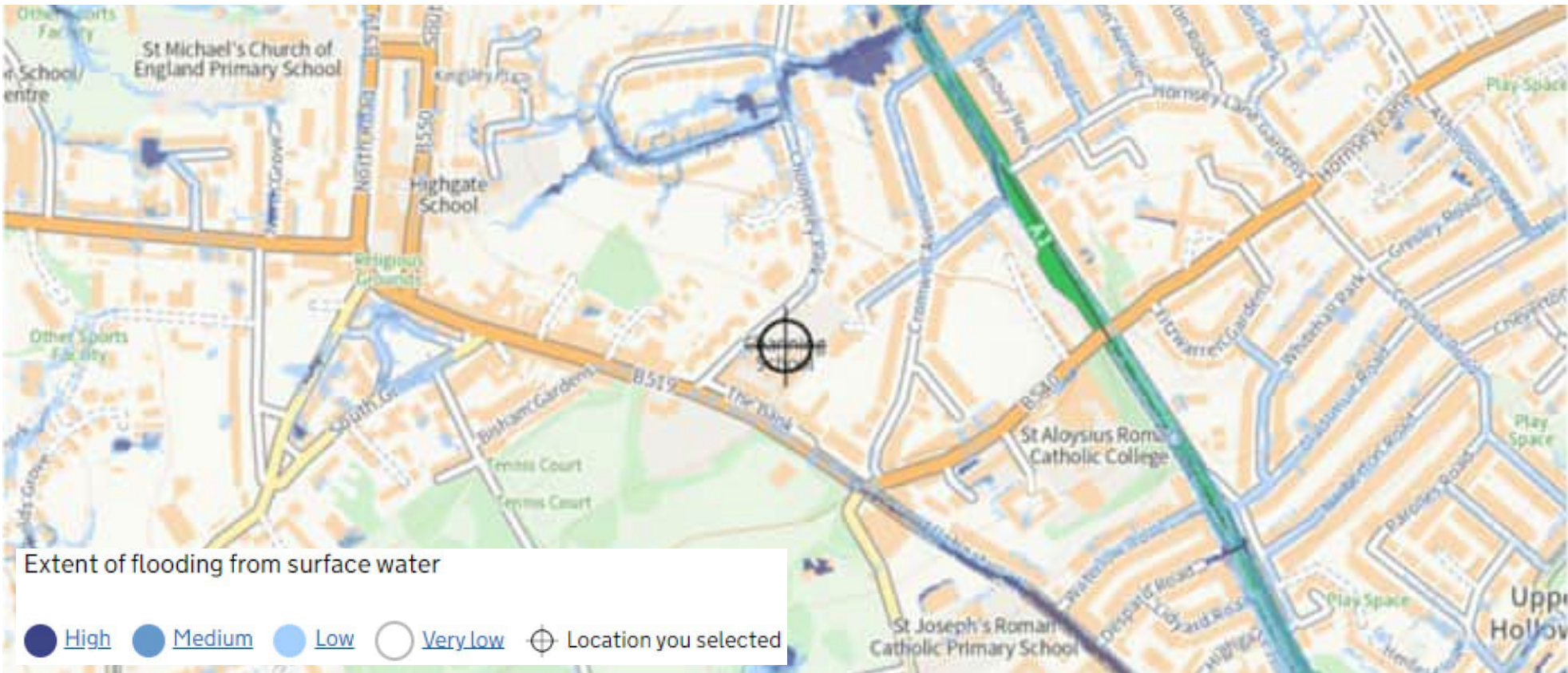


Image 4 - Extent of surface water flooding (extract from EA website)

### 3.4 Critical Drainage Areas

The LBH SWMP detailed key flood risk areas and defined Local Flood Risk Zones (LFRZs) and Critical Drainage Areas (CDAs). The Drain London Tier 2 Technical Specification defines LFRZs as:

*“the actual spatial extent of predicted flooding in a single location. LFRZs are discrete areas of flooding that do not exceed the national criteria for a ‘Flood Risk Area’ but still affect houses, businesses or infrastructure”*

And CDAs as:

*“a discrete geographic area (usually a hydrological catchment) where multiple and interlinked sources of flood risk (surface water, groundwater, sewer and/or river) often cause flooding in a Flood Risk Area during severe weather thereby affecting people, property or local infrastructure.”*

The borough has been divided into various CDAs, with the proposed site situated within Group4\_062. Analysis of the flood maps shows the site is not at risk as although it is located within a CDA, it is not located within a LFRZ. Therefore, the risk of surface water flooding is deemed low.

A copy of the CDAs within Haringey is shown in Appendix C.

### 3.5 Flooding from Sewers

Sewer flooding is typically caused by heavy rainfall or blockages in the system. The frequency of sewer flooding is increasing due to climate change, population growth and increased impermeable areas. There is an increased risk of sewer flooding within Tower Hamlets due to London having combined sewers, as opposed to separate networks which deal with foul waters and surface water separately.

The London Borough of Haringey SFRA and PFRA collated data from Thames Water to provide a high-level analysis of sewer relating flood incidents. Locations of the areas of sewer flooding were identified using a four-digit postcode. Data collected showed the majority of sewer flood events were located east and south of Haringey, especially in Highgate. However, the number of sewer incidents were recorded to be low with 1 – 5 sewer flood events recorded. Appendix C shows the number of recorded sewer flood incidents within the borough.

The development includes a proposed basement level which will drain via a pumped drainage network. The pumped drainage system at basement level will protect the basement against sewer surcharge.

Therefore, the risk of flooding from sewer is assessed to be low.

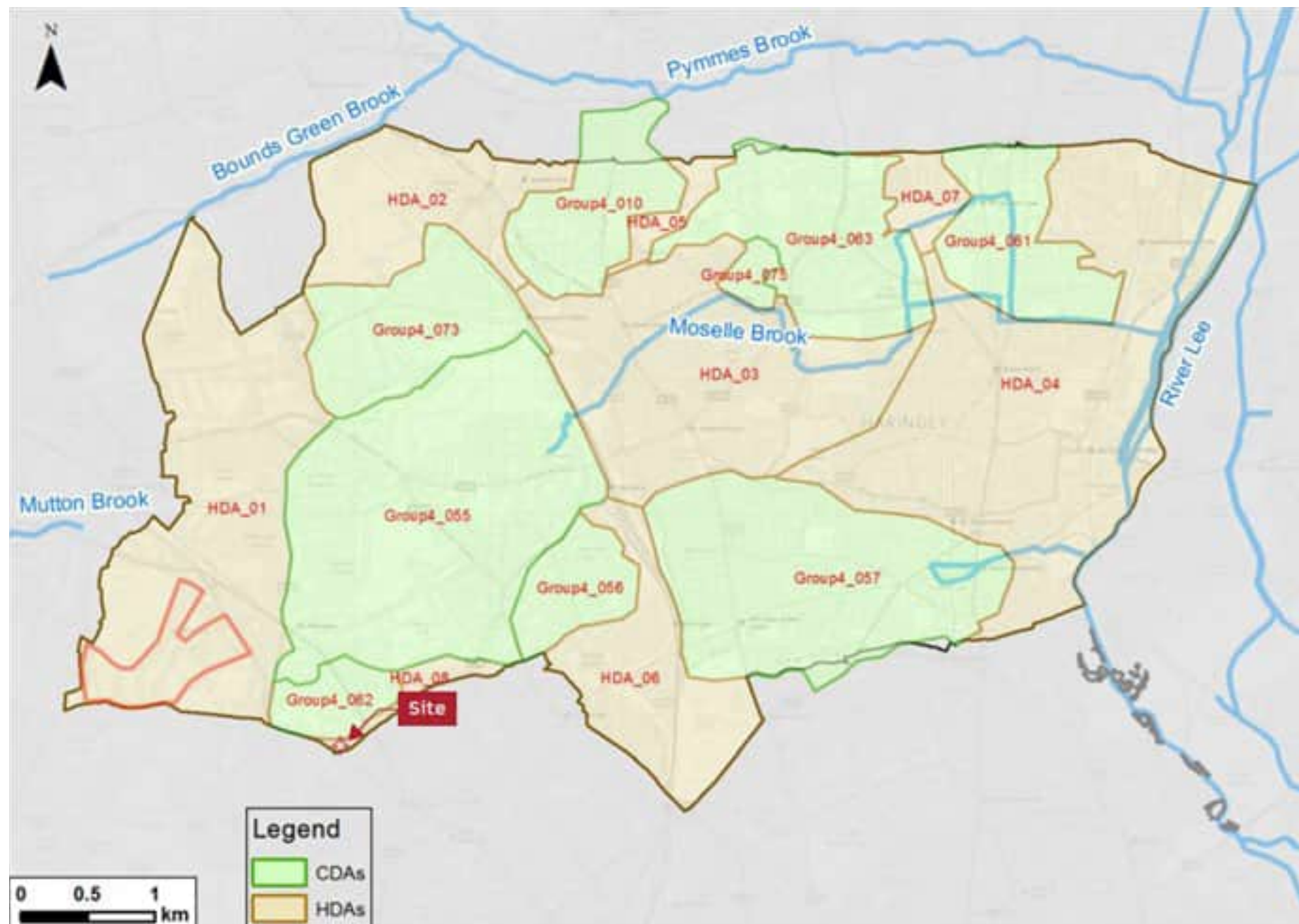


Image 5 - CDAs within Haringey

### 3.6 Flooding from Reservoirs, Canals, and other Artificial Water Sources

There are no reservoirs, canals or other artificial water sources in the vicinity of the site which could pose a risk of flooding to the site. This can be seen on the EA's long term flood risk map shown in image 5. Therefore, the risk of flooding from reservoirs, canals and other artificial water sources is considered to be very low.

### 3.7 Flooding from Groundwater

Groundwater flooding can occur on sites that are located on permeable ground. After a prolonged period of rainfall, a considerable rise in the water table can result in inundation for extended periods of time.

The LHB SFRA concluded that the London Borough of Haringey is at low susceptibility of groundwater flooding. Additionally, the site is underlain by bagshot formation, which is comprised of sand, which is permeable.

Therefore, the risk of groundwater flooding is low.



Image 6 - Flood Risk from Reservoir (extract from EA website)

## 4. Existing Drainage Arrangements

### 4.1 Public Drainage Network

The Thames Water asset map for the area surround the development was obtained and can be seen in Image 7.

The site is bounded by a separate 229mm diameter foul and surface water sewer located on Cholmeley Park to the northwest of the site. A 375mm diameter combined sewer is also located on Highgate High Street to the south.

A copy of the Thames Water sewer record is contained in Appendix D.

### 4.2 Existing On-site Drainage

A CCTV survey was conducted in October 2023, showing a separate foul and surface water network for the below ground drainage network of the site. Both the foul and surface water systems discharge into the Thames Water public foul and surface water sewers, respectively, in Cholmeley Park.

It is proposed to reuse the existing onsite connections as far as feasible. However, the drainage network could not be fully surveyed due to debris build up. Furthermore, structural defects including fractures and joint displacements were identified within the pipes. Therefore, jetting of the pipes along with repair works will be required where necessary to ensure the existing drainage can be reused.

The complete site contains various school buildings with each building consisting of their own drainage network.

A copy of the CCTV survey is shown in Appendix E.

Further CCTV survey work is required to investigate the internal drainage conditions of the building. This will determine the condition of the existing drainage network and if any existing drainage can be reused.

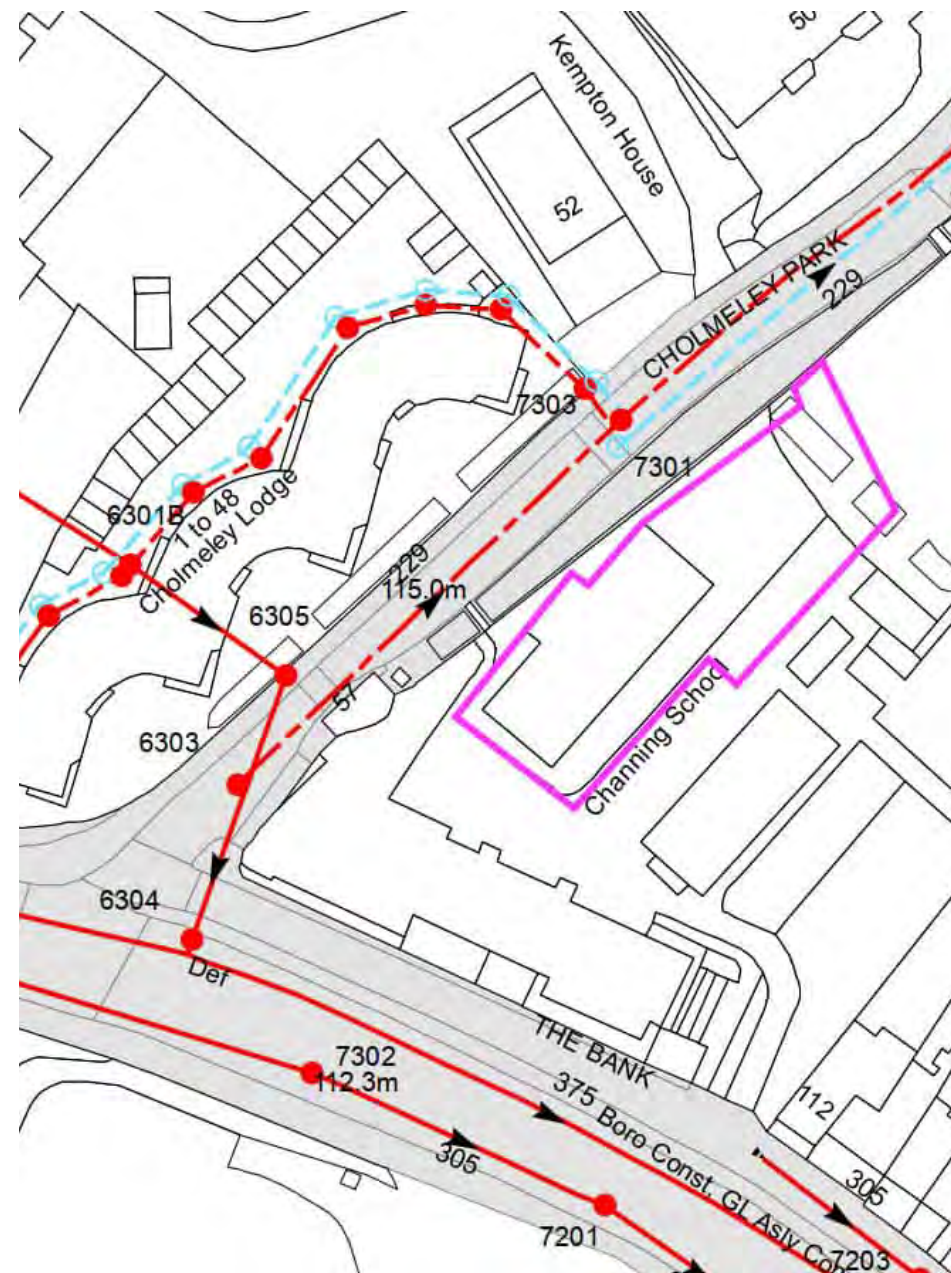


Image 7 - Thames Water Asset Map Location

### 4.3 Existing Surface Water Rates

The development site has an area of approximately 0.14 ha or 1460m<sup>2</sup> and is completely impermeable.

The existing peak run-off rate has been calculated using the Modified Rational Method in accordance with the following formula:

$$Q = 3.61 C_v \times i \times A$$

Where  $C_v$  is the volumetric runoff coefficient,  $A$  is the catchment area in hectares and  $i$  is the peak rainfall intensity in mm/hr using FEH rainfall intensities.

Table 3 summarises the existing peak run-off rate for the 1 in 2 year, 1 in 30 year, 1 in 100 year and 1 in 100 year + 40% climate change (CC) rainfall events.

| Rainfall Event | Rainfall Intensity | Existing Discharge Rate |
|----------------|--------------------|-------------------------|
| $Q_2$          | 36.92 mm/hr        | 19.46 l/s               |
| $Q_{30}$       | 96.58 mm/hr        | 50.90 l/s               |
| $Q_{100}$      | 127.85 mm/hr       | 67.38 l/s               |
| $Q_{100+40}$   | 178.99 mm/hr       | 94.34 l/s               |

\*FEH data cannot be used to generate a 1 in 1 year rainfall profile

Table 3 - Existing Surface Water Run-off Rates

## 5. Proposed Drainage Arrangements

It is proposed to use SuDS for the capture of surface water runoff where possible and reuse the existing outfalls to the public sewers. Separate foul and surface water networks will be provided to serve the site and will be designed in accordance with Building Regulations Part H.

### 5.1 Surface Water Drainage Proposals

In accordance with the London Plan and LBH policy, the surface water drainage network has been designed in coordination with the architect and landscape architect and aims to incorporate SuDS into the fabric of the new extension.

A SuDS Assessment has been carried out using guidance set out in the London Plan. Priority was given to SuDS which provide multifunctional benefits and coordination was undertaken to ensure that SuDS are incorporated into the building fabric and the landscaping. The LBH SuDS proforma has been completed and is included in Appendix F.

Table 4 presents the drainage hierarchy, taken from Policy SI13 of the London Plan, which shows which SuDS are proposed to be incorporated into the development.

| SuDS Technique |                                                                                                                    | Included | Examples                                                                                                                                                                                                                                                                                                           |
|----------------|--------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1              | Rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)                          | ✓        | Blue-green roofs are proposed at roof level on the extension block to provide attenuation and passive irrigation of the soft landscaping on the roof.                                                                                                                                                              |
| 2              | Rainwater infiltration to ground at or close to source                                                             | ✗        | From a review of the site investigation borehole logs, the permeability of the site is deemed to be unsuitable for infiltration due to being underlain by London Clay Formation. It is therefore concluded that infiltration is not viable across the site.                                                        |
| 3              | Rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens) | ✓        | The proposed blue-green roof will attenuate rainwater at source, which will drain slowly into the existing combined sewers in the immediate vicinity of the site.                                                                                                                                                  |
| 4              | Rainwater discharge direct to a watercourse (unless not appropriate)                                               | ✗        | There are no watercourses nearby of the site. It is therefore concluded that discharge to a watercourse is not achievable.                                                                                                                                                                                         |
| 5              | Controlled rainwater discharge to a surface water sewer or drain                                                   | ✓        | It is proposed to discharge surface water from SuDS features into the surface water sewer located on Cholmeley Park. Discharge will be at a restricted rate, utilising existing connections where possible.                                                                                                        |
| 6              | Controlled rainwater discharge to a combined sewer                                                                 | ✗        | Although there is a combined sewer located south of the site, the CCTV survey concluded that the buildings located south connect to this public combined sewer. As the current development has an existing connection to the public foul and surface water sewers, it will be proposed to reuse these connections. |

Table 4 - Surface Water Drainage Hierarchy

5.2 Blue Roofs

The intent is to provide multifunctional source control features (blue roofs) wherever feasible. Blue roofs have been proposed on the roof level on the new extension of the building. Green roofs and planters are proposed atop blue roofs where feasible with the remainder paved or terraced. The blue roof will serve a greater catchment area due to the pitched roof of the existing structure. See Table 6 for the areas and locations of the blue roof.

| Level           | Catchment Area (m²) | Effective Area (m²) | Crate Depth (mm) | Flow Rate (l/s) | Provided Volume (m³) |
|-----------------|---------------------|---------------------|------------------|-----------------|----------------------|
| eExtension Roof | 211.7               | 105.41              | 125              | 0.95            | 11.86                |

Table 5 - Blue roof summary

The total effective blue roof area is 105m² which serves its own catchment. Blue roofs have been derived based on the ACO Roofbloxx system. ACO storage calculations can be found in Appendix G.

Where possible, blue roofs will have extensive green roof overlaying them. This would use a geocellular storage system to store rainwater and has the potential to provide passive irrigation to serve the soft landscaping above.

Surface water discharge will be restricted using a flow control device and is intended to discharge to the surface water public sewer within Cholmeley Park.

Refer to Appendix H for the proposed SuDS Strategy plan and Appendix G for the blue roof calculations.

The addition of blue-green roofs to the proposed extension of the development provides a betterment on the existing conditions. This is in accordance with planning policy as a minor application.

### 5.3 Water Quality

Surface water runoff from roofs is considered to be clean. As such, no additional pollution mitigation is deemed necessary.

### 5.4 Exceedance Plan

The surface water drainage strategy has been designed to accommodate runoff from the 1 in 100 year +40% climate change return period. The incorporation of SuDS measures means the site should not contribute any additional risk both on site and outside the development to the current scenario.

It is considered all flows served by blue roofs should be able to enter the attenuation provided without issues of localised backing up. Where orifices are temporarily blocked at blue roof outlets, water would build up within the blue roof prior to discharging at an unrestricted rate via the overflow feature. Outlets should be easily accessible to allow for clearance when required.

### 5.5 Proposed Foul Drainage

It is proposed to re-use the existing foul drainage points and below ground runs where they sit below the retained ground floor slab as much as feasible.

Additional drain points will be added for the extension and classrooms which will feed into a new system, also picking up the retained points from the existing building. It is proposed for the foul water to drain into the basement level located within the new extension building, which will be pumped to high level and drain via gravity to the existing outfall connection to the foul water sewer located on Cholmeley Park.

A pre-planning enquiry will be submitted to Thames Water to confirm sufficient capacity in their network to accept the flows from the development. The assessment (undertaken by Thames Water) would confirm the capacity of the local sewer network and details relating to the point of connection, with the aim to identify any requirement to upgrade the local sewer network if required.

A Section 106 (Water Industry Act 1991) will be completed after planning and between RIBA Stages 4 and 5 to obtain formal permission to connect to the public sewer.

### 5.6 Drainage Inspection and Maintenance Strategy

In accordance with CIRIA C625, it is recommended that a private SuDS maintenance agreement is agreed as a simple contract between the property owner / tenant (customer) and the maintenance provider (the maintainer). It is mainly to facilitate continuing maintenance of the SuDS that are in private ownership. The maintenance requirements are in accordance with the CIRIA C753 SuDS Manual 2015. Refer to Appendix I.

## 6. Conclusion

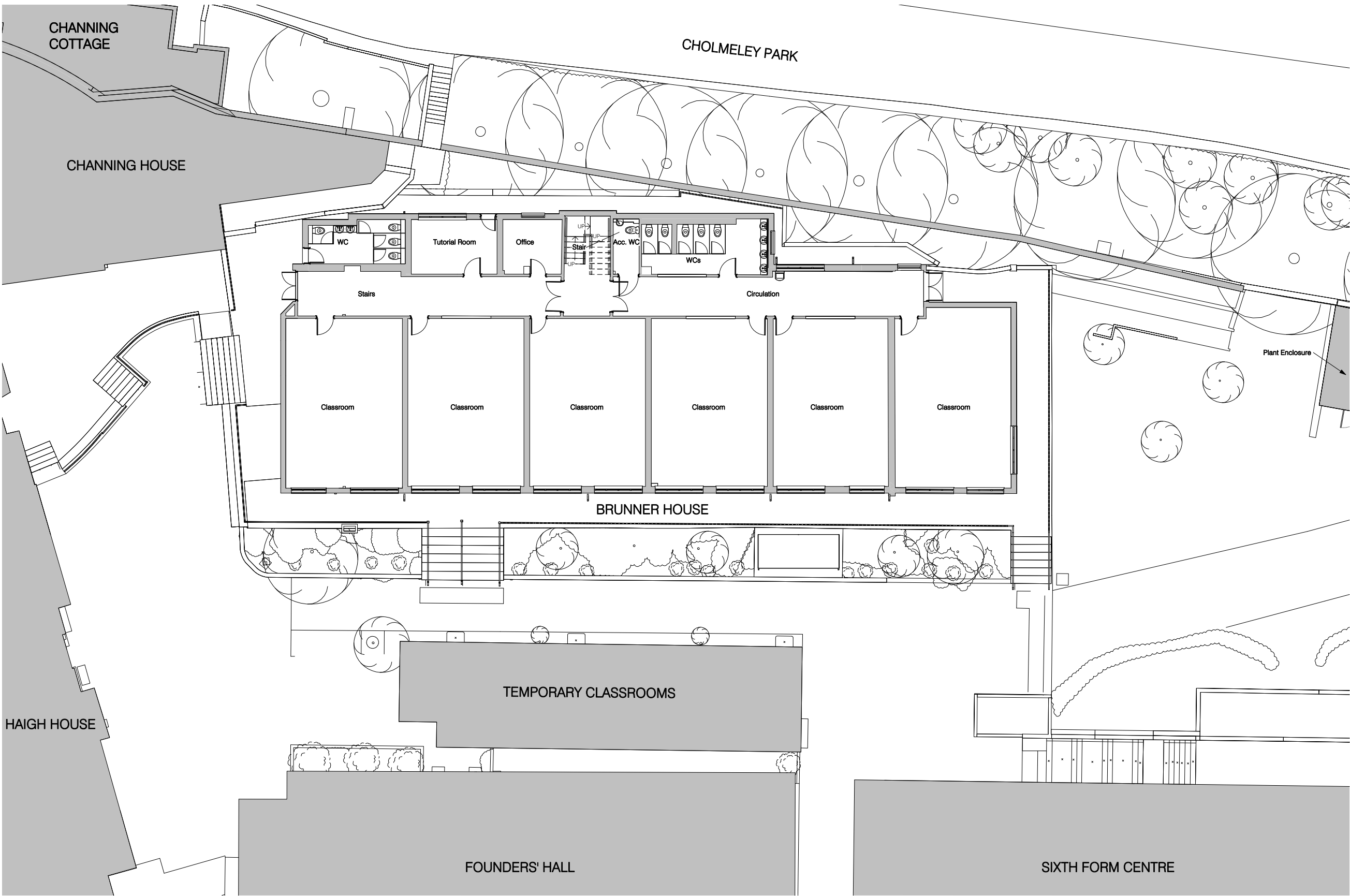
This FRA and SuDS Strategy report has been prepared in accordance with local and national planning policy, along with guidance documents including the LBH flood risk and policy documents. The proposed development aims to comply with local and national planning policy on flood risk and sustainable drainage as far as reasonably practicable.

This report has confirmed that the development site is at low risk from all sources of flooding.

The proposed development includes SuDs in the form of blue-green roofs where there are proposed additions to the development, providing a betterment on the existing conditions. This is in accordance with planning policy as a minor application. Therefore, the proposed development complies with local, regional, and national planning policy on flood risk and sustainable drainage.

# Appendix A

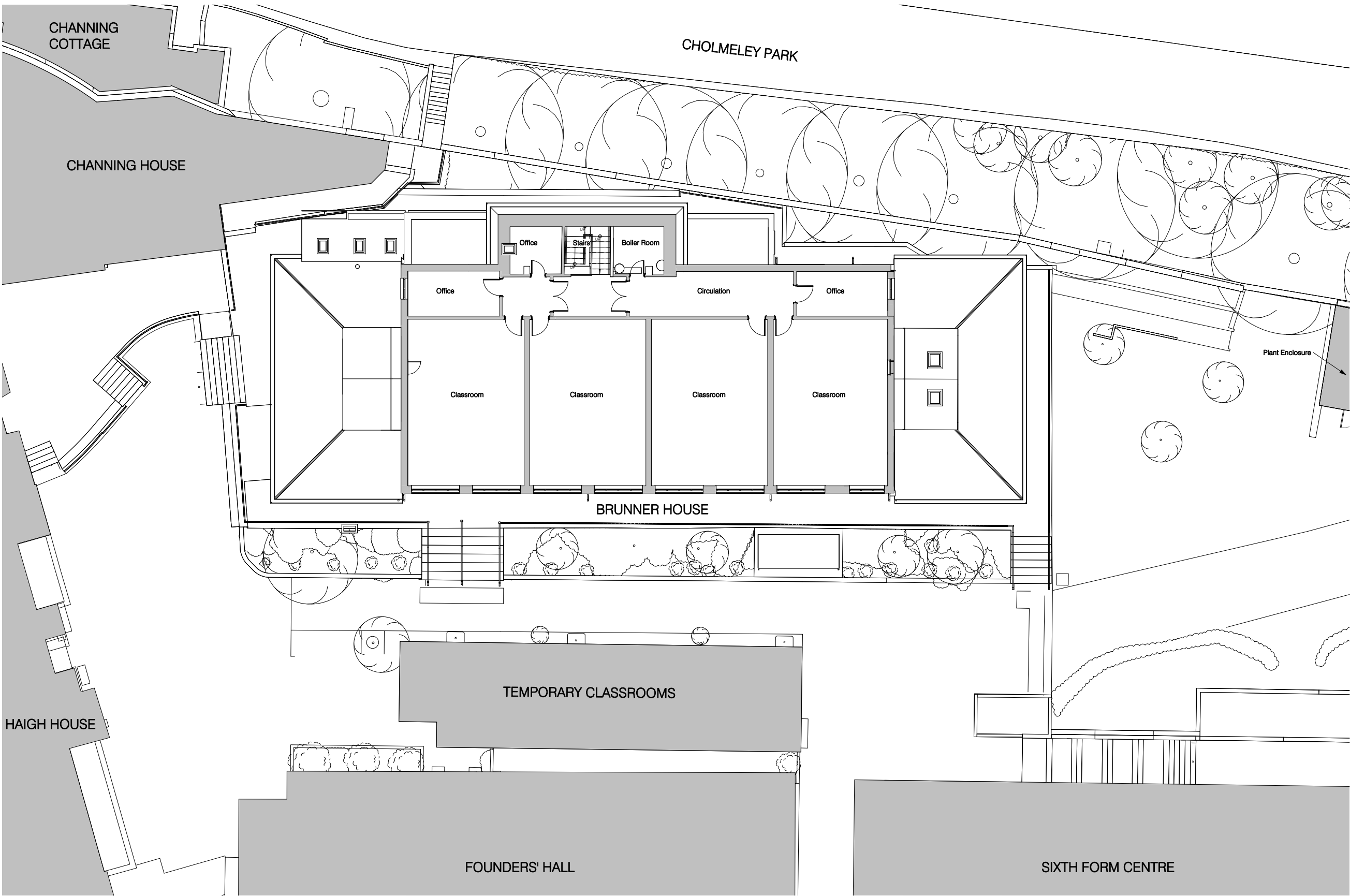
Existing General Arrangements



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mailto:nvb@nvbarchitects.co.uk  
Disclaimer: Responsibility will not be accepted for errors made in scaling  
from this drawing. Figured dimensions only must be used  
Scale: 1:100 @ A1 (200 @ A3)  
1 2 3 4 5 6 7 8 9 10m

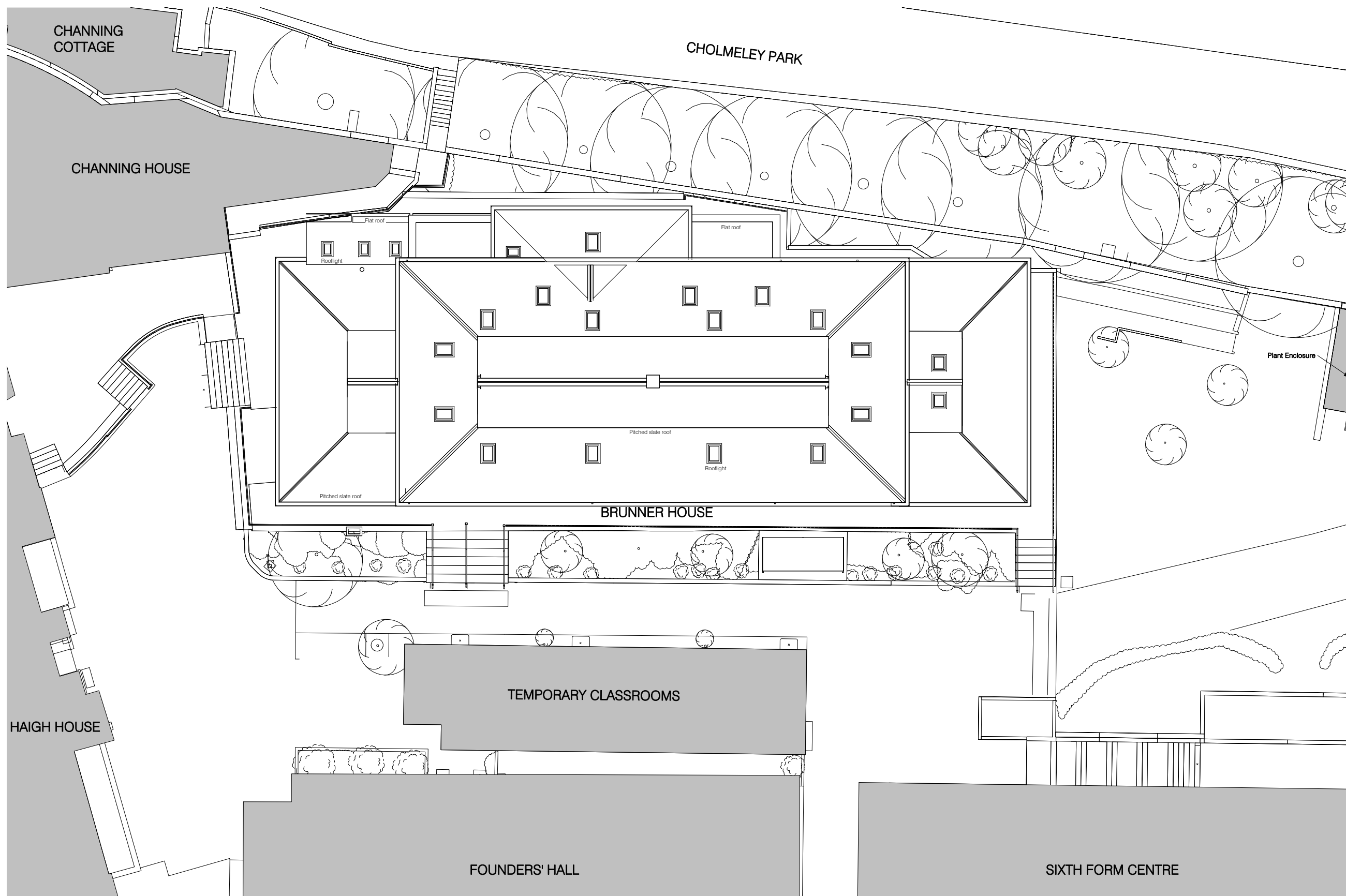
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|------------------------------|-----------------------------------|-----------------|
| P02                          | Issued for Pre-Application Advice | Date 02/11/2023 |
| Rev.                         | Description                       |                 |
| Client & Project             |                                   |                 |
| Channing School              |                                   |                 |
| Brunner House Redevelopment  |                                   |                 |
| Document Title               |                                   |                 |
| Brunner House                |                                   |                 |
| Existing Plan - Ground Floor |                                   |                 |
| Project Stage                | Purpose                           | Scale           |
| RIBA 2                       | PRE-APPLICATION                   | 1:100 @A1       |
| Document Reference:          | Revision                          | Status          |
| CHA-NVB-BHR-00-DR-A-2040     | P02                               | S2              |





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Scale: 1:100 @ A1 (200 @ A3)  
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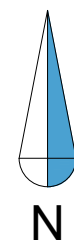
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|-----------------------------|------------------------|-----------------|
| P02                         | Issued for Information | Date 19/10/2023 |
| Rev.                        | Description            |                 |
| Client & Project            |                        |                 |
| Channing School             |                        |                 |
| Brunner House Redevelopment |                        |                 |
| Document Title              |                        |                 |
| Brunner House               |                        |                 |
| Existing Plan - First Floor |                        |                 |
| Project Stage               | Purpose                | Scale           |
| RIBA 2                      | PRE-APPLICATION        | 1:100 @A1       |
| Document Reference          | Revision               | Status          |
| CHA-NVB-BHR-01-DR-A-2041    | P02                    | S2              |



|                             |                                   |                 |
|-----------------------------|-----------------------------------|-----------------|
| P02                         | Issued for Pre-Application Advice | Date 02/11/2023 |
| Rev.                        | Description                       |                 |
| Client & Project            |                                   |                 |
| Channing School             |                                   |                 |
| Brunner House Redevelopment |                                   |                 |
| Document Title              |                                   |                 |
| Brunner House               |                                   |                 |
| Existing Plan - Roof        |                                   |                 |
| Project Stage               | Purpose                           | Scale           |
| RIBA 2                      | PRE-APPLICATION                   | 1:100 @A1       |
| Document Reference:         | Revision                          | Status          |
| CHA-NVB-BHR-RF-DR-A-2042    | P02                               | S2              |

# Appendix B

## Topographical Survey



Notes:

The survey has been orientated to the O.S. National Grid (OSGB36) via GPS and the O.S. Active Network.

True OSGB36 coordinates have been established at:

Station: ST CTRL A    E: 187389.9775    N: 528782.248    EL: 112.034

Further OSGB36 points have been established to create a true O.S. bearing for orientation.

All levels are related to O.S. Datum.

[illegible]

| <u>ON FENCES/WALLS/DIVISIONS</u> |                       |     |                     |     |                     |
|----------------------------------|-----------------------|-----|---------------------|-----|---------------------|
| R/W                              | Barbed Wire Fence     | E/F | Electric Fence      | P/W | Post and Wire Fence |
| BW                               | Brick Wall            | FPB | Panel / Board Fence | R/W | Retaining Wall      |
| C/B                              | Close Boarded Fence   | FTR | Trellis Fence       | S/F | Safety Fence        |
| C/I                              | Corrugated Iron Fence | H/R | Hand Rail           | S/S | Steel Railings      |
| C/L                              | Chain Link Fence      | I/R | Iron Rail Fence     | SW  | Stone Wall          |
| CrB                              | Crash Barrier         | P/F | Picket Fence        | W/M | Wire Mesh Fence     |
| CW                               | Concrete Wall         | P/L | Palisade Fence      |     |                     |
| DSW                              | Dry Stone Wall        | P/R | Post and Rail Fence |     |                     |

| ON BUILDINGS |                      |      |                    |     |                    |
|--------------|----------------------|------|--------------------|-----|--------------------|
| ASB          | Asbestos             | GRL  | Glazed Roof Light  | SOF | U/S Offt Height    |
| AVAIR        | Vent                 | HL   | Head Level         | SOP | Soil Pipe          |
| CH           | Ceiling Height       | P&RT | Partitioning       | SWP | Sewer Vent Pipe    |
| CHM          | Chimney Stack Height | PL   | Parapet Level      | THL | Threshold Level    |
| CHD          | Chimney Head         | RL   | Ridge Level        | UPB | Underfloor Of Beam |
| CHL          | Chimney Level        | RWC  | Rain Water Channel | USH | Under Sill Height  |
| CL           | Clamp Pipe           | RWP  | Rain Water Pipe    | WSP | Waste Pipe         |
| EL           | Eave Level           | SA   | Spring Of Arch     | WST | Water Storage Tank |
| F            | Frame Height         | SCH  | Suspended Ceiling  |     |                    |
| FRI          | Flat Roof Height     |      |                    |     |                    |

# SITE

[illegible]

**SURVEYBASE**  
PRECISION DIGITAL SURVEYORS

[www.surveybase.co.uk](http://www.surveybase.co.uk)

Bath: 01225 314370 - London: 02039 066892

Project Name  
Channing School, The Bank, Highgate, London,  
N6 5HF

CAD Drawing Name

|                                   |
|-----------------------------------|
| SB7892 - TOPO                     |
| Drawing Title<br><b>SITE PLAN</b> |

Client  
NVB Architects

|      |            |
|------|------------|
| Date | 10/10/2022 |
|------|------------|

Scale  
A1 @ 1:200

Drawn By  
SB - MG

Checked By  
SB - CW

SB Code  
SB7892

Revisio  
-

Grid Orientation  
NORTH GPS

|                  |        |
|------------------|--------|
| Site Level Datum | OS GPS |
|------------------|--------|

All dimensions are to be checked on site where applicable. This drawing must not be scaled, and only written dimensions should be respected.

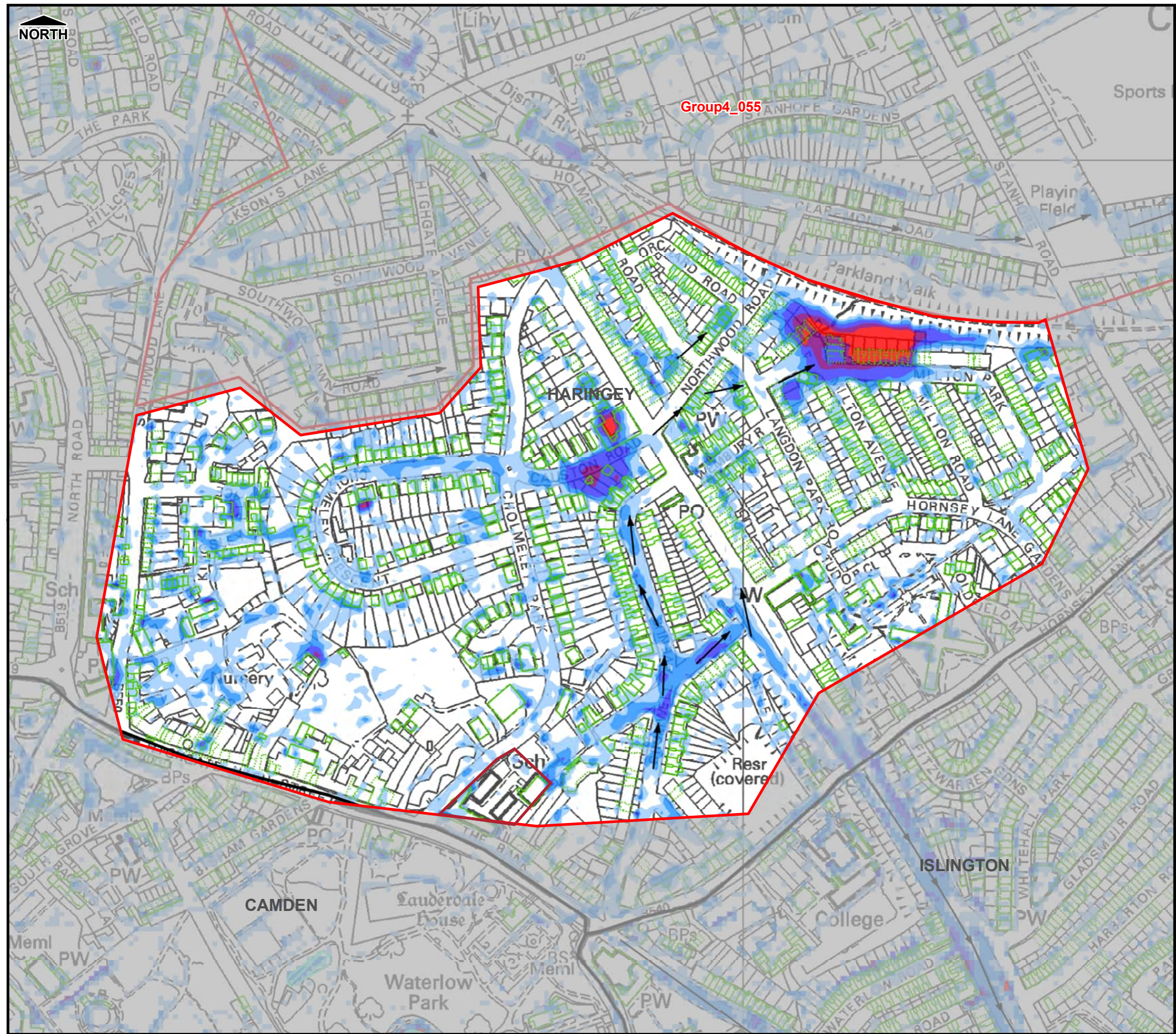


Tree species and sizes on this drawing are not guaranteed, and if critical should be verified by an arboriculturist. Tree spread are approximate about the hole, and heights are approximate at the time of the survey.

# Appendix C

## Flood Risk Maps

Filepath: L:\Environment\zwet\CS046913\_DrainLondon\_Tier2\Group4\ARC\mxd\SWMP\_GP4\_Haringey\_Fig23\_Depth\_100\_CDA062.mxd



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

**Legend**

- Borough Administrative Boundary
  - Main River
  - Ordinary Watercourse
  - Culverted Watercourse (Main River)
  - Permanent Water Bodies
  - Flow Direction
  - Critical Drainage Area
  - Flooded Building (With Basement)
  - Flooded Building (Without Basement)
- Flood Depth (m)
- |              |             |
|--------------|-------------|
| < 0.1m       | 0.5m - 1.0m |
| 0.1m - 0.25m | 1.0m - 1.5m |
| 0.25m - 0.5m | > 1.5m      |

**Notes**

1. This map only shows the predicted likelihood of surface water flooding (this includes flooding from sewers, drains, small watercourses and ditches that occurs in heavy rainfall) for defined areas, and due to the coarse nature of the source data used, are not detailed enough to account for precise addresses.
2. Users of this map should refer to section 3.2 of the Surface Water Management Plan for a complete description of limitations and accuracy of the flood/hazard extents shown.

**London Borough of Haringey**



**Surface Water Management Plan**

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| Scale at A3 | Date       | Drawn by | Approved by |
|-------------|------------|----------|-------------|
| 1:4,000     | 06/05/2011 | D.HUGHES | S.I.P       |

**Critical Drainage Area 062**  
**Surface Water Depth (m)**  
**1 in 100 Chance of rainfall event occurring in any given year (1% AEP)**

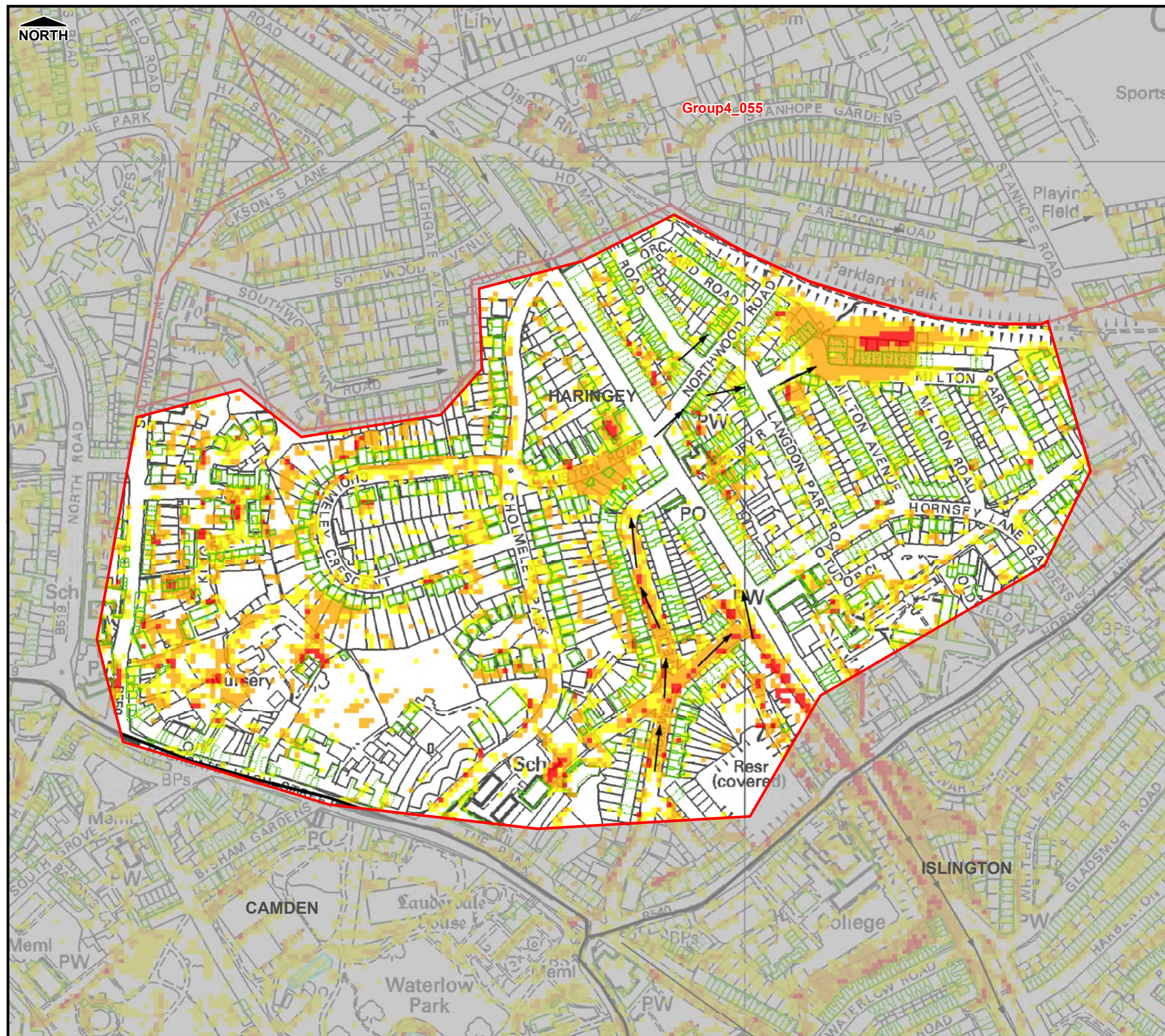
Consultants

Capita Symonds  
Level Seven,  
52 Grosvenor Gardens,  
Belgravia,  
London  
SW1W 0AU

Drain London Programme Board Members

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**FIGURE 23**



0.0 0.1 0.2 0.4 0.6 0.8  
Kilometres

### Legend

## Notes

## London Borough of Haringey

## Surface Water Management Plan

|                               |                           |                             |                            |
|-------------------------------|---------------------------|-----------------------------|----------------------------|
| <b>Scale at A3</b><br>1:4,000 | <b>Date</b><br>06/05/2011 | <b>Drawn by</b><br>D.HUGHES | <b>Approved by</b><br>S.IP |
|-------------------------------|---------------------------|-----------------------------|----------------------------|

Consultants

**CAPITA SYMONDS**

Flood Risk Management



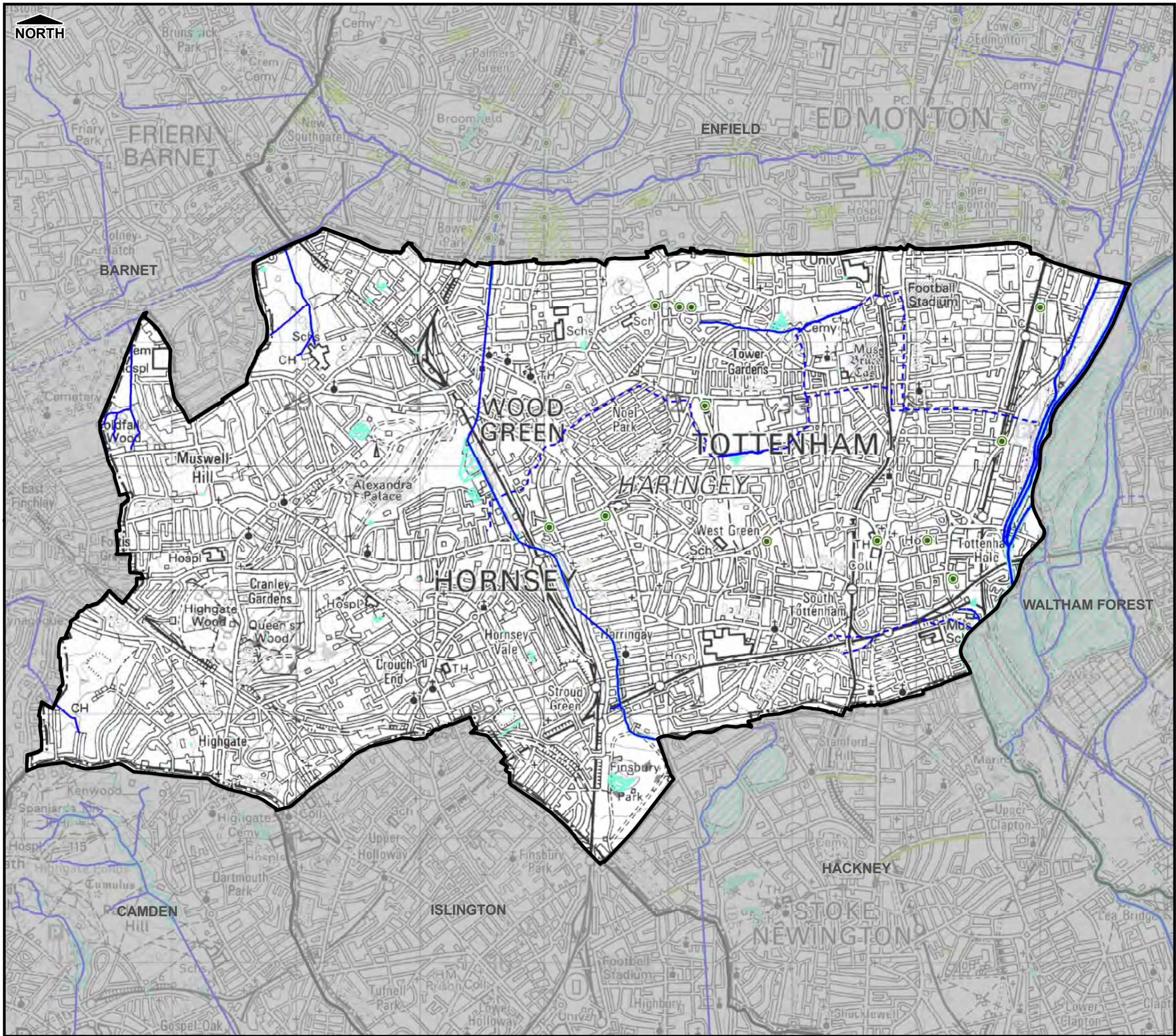
Capita Symonds  
Level Seven,  
52 Grosvenor Gardens,  
Belgravia,  
London  
SW1W 0AU

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**FIGURE 24**

Filepath: L:\Environment\ZNET\CS046913\_Drain\London\_Tier2\Group4\ARC\mxd\PRF\RA\GP4\_Haringey\_FigA-1\_SWIIncidents.mxd



THIS DRAWING MAY BE USED ONLY FOR  
THE PURPOSE INTENDED

**Legend**

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Culverted Watercourse (Main River)
- Permanent Water Bodies
- Surface Water Flooding Incidents
- Surface Water Flood Outline

**Notes**

**London Borough of  
Haringey**



**Preliminary Flood Risk Assessment**

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| Scale at A3 | Date       | Drawn by   | Approved by |
|-------------|------------|------------|-------------|
| 1:32,000    | 07/04/2011 | S.TURNBULL | S.I.P       |

**Summary Map of Past Floods -  
Surface Water Incidents**

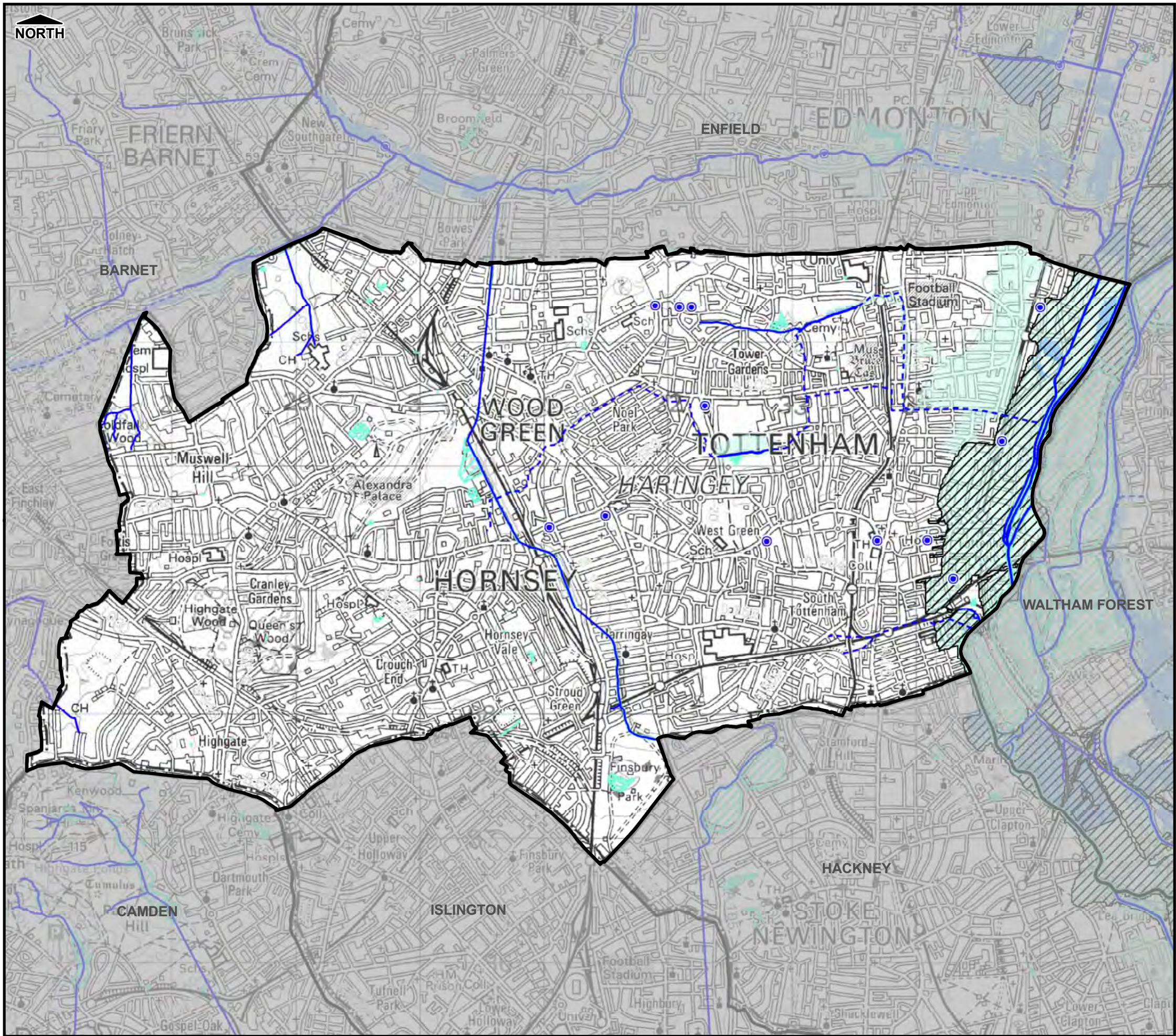
Consultants  
**CAPITA SYMONDS** Capita Symonds  
Level Seven,  
52 Grosvenor Gardens,  
Belgravia,  
London  
SW1W 0AU

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**FIGURE A-1**

Filepath: L:\Environment\ZNET\CS046913\_Drain\London\_Tier2\Group4\ARC\mxd\PRAGP4\_Haringey\_FigA-2\_FluvialIncidents.mxd



THIS DRAWING MAY BE USED ONLY FOR  
THE PURPOSE INTENDED

### Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Culverted Watercourse (Main River)
- Permanent Water Bodies
- Fluvial Flooding Incidents
- Historic Fluvial Flood Outline
- Environment Agency Flood Zone 3
- Environment Agency Flood Zone 2

### Notes

- Environment Agency Flood Zone 3: Land assessed, ignoring the presence of flood defences, as having a 1% or greater annual probability of fluvial flooding or a 0.5% or greater annual probability of tidal flooding.
- Environment Agency Flood Zone 2: Land assessed, ignoring the presence of flood defences, as having between a 1% and 0.1% annual probability of fluvial flooding or between a 0.5% and 0.1% annual probability of tidal flooding in any year.

## London Borough of Haringey



## Preliminary Flood Risk Assessment

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| Scale at A3 | Date       | Drawn by   | Approved by |
|-------------|------------|------------|-------------|
| 1:32,000    | 07/04/2011 | S.TURNBULL | S.IP        |

### Summary Map of Past Floods - Main River / Fluvial / Tidal Incidents

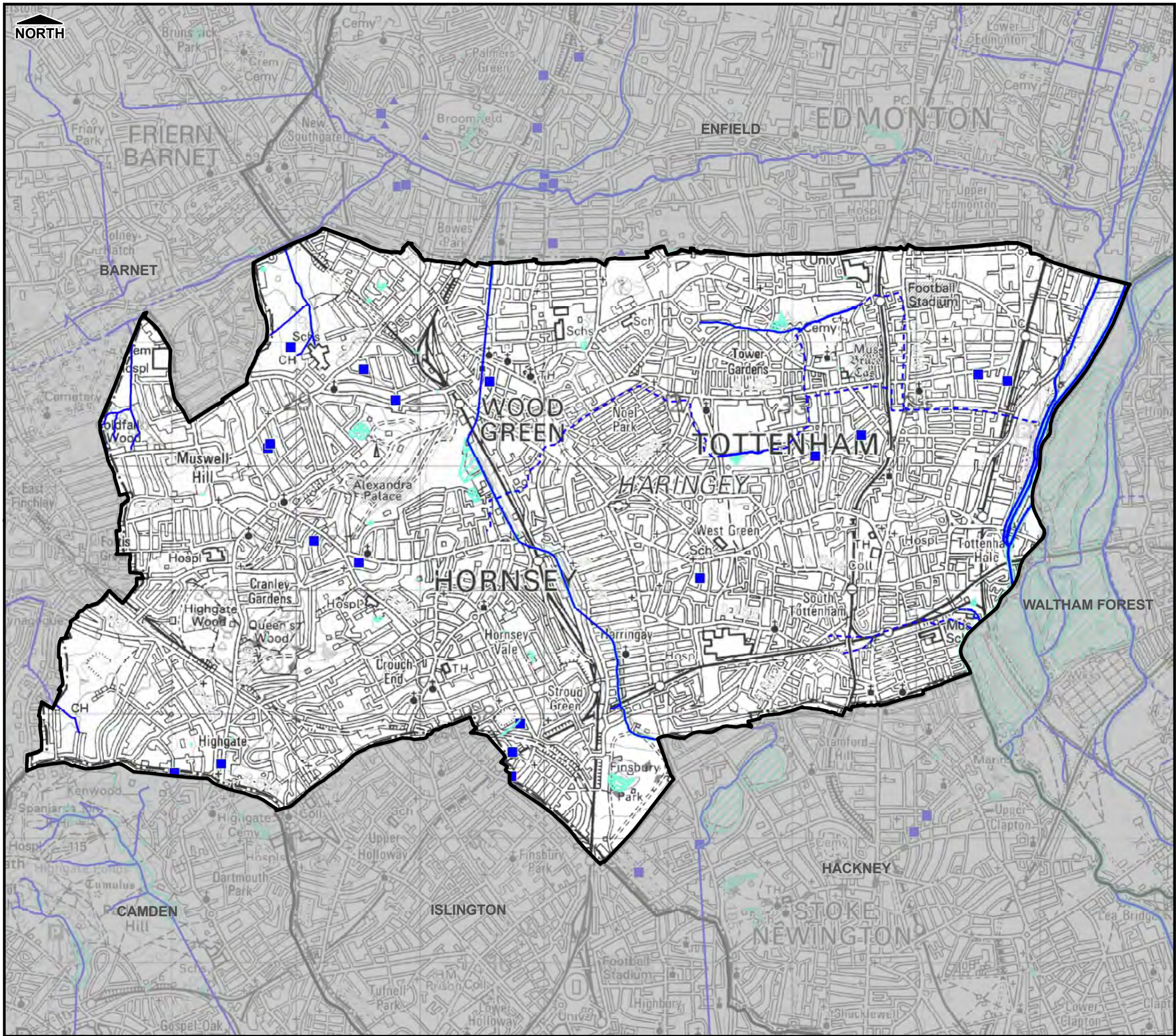
Consultants  
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FIGURE A-2

Filepath: L:\Environment\ZNET\CS046913\_Drain\London\_Tier2\Group4\ARC\mxd\PFRA\GP4\_Haringey\_FigA-3\_GWIncidents.mxd



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED

Legend

- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Culverted Watercourse (Main River)
- Permanent Water Bodies
- Groundwater Flood Incident (EA Records)
- Groundwater Flood Incident (Other Records)

Notes

London Borough of Haringey



Preliminary Flood Risk Assessment

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| Scale at A3 | Date       | Drawn by   | Approved by |
|-------------|------------|------------|-------------|
| 1:32,000    | 07/04/2011 | S.TURNBULL | S.IP        |

Summary Map of Past Floods - Ground Water Incidents

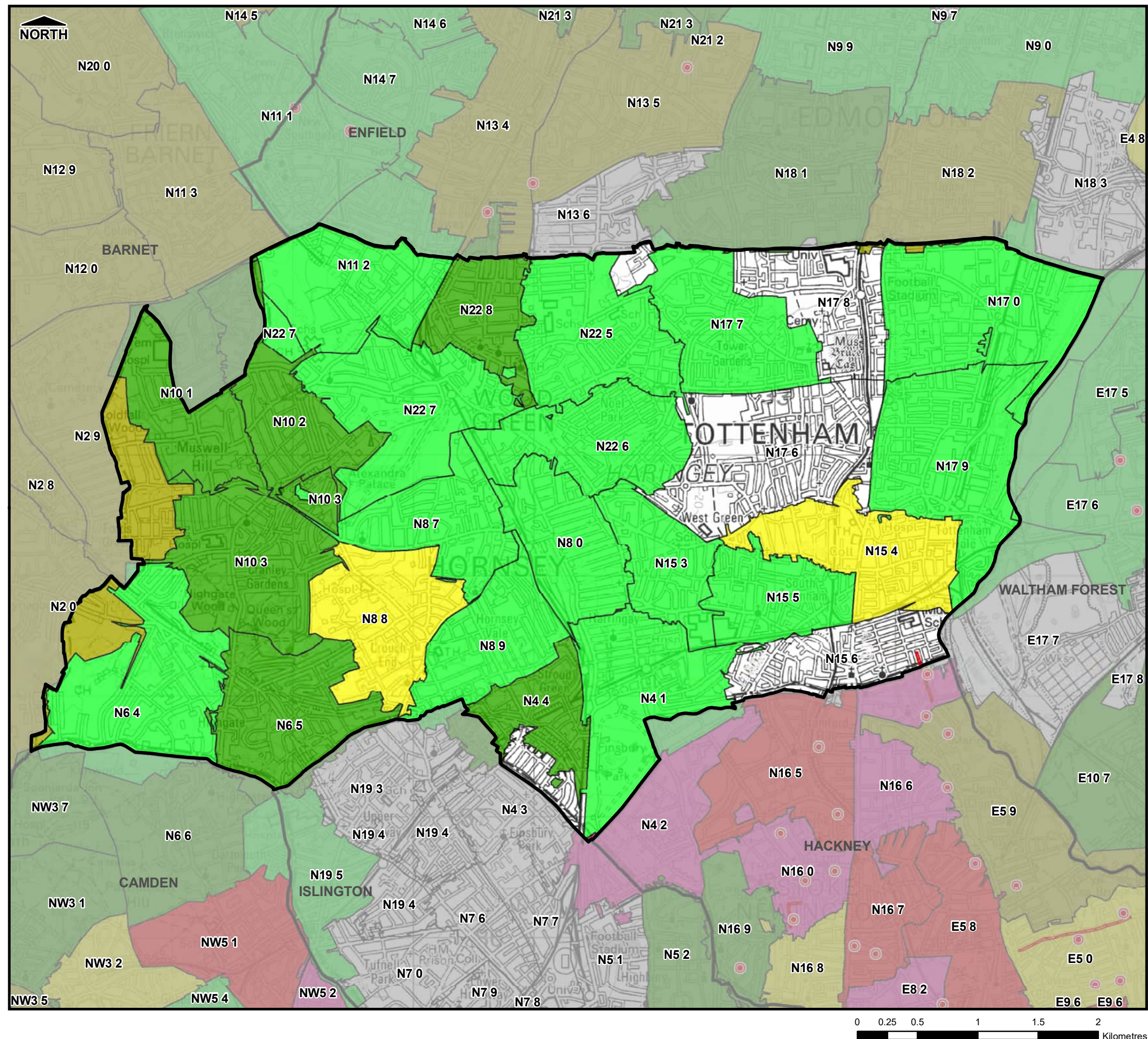
Consultants

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FIGURE A-3

Filepath: L:\Environment\ZNET\CS04613\_DrainLondon\_Tier2\Group4\ARC\mxd\PFRA\GP4\_Haringey\_FigA-4\_SewerIncidents.mxd



THIS DRAWING MAY BE USED ONLY FOR  
THE PURPOSE INTENDED

#### Legend

- Borough Administrative Boundary
- Sewer Flooding Incidents
- Sewer Flood Outline
- No. of Sewer Flood Records
  - None
  - 1 - 5
  - 6 - 10
  - 11 - 20
  - 21 - 50
  - 51 - 100
  - 101+

#### Notes

1. Sewer flood records relate to internal and external flooding of properties
2. Data supplied by Thames Water Ltd and is correct as at June 2010

### London Borough of Haringey



### Preliminary Flood Risk Assessment

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| Scale at A3 | Date       | Drawn by   | Approved by |
|-------------|------------|------------|-------------|
| 1:32,000    | 07/04/2011 | S.TURNBULL | S.IP        |

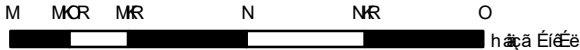
### Summary Map of Past Floods - Sewer Incidents

Consultants  
**CAPITA SYMONDS** Capita Symonds  
Level Seven,  
52 Grosvenor Gardens,  
Belgravia,  
London  
SW1W 0AU

Drain London Programme Board Members



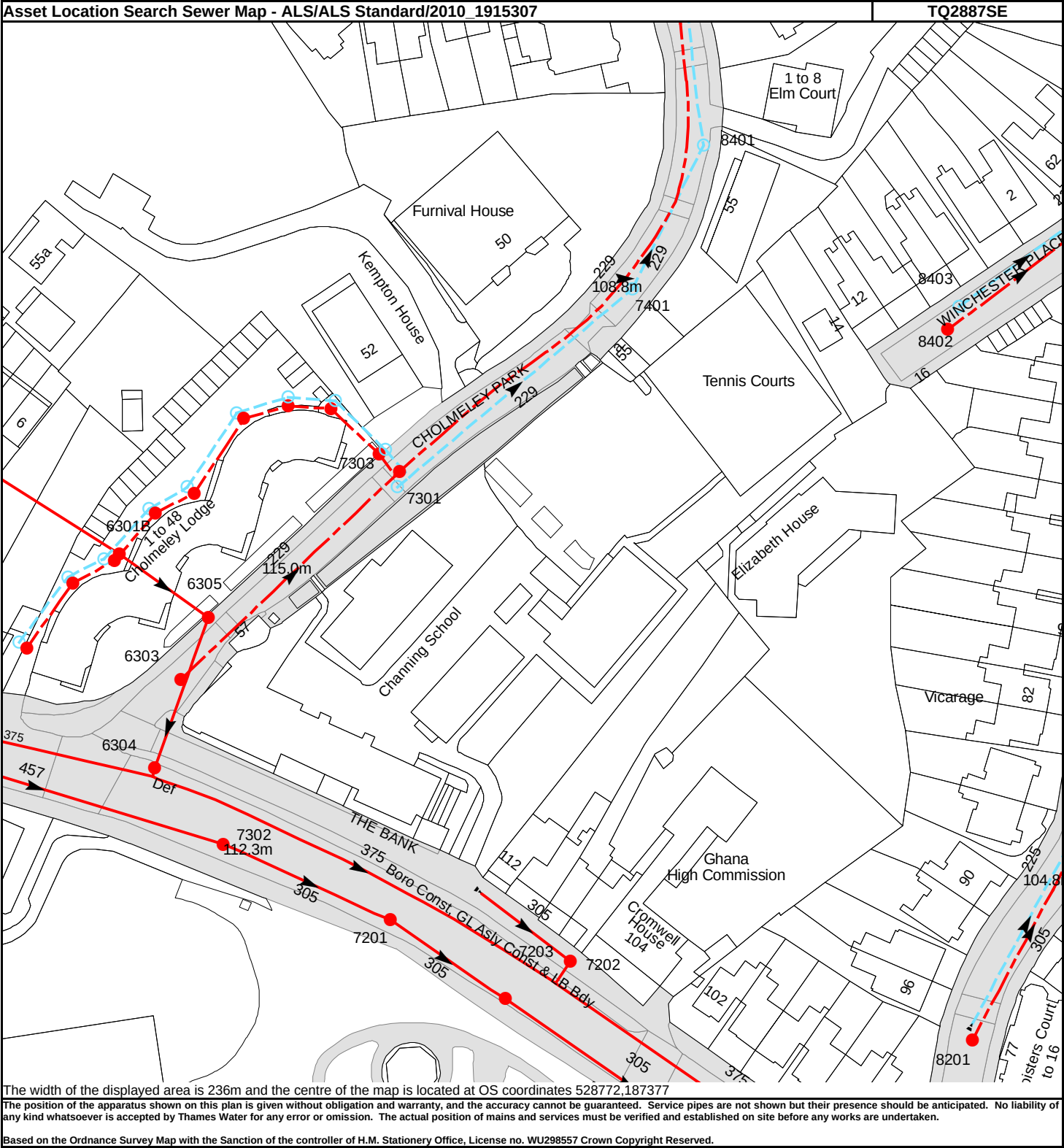
**FIGURE A-4**



### FIGURE A-5

# Appendix D

## Thames Water Asset Maps



NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

| Manhole Reference | Manhole Cover Level | Manhole Invert Level |
|-------------------|---------------------|----------------------|
| 8401              | 104.69              | 102.63               |
| 742R              | n/a                 | n/a                  |
| 742V              | n/a                 | n/a                  |
| 742T              | n/a                 | n/a                  |
| 742S              | n/a                 | n/a                  |
| 73YZ              | n/a                 | n/a                  |
| 73YX              | n/a                 | n/a                  |
| 7201              | 109.71              | 107.73               |
| 7301              | 114.05              | 112.14               |
| 7303              | 113.99              | 112.01               |
| 7203              | 107.57              | 105.89               |
| 7202              | 108.54              | 105.64               |
| 8201              | 102.37              | 99.5                 |
| 63YT              | n/a                 | n/a                  |
| 63YZ              | n/a                 | n/a                  |
| 63YS              | n/a                 | n/a                  |
| 63YY              | n/a                 | n/a                  |
| 63YR              | n/a                 | n/a                  |
| 63YX              | n/a                 | n/a                  |
| 6301B             | 117.16              | 111.61               |
| 63YQ              | n/a                 | n/a                  |
| 6304              | 113.74              | 110.64               |
| 63YW              | n/a                 | n/a                  |
| 6303              | 114.96              | 113.77               |
| 63YP              | n/a                 | n/a                  |
| 63YV              | n/a                 | n/a                  |
| 6305              | 115.11              | 111.25               |
| 7302              | 112.39              | 109.98               |
| 742P              | n/a                 | n/a                  |
| 742Q              | n/a                 | n/a                  |
| 8402              | 102.84              | 100                  |
| 8403              | n/a                 | n/a                  |
| 7401              | 108.02              | 106.29               |

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.



# ALS Sewer Map Key

## Public Sewer Types (Operated & Maintained by Thames Water)

|  |                                                                                                                                             |
|--|---------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Foul:</b> A sewer designed to convey waste water from domestic and industrial sources to a treatment works.                              |
|  | <b>Surface Water:</b> A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses. |
|  | <b>Combined:</b> A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.   |
|  | Trunk Surface Water                                                                                                                         |
|  | Trunk Foul                                                                                                                                  |
|  | Storm Relief                                                                                                                                |
|  | Trunk Combined                                                                                                                              |
|  | Vent Pipe                                                                                                                                   |
|  | Bio-solids (Sludge)                                                                                                                         |
|  | Proposed Thames Surface Water Sewer                                                                                                         |
|  | Proposed Thames Water Foul Sewer                                                                                                            |
|  | Gallery                                                                                                                                     |
|  | Foul Rising Main                                                                                                                            |
|  | Surface Water Rising Main                                                                                                                   |
|  | Combined Rising Main                                                                                                                        |
|  | Sludge Rising Main                                                                                                                          |
|  | Proposed Thames Water Rising Main                                                                                                           |
|  | Vacuum                                                                                                                                      |

### Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plans are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
- 5) 'na' or '0' on a manhole level indicates that data is unavailable.

## Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

|  |             |
|--|-------------|
|  | Air Valve   |
|  | Dam Chase   |
|  | Fitting     |
|  | Meter       |
|  | Vent Column |

## Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

|  |               |
|--|---------------|
|  | Control Valve |
|  | Drop Pipe     |
|  | Ancillary     |
|  | Weir          |

## End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol, Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

|  |               |
|--|---------------|
|  | Outfall       |
|  | Undefined End |
|  | Inlet         |

## Other Symbols

Symbols used on maps which do not fall under other general categories

|  |                                               |
|--|-----------------------------------------------|
|  | Public/Private Pumping Station                |
|  | Change of characteristic indicator (C.O.C.I.) |
|  | Invert Level                                  |
|  | Summit                                        |

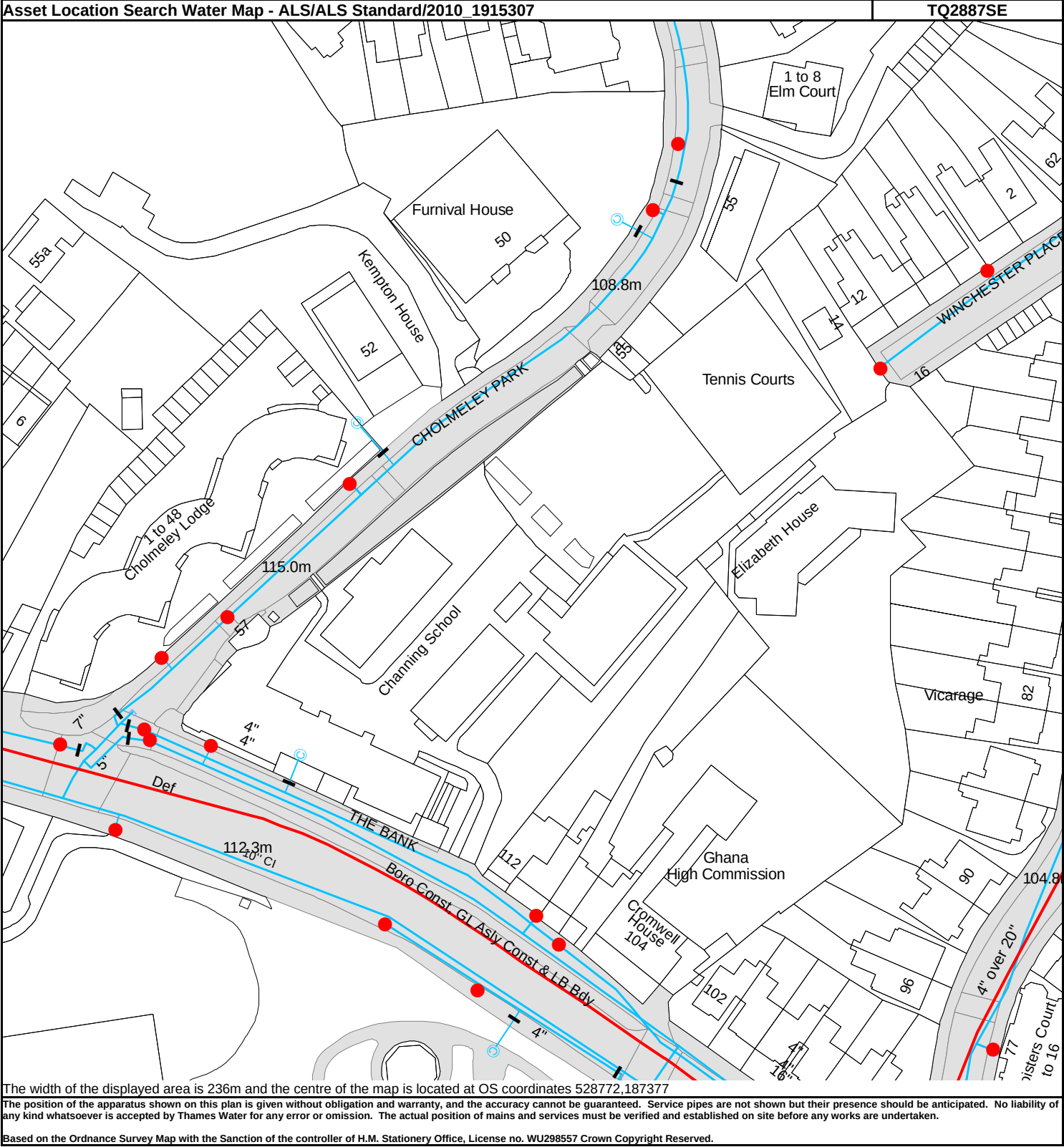
### Areas

Lines denoting areas of underground surveys, etc.

|  |                  |
|--|------------------|
|  | Agreement        |
|  | Operational Site |
|  | Chamber          |
|  | Tunnel           |
|  | Conduit Bridge   |

## Other Sewer Types (Not Operated or Maintained by Thames Water)

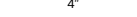
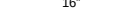
|  |                       |  |                     |
|--|-----------------------|--|---------------------|
|  | Foul Sewer            |  | Surface Water Sewer |
|  | Combined Sewer        |  | Gully               |
|  | Culverted Watercourse |  | Proposed            |
|  |                       |  | Abandoned Sewer     |





# ALS Water Map Key

## Water Pipes (Operated & Maintained by Thames Water)

-  **Distribution Main:** The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
-  **Trunk Main:** A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
-  **Supply Main:** A supply main indicates that the water main is used as a supply for a single property or group of properties.
-  **Fire Main:** Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
-  **Metered Pipe:** A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
-  **Transmission Tunnel:** A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
-  **Proposed Main:** A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

| PIPE DIAMETER               | DEPTH BELOW GROUND |
|-----------------------------|--------------------|
| Up to 300mm (12")           | 900mm (3')         |
| 300mm - 600mm (12" - 24")   | 1100mm (3' 8")     |
| 600mm and bigger (24" plus) | 1200mm (4')        |

## Valves

-  General Purpose Valve
-  Air Valve
-  Pressure Control Valve
-  Customer Valve

## Hydrants

-  Single Hydrant

## Meters

-  Meter

## End Items

Symbol indicating what happens at the end of a water main.

-  Blank Flange
-  Capped End
-  Emptying Pit
-  Undefined End
-  Manifold
-  Customer Supply
-  Fire Supply

## Operational Sites

-  Booster Station
-  Other
-  Other (Proposed)
-  Pumping Station
-  Service Reservoir
-  Shaft Inspection
-  Treatment Works
-  Unknown
-  Water Tower

## Other Symbols

-  Data Logger

## Other Water Pipes (Not Operated or Maintained by Thames Water)

-  **Other Water Company Main:** Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
-  **Private Main:** Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

# Appendix E

CCTV Survey

Tower Surveys Associates Ltd



Channing School for Girls – Senior School  
CCTV Condition Report

Project Ref: TSA-23-2537 Channing School for Girls CCTV  
Report\_303\_Issue01

James Hulme – Tower Surveys Associates Ltd  
20/10/2023

|                                                                                      |  |                                                                                                                    |                                   |
|--------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|-----------------------------------|
|   |  | <b>Tower Surveys Associates</b><br>18-20 The Ropewalk, Nottingham<br><i>james.hulme@towersurveysassociates.biz</i> |                                   |
| <b>Project Information</b>                                                           |  |                                                                                                                    |                                   |
| <b>Project Name</b><br>TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01 |  | <b>Project Number</b><br>TSA-23-2537                                                                               | <b>Project Date</b><br>18/10/2023 |
| <b>Client</b>                                                                        |  |                                                                                                                    |                                   |
| <b>Company:</b>                                                                      |  | Channing House Incorporated                                                                                        |                                   |
| <b>Site</b>                                                                          |  |                                                                                                                    |                                   |
| <b>Company:</b>                                                                      |  | Channing School for Girls - Senior School                                                                          |                                   |
| <b>Contact:</b>                                                                      |  | Mel Blase                                                                                                          |                                   |
| <b>Street:</b>                                                                       |  | The Bank                                                                                                           |                                   |
| <b>Town or City:</b>                                                                 |  | London                                                                                                             |                                   |
| <b>Post Code:</b>                                                                    |  | N6 5HF                                                                                                             |                                   |
| <b>Email:</b>                                                                        |  | mblase@channing.co.uk                                                                                              |                                   |
| <b>Contractor</b>                                                                    |  |                                                                                                                    |                                   |
| <b>Company:</b>                                                                      |  | Tower Surveys Associates                                                                                           |                                   |
| <b>Contact:</b>                                                                      |  | James Hulme                                                                                                        |                                   |
| <b>Department:</b>                                                                   |  | CCTV Department                                                                                                    |                                   |
| <b>Street:</b>                                                                       |  | 18-20 The Ropewalk                                                                                                 |                                   |
| <b>Town or City:</b>                                                                 |  | Nottingham                                                                                                         |                                   |
| <b>County:</b>                                                                       |  | Nottinghamshire                                                                                                    |                                   |
| <b>Post Code:</b>                                                                    |  | NG1 5DT                                                                                                            |                                   |
| <b>Mobile:</b>                                                                       |  | 07786 650 005                                                                                                      |                                   |
| <b>Email:</b>                                                                        |  | james.hulme@towersurveysassociates.biz                                                                             |                                   |



## Scoring Summary

| Project Name                                                  | Project Number | Project Date |
|---------------------------------------------------------------|----------------|--------------|
| TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01 | TSA-23-2537    | 18/10/2023   |

### 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                                             |
|---------|--------|-------|---------------------------------------------------------|
| 19      | Gully  | 3     | Cracks, multiple at joint from 8 o'clock to 2 o'clock   |
| 45      | MH20 X | 3     | Fracture, circumferential from 12 o'clock to 12 o'clock |
| 46      | RE     | 3     | Fracture, circumferential from 9 o'clock to 11 o'clock  |
| 51      | MH23 X | 4     | Broken pipe from 11 o'clock to 1 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       | MH1 X     | 3     | Multiple defects                                                            |
| 13      | Downpipe  | 4     | Settled deposits, hard or compacted, 20% cross-sectional area loss          |
| 15      | Vent Pipe | 4     | Joint displaced, large                                                      |
| 20      | MH7 X     | 3     | Settled deposits, coarse, 10% cross-sectional area loss, finish             |
| 21      | Capped    | 3     | Settled deposits, fine, 20% cross-sectional area loss, finish               |
| 22      | MH8 X     | 4     | Multiple defects                                                            |
| 23      | Unknown   | 5     | Settled deposits, coarse, 95% cross-sectional area loss                     |
| 24      | RE?       | 2     | Crack, circumferential from 3 o'clock to 9 o'clock                          |
| 26      | Gully     | 4     | Settled deposits, coarse, 25% cross-sectional area loss                     |
| 32      | MH14 X    | 4     | Settled deposits, hard or compacted at joint, 20% cross-sectional area loss |
| 35      | RWP       | 3     | Multiple defects                                                            |
| 37      | MH16      | 3     | Multiple defects                                                            |
| 39      | RWP       | 3     | Joint displaced, medium                                                     |
| 46      | RE        | 4     | Multiple defects                                                            |
| 47      | MH21 X    | 3     | Joint displaced, medium                                                     |
| 49      | MH20      | 4     | Joint displaced, large                                                      |
| 50      | MH22 X    | 5     | Roots, mass, 20% cross-sectional area loss, start                           |
| 51      | MH23 X    | 4     | Joint displaced, large                                                      |
| 53      | RWP       | 3     | Joint displaced, medium                                                     |
| 57      | MH26 X    | 3     | Multiple defects                                                            |
| 59      | MH27 X    | 3     | Settled deposits, fine, 10% cross-sectional area loss, finish               |
| 64      | MH29 X    | 3     | Settled deposits, fine, 10% cross-sectional area loss, finish               |

## Scoring Summary

| Project Name                                                  | Project Number | Project Date |
|---------------------------------------------------------------|----------------|--------------|
| TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01 | TSA-23-2537    | 18/10/2023   |

| Section | PLR      | Grade | Description                                                                                   |
|---------|----------|-------|-----------------------------------------------------------------------------------------------|
| 70      | MH32 X   | 3     | Multiple defects                                                                              |
| 73      | MH33 X   | 3     | Attached deposits, fouling at joint from 9 o'clock to 3 o'clock, 5% cross-sectional area loss |
| 74      | MH34 X   | 3     | Settled deposits, coarse, 5% cross-sectional area loss                                        |
| 84      | MH31 UTL | 3     | Multiple defects                                                                              |
| 87      | MH41 X   | 3     | Multiple defects                                                                              |
| 89      | MH42 X   | 3     | Multiple defects                                                                              |
| 93      | MH19 UTL | 3     | Settled deposits, hard or compacted at joint, 5% cross-sectional area loss                    |
| 97      | Unknown  | 5     | Settled deposits, other, 100% cross-sectional area loss                                       |

### Information

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

Tower Surveys Associates

Chartered Surveyors

Geomatics - Land, Utilities, Engineering & Building

Tower Surveys Associates

18-20 The Ropewalk, Nottingham

james.hulme@towersurveysassociates.biz

Section Inspection - 17/10/2023 - MH1 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 1             | 1         | 17/10/23 | 9:08 | TSA-23-2537      | No Rain Or Snow | No            | MH1 X          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |       |
|---------------------|-----------------------|-----------------------|----------------|------------------------|-------|
| Town or Village:    | London                | Inspection Direction: | Downstream     | Upstream Node:         | MH1 X |
| Road:               | The Bank              | Inspected Length:     | 4.62 m         | Upstream Pipe Depth:   |       |
| Location:           | Property or buildings | Total Length:         | 4.62 m         | Downstream Node:       | MAIN  |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |       |
| Use:                | Combined              | Pipe Shape:           | Circular       |                        |       |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 150 mm         |                        |       |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |       |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |       |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |       |

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH1 X

0.00

MH

Start node, manhole, reference: MH1 X

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

REM

General remark: Winsor trap visible

00:00:01

1

1.30

JN

Junction at 11 o'clock, 100mm dia

00:00:17

2

3.04

DES

Settled deposits, fine, 10% cross-sectional area loss

00:00:30

3

3

3.04

JDM

Joint displaced, medium

00:00:30

4

1 / 3

3.04

LR

Line deviates right

00:00:32

5

3.82

JDM

Joint displaced, medium

00:00:37

6

1 / 3

3.82

LR

Line deviates right

00:00:37

7

4.62

BRF

Finish node, major connection without manhole, reference: Main public sewer reached

00:00:47

8

Main

Depth: 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 |
| 2           | 1.0      | 0.4      | 2.0       | 1.0       | 3           | 4.0      | 1.3      | 6.0       | 3.0       |

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Section Pictures - 17/10/2023 - MH1 X

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 1        | Downstream           | MH1 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:01, 0.00 m  
General remark, Winsor trap visible



2, 00:00:17, 1.30 m  
Junction at 11 o'clock, 100mm dia



3, 00:00:30, 3.04 m  
Settled deposits, fine, 10% cross-sectional area loss



4, 00:00:30, 3.04 m  
Joint displaced, medium

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|                                                                                                                                                                                                                                                                                                             |                      |                                       |                  |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------------|------------------|----------------------|
| <div><div><div>Tower Surveys</div><div>Associates</div><div>Chartered Surveyors</div><div>Geomatics - Land, Utilities, Engineering &amp; Building</div></div><div><div>Tower Surveys Associates</div><div>18-20 The Ropewalk, Nottingham</div><div>james.hulme@towersurveysassociates.biz</div></div></div> |                      | Section Pictures - 17/10/2023 - MH1 X |                  |                      |
| Item No.                                                                                                                                                                                                                                                                                                    | Inspection Direction | PLR                                   | Client's Job Ref | Contractor's Job Ref |
| 1                                                                                                                                                                                                                                                                                                           | Downstream           | MH1 X                                 | TSA-23-2537      | TSA-23-2537          |



5, 00:00:32, 3.04 m  
Line deviates right



6, 00:00:37, 3.82 m  
Joint displaced, medium



7, 00:00:37, 3.82 m  
Line deviates right



8, 00:00:47, 4.62 m  
Finish node, major connection without manhole, reference:  
Main public sewer reached

|                                                                                                                                                                                                                                                                                                             |           |          |      |                                         |                 |               |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|------|-----------------------------------------|-----------------|---------------|----------------|
| <div><div><div>Tower Surveys</div><div>Associates</div><div>Chartered Surveyors</div><div>Geomatics - Land, Utilities, Engineering &amp; Building</div></div><div><div>Tower Surveys Associates</div><div>18-20 The Ropewalk, Nottingham</div><div>james.hulme@towersurveysassociates.biz</div></div></div> |           |          |      | Section Inspection - 17/10/2023 - Gully |                 |               |                |
| Item No.                                                                                                                                                                                                                                                                                                    | Insp. No. | Date     | Time | Client's Job Ref                        | Weather         | Pre Cleaned   | PLR            |
| 2                                                                                                                                                                                                                                                                                                           | 1         | 17/10/23 | 9:08 | TSA-23-2537                             | No Rain Or Snow | No            | GULLY          |
| Operator                                                                                                                                                                                                                                                                                                    |           | Vehicle  |      | Camera                                  | Preset Length   | Legal Status  | Alternative ID |
| Dominic White                                                                                                                                                                                                                                                                                               |           | LM21 UHU |      | Minicam Solopro                         | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |       |
|---------------------|-----------------------|-----------------------|----------------|------------------------|-------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | GULLY |
| Road:               | The Bank              | Inspected Length:     | 7.16 m         | Upstream Pipe Depth:   |       |
| Location:           | Property or buildings | Total Length:         | 7.16 m         | Downstream Node:       | MH1 B |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |       |
| Use:                | Combined              | Pipe Shape:           | Circular       |                        |       |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |       |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |       |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |       |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |       |
| Comments:           |                       |                       |                |                        |       |
| Recommendations:    |                       |                       |                |                        |       |

|          |      |              |      |                                                                 |          |       |       |
|----------|------|--------------|------|-----------------------------------------------------------------|----------|-------|-------|
| Scale:   | 1:62 | Position [m] | Code | Observation                                                     | MPEG     | Photo | Grade |
| Depth: m |      |              |      |                                                                 |          |       |       |
| MH1 B    |      |              |      |                                                                 |          |       |       |
|          | 0.00 | MH           |      | Start node, manhole, reference: MH1 B                           | 00:00:00 |       |       |
|          | 0.00 | WL           |      | Water level, 0% of the vertical dimension                       |          |       |       |
|          | 0.42 | GP           |      | General photograph taken at this point                          | 00:00:07 | 1     |       |
|          | 1.09 | DESJ         |      | Settled deposits, fine at joint, 10% cross-sectional area loss  | 00:00:11 | 2     | 3     |
|          | 1.09 | LL           |      | Line deviates left                                              | 00:00:11 | 3     |       |
|          | 2.28 | DESJ         |      | Settled deposits, fine at joint, 5% cross-sectional area loss   | 00:00:20 | 4     | 3     |
|          | 3.90 | JN           |      | Junction at 11 o'clock, 100mm dia                               | 00:00:30 | 5     |       |
|          | 4.06 | DESJ         |      | Settled deposits, fine at joint, 5% cross-sectional area loss   | 00:00:35 | 6     | 3     |
|          | 4.06 | CCJ          |      | Crack, circumferential at joint from 4 o'clock to 8 o'clock     | 00:00:35 | 7     | 2 / 2 |
|          | 4.79 | DESJ         |      | Settled deposits, fine at joint, 5% cross-sectional area loss   | 00:00:39 | 8     | 3     |
|          | 5.44 | DESJ         |      | Settled deposits, fine at joint, 10% cross-sectional area loss  | 00:00:44 | 9     | 3     |
|          | 6.19 | S01          | DER  | Settled deposits, coarse, 10% cross-sectional area loss, start  | 00:00:48 | 10    | 3     |
|          | 7.16 | C01          | DER  | Settled deposits, coarse, 25% cross-sectional area loss, change | 00:00:56 | 11    |       |
|          | 7.16 | SA           |      | Survey abandoned: Unable to pass debris                         | 00:00:56 |       |       |

|                       |          |          |           |           |                                    |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| 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                     | 10.0     | 1.4      | 10.0      | 2.0       | 7                                  | 3.0      | 1.8      | 13.0      | 3.0       |

Section Pictures - 17/10/2023 - Gully

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 2        | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



1, 00:00:07, 0.42 m  
General photograph taken at this point



2, 00:00:11, 1.09 m  
Settled deposits, fine at joint, 10% cross-sectional area loss



3, 00:00:11, 1.09 m  
Line deviates left



4, 00:00:20, 2.28 m  
Settled deposits, fine at joint, 5% cross-sectional area loss

Section Pictures - 17/10/2023 - Gully

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 2        | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



5, 00:00:30, 3.90 m  
Junction at 11 o'clock, 100mm dia



6, 00:00:35, 4.06 m  
Settled deposits, fine at joint, 5% cross-sectional area loss



7, 00:00:35, 4.06 m  
Crack, circumferential at joint from 4 o'clock to 8 o'clock



8, 00:00:39, 4.79 m  
Settled deposits, fine at joint, 5% cross-sectional area loss

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Section Pictures - 17/10/2023 - Gully

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 2        | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



9, 00:00:44, 5.44 m  
Settled deposits, fine at joint, 10% cross-sectional area loss



10, 00:00:48, 6.19 m  
Settled deposits, coarse, 10% cross-sectional area loss, start



11, 00:00:56, 7.16 m  
Settled deposits, coarse, 25% cross-sectional area loss, change

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Section Inspection - 17/10/2023 - MH2 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 3             | 1         | 17/10/23 | 9:00 | TSA-23-2537      | No Rain Or Snow | No            | MH2 X          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

Road:

Location:

Surface Type:

Use:

Type of Pipe:

Flow Control:

Year Constructed:

Inspection Purpose:

London

The Bank

Property or buildings

Combined

Gravity drain/sewer

No flow control

Not Specified

Routine inspection

Inspection Direction:

Inspected Length:

Total Length:

Joint Length:

Pipe Shape:

Dia/Height:

Pipe Material:

Lining Type:

Lining Material:

Downstream

14.20 m

14.20 m

Circular

150 mm

Vitrified clay

No Lining

No Lining

Upstream Node:

Upstream Pipe Depth:

Downstream Node:

Downstream Pipe Depth:

MH2 X

MAIN

Comments:

Recommendations:

Scale: 1:123

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH2 X

0.00

MH

Start node, manhole, reference: MH2 X

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.00

REM

General remark: Vision limited due to steam

00:01:07

0.22

REM

General remark: Winsor trap visible

00:00:07

1

0.83

GP

General photograph taken at this point

00:00:10

2

6.62

GP

General photograph taken at this point

00:00:32

3

11.88

GP

General photograph taken at this point

00:00:52

4

13.54

LL

Line deviates left

00:00:57

5

14.20

BRF

Finish node, major connection without manhole, reference: Main public sewer reached

00:01:07

6

Main

Depth: 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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - MH2 X

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 3        | Downstream           | MH2 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:07, 0.22 m  
General remark, Winser trap visible



2, 00:00:10, 0.83 m  
General photograph taken at this point



3, 00:00:32, 6.62 m  
General photograph taken at this point



4, 00:00:52, 11.88 m  
General photograph taken at this point

Section Pictures - 17/10/2023 - MH2 X

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 3        | Downstream           | MH2 X | TSA-23-2537      | TSA-23-2537          |



5, 00:00:57, 13.54 m  
Line deviates left



6, 00:01:07, 14.20 m  
Finish node, major connection without manhole, reference:  
Main public sewer reached

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Section Inspection - 17/10/2023 - Vent Pipe

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 4             | 1         | 17/10/23 | 9:00 | TSA-23-2537      | No Rain Or Snow | No            | VENT PIPE      |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |           |
|---------------------|-----------------------|-----------------------|----------------|------------------------|-----------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | VENT PIPE |
| Road:               | The Bank              | Inspected Length:     | 0.31 m         | Upstream Pipe Depth:   |           |
| Location:           | Property or buildings | Total Length:         | 0.31 m         | Downstream Node:       | MH2 A     |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |           |
| Use:                | Combined              | Pipe Shape:           | Circular       |                        |           |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |           |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |           |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |           |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |           |

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH2 A

0.00

0.00

0.00

0.31

Vent Pipe

Depth: m

MH

Start node, manhole, reference: MH2 A

00:00:00

WL

Water level, 0% of the vertical dimension

GP

General photograph taken at this point

00:00:02

1

OCF

Finish node, other special chamber, reference: Vent Pipe: Vent Pipe reached

00:00:13

2

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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - Vent Pipe

|          |                      |           |                  |                      |
|----------|----------------------|-----------|------------------|----------------------|
| Item No. | Inspection Direction | PLR       | Client's Job Ref | Contractor's Job Ref |
| 4        | Upstream             | VENT PIPE | TSA-23-2537      | TSA-23-2537          |



1, 00:00:02, 0.00 m  
General photograph taken at this point

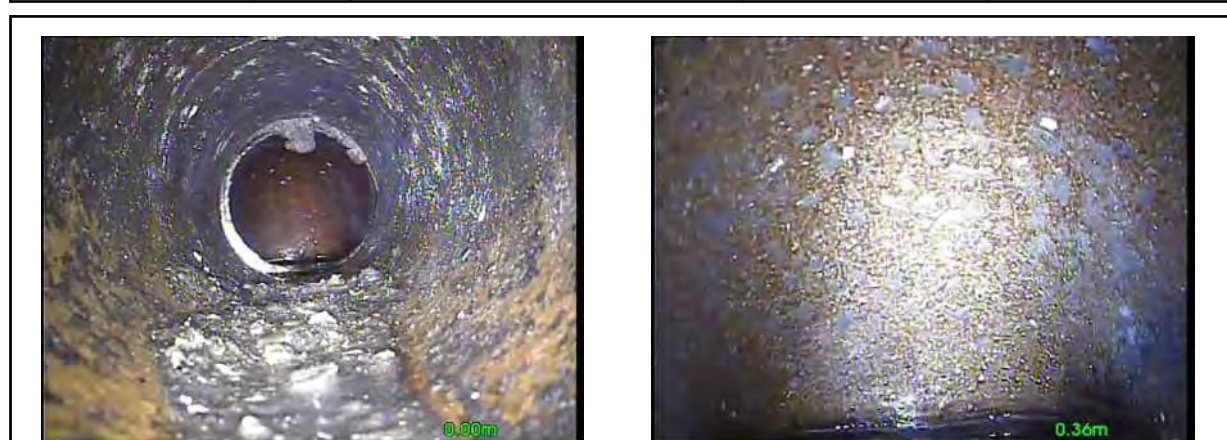


2, 00:00:13, 0.31 m  
Finish node, other special chamber, reference: Vent Pipe, Vent Pipe reached

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| 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |



1, 00:00:01, 0.00 m  
General photograph taken at this point

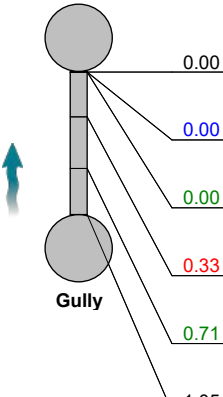
2, 00:00:08, 0.36 m  
Finish node, gully, reference: Gully reached

## Section Inspection - 17/10/2023 - Gully

| Item No.                  | Insp. No. | Date                | Time | Client's Job Ref          | Weather                        | Pre Cleaned                   | PLR                             |
|---------------------------|-----------|---------------------|------|---------------------------|--------------------------------|-------------------------------|---------------------------------|
| 6                         | 1         | 17/10/23            | 9:00 | TSA-23-2537               | No Rain Or Snow                | No                            | GULLY                           |
| Operator<br>Dominic White |           | Vehicle<br>LM21 UHU |      | Camera<br>Minicam Solopro | Preset Length<br>Not Specified | Legal Status<br>Not Specified | Alternative ID<br>Not Specified |

|                            |                       |                              |                |                               |       |
|----------------------------|-----------------------|------------------------------|----------------|-------------------------------|-------|
| <b>Town or Village:</b>    | London                | <b>Inspection Direction:</b> | Upstream       | <b>Upstream Node:</b>         | GULLY |
| <b>Road:</b>               | The Bank              | <b>Inspected Length:</b>     | 1.05 m         | <b>Upstream Pipe Depth:</b>   |       |
| <b>Location:</b>           | Property or buildings | <b>Total Length:</b>         | 1.05 m         | <b>Downstream Node:</b>       | MH2 C |
| <b>Surface Type:</b>       |                       | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |       |
| <b>Use:</b>                | Combined              | <b>Pipe Shape:</b>           | Circular       |                               |       |
| <b>Type of Pipe:</b>       | Gravity drain/sewer   | <b>Dia/Height:</b>           | 100 mm         |                               |       |
| <b>Flow Control:</b>       | No flow control       | <b>Pipe Material:</b>        | Vitrified clay |                               |       |
| <b>Year Constructed:</b>   | Not Specified         | <b>Lining Type:</b>          | No Lining      |                               |       |
| <b>Inspection Purpose:</b> | Routine inspection    | <b>Lining Material:</b>      | No Lining      |                               |       |

|                                                        |
|--------------------------------------------------------|
| <p><b>Comments:</b></p> <p><b>Recommendations:</b></p> |
|--------------------------------------------------------|

| Scale:                                                                             | 1:50     | Position [m]                                 | Code                                      | Observation | MPEG | Photo | Grade |
|------------------------------------------------------------------------------------|----------|----------------------------------------------|-------------------------------------------|-------------|------|-------|-------|
|  | Depth: m |                                              |                                           |             |      |       |       |
|                                                                                    | MH2 C    |                                              |                                           |             |      |       |       |
|                                                                                    | 0.00     | MH                                           | Start node, manhole, reference: MH2 C     | 00:00:00    |      |       |       |
|                                                                                    | 0.00     | WL                                           | Water level, 0% of the vertical dimension |             |      |       |       |
|                                                                                    | 0.00     | LU                                           | Line deviates up                          | 00:00:02    | 1    |       |       |
|                                                                                    | 0.33     | JDM                                          | Joint displaced, medium                   | 00:00:08    | 2    | 1 / 3 |       |
|                                                                                    | 0.71     | LR                                           | Line deviates right                       | 00:00:15    | 3    |       |       |
| 1.05                                                                               | GYF      | Finish node, gully, reference: Gully reached | 00:00:22                                  | 4           |      |       |       |

| 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                     | 1.0      | 1.0      | 1.0       | 1.0       | 1                                  | 2.0      | 1.9      | 2.0       | 3.0       |

## Section Pictures - 17/10/2023 - Gully

|               |                                  |              |                                 |                                     |
|---------------|----------------------------------|--------------|---------------------------------|-------------------------------------|
| Item No.<br>6 | Inspection Direction<br>Upstream | PLR<br>GULLY | Client's Job Ref<br>TSA-23-2537 | Contractor's Job Ref<br>TSA-23-2537 |
|---------------|----------------------------------|--------------|---------------------------------|-------------------------------------|



1, 00:00:02, 0.00 m  
Line deviates up



2, 00:00:08, 0.33 m  
Joint displaced, medium



3, 00:00:15, 0.71 m  
Line deviates right



4, 00:00:22, 1.05 m  
Finish node, gully, reference: Gully reached



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Section Inspection - 17/10/2023 - Gully

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 8             | 1         | 17/10/23 | 9:00 | TSA-23-2537      | No Rain Or Snow | No            | GULLY          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                    |                        |       |
|---------------------|-----------------------|-----------------------|--------------------|------------------------|-------|
| Town or Village:    | London                | Inspection Direction: | Upstream           | Upstream Node:         | GULLY |
| Road:               | The Bank              | Inspected Length:     | 6.21 m             | Upstream Pipe Depth:   |       |
| Location:           | Property or buildings | Total Length:         | 6.21 m             | Downstream Node:       | MH2 F |
| Surface Type:       |                       | Joint Length:         |                    | Downstream Pipe Depth: |       |
| Use:                | Foul                  | Pipe Shape:           | Circular           |                        |       |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm             |                        |       |
| Flow Control:       | No flow control       | Pipe Material:        | Polyvinyl chloride |                        |       |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining          |                        |       |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining          |                        |       |

Comments:

Recommendations:

Scale: 1:54

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH2 F

0.00

MH

Start node, manhole, reference: MH2 F

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.39

GP

General photograph taken at this point

00:00:07

1

0.93

LL

Line deviates left

00:00:12

2

2.29

LR

Line deviates right

00:00:32

3

3.62

GP

General photograph taken at this point

00:00:46

4

4.53

JN

Junction at 9 o'clock, 100mm dia

00:00:53

5

4.86

LR

Line deviates right

00:00:58

6

6.21

GYF

Finish node, gully, reference: Internal gully reached

00:01:07

7

Gully

Depth: 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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - Gully

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 8        | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



1, 00:00:07, 0.39 m  
General photograph taken at this point



2, 00:00:12, 0.93 m  
Line deviates left



3, 00:00:32, 2.29 m  
Line deviates right



4, 00:00:46, 3.62 m  
General photograph taken at this point

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Section Pictures - 17/10/2023 - Gully

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 8        | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



5, 00:00:53, 4.53 m  
Junction at 9 o'clock, 100mm dia



6, 00:00:58, 4.86 m  
Line deviates right



7, 00:01:07, 6.21 m  
Finish node, gully, reference: Internal gully reached

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Section Inspection - 17/10/2023 - Gully

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 9             | 1         | 17/10/23 | 9:00 | TSA-23-2537      | No Rain Or Snow | No            | GULLY          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

Road:

Location:

Surface Type:

Use:

Type of Pipe:

Flow Control:

Year Constructed:

Inspection Purpose:

London

The Bank

Property or buildings

Surface water

Gravity drain/sewer

No flow control

Not Specified

Routine inspection

Inspection Direction:

Inspected Length:

Total Length:

Joint Length:

Pipe Shape:

Dia/Height:

Pipe Material:

Lining Type:

Lining Material:

Upstream

2.30 m

2.30 m

Circular

100 mm

Vitrified clay

No Lining

No Lining

Upstream Node: GULLY

Upstream Pipe Depth:

Downstream Node: MH2 G

Downstream Pipe Depth:

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH2 G

0.00

MH

Start node, manhole, reference: MH2 G

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:01

1

1.68

GP

General photograph taken at this point

00:00:16

2

1.86

DEC

Settled deposits, hard or compacted, 10% cross-sectional area loss

00:00:23

3

3

2.30

GYF

Finish node, gully, reference: Gully reached

00:00:32

4

Gully

Depth: 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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 1           | 2.0      | 0.9      | 2.0       | 3.0       |

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Section Pictures - 17/10/2023 - Gully

Item No.

9

Inspection Direction

Upstream

PLR

GULLY

Client's Job Ref

TSA-23-2537

Contractor's Job Ref

TSA-23-2537



1, 00:00:01, 0.00 m  
General photograph taken at this point



2, 00:00:16, 1.68 m  
General photograph taken at this point



3, 00:00:23, 1.86 m  
Settled deposits, hard or compacted, 10% cross-sectional area loss



4, 00:00:32, 2.30 m  
Finish node, gully, reference: Gully reached

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Section Inspection - 17/10/2023 - Downpipe

Item No.

10

Insp. No.

1

Date

17/10/23

Time

9:00

Client's Job Ref

TSA-23-2537

Weather

No Rain Or Snow

Pre Cleaned

No

PLR

DOWNPIPE

Operator

Dominic White

Vehicle

LM21 UHU

Camera

Minicam Solopro

Preset Length

Not Specified

Legal Status

Not Specified

Alternative ID

Not Specified

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Combined

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Upstream

Inspected Length:

0.02 m

Total Length:

0.02 m

Joint Length:

Upstream Node:

DOWNPIPE

Upstream Pipe Depth:

Downstream Node:

MH2 I

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale:

1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH2 I

0.00

MH

Start node, manhole, reference: MH2 I

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.02

GP

General photograph taken at this point

00:00:04

1

0.02

OCF

Finish node, other special chamber, reference: Downpipe: Downpipe reached

00:00:04

2

Depth: m

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def

0

STR Peak

0.0

STR Mean

0.0

STR Total

0.0

STR Grade

1.0

SER No. Def

0

SER Peak

0.0

SER Mean

0.0

SER Total

0.0

SER Grade

1.0

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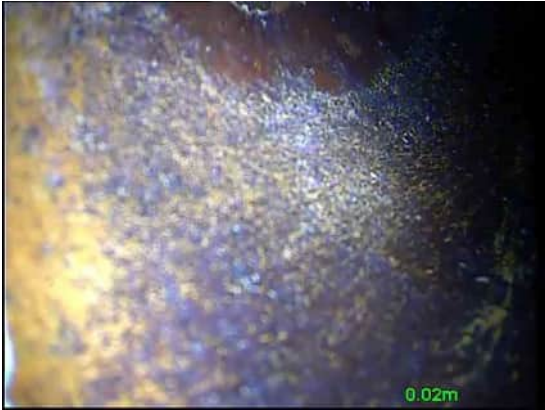
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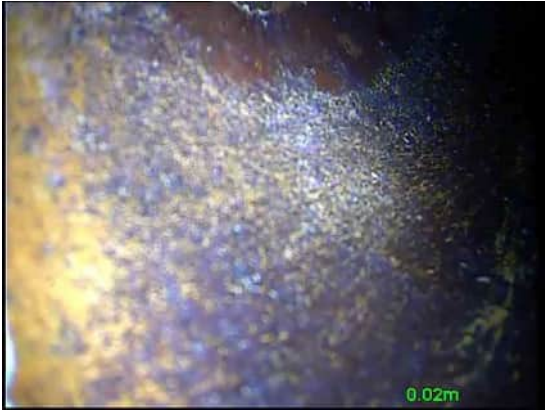
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Section Pictures - 17/10/2023 - Downpipe

|          |                      |          |                  |                      |
|----------|----------------------|----------|------------------|----------------------|
| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
| 10       | Upstream             | DOWNPIPE | TSA-23-2537      | TSA-23-2537          |



1, 00:00:04, 0.02 m  
General photograph taken at this point



2, 00:00:04, 0.02 m  
Finish node, other special chamber, reference: Downpipe, Downpipe reached

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Section Inspection - 17/10/2023 - MH3 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 11            | 1         | 17/10/23 | 9:01 | TSA-23-2537      | No Rain Or Snow | No            | MH3 X          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Combined

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Downstream

Inspected Length:

2.05 m

Total Length:

2.05 m

Joint Length:

Upstream Node:

MH3 X

Upstream Pipe Depth:

Downstream Node:

MH4

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale:

1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH3 X

MH4

Depth: m

0.00

0.00

0.45

1.01

1.54

2.05

MH

WL

LD

REM

GP

MHF

Start node, manhole, reference: MH3 X

Water level, 5% of the vertical dimension

Line deviates down

General remark: Sewer levels out at this point

General photograph taken at this point

Finish node, manhole, reference: MH4 reached

00:00:00

00:00:09

00:00:14

00:00:19

00:00:25

1

2

3

4

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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - MH3 X

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 11       | Downstream           | MH3 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:09, 0.45 m  
Line deviates down



2, 00:00:14, 1.01 m  
General remark, Sewer levels out at this point



3, 00:00:19, 1.54 m  
General photograph taken at this point



4, 00:00:25, 2.05 m  
Finish node, manhole, reference: MH4 reached

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Section Inspection - 17/10/2023 - Gully

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 12            | 1         | 17/10/23 | 9:01 | TSA-23-2537      | No Rain Or Snow | No            | GULLY          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

Road:

Location:

Surface Type:

Use:

Type of Pipe:

Flow Control:

Year Constructed:

Inspection Purpose:

London

The Bank

Property or buildings

Surface water

Gravity drain/sewer

No flow control

Not Specified

Routine inspection

Inspection Direction:

Inspected Length:

Total Length:

Joint Length:

Pipe Shape:

Dia/Height:

Pipe Material:

Lining Type:

Lining Material:

Upstream

3.44 m

3.44 m

Circular

100 mm

Vitrified clay

No Lining

No Lining

Upstream Node:

Upstream Pipe Depth:

Downstream Node:

Downstream Pipe Depth:

GULLY

MH3 A

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

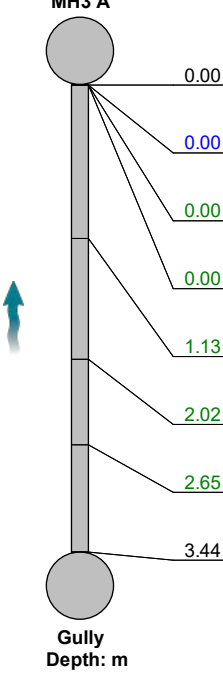
MPEG

Photo

Grade

Depth: m

MH3 A



0.00

MH

Start node, manhole, reference: MH3 A

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

LU

Line deviates up

00:00:02

1

0.00

LL

Line deviates left

00:00:02

2

1.13

LL

Line deviates left

00:00:13

3

2.02

LR

Line deviates right

00:00:17

4

2.65

LL

Line deviates left

00:00:22

5

3.44

GYF

Finish node, gully, reference: Gully reached

00:00:27

6

Gully Depth: 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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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| Section Pictures - 17/10/2023 - Gully |                      |       |                  |                      |
|---------------------------------------|----------------------|-------|------------------|----------------------|
| Item No.                              | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 12                                    | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



1, 00:00:02, 0.00 m  
Line deviates up



2, 00:00:02, 0.00 m  
Line deviates left



3, 00:00:13, 1.13 m  
Line deviates left



4, 00:00:17, 2.02 m  
Line deviates right

| Section Pictures - 17/10/2023 - Gully |                      |       |                  |                      |
|---------------------------------------|----------------------|-------|------------------|----------------------|
| Item No.                              | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 12                                    | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



5, 00:00:22, 2.65 m  
Line deviates left



6, 00:00:27, 3.44 m  
Finish node, gully, reference: Gully reached

## Section Inspection - 17/10/2023 - Downpipe

| Item No.                         | Insp. No. | Date                       | Time | Client's Job Ref                 | Weather                               | Pre Cleaned                          | PLR                                    |
|----------------------------------|-----------|----------------------------|------|----------------------------------|---------------------------------------|--------------------------------------|----------------------------------------|
| 13                               | 1         | 17/10/23                   | 9:01 | TSA-23-2537                      | No Rain Or Snow                       | No                                   | DOWNPIPE                               |
| <b>Operator</b><br>Dominic White |           | <b>Vehicle</b><br>LM21 UHU |      | <b>Camera</b><br>Minicam Solopro | <b>Preset Length</b><br>Not Specified | <b>Legal Status</b><br>Not Specified | <b>Alternative ID</b><br>Not Specified |

|                            |                       |                              |                |                               |          |
|----------------------------|-----------------------|------------------------------|----------------|-------------------------------|----------|
| <b>Town or Village:</b>    | London                | <b>Inspection Direction:</b> | Upstream       | <b>Upstream Node:</b>         | DOWNPIPE |
| <b>Road:</b>               | The Bank              | <b>Inspected Length:</b>     | 1.80 m         | <b>Upstream Pipe Depth:</b>   |          |
| <b>Location:</b>           | Property or buildings | <b>Total Length:</b>         | 1.80 m         | <b>Downstream Node:</b>       | MH3 B    |
| <b>Surface Type:</b>       |                       | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |          |
| <b>Use:</b>                | Foul                  | <b>Pipe Shape:</b>           | Circular       |                               |          |
| <b>Type of Pipe:</b>       | Gravity drain/sewer   | <b>Dia/Height:</b>           | 100 mm         |                               |          |
| <b>Flow Control:</b>       | No flow control       | <b>Pipe Material:</b>        | Vitrified clay |                               |          |
| <b>Year Constructed:</b>   | Not Specified         | <b>Lining Type:</b>          | No Lining      |                               |          |
| <b>Inspection Purpose:</b> | Routine inspection    | <b>Lining Material:</b>      | No Lining      |                               |          |

|                                                        |
|--------------------------------------------------------|
| <p><b>Comments:</b></p> <p><b>Recommendations:</b></p> |
|--------------------------------------------------------|

| Scale: | 1:50 | Position [m] | Code | Observation                                                                                  | MPEG     | Photo | Grade |
|--------|------|--------------|------|----------------------------------------------------------------------------------------------|----------|-------|-------|
|        |      |              | MH   | Start node, manhole, reference: MH3 B                                                        | 00:00:00 |       |       |
|        |      |              | WL   | Water level, 5% of the vertical dimension                                                    |          |       |       |
|        |      |              | LL   | Line deviates left                                                                           | 00:00:03 | 1     |       |
|        |      |              | GP   | General photograph taken at this point                                                       | 00:00:11 | 2     |       |
|        |      |              | DEC  | Settled deposits, hard or compacted, 20% cross-sectional area loss: At rest bend of downpipe | 00:00:22 | 3     | 4     |
|        |      |              | OCF  | Finish node, other special chamber, reference: Downpipe: Internal downpipe reached           | 00:00:22 | 4     |       |
|        |      |              |      |                                                                                              |          |       |       |

| 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 1                                  | 5.0      | 2.8      | 5.0       | 4.0       |

### Section Pictures - 17/10/2023 - Downpipe

|                |                                  |                 |                                 |                                     |
|----------------|----------------------------------|-----------------|---------------------------------|-------------------------------------|
| Item No.<br>13 | Inspection Direction<br>Upstream | PLR<br>DOWNPIPE | Client's Job Ref<br>TSA-23-2537 | Contractor's Job Ref<br>TSA-23-2537 |
|----------------|----------------------------------|-----------------|---------------------------------|-------------------------------------|



1, 00:00:03, 0.00 m  
Line deviates left



2, 00:00:11, 0.98 m  
General photograph taken at this point



3, 00:00:22, 1.80 m  
Settled deposits, hard or compacted, 20% cross-sectional area  
loss, At rest bend of downpipe



4, 00:00:22, 1.80 m  
Finish node, other special chamber, reference: Downpipe,  
Internal downpipe reached



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Section Pictures - 17/10/2023 - MH4 X

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 14       | Downstream           | MH4 X | TSA-23-2537      | TSA-23-2537          |



5, 00:01:45, 5.38 m  
General photograph taken at this point



6, 00:01:16, 10.06 m  
Line deviates down



7, 00:01:10, 11.80 m  
Finish node, major connection without manhole, reference:  
Main public sewer reached

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Section Inspection - 17/10/2023 - Vent Pipe

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 15            | 1         | 17/10/23 | 9:01 | TSA-23-2537      | No Rain Or Snow | No            | VENT PIPE      |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Combined

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Upstream

Inspected Length:

0.08 m

Total Length:

0.08 m

Joint Length:

Upstream Node:

VENT PIPE

Upstream Pipe Depth:

Downstream Node:

MH4 A

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale:

1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH4 A

0.00

MH

Start node, manhole, reference: MH4 A

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.08

JDL

Joint displaced, large

00:00:05

1

1 / 4

0.08

SA

Survey abandoned: Unable to pass displaced joint

00:00:05

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           | 2.0      | 25.0     | 2.0       | 1.0       | 1           | 5.0      | 62.5     | 5.0       | 5.0       |

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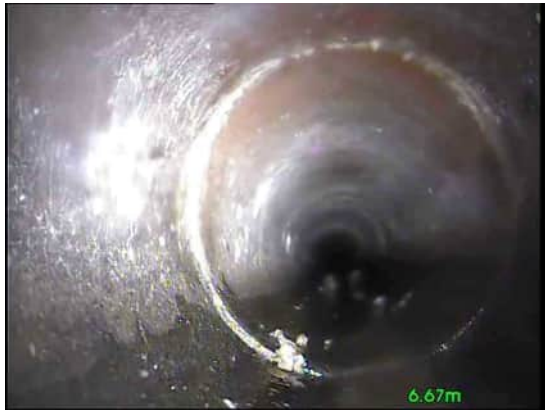
| Section Pictures - 17/10/2023 - MH9 |                      |     |                  |                      |
|-------------------------------------|----------------------|-----|------------------|----------------------|
| Item No.                            | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 16                                  | Upstream             | MH9 | TSA-23-2537      | TSA-23-2537          |



1, 00:04:01, 1.37 m  
General photograph taken at this point



2, 00:03:45, 3.10 m  
Pipe material changes to vitrified clay at this point



3, 00:03:24, 6.67 m  
General photograph taken at this point



4, 00:02:54, 12.01 m  
Pipe material changes to cast iron at this point

| Section Pictures - 17/10/2023 - MH9 |                      |     |                  |                      |
|-------------------------------------|----------------------|-----|------------------|----------------------|
| Item No.                            | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 16                                  | Upstream             | MH9 | TSA-23-2537      | TSA-23-2537          |



5, 00:02:35, 13.89 m  
Finish node, manhole, reference: MH9 reached

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Section Inspection - 17/10/2023 - MH6 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 17            | 1         | 17/10/23 | 9:02 | TSA-23-2537      | No Rain Or Snow | No            | MH6 X          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |       |
|---------------------|-----------------------|-----------------------|----------------|------------------------|-------|
| Town or Village:    | London                | Inspection Direction: | Downstream     | Upstream Node:         | MH6 X |
| Road:               | The Bank              | Inspected Length:     | 6.84 m         | Upstream Pipe Depth:   |       |
| Location:           | Property or buildings | Total Length:         | 6.84 m         | Downstream Node:       | MAIN  |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |       |
| Use:                | Combined              | Pipe Shape:           | Circular       |                        |       |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 150 mm         |                        |       |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |       |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |       |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |       |

Comments:

Recommendations:

|          |      |              |                                                                                     |             |      |       |       |
|----------|------|--------------|-------------------------------------------------------------------------------------|-------------|------|-------|-------|
| Scale:   | 1:60 | Position [m] | Code                                                                                | Observation | MPEG | Photo | Grade |
| Depth: m |      |              |                                                                                     |             |      |       |       |
| MH6 X    |      |              |                                                                                     |             |      |       |       |
|          |      |              |                                                                                     |             |      |       |       |
| 0.00     | MH   |              | Start node, manhole, reference: MH6 X                                               | 00:00:00    |      |       |       |
| 0.00     | WL   |              | Water level, 5% of the vertical dimension                                           |             |      |       |       |
| 0.08     | REM  |              | General remark: Winsor trap visible                                                 | 00:00:05    | 1    |       |       |
| 1.17     | GP   |              | General photograph taken at this point                                              | 00:00:10    | 2    |       |       |
| 2.32     | GP   |              | General photograph taken at this point                                              | 00:00:20    | 3    |       |       |
| 5.16     | LL   |              | Line deviates left                                                                  | 00:00:27    | 4    |       |       |
| 5.16     | LD   |              | Line deviates down                                                                  | 00:00:27    | 5    |       |       |
| 5.80     | GP   |              | General photograph taken at this point                                              | 00:00:32    | 6    |       |       |
| 6.84     | BRF  |              | Finish node, major connection without manhole, reference: Main public sewer reached | 00:00:38    | 7    |       |       |
| Main     |      |              |                                                                                     |             |      |       |       |
| Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - MH6 X

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 17       | Downstream           | MH6 X | TSA-23-2537      | TSA-23-2537          |

1, 00:00:05, 0.08 m  
General remark, Winsor trap visible

2, 00:00:10, 1.17 m  
General photograph taken at this point

3, 00:00:20, 2.32 m  
General photograph taken at this point

4, 00:00:27, 5.16 m  
Line deviates left

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Section Pictures - 17/10/2023 - MH6 X

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 17       | Downstream           | MH6 X | TSA-23-2537      | TSA-23-2537          |



5, 00:00:27, 5.16 m  
Line deviates down



6, 00:00:32, 5.80 m  
General photograph taken at this point



7, 00:00:38, 6.84 m  
Finish node, major connection without manhole, reference:  
Main public sewer reached

TSA-23-2537 Channing School for Girls CCTV Report\_303\_Issue01

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Section Inspection - 17/10/2023 - MH12

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 18            | 1         | 17/10/23 | 9:02 | TSA-23-2537      | No Rain Or Snow | No            | MH12           |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

Road:

Location:

Surface Type:

Use:

Type of Pipe:

Flow Control:

Year Constructed:

Inspection Purpose:

London

The Bank

Property or buildings

Foul

Gravity drain/sewer

No flow control

Not Specified

Routine inspection

Inspection Direction:

Inspected Length:

Total Length:

Joint Length:

Pipe Shape:

Dia/Height:

Pipe Material:

Lining Type:

Lining Material:

Upstream

16.33 m

16.33 m

Circular

100 mm

Polyvinyl chloride

No Lining

No Lining

Upstream Node:

Upstream Pipe Depth:

Downstream Node:

Downstream Pipe Depth:

MH12

MH6 A

Comments:

Recommendations:

Scale: 1:142

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH6 A

0.00

MH

Start node, manhole, reference: MH6 A

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.06

GP

General photograph taken at this point

00:00:03

1

5.30

GP

General photograph taken at this point

00:00:36

2

10.31

GP

General photograph taken at this point

00:00:59

3

14.77

GP

General photograph taken at this point

00:01:19

4

16.33

MHF

Finish node, manhole, reference: MH12 reached

00:01:29

5

MH12

Depth: 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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - MH12

|          |                      |      |                  |                      |
|----------|----------------------|------|------------------|----------------------|
| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
| 18       | Upstream             | MH12 | TSA-23-2537      | TSA-23-2537          |



1, 00:00:03, 0.06 m  
General photograph taken at this point



2, 00:00:36, 5.30 m  
General photograph taken at this point



3, 00:00:59, 10.31 m  
General photograph taken at this point



4, 00:01:19, 14.77 m  
General photograph taken at this point

Section Pictures - 17/10/2023 - MH12

|          |                      |      |                  |                      |
|----------|----------------------|------|------------------|----------------------|
| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
| 18       | Upstream             | MH12 | TSA-23-2537      | TSA-23-2537          |



5, 00:01:29, 16.33 m  
Finish node, manhole, reference: MH12 reached

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Section Inspection - 17/10/2023 - Gully

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 19            | 1         | 17/10/23 | 9:02 | TSA-23-2537      | No Rain Or Snow | No            | GULLY          |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | GULLY  |
| Road:               | The Bank              | Inspected Length:     | 0.54 m         | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 0.54 m         | Downstream Node:       | MH16 C |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH16 C

0.00

MH

Start node, manhole, reference: MH16 C

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:01

1

0.12

CMJ

Cracks, multiple at joint from 8 o'clock to 2 o'clock

00:00:03

2

3 / 2

0.54

GYF

Finish node, gully, reference: Gully reached

00:00:09

3

Depth: m

Gully

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     | 74.1     | 40.0      | 3.0       | 1           | 1.0      | 1.9      | 1.0       | 3.0       |

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Section Pictures - 17/10/2023 - Gully

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 19       | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



1, 00:00:01, 0.00 m  
General photograph taken at this point



2, 00:00:03, 0.12 m  
Cracks, multiple at joint from 8 o'clock to 2 o'clock



3, 00:00:09, 0.54 m  
Finish node, gully, reference: Gully reached

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## Section Inspection - 17/10/2023 - MH8 X

|                                  |                       |                            |                     |                                        |                                       |                                      |                                        |
|----------------------------------|-----------------------|----------------------------|---------------------|----------------------------------------|---------------------------------------|--------------------------------------|----------------------------------------|
| <b>Item No.</b><br>22            | <b>Insp. No.</b><br>1 | <b>Date</b><br>17/10/23    | <b>Time</b><br>9:05 | <b>Client's Job Ref</b><br>TSA-23-2537 | <b>Weather</b><br>No Rain Or Snow     | <b>Pre Cleaned</b><br>No             | <b>PLR</b><br>MH8 X                    |
| <b>Operator</b><br>Dominic White |                       | <b>Vehicle</b><br>LM21 UHU |                     | <b>Camera</b><br>Minicam Solopro       | <b>Preset Length</b><br>Not Specified | <b>Legal Status</b><br>Not Specified | <b>Alternative ID</b><br>Not Specified |

|                            |                       |                              |                |                               |       |
|----------------------------|-----------------------|------------------------------|----------------|-------------------------------|-------|
| <b>Town or Village:</b>    | London                | <b>Inspection Direction:</b> | Downstream     | <b>Upstream Node:</b>         | MH8 X |
| <b>Road:</b>               | The Bank              | <b>Inspected Length:</b>     | 15.91 m        | <b>Upstream Pipe Depth:</b>   |       |
| <b>Location:</b>           | Property or buildings | <b>Total Length:</b>         | 15.91 m        | <b>Downstream Node:</b>       | MAIN  |
| <b>Surface Type:</b>       |                       | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |       |
| <b>Use:</b>                | Combined              | <b>Pipe Shape:</b>           | Circular       |                               |       |
| <b>Type of Pipe:</b>       | Gravity drain/sewer   | <b>Dia/Height:</b>           | 150 mm         |                               |       |
| <b>Flow Control:</b>       | No flow control       | <b>Pipe Material:</b>        | Vitrified clay |                               |       |
| <b>Year Constructed:</b>   | Not Specified         | <b>Lining Type:</b>          | No Lining      |                               |       |
| <b>Inspection Purpose:</b> | Routine inspection    | <b>Lining Material:</b>      | No Lining      |                               |       |

|                                                        |
|--------------------------------------------------------|
| <p><b>Comments:</b></p> <p><b>Recommendations:</b></p> |
|--------------------------------------------------------|

| Scale:                                                                                                                             | 1:98 | Position [m]                                                  | Code                                                                       | Observation | MPEG | Photo | Grade |
|------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------|----------------------------------------------------------------------------|-------------|------|-------|-------|
| <div>Depth: m</div> <div>MH8 X</div> <div></div> | 0.00 | MH                                                            | Start node, manhole, reference: MH8 X                                      | 00:00:00    |      |       |       |
|                                                                                                                                    | 0.00 | WL                                                            | Water level, 5% of the vertical dimension                                  |             |      |       |       |
|                                                                                                                                    | 0.00 | REM                                                           | General remark: Vision limited due to steam                                | 00:10:36    |      |       |       |
|                                                                                                                                    | 0.22 | REM                                                           | General remark: Winser trap visible                                        | 00:00:05    | 1    |       |       |
|                                                                                                                                    | 1.91 | GP                                                            | General photograph taken at this point                                     | 00:00:10    | 2    |       |       |
|                                                                                                                                    | 3.38 | JDL                                                           | Joint displaced, large                                                     | 00:00:51    | 3    | 1 / 4 |       |
|                                                                                                                                    | 3.75 | LD                                                            | Line deviates down                                                         | 00:01:03    | 4    |       |       |
|                                                                                                                                    | 4.19 | RF                                                            | Roots, fine                                                                | 00:02:27    | 5    | 2     |       |
|                                                                                                                                    | 5.43 | DECJ                                                          | Settled deposits, hard or compacted at joint, 5% cross-sectional area loss | 00:02:48    | 6    | 3     |       |
|                                                                                                                                    | 6.56 | JDL                                                           | Joint displaced, large                                                     | 00:05:01    | 7    | 1 / 4 |       |
|                                                                                                                                    | 6.56 | LL                                                            | Line deviates left                                                         | 00:05:01    | 8    |       |       |
|                                                                                                                                    | 8.64 | DESJ                                                          | Settled deposits, fine at joint, 5% cross-sectional area loss              | 00:05:13    | 9    | 3     |       |
| 8.98                                                                                                                               | DESJ | Settled deposits, fine at joint, 5% cross-sectional area loss | 00:05:18                                                                   | 10          | 3    |       |       |
| 9.46                                                                                                                               | DESJ | Settled deposits, fine at joint, 5% cross-sectional area loss | 00:05:30                                                                   | 11          | 3    |       |       |
| 10.30                                                                                                                              | DESJ | Settled deposits, fine at joint, 5% cross-sectional area loss | 00:05:34                                                                   | 12          | 3    |       |       |

## Section Inspection - 17/10/2023 - MH8 X

|                                  |                       |                            |                     |                                        |                                       |                                      |                                        |
|----------------------------------|-----------------------|----------------------------|---------------------|----------------------------------------|---------------------------------------|--------------------------------------|----------------------------------------|
| <b>Item No.</b><br>22            | <b>Insp. No.</b><br>1 | <b>Date</b><br>17/10/23    | <b>Time</b><br>9:05 | <b>Client's Job Ref</b><br>TSA-23-2537 | <b>Weather</b><br>No Rain Or Snow     | <b>Pre Cleaned</b><br>No             | <b>PLR</b><br>MH8 X                    |
| <b>Operator</b><br>Dominic White |                       | <b>Vehicle</b><br>LM21 UHU |                     | <b>Camera</b><br>Minicam Solopro       | <b>Preset Length</b><br>Not Specified | <b>Legal Status</b><br>Not Specified | <b>Alternative ID</b><br>Not Specified |

| Scale:                                                                              | 1:98                                                                                | Position [m] | Code | Observation                                                                         | MPEG     | Photo | Grade |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|------|-------------------------------------------------------------------------------------|----------|-------|-------|
|  |                                                                                     | 12.32        | DESJ | Settled deposits, fine at joint, 5% cross-sectional area loss                       | 00:09:32 | 13    | 3     |
|                                                                                     |                                                                                     | 15.91        | LD   | Line deviates down: At entry to main public sewer                                   | 00:09:07 | 14    |       |
|                                                                                     |  | 15.91        | BRF  | Finish node, major connection without manhole, reference: Main public sewer reached | 00:09:07 | 15    |       |

**Main Depth: 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 |
| 2                     | 2.0      | 0.3      | 4.0       | 1.0       | 9                                  | 5.0      | 1.4      | 23.0      | 4.0       |

Section Pictures - 17/10/2023 - MH8 X

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 22       | Downstream           | MH8 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:05, 0.22 m

General remark, Winsor trap visible



2, 00:00:10, 1.91 m

General photograph taken at this point



3, 00:00:51, 3.38 m

Joint displaced, large



4, 00:01:03, 3.75 m

Line deviates down

Section Pictures - 17/10/2023 - MH8 X

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 22       | Downstream           | MH8 X | TSA-23-2537      | TSA-23-2537          |



5, 00:02:27, 4.19 m

Roots, fine



6, 00:02:48, 5.43 m

Settled deposits, hard or compacted at joint, 5% cross-sectional area loss



7, 00:05:01, 6.56 m

Joint displaced, large



8, 00:05:01, 6.56 m

Line deviates left

Section Pictures - 17/10/2023 - MH8 X

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 22       | Downstream           | MH8 X | TSA-23-2537      | TSA-23-2537          |



9, 00:05:13, 8.64 m  
Settled deposits, fine at joint, 5% cross-sectional area loss



10, 00:05:18, 8.98 m  
Settled deposits, fine at joint, 5% cross-sectional area loss



11, 00:05:30, 9.46 m  
Settled deposits, fine at joint, 5% cross-sectional area loss



12, 00:05:34, 10.30 m  
Settled deposits, fine at joint, 5% cross-sectional area loss

Section Pictures - 17/10/2023 - MH8 X

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 22       | Downstream           | MH8 X | TSA-23-2537      | TSA-23-2537          |



13, 00:09:32, 12.32 m  
Settled deposits, fine at joint, 5% cross-sectional area loss



14, 00:09:07, 15.91 m  
Line deviates down, At entry to main public sewer



15, 00:09:07, 15.91 m  
Finish node, major connection without manhole, reference:  
Main public sewer reached





## Section Inspection - 17/10/2023 - Downpipe

| Item No.                         | Insp. No. | Date                       | Time | Client's Job Ref                 | Weather                               | Pre Cleaned                          | PLR                                    |
|----------------------------------|-----------|----------------------------|------|----------------------------------|---------------------------------------|--------------------------------------|----------------------------------------|
| 25                               | 1         | 17/10/23                   | 9:06 | TSA-23-2537                      | No Rain Or Snow                       | No                                   | DOWNPIPE                               |
| <b>Operator</b><br>Dominic White |           | <b>Vehicle</b><br>LM21 UHU |      | <b>Camera</b><br>Minicam Solopro | <b>Preset Length</b><br>Not Specified | <b>Legal Status</b><br>Not Specified | <b>Alternative ID</b><br>Not Specified |

|                            |                       |                              |                |                               |          |
|----------------------------|-----------------------|------------------------------|----------------|-------------------------------|----------|
| <b>Town or Village:</b>    | London                | <b>Inspection Direction:</b> | Upstream       | <b>Upstream Node:</b>         | DOWNPIPE |
| <b>Road:</b>               | The Bank              | <b>Inspected Length:</b>     | 1.38 m         | <b>Upstream Pipe Depth:</b>   |          |
| <b>Location:</b>           | Property or buildings | <b>Total Length:</b>         | 1.38 m         | <b>Downstream Node:</b>       | MH9 D    |
| <b>Surface Type:</b>       |                       | <b>Joint Length:</b>         |                | <b>Downstream Pipe Depth:</b> |          |
| <b>Use:</b>                | Foul                  | <b>Pipe Shape:</b>           | Circular       |                               |          |
| <b>Type of Pipe:</b>       | Gravity drain/sewer   | <b>Dia/Height:</b>           | 100 mm         |                               |          |
| <b>Flow Control:</b>       | No flow control       | <b>Pipe Material:</b>        | Vitrified clay |                               |          |
| <b>Year Constructed:</b>   | Not Specified         | <b>Lining Type:</b>          | No Lining      |                               |          |
| <b>Inspection Purpose:</b> | Routine inspection    | <b>Lining Material:</b>      | No Lining      |                               |          |

|                                                        |
|--------------------------------------------------------|
| <p><b>Comments:</b></p> <p><b>Recommendations:</b></p> |
|--------------------------------------------------------|

| Scale: | 1:50  | Position [m] | Code                                                                               | Observation | MPEG | Photo | Grade |
|--------|-------|--------------|------------------------------------------------------------------------------------|-------------|------|-------|-------|
|        | MH9 D |              |                                                                                    |             |      |       |       |
|        | 0.00  | MH           | Start node, manhole, reference: MH9 D                                              | 00:00:00    |      |       |       |
|        | 0.00  | WL           | Water level, 0% of the vertical dimension                                          |             |      |       |       |
|        | 0.13  | LU           | Line deviates up                                                                   | 00:00:11    | 1    |       |       |
|        | 1.15  | GP           | General photograph taken at this point                                             | 00:00:32    | 2    |       |       |
|        | 1.38  | OCF          | Finish node, other special chamber, reference: Downpipe: Internal downpipe reached | 00:01:11    | 3    |       |       |

| 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

### Section Pictures - 17/10/2023 - Downpipe

|                |                                  |                 |                                 |                                     |
|----------------|----------------------------------|-----------------|---------------------------------|-------------------------------------|
| Item No.<br>25 | Inspection Direction<br>Upstream | PLR<br>DOWNPIPE | Client's Job Ref<br>TSA-23-2537 | Contractor's Job Ref<br>TSA-23-2537 |
|----------------|----------------------------------|-----------------|---------------------------------|-------------------------------------|



1, 00:00:11, 0.13 m  
Line deviates up



2, 00:00:32, 1.15 m  
General photograph taken at this point



3, 00:01:11, 1.38 m  
Finish node, other special chamber, reference: Downpipe,  
Internal downpipe reached

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| <div><div><div>Tower Surveys</div><div>Chartered Surveyors</div><div>Geomatics - Land, Utilities, Engineering &amp; Building</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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             |              | <div><div><div>Tower Surveys Associates</div><div>18-20 The Ropewalk, Nottingham</div><div>james.hulme@towersurveysassociates.biz</div></div></div> |                                |                               |                                 |
| Section Inspection - 17/10/2023 - Gully                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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| Item No.<br>26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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No.<br>1 | Date<br>17/10/23      | Time<br>9:06 | Client's Job Ref<br>TSA-23-2537                                                                                                                     | Weather<br>No Rain Or Snow     | Pre Cleaned<br>No             | PLR<br>GULLY                    |
| Operator<br>Dominic White                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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Vehicle<br>LM21 UHU   |              | Camera<br>Minicam Solopro                                                                                                                           | Preset Length<br>Not Specified | Legal Status<br>Not Specified | Alternative ID<br>Not Specified |
| Town or Village:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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             |              | Inspected Length:                                                                                                                                   |                                | 7.15 m                        |                                 |
| Location:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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or buildings |              | Total Length:                                                                                                                                       |                                | 7.15 m                        |                                 |
| Surface Type:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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             |              | Joint Length:                                                                                                                                       |                                |                               |                                 |
| Use:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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water         |              |                                                                                                                                                     | Pipe Shape:                    |                               | Circular                        |
| Type of Pipe:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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drain/sewer   |              |                                                                                                                                                     | Dia/Height:                    |                               | 100 mm                          |
| Flow Control:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          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control       |              |                                                                                                                                                     | Pipe Material:                 |                               | Vitrified clay                  |
| Year Constructed:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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Specified         |              |                                                                                                                                                     | Lining Type:                   |                               | No Lining                       |
| Inspection Purpose:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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inspection    |              |                                                                                                                                                     | Lining Material:               |                               | No Lining                       |
| Comments:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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             |              |                                                                                                                                                     |                                |                               |                                 |
| Recommendations:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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             |              |                                                                                                                                                     |                                |                               |                                 |
| Scale:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1:62           | Position [m]          | Code         | Observation                                                                                                                                         | MPEG                           | Photo                         | Grade                           |
| <div><div>Depth: m</div><div>MH9 G</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div>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|                |                       |              |                                                                                                                                                     |                                |                               |                                 |

**Tower Surveys**  
Chartered Surveyors  
Geomatics - Land, Utilities, Engineering & Building

**Tower Surveys Associates**  
18-20 The Ropewalk, Nottingham

james.hulme@towersurveysassociates.biz

Section Pictures - 17/10/2023 - Gully

| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-------|------------------|----------------------|
| 26       | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |

A top-down view into a circular gully. The interior walls are dark and textured. A bright, circular reflection is visible in the center of the gully.

1, 00:00:03, 0.47 m  
General photograph taken at this point

A top-down view into a circular gully. A prominent, light-colored, circumferential crack is visible around the joint, spanning from approximately 10 o'clock to 3 o'clock. The gully walls are dark and textured.

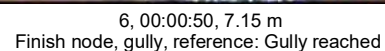
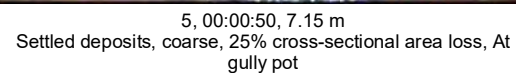
2, 00:00:17, 1.40 m  
Crack, circumferential at joint from 10 o'clock to 3 o'clock

A top-down view into a circular gully. The gully walls are dark and textured. A bright, circular reflection is visible in the center of the gully.

3, 00:00:28, 3.41 m  
General remark, Sewer levels out at this point

A top-down view into a circular gully. A prominent, light-colored, circumferential crack is visible around the joint, spanning from approximately 12 o'clock to 7 o'clock. The gully walls are dark and textured.

4, 00:00:35, 5.51 m  
Crack, circumferential at joint from 12 o'clock to 7 o'clock



| Scale:             | 1:77 | Position [m] | Code | Observation                                    | MPEG     | Photo | Grade |
|--------------------|------|--------------|------|------------------------------------------------|----------|-------|-------|
| Depth: m<br>MH10 X |      |              |      |                                                |          |       |       |
|                    |      | 0.00         | MH   | Start node, manhole, reference: MH10 X         | 00:00:00 |       |       |
|                    |      | 0.00         | WL   | Water level, 0% of the vertical dimension      |          |       |       |
|                    |      | 0.00         | GP   | General photograph taken at this point         | 00:00:02 | 1     |       |
|                    |      | 0.51         | LR   | Line deviates right                            | 00:00:06 | 2     |       |
|                    |      | 2.23         | LD   | Line deviates down                             | 00:00:13 | 3     |       |
|                    |      | 3.56         | LL   | Line deviates left                             | 00:00:17 | 4     |       |
|                    |      | 3.56         | LD   | Line deviates down                             | 00:00:17 | 5     |       |
|                    |      | 5.32         | GP   | General photograph taken at this point         | 00:00:28 | 6     |       |
|                    |      | 6.62         | LD   | Line deviates down                             | 00:00:34 | 7     |       |
|                    |      | 7.31         | REM  | General remark: Sewer levels out at this point | 00:00:39 | 8     |       |
|                    |      | 8.78         | MHF  | Finish node, manhole, reference: MH7 reached   | 00:00:52 | 9     |       |
| MH7<br>Depth: m    |      |              |      |                                                |          |       |       |

TSA-23-2537 Channing School for Girls CCTV Report 303 Issue01 68

Section Pictures - 17/10/2023 - MH10 X

| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|--------|------------------|----------------------|
| 27       | Downstream           | MH10 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:02, 0.00 m  
General photograph taken at this point



2, 00:00:06, 0.51 m  
Line deviates right



3, 00:00:13, 2.23 m  
Line deviates down



4, 00:00:17, 3.56 m  
Line deviates left

Section Pictures - 17/10/2023 - MH10 X

| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|--------|------------------|----------------------|
| 27       | Downstream           | MH10 X | TSA-23-2537      | TSA-23-2537          |



5, 00:00:17, 3.56 m  
Line deviates down



6, 00:00:28, 5.32 m  
General photograph taken at this point



7, 00:00:34, 6.62 m  
Line deviates down



8, 00:00:39, 7.31 m  
General remark, Sewer levels out at this point

Section Pictures - 17/10/2023 - MH10 X

|          |                      |        |                  |                      |
|----------|----------------------|--------|------------------|----------------------|
| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
| 27       | Downstream           | MH10 X | TSA-23-2537      | TSA-23-2537          |



9, 00:00:52, 8.78 m  
Finish node, manhole, reference: MH7 reached

Section Inspection - 17/10/2023 - MH11 UTL

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 28            | 1         | 17/10/23 | 9:06 | TSA-23-2537      | No Rain Or Snow | No            | MH11 UTL       |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                    |                        |          |
|---------------------|-----------------------|-----------------------|--------------------|------------------------|----------|
| Town or Village:    | London                | Inspection Direction: | Upstream           | Upstream Node:         | MH11 UTL |
| Road:               | The Bank              | Inspected Length:     | 28.37 m            | Upstream Pipe Depth:   |          |
| Location:           | Property or buildings | Total Length:         | 28.37 m            | Downstream Node:       | MH10 A   |
| Surface Type:       |                       | Joint Length:         |                    | Downstream Pipe Depth: |          |
| Use:                | Surface water         | Pipe Shape:           | Circular           |                        |          |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 150 mm             |                        |          |
| Flow Control:       | No flow control       | Pipe Material:        | Polyvinyl chloride |                        |          |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining          |                        |          |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining          |                        |          |

Comments:  
Recommendations:

| Scale:               | 1:246 | Position [m] | Code | Observation                                       | MPEG     | Photo | Grade |
|----------------------|-------|--------------|------|---------------------------------------------------|----------|-------|-------|
| Depth: m             |       |              |      |                                                   |          |       |       |
| MH10 A               |       |              |      |                                                   |          |       |       |
|                      |       |              |      |                                                   |          |       |       |
|                      | 0.00  | MH           |      | Start node, manhole, reference: MH10 A            | 00:00:00 |       |       |
|                      | 0.00  | WL           |      | Water level, 0% of the vertical dimension         |          |       |       |
|                      | 0.00  | LU           |      | Line deviates up                                  | 00:00:02 | 1     |       |
|                      | 0.40  | REM          |      | General remark: Sewer levels out at this point    | 00:00:10 | 2     |       |
|                      | 3.26  | LL           |      | Line deviates left                                | 00:00:23 | 3     |       |
|                      | 5.28  | GP           |      | General photograph taken at this point            | 00:00:32 | 4     |       |
|                      | 10.32 | GP           |      | General photograph taken at this point            | 00:00:45 | 5     |       |
|                      | 15.58 | GP           |      | General photograph taken at this point            | 00:00:59 | 6     |       |
|                      | 20.34 | GP           |      | General photograph taken at this point            | 00:01:14 | 7     |       |
|                      | 25.54 | GP           |      | General photograph taken at this point            | 00:01:26 | 8     |       |
|                      | 28.37 | MHF          |      | Finish node, manhole, reference: MH11 UTL reached | 00:01:34 | 9     |       |
| MH11 UTL<br>Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

Section Pictures - 17/10/2023 - MH11 UTL

| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|----------|------------------|----------------------|
| 28       | Upstream             | MH11 UTL | TSA-23-2537      | TSA-23-2537          |



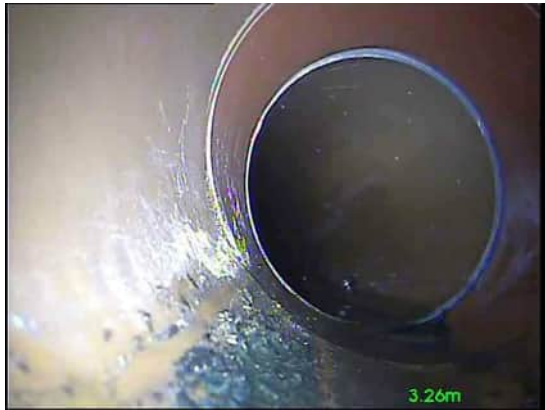
1, 00:00:02, 0.00 m

Line deviates up



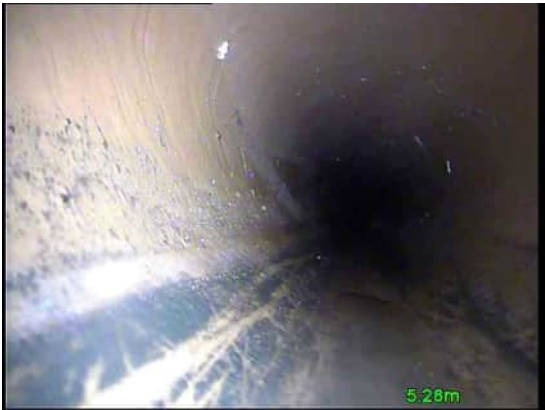
2, 00:00:10, 0.40 m

General remark, Sewer levels out at this point



3, 00:00:23, 3.26 m

Line deviates left



4, 00:00:32, 5.28 m

General photograph taken at this point

Section Pictures - 17/10/2023 - MH11 UTL

| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|----------|------------------|----------------------|
| 28       | Upstream             | MH11 UTL | TSA-23-2537      | TSA-23-2537          |



5, 00:00:45, 10.32 m

General photograph taken at this point



6, 00:00:59, 15.58 m

General photograph taken at this point



7, 00:01:14, 20.34 m

General photograph taken at this point



8, 00:01:26, 25.54 m

General photograph taken at this point

Section Pictures - 17/10/2023 - MH11 UTL

|          |                      |          |                  |                      |
|----------|----------------------|----------|------------------|----------------------|
| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
| 28       | Upstream             | MH11 UTL | TSA-23-2537      | TSA-23-2537          |



9, 00:01:34, 28.37 m  
Finish node, manhole, reference: MH11 UTL reached

Section Inspection - 17/10/2023 - RWP

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 29            | 1         | 17/10/23 | 9:06 | TSA-23-2537      | No Rain Or Snow | No            | RWP            |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                    |                        |        |
|---------------------|-----------------------|-----------------------|--------------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream           | Upstream Node:         | RWP    |
| Road:               | The Bank              | Inspected Length:     | 5.51 m             | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 5.51 m             | Downstream Node:       | MH11 A |
| Surface Type:       |                       | Joint Length:         |                    | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular           |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 150 mm             |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Polyvinyl chloride |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining          |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining          |                        |        |

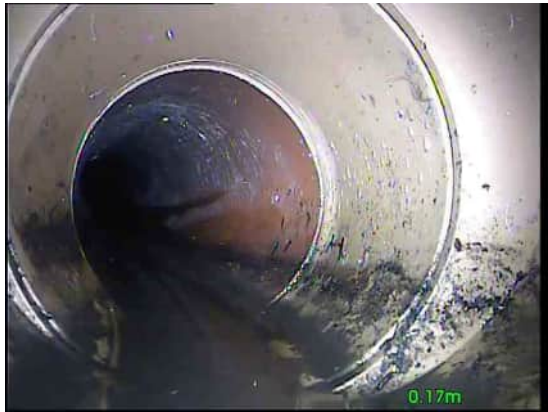
Comments:  
Recommendations:

| Scale:   | 1:50 | Position [m] | Code | Observation                                                     | MPEG     | Photo | Grade |
|----------|------|--------------|------|-----------------------------------------------------------------|----------|-------|-------|
| Depth: m |      |              |      |                                                                 |          |       |       |
| MH11 A   |      |              |      |                                                                 |          |       |       |
|          |      | 0.00         | MH   | Start node, manhole, reference: MH11 A                          | 00:00:00 |       |       |
|          |      | 0.00         | WL   | Water level, 5% of the vertical dimension                       |          |       |       |
|          |      | 0.17         | SC   | Pipe size changes, new size(s), 100mm high                      | 00:00:07 | 1     |       |
|          |      | 0.66         | GP   | General photograph taken at this point                          | 00:00:13 | 2     |       |
|          |      | 3.25         | LL   | Line deviates left                                              | 00:00:24 | 3     |       |
|          |      | 3.25         | LU   | Line deviates up                                                | 00:00:24 | 4     |       |
|          |      | 4.13         | GP   | General photograph taken at this point                          | 00:00:30 | 5     |       |
|          |      | 5.51         | OCF  | Finish node, other special chamber, reference: RWP: RWP reached | 00:00:36 | 6     |       |
| RWP      |      |              |      |                                                                 |          |       |       |
| Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

Section Pictures - 17/10/2023 - RWP

| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-----|------------------|----------------------|
| 29       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



1, 00:00:07, 0.17 m  
Pipe size changes, new size(s), 100mm high



2, 00:00:13, 0.66 m  
General photograph taken at this point



3, 00:00:24, 3.25 m  
Line deviates left



4, 00:00:24, 3.25 m  
Line deviates up

Section Pictures - 17/10/2023 - RWP

| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-----|------------------|----------------------|
| 29       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



5, 00:00:30, 4.13 m  
General photograph taken at this point



6, 00:00:36, 5.51 m  
Finish node, other special chamber, reference: RWP, RWP reached

|                                                                                                                                                |           |                       |           |                                                                                                                                                     |                 |                    |                |           |           |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|----------------|-----------|-----------|
| <div><div><div>Tower Surveys</div><div>Chartered Surveyors</div><div>Geomatics - Land, Utilities, Engineering &amp; Building</div></div></div> |           |                       |           | <div><div><div>Tower Surveys Associates</div><div>18-20 The Ropewalk, Nottingham</div><div>james.hulme@towersurveysassociates.biz</div></div></div> |                 |                    |                |           |           |
| Section Inspection - 17/10/2023 - Downpipe                                                                                                     |           |                       |           |                                                                                                                                                     |                 |                    |                |           |           |
| Item No.                                                                                                                                       | Insp. No. | Date                  | Time      | Client's Job Ref                                                                                                                                    | Weather         | Pre Cleaned        | PLR            |           |           |
| 30                                                                                                                                             | 1         | 17/10/23              | 9:07      | TSA-23-2537                                                                                                                                         | No Rain Or Snow | No                 | DOWNPIPE       |           |           |
| Operator                                                                                                                                       |           | Vehicle               |           | Camera                                                                                                                                              | Preset Length   | Legal Status       | Alternative ID |           |           |
| Dominic White                                                                                                                                  |           | LM21 UHU              |           | Minicam Solopro                                                                                                                                     | Not Specified   | Not Specified      | Not Specified  |           |           |
| Town or Village:                                                                                                                               |           | London                |           | Inspection Direction:                                                                                                                               |                 | Upstream           |                |           |           |
| Road:                                                                                                                                          |           | The Bank              |           | Inspected Length:                                                                                                                                   |                 | 6.17 m             |                |           |           |
| Location:                                                                                                                                      |           | Property or buildings |           | Total Length:                                                                                                                                       |                 | 6.17 m             |                |           |           |
| Surface Type:                                                                                                                                  |           |                       |           | Joint Length:                                                                                                                                       |                 |                    |                |           |           |
| Use:                                                                                                                                           |           | Foul                  |           | Pipe Shape:                                                                                                                                         |                 | Circular           |                |           |           |
| Type of Pipe:                                                                                                                                  |           | Gravity drain/sewer   |           | Dia/Height:                                                                                                                                         |                 | 150 mm             |                |           |           |
| Flow Control:                                                                                                                                  |           | No flow control       |           | Pipe Material:                                                                                                                                      |                 | Polyvinyl chloride |                |           |           |
| Year Constructed:                                                                                                                              |           | Not Specified         |           | Lining Type:                                                                                                                                        |                 | No Lining          |                |           |           |
| Inspection Purpose:                                                                                                                            |           | Routine inspection    |           | Lining Material:                                                                                                                                    |                 | No Lining          |                |           |           |
| Comments:                                                                                                                                      |           |                       |           |                                                                                                                                                     |                 |                    |                |           |           |
| Recommendations:                                                                                                                               |           |                       |           |                                                                                                                                                     |                 |                    |                |           |           |
| Scale:                                                                                                                                         | 1:54      | Position [m]          | Code      | Observation                                                                                                                                         | MPEG            | Photo              | Grade          |           |           |
| <div><div><div>Depth: m</div><div>MH12 B</div><div></div><div>Downpipe Depth: m</div></div></div>                                              |           |                       |           |                                                                                                                                                     |                 |                    |                |           |           |
| 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 |
| 0                                                                                                                                              | 0.0       | 0.0                   | 0.0       | 1.0                                                                                                                                                 | 0               | 0.0                | 0.0            | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - Downpipe

| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|----------|------------------|----------------------|
| 30       | Upstream             | DOWNPIPE | TSA-23-2537      | TSA-23-2537          |

1, 00:00:01, 0.00 m  
General photograph taken at this point

2, 00:00:07, 1.24 m  
Junction at 3 o'clock, 150mm dia

3, 00:00:13, 1.70 m  
Pipe size changes, new size(s), 100mm high

4, 00:00:15, 1.97 m  
Line deviates left

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Section Pictures - 17/10/2023 - Downpipe

|          |                      |          |                  |                      |
|----------|----------------------|----------|------------------|----------------------|
| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
| 30       | Upstream             | DOWNPIPE | TSA-23-2537      | TSA-23-2537          |



5, 00:00:23, 3.16 m  
General photograph taken at this point



6, 00:00:30, 4.86 m  
Junction at 3 o'clock, 100mm dia



7, 00:00:34, 5.21 m  
Line deviates left



8, 00:00:45, 6.17 m  
Finish node, other special chamber, reference: Downpipe, Internal downpipe reached

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Section Inspection - 17/10/2023 - MH13 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 31            | 1         | 17/10/23 | 9:07 | TSA-23-2537      | No Rain Or Snow | No            | MH13 X         |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Surface water

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Downstream

Inspected Length:

17.53 m

Total Length:

17.53 m

Joint Length:

Upstream Node:

MH13 X

Upstream Pipe Depth:

Downstream Node:

MH7

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

150 mm

Pipe Material:

Polyvinyl chloride

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale:

1:152

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH13 X

0.00

MH

Start node, manhole, reference: MH13 X

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.26

GP

General photograph taken at this point

00:00:04

1

5.40

GP

General photograph taken at this point

00:00:16

2

9.12

LR

Line deviates right

00:00:26

3

10.64

GP

General photograph taken at this point

00:00:32

4

15.36

LD

Line deviates down

00:00:44

5

16.25

REM

General remark: Sewer levels out at this point

00:00:47

6

17.53

MHF

Finish node, manhole, reference: MH7 reached

00:01:28

7

MH7

Depth: 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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - MH13 X

|          |                      |        |                  |                      |
|----------|----------------------|--------|------------------|----------------------|
| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
| 31       | Downstream           | MH13 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:04, 0.26 m  
General photograph taken at this point



2, 00:00:16, 5.40 m  
General photograph taken at this point



3, 00:00:26, 9.12 m  
Line deviates right



4, 00:00:32, 10.64 m  
General photograph taken at this point

Section Pictures - 17/10/2023 - MH13 X

|          |                      |        |                  |                      |
|----------|----------------------|--------|------------------|----------------------|
| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
| 31       | Downstream           | MH13 X | TSA-23-2537      | TSA-23-2537          |



5, 00:00:44, 15.36 m  
Line deviates down



6, 00:00:47, 16.25 m  
General remark, Sewer levels out at this point



7, 00:01:28, 17.53 m  
Finish node, manhole, reference: MH7 reached

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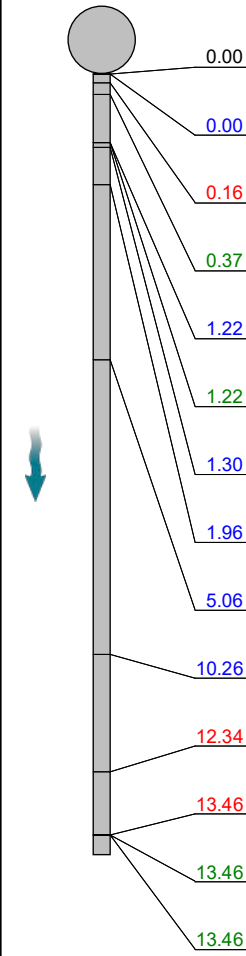
18-20 The Ropewalk, Nottingham

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Section Inspection - 17/10/2023 - MH14 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 32            | 1         | 17/10/23 | 9:07 | TSA-23-2537      | No Rain Or Snow | No            | MH14 X         |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Downstream     | Upstream Node:         | MH14 X |
| Road:               | The Bank              | Inspected Length:     | 17.13 m        | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 17.13 m        | Downstream Node:       | MH9    |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |
| Comments:           |                       |                       |                |                        |        |
| Recommendations:    |                       |                       |                |                        |        |

|                                                                                    |       |                                                                                   |          |             |       |       |       |
|------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|----------|-------------|-------|-------|-------|
| Scale:                                                                             | 1:120 | Position [m]                                                                      | Code     | Observation | MPEG  | Photo | Grade |
| Depth: m                                                                           |       |                                                                                   |          |             |       |       |       |
| MH14 X                                                                             |       |                                                                                   |          |             |       |       |       |
|  |       |                                                                                   |          |             |       |       |       |
| 0.00                                                                               | MH    | Start node, manhole, reference: MH14 X                                            | 00:00:00 |             |       |       |       |
| 0.00                                                                               | WL    | Water level, 5% of the vertical dimension                                         |          |             |       |       |       |
| 0.16                                                                               | CC    | Crack, circumferential from 9 o'clock to 3 o'clock                                | 00:00:03 | 1           | 2 / 2 |       |       |
| 0.37                                                                               | DECJ  | Settled deposits, hard or compacted at joint, 10% cross-sectional area loss       | 00:00:05 | 2           | 3     |       |       |
| 1.22                                                                               | WL    | Water level, 20% of the vertical dimension: Water standing due to debris at joint | 00:00:10 | 3           |       |       |       |
| 1.22                                                                               | DECJ  | Settled deposits, hard or compacted at joint, 20% cross-sectional area loss       | 00:00:10 | 4           | 4     |       |       |
| 1.30                                                                               | WL    | Water level, 5% of the vertical dimension                                         | 00:00:14 |             |       |       |       |
| 1.96                                                                               | GP    | General photograph taken at this point                                            | 00:00:15 | 5           |       |       |       |
| 5.06                                                                               | GP    | General photograph taken at this point                                            | 00:00:29 | 6           |       |       |       |
| 10.26                                                                              | GP    | General photograph taken at this point                                            | 00:00:49 | 7           |       |       |       |
| 12.34                                                                              | CC    | Crack, circumferential from 10 o'clock to 4 o'clock                               | 00:01:00 | 8           | 2 / 2 |       |       |
| 13.46                                                                              | JDM   | Joint displaced, medium                                                           | 00:01:09 | 9           | 1 / 3 |       |       |
| 13.46                                                                              | LL    | Line deviates left                                                                | 00:01:09 | 10          |       |       |       |
| 13.46                                                                              | LD    | Line deviates down                                                                | 00:01:09 | 11          |       |       |       |

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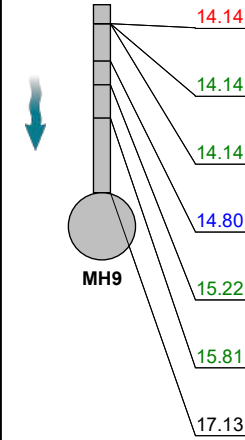
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Section Inspection - 17/10/2023 - MH14 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 32            | 1         | 17/10/23 | 9:07 | TSA-23-2537      | No Rain Or Snow | No            | MH14 X         |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                                                                                     |       |                                              |          |             |       |       |       |
|-------------------------------------------------------------------------------------|-------|----------------------------------------------|----------|-------------|-------|-------|-------|
| Scale:                                                                              | 1:120 | Position [m]                                 | Code     | Observation | MPEG  | Photo | Grade |
| Depth: m                                                                            |       |                                              |          |             |       |       |       |
| MH9                                                                                 |       |                                              |          |             |       |       |       |
|  |       |                                              |          |             |       |       |       |
| 14.14                                                                               | JDM   | Joint displaced, medium                      | 00:01:24 | 12          | 1 / 3 |       |       |
| 14.14                                                                               | LR    | Line deviates right                          | 00:01:29 | 13          |       |       |       |
| 14.14                                                                               | LD    | Line deviates down                           | 00:01:29 | 14          |       |       |       |
| 14.80                                                                               | GP    | General photograph taken at this point       | 00:01:39 | 15          |       |       |       |
| 15.22                                                                               | LL    | Line deviates left                           | 00:01:42 | 16          |       |       |       |
| 15.81                                                                               | LD    | Line deviates down                           | 00:01:47 | 17          |       |       |       |
| 17.13                                                                               | MHF   | Finish node, manhole, reference: MH9 reached | 00:02:11 | 18          |       |       |       |

|                       |          |          |           |           |                                    |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| 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 |
| 4                     | 10.0     | 1.3      | 22.0      | 2.0       | 6                                  | 5.0      | 0.8      | 13.0      | 4.0       |

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Section Pictures - 17/10/2023 - MH14 X

| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|--------|------------------|----------------------|
| 32       | Downstream           | MH14 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:03, 0.16 m  
Crack, circumferential from 9 o'clock to 3 o'clock



2, 00:00:05, 0.37 m  
Settled deposits, hard or compacted at joint, 10% cross-sectional area loss



3, 00:00:10, 1.22 m  
Water level, 20% of the vertical dimension, Water standing due to debris at joint



4, 00:00:10, 1.22 m  
Settled deposits, hard or compacted at joint, 20% cross-sectional area loss

Section Pictures - 17/10/2023 - MH14 X

| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|--------|------------------|----------------------|
| 32       | Downstream           | MH14 X | TSA-23-2537      | TSA-23-2537          |



5, 00:00:15, 1.96 m  
General photograph taken at this point



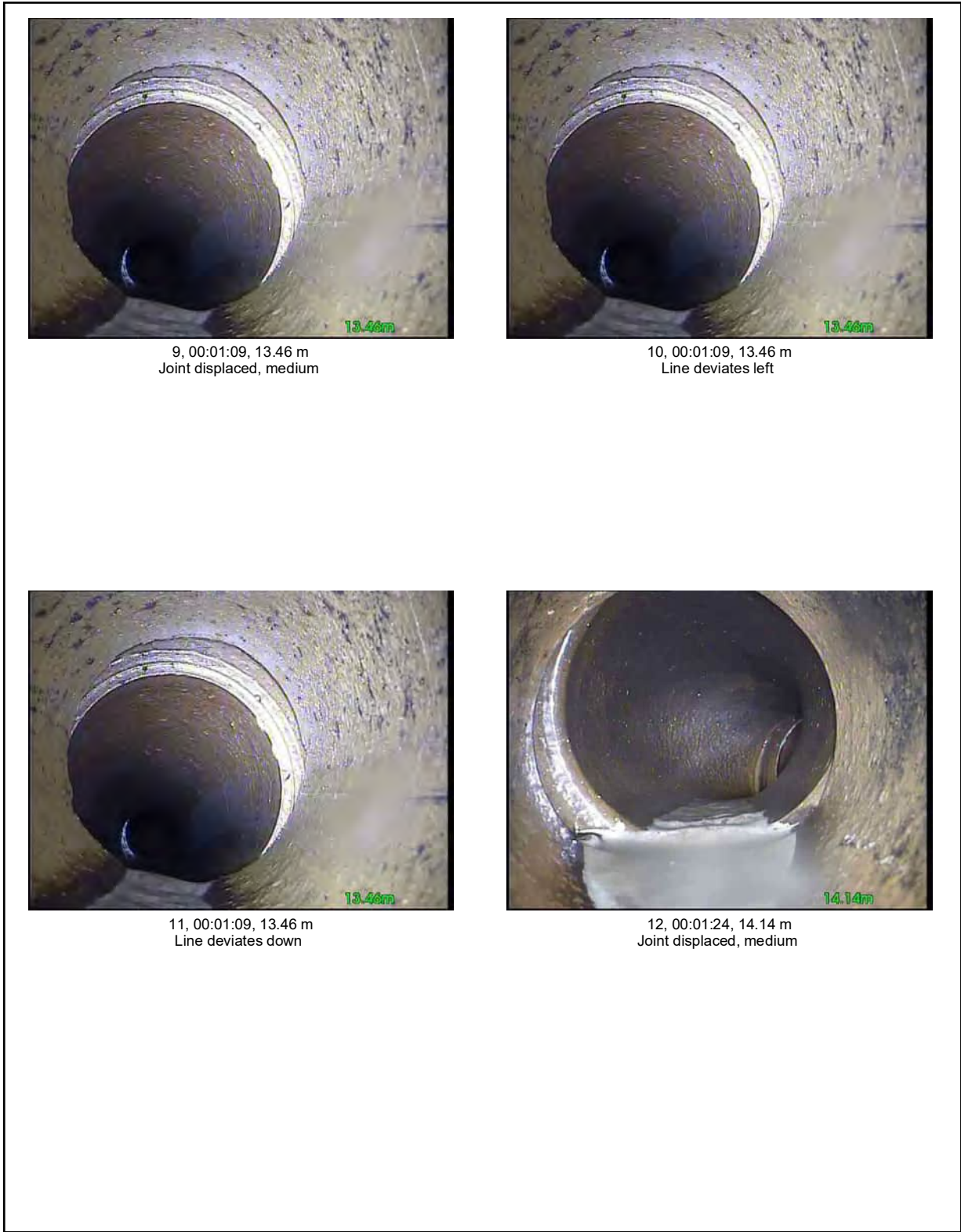
6, 00:00:29, 5.06 m  
General photograph taken at this point



7, 00:00:49, 10.26 m  
General photograph taken at this point

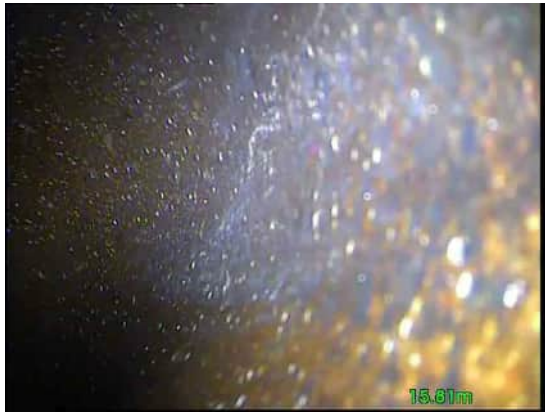


8, 00:01:00, 12.34 m  
Crack, circumferential from 10 o'clock to 4 o'clock



Section Pictures - 17/10/2023 - MH14 X

|          |                      |        |                  |                      |
|----------|----------------------|--------|------------------|----------------------|
| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
| 32       | Downstream           | MH14 X | TSA-23-2537      | TSA-23-2537          |



17, 00:01:47, 15.81 m  
Line deviates down



18, 00:02:11, 17.13 m  
Finish node, manhole, reference: MH9 reached

Section Inspection - 17/10/2023 - RWP

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 33            | 1         | 17/10/23 | 9:07 | TSA-23-2537      | No Rain Or Snow | No            | RWP            |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                    |                        |        |
|---------------------|-----------------------|-----------------------|--------------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream           | Upstream Node:         | RWP    |
| Road:               | The Bank              | Inspected Length:     | 1.72 m             | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 1.72 m             | Downstream Node:       | MH14 A |
| Surface Type:       |                       | Joint Length:         |                    | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular           |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm             |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Polyvinyl chloride |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining          |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining          |                        |        |

Comments:  
Recommendations:

| Scale:   | 1:50 | Position [m] | Code | Observation                                | MPEG     | Photo | Grade |
|----------|------|--------------|------|--------------------------------------------|----------|-------|-------|
| Depth: m |      |              |      |                                            |          |       |       |
| MH14 A   |      |              |      |                                            |          |       |       |
|          |      |              |      |                                            |          |       |       |
|          | 0.00 | MH           |      | Start node, manhole, reference: MH14 A     | 00:00:00 |       |       |
|          | 0.00 | WL           |      | Water level, 0% of the vertical dimension  |          |       |       |
|          | 0.00 | GP           |      | General photograph taken at this point     | 00:00:03 | 1     |       |
|          | 0.44 | LR           |      | Line deviates right                        | 00:00:06 | 2     |       |
|          | 0.91 | GP           |      | General photograph taken at this point     | 00:00:12 | 3     |       |
|          | 1.72 | GYF          |      | Finish node, gully, reference: RWP reached | 00:00:19 | 4     |       |
| RWP      |      |              |      |                                            |          |       |       |
| Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

Section Pictures - 17/10/2023 - RWP

|          |                      |     |                  |                      |
|----------|----------------------|-----|------------------|----------------------|
| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 33       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



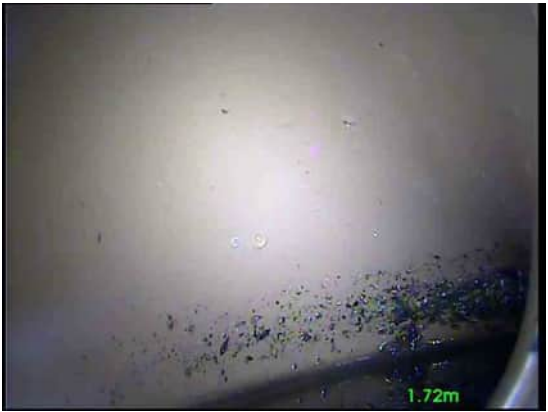
1, 00:00:03, 0.00 m  
General photograph taken at this point



2, 00:00:06, 0.44 m  
Line deviates right



3, 00:00:12, 0.91 m  
General photograph taken at this point



4, 00:00:19, 1.72 m  
Finish node, gully, reference: RWP reached

Section Inspection - 17/10/2023 - RWP

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 34            | 1         | 17/10/23 | 9:07 | TSA-23-2537      | No Rain Or Snow | No            | RWP            |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | RWP    |
| Road:               | The Bank              | Inspected Length:     | 0.47 m         | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 0.47 m         | Downstream Node:       | MH14 B |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |

Comments:  
Recommendations:

| Scale:   | 1:50 | Position [m] | Code  | Observation                                               | MPEG     | Photo | Grade |
|----------|------|--------------|-------|-----------------------------------------------------------|----------|-------|-------|
| Depth: m |      |              |       |                                                           |          |       |       |
| MH14 B   |      |              |       |                                                           |          |       |       |
|          |      | 0.00         | MH    | Start node, manhole, reference: MH14 B                    | 00:00:00 |       |       |
|          |      | 0.00         | WL    | Water level, 0% of the vertical dimension                 |          |       |       |
|          |      | 0.23         | LU    | Line deviates up                                          | 00:00:10 | 1     |       |
|          |      | 0.27         | MCPVC | Pipe material changes to polyvinyl chloride at this point | 00:00:13 | 2     |       |
|          |      | 0.47         | GYF   | Finish node, gully, reference: RWP reached                | 00:00:16 | 3     |       |
| Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

Section Pictures - 17/10/2023 - RWP

|          |                      |     |                  |                      |
|----------|----------------------|-----|------------------|----------------------|
| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 34       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



1, 00:00:10, 0.23 m  
Line deviates up



2, 00:00:13, 0.27 m  
Pipe material changes to polyvinyl chloride at this point



3, 00:00:16, 0.47 m  
Finish node, gully, reference: RWP reached

Section Inspection - 17/10/2023 - RWP

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 35            | 1         | 17/10/23 | 9:08 | TSA-23-2537      | No Rain Or Snow | No            | RWP            |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | RWP    |
| Road:               | The Bank              | Inspected Length:     | 22.41 m        | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 22.41 m        | Downstream Node:       | MH14 C |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |

Comments:  
Recommendations:

| Scale:   | 1:114 | Position [m] | Code  | Observation                                                                | MPEG     | Photo | Grade |
|----------|-------|--------------|-------|----------------------------------------------------------------------------|----------|-------|-------|
| Depth: m |       |              |       |                                                                            |          |       |       |
| MH14 C   | 0.00  |              | MH    | Start node, manhole, reference: MH14 C                                     | 00:00:00 |       |       |
|          | 0.00  |              | WL    | Water level, 5% of the vertical dimension                                  |          |       |       |
|          | 0.45  |              | DER   | Settled deposits, coarse, 5% cross-sectional area loss                     | 00:00:07 | 1     | 3     |
|          | 1.74  |              | DECJ  | Settled deposits, hard or compacted at joint, 5% cross-sectional area loss | 00:00:16 | 2     | 3     |
|          | 2.35  |              | DECJ  | Settled deposits, hard or compacted at joint, 5% cross-sectional area loss | 00:00:19 | 3     | 3     |
|          | 5.00  |              | GP    | General photograph taken at this point                                     | 00:00:31 | 4     |       |
|          | 7.98  |              | MCPVC | Pipe material changes to polyvinyl chloride at this point                  | 00:00:48 | 5     |       |
|          | 7.98  |              | JDM   | Joint displaced, medium                                                    | 00:00:48 | 6     | 1 / 3 |
|          | 8.18  |              | JN    | Junction at 2 o'clock, 100mm dia                                           | 00:00:54 | 7     |       |
|          | 8.40  | S01          | DER   | Settled deposits, coarse, 5% cross-sectional area loss, start              | 00:00:56 | 8     |       |
|          | 8.40  |              | MCVC  | Pipe material changes to vitrified clay at this point                      | 00:00:56 | 9     |       |
|          | 9.94  | F01          | DER   | Settled deposits, coarse, 5% cross-sectional area loss, finish             | 00:01:09 |       | 3     |
|          | 9.94  |              | JN    | Junction at 10 o'clock, 100mm dia                                          | 00:01:09 | 10    |       |
|          | 10.48 | S02          | DER   | Settled deposits, coarse, 5% cross-sectional area loss, start              | 00:01:16 | 11    |       |
|          | 10.82 |              | GP    | General photograph taken at this point                                     | 00:01:18 | 12    |       |

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| <div><div></div><div><div>Tower Surveys Associates</div><div>18-20 The Ropewalk, Nottingham</div><div>james.hulme@towersurveysassociates.biz</div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| Section Inspection - 17/10/2023 - RWP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| Item No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |  |  |
| 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1         | 17/10/23 | 9:08 | TSA-23-2537      | No Rain Or Snow | No            | RWP            |  |  |
| Operator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| Dominic White                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |  |  |
| Scale: 1:114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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| Position [m]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           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Tower Surveys

Associates

Chartered Surveyors

Geomatics - Land, Utilities, Engineering & Building

Tower Surveys Associates

18-20 The Ropewalk, Nottingham

james.hulme@towersurveysassociates.biz

Section Pictures - 17/10/2023 - RWP

|          |                      |     |                  |                      |
|----------|----------------------|-----|------------------|----------------------|
| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 35       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |

A close-up inspection photograph of a pipe interior. The pipe wall is heavily encrusted with dark, coarse, and irregular deposits. A green scale bar in the bottom right corner indicates a length of 0.45m.

1, 00:00:07, 0.45 m  
Settled deposits, coarse, 5% cross-sectional area loss

A close-up inspection photograph of a pipe interior, showing a joint area. The deposits are dark and appear hard or compacted. A green scale bar in the bottom right corner indicates a length of 1.74m.

2, 00:00:16, 1.74 m  
Settled deposits, hard or compacted at joint, 5% cross-sectional area loss

A close-up inspection photograph of a pipe interior, showing a joint area. The deposits are dark and appear hard or compacted. A green scale bar in the bottom right corner indicates a length of 2.35m.

3, 00:00:19, 2.35 m  
Settled deposits, hard or compacted at joint, 5% cross-sectional area loss

A general inspection photograph of a pipe interior. The pipe wall is heavily encrusted with dark, coarse, and irregular deposits. A green scale bar in the bottom right corner indicates a length of 5.00m.

4, 00:00:31, 5.00 m  
General photograph taken at this point

Section Pictures - 17/10/2023 - RWP

|          |                      |     |                  |                      |
|----------|----------------------|-----|------------------|----------------------|
| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 35       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



5, 00:00:48, 7.98 m

Pipe material changes to polyvinyl chloride at this point



6, 00:00:48, 7.98 m

Joint displaced, medium



7, 00:00:54, 8.18 m

Junction at 2 o'clock, 100mm dia



8, 00:00:56, 8.40 m

Settled deposits, coarse, 5% cross-sectional area loss, start

Section Pictures - 17/10/2023 - RWP

|          |                      |     |                  |                      |
|----------|----------------------|-----|------------------|----------------------|
| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 35       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



9, 00:00:56, 8.40 m

Pipe material changes to vitrified clay at this point



10, 00:01:09, 9.94 m

Junction at 10 o'clock, 100mm dia



11, 00:01:16, 10.48 m

Settled deposits, coarse, 5% cross-sectional area loss, start



12, 00:01:18, 10.82 m

General photograph taken at this point

Section Pictures - 17/10/2023 - RWP

| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-----|------------------|----------------------|
| 35       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



13, 00:01:44, 15.46 m

Crack, circumferential at joint from 8 o'clock to 4 o'clock



14, 00:01:50, 15.54 m

Pipe material changes to polyvinyl chloride at this point



15, 00:01:52, 15.56 m

Junction at 2 o'clock, 100mm dia



16, 00:01:55, 15.92 m

Pipe material changes to vitrified clay at this point

Section Pictures - 17/10/2023 - RWP

| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|-----|------------------|----------------------|
| 35       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



17, 00:02:00, 16.46 m

Junction at 10 o'clock, 100mm dia



18, 00:02:06, 17.17 m

Junction at 10 o'clock, 100mm dia



19, 00:02:08, 17.83 m

Pipe material changes to polyvinyl chloride at this point



20, 00:02:17, 20.51 m

General photograph taken at this point

Section Pictures - 17/10/2023 - RWP

|          |                      |     |                  |                      |
|----------|----------------------|-----|------------------|----------------------|
| Item No. | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 35       | Upstream             | RWP | TSA-23-2537      | TSA-23-2537          |



21, 00:02:27, 21.57 m  
Line deviates left



22, 00:02:27, 21.57 m  
Line deviates up



23, 00:02:27, 21.57 m  
Open joint, large



24, 00:02:38, 22.41 m  
Finish node, gully, reference: RWP reached

Section Inspection - 17/10/2023 - MH15 X

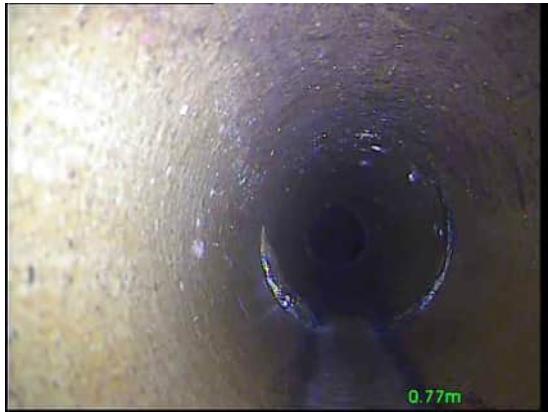
|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 36            | 1         | 17/10/23 | 9:11 | TSA-23-2537      | No Rain Or Snow | No            | MH15 X         |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Downstream     | Upstream Node:         | MH15 X |
| Road:               | The Bank              | Inspected Length:     | 5.91 m         | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 5.91 m         | Downstream Node:       | MH9    |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Combined              | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |

Comments:  
Recommendations:

| Scale:             | 1:52 | Position [m] | Code | Observation                                                | MPEG     | Photo | Grade |
|--------------------|------|--------------|------|------------------------------------------------------------|----------|-------|-------|
| Depth: m<br>MH15 X |      |              |      |                                                            |          |       |       |
|                    |      | 0.00         | MH   | Start node, manhole, reference: MH15 X                     | 00:00:00 |       |       |
|                    |      | 0.00         | WL   | Water level, 5% of the vertical dimension                  |          |       |       |
|                    |      | 0.77         | GP   | General photograph taken at this point                     | 00:00:06 | 1     |       |
|                    |      | 2.29         | GP   | General photograph taken at this point                     | 00:00:10 | 2     |       |
|                    |      | 4.79         | LD   | Line deviates down                                         | 00:00:17 | 3     |       |
|                    |      | 5.91         | REM  | General remark: Sewer levels out at entry to MH9           | 00:00:28 | 4     |       |
|                    |      | 5.91         | SA   | Survey abandoned: Unable to pass deviation at entry to MH9 | 00:00:28 |       |       |

| 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |



1, 00:00:06, 0.77 m  
General photograph taken at this point



2, 00:00:10, 2.29 m  
General photograph taken at this point



3, 00:00:17, 4.79 m  
Line deviates down



4, 00:00:28, 5.91 m  
General remark, Sewer levels out at entry to MH9

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | MH16   |
| Road:               | The Bank              | Inspected Length:     | 27.23 m        | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 27.23 m        | Downstream Node:       | MH15 A |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Combined              | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |

Comments:  
Recommendations:

| Scale:   | 1:215 | Position [m] | Code | Observation                                                                                   | MPEG     | Photo | Grade |
|----------|-------|--------------|------|-----------------------------------------------------------------------------------------------|----------|-------|-------|
| Depth: m |       |              |      |                                                                                               |          |       |       |
| MH15 A   |       | 0.00         | MH   | Start node, manhole, reference: MH15 A                                                        | 00:00:00 |       |       |
|          |       | 0.00         | WL   | Water level, 5% of the vertical dimension                                                     |          |       |       |
|          |       | 0.30         | GP   | General photograph taken at this point                                                        | 00:00:03 | 1     |       |
|          |       | 3.08         | LU   | Line deviates up                                                                              | 00:00:13 | 2     |       |
|          |       | 3.86         | JN   | Junction at 2 o'clock, 100mm dia                                                              | 00:00:17 | 3     |       |
|          |       | 5.15         | GP   | General photograph taken at this point                                                        | 00:00:26 | 4     |       |
|          |       | 10.14        | GP   | General photograph taken at this point                                                        | 00:00:45 | 5     |       |
|          |       | 10.86        | JDM  | Joint displaced, medium                                                                       | 00:00:48 |       | 1 / 3 |
|          |       | 14.59 S01    | DEF  | Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, start  | 00:01:07 | 6     |       |
|          |       | 14.59        | JN   | Junction at 2 o'clock, 100mm dia                                                              | 00:01:07 | 7     |       |
|          |       | 19.10 F01    | DEF  | Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish | 00:01:36 | 8     | 3     |
|          |       | 20.60 S02    | DEF  | Attached deposits, fouling from 5 o'clock to 7 o'clock, 5% cross-sectional area loss, start   | 00:01:45 | 9     |       |
|          |       | 21.60        | JN   | Junction at 2 o'clock, 100mm dia                                                              | 00:01:55 | 10    |       |
|          |       | 22.42 F02    | DEF  | Attached deposits, fouling from 5 o'clock to 7 o'clock, 5% cross-sectional area loss, finish  | 00:02:18 | 11    | 3     |
|          |       | 24.26 S03    | DEC  | Settled deposits, hard or compacted, 10% cross-sectional area loss, start                     | 00:03:53 | 12    |       |

|        |       |              |      |                                                                            |          |       |       |
|--------|-------|--------------|------|----------------------------------------------------------------------------|----------|-------|-------|
| Scale: | 1:215 | Position [m] | Code | Observation                                                                | MPEG     | Photo | Grade |
|        |       | 25.21        | GP   | General photograph taken at this point                                     | 00:04:11 | 13    |       |
|        |       | 26.00        | F03  | Settled deposits, hard or compacted, 10% cross-sectional area loss, finish | 00:04:25 |       | 3     |
|        |       | 27.23        | MHF  | Finish node, manhole, reference: MH16 reached                              | 00:04:52 | 14    |       |

MH16

Depth: 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 |
| 1                     | 1.0      | 0.0      | 1.0       | 1.0       | 4                                  | 2.0      | 0.7      | 20.0      | 3.0       |



1, 00:00:03, 0.30 m  
General photograph taken at this point



2, 00:00:13, 3.08 m  
Line deviates up



3, 00:00:17, 3.86 m  
Junction at 2 o'clock, 100mm dia



4, 00:00:26, 5.15 m  
General photograph taken at this point



5, 00:00:45, 10.14 m  
General photograph taken at this point



6, 00:01:07, 14.59 m  
Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, start



7, 00:01:07, 14.59 m  
Junction at 2 o'clock, 100mm dia



8, 00:01:36, 19.10 m  
Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish



9, 00:01:45, 20.60 m  
Attached deposits, fouling from 5 o'clock to 7 o'clock, 5% cross-sectional area loss, start



10, 00:01:55, 21.60 m  
Junction at 2 o'clock, 100mm dia



11, 00:02:18, 22.42 m  
Attached deposits, fouling from 5 o'clock to 7 o'clock, 5% cross-sectional area loss, finish



12, 00:03:53, 24.26 m  
Settled deposits, hard or compacted, 10% cross-sectional area loss, start

Tower Surveys

Chartered Surveyors

Geomatics - Land, Utilities, Engineering & Building

Tower Surveys Associates

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Section Pictures - 17/10/2023 - MH16

|          |                      |      |                  |                      |
|----------|----------------------|------|------------------|----------------------|
| Item No. | Inspection Direction | PLR  | Client's Job Ref | Contractor's Job Ref |
| 37       | Upstream             | MH16 | TSA-23-2537      | TSA-23-2537          |



13, 00:04:11, 25.21 m  
General photograph taken at this point



14, 00:04:52, 27.23 m  
Finish node, manhole, reference: MH16 reached

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Chartered Surveyors

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Section Inspection - 17/10/2023 - Downpipe

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 38            | 1         | 17/10/23 | 9:12 | TSA-23-2537      | No Rain Or Snow | No            | DOWNPIPE       |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Inspection Direction:

Upstream

Inspected Length:

1.29 m

Total Length:

1.29 m

Joint Length:

Upstream Node:

DOWNPIPE

Upstream Pipe Depth:

Downstream Node:

MH16 B

Downstream Pipe Depth:

Use:

Foul

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH16 B

0.00

MH

Start node, manhole, reference: MH16 B

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.58

GP

General photograph taken at this point

00:00:05

1

1.29

OCF

Finish node, other special chamber, reference: Downpipe: Internal downpipe reached

00:00:13

2

Downpipe

Depth: 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 |
| 0           | 0.0      | 0.0      | 0.0       | 1.0       | 0           | 0.0      | 0.0      | 0.0       | 1.0       |

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Section Pictures - 17/10/2023 - Downpipe

|          |                      |          |                  |                      |
|----------|----------------------|----------|------------------|----------------------|
| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
| 38       | Upstream             | DOWNPIPE | TSA-23-2537      | TSA-23-2537          |



1, 00:00:05, 0.58 m  
General photograph taken at this point



2, 00:00:13, 1.29 m  
Finish node, other special chamber, reference: Downpipe,  
Internal downpipe reached

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Section Inspection - 17/10/2023 - RWP

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 39            | 1         | 17/10/23 | 9:12 | TSA-23-2537      | No Rain Or Snow | No            | RWP            |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Surface water

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Upstream

Inspected Length:

0.73 m

Total Length:

0.73 m

Joint Length:

Upstream Node:

RWP

Upstream Pipe Depth:

Downstream Node:

MH16 C

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH16 C

0.00

MH

Start node, manhole, reference: MH16 C

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

LU

Line deviates up

00:00:01

1

0.59

JDM

Joint displaced, medium: At entry to RWP gully pot

00:00:09

2

1 / 3

0.73

GYF

Finish node, gully, reference: RWP reached

00:00:11

3

Depth: m

Construction Features

Miscellaneous Features

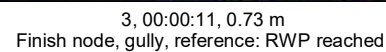
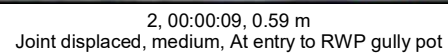
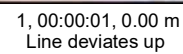
Structural Defects

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 |
| 1           | 1.0      | 1.4      | 1.0       | 1.0       | 1           | 2.0      | 2.7      | 2.0       | 4.0       |

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|                                                        |
|--------------------------------------------------------|
| <p><b>Comments:</b></p> <p><b>Recommendations:</b></p> |
|--------------------------------------------------------|

Depth: m

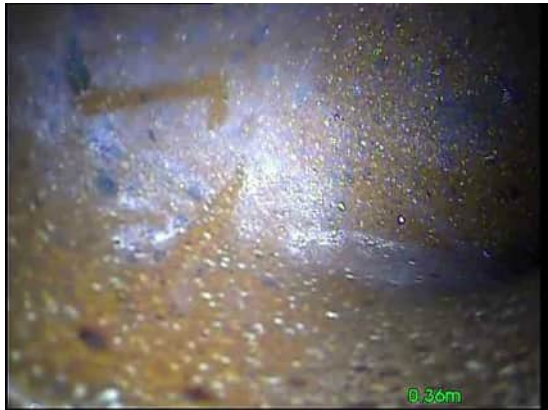
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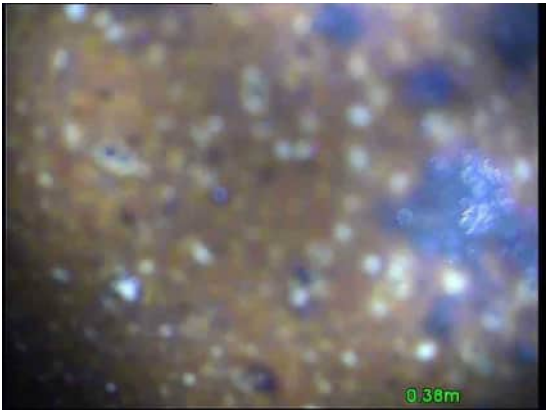
1, 00:00:02, 0.00 m  
General photograph taken at this point



2, 00:00:05, 0.10 m  
Line deviates up



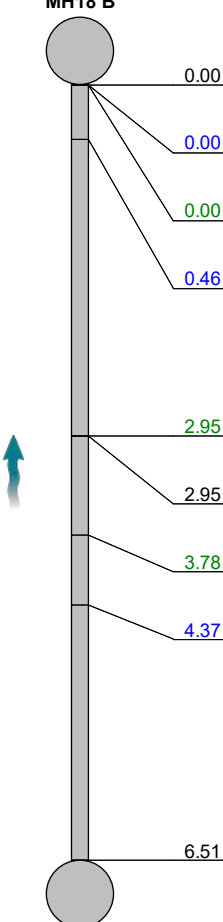
3, 00:00:10, 0.36 m  
Line deviates right



4, 00:00:12, 0.38 m  
Finish node, gully, reference: RWP reached

|                     |                       |                       |                |                        |          |
|---------------------|-----------------------|-----------------------|----------------|------------------------|----------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | DOWNPIPE |
| Road:               | The Bank              | Inspected Length:     | 6.51 m         | Upstream Pipe Depth:   |          |
| Location:           | Property or buildings | Total Length:         | 6.51 m         | Downstream Node:       | MH18 B   |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |          |
| Use:                | Foul                  | Pipe Shape:           | Circular       |                        |          |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |          |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |          |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |          |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |          |

Comments:  
Recommendations:

| Scale:                                                                               | 1:57 | Position [m] | Code                                                                                 | Observation | MPEG | Photo | Grade |
|--------------------------------------------------------------------------------------|------|--------------|--------------------------------------------------------------------------------------|-------------|------|-------|-------|
| Depth: m                                                                             |      |              |                                                                                      |             |      |       |       |
| MH18 B                                                                               |      |              |                                                                                      |             |      |       |       |
|  |      |              |                                                                                      |             |      |       |       |
|                                                                                      | 0.00 | MH           | Start node, manhole, reference: MH18 B                                               | 00:00:00    |      |       |       |
|                                                                                      | 0.00 | WL           | Water level, 5% of the vertical dimension                                            |             |      |       |       |
|                                                                                      | 0.00 | LR           | Line deviates right                                                                  | 00:00:01    | 1    |       |       |
|                                                                                      | 0.46 | GP           | General photograph taken at this point                                               | 00:00:11    | 2    |       |       |
|                                                                                      | 2.95 | DEF          | Attached deposits, fouling from 5 o'clock to 7 o'clock, 5% cross-sectional area loss | 00:00:26    | 3    |       | 3     |
|                                                                                      | 2.95 | MCPVC        | Pipe material changes to polyvinyl chloride at this point                            | 00:00:26    | 4    |       |       |
|                                                                                      | 3.78 | LR           | Line deviates right                                                                  | 00:00:33    | 5    |       |       |
|                                                                                      | 4.37 | GP           | General photograph taken at this point                                               | 00:00:41    | 6    |       |       |
|                                                                                      | 6.51 | OCF          | Finish node, other special chamber, reference: Downpipe: Internal downpipe reached   | 00:00:54    | 7    |       |       |
| Downpipe Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 1                                  | 2.0      | 0.3      | 2.0       | 3.0       |

Section Pictures - 17/10/2023 - Downpipe

| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|----------|------------------|----------------------|
| 41       | Upstream             | DOWNPIPE | TSA-23-2537      | TSA-23-2537          |



1, 00:00:01, 0.00 m  
Line deviates right



2, 00:00:11, 0.46 m  
General photograph taken at this point



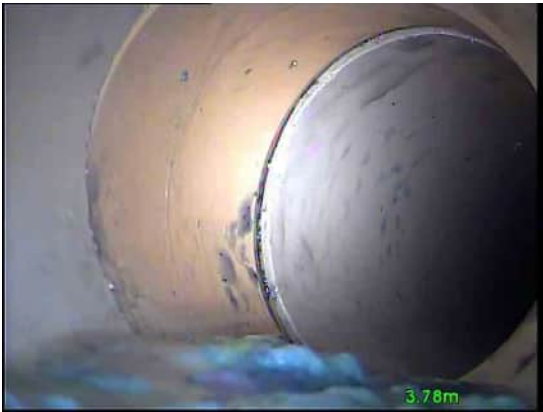
3, 00:00:26, 2.95 m  
Attached deposits, fouling from 5 o'clock to 7 o'clock, 5% cross-sectional area loss



4, 00:00:26, 2.95 m  
Pipe material changes to polyvinyl chloride at this point

Section Pictures - 17/10/2023 - Downpipe

| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
|----------|----------------------|----------|------------------|----------------------|
| 41       | Upstream             | DOWNPIPE | TSA-23-2537      | TSA-23-2537          |



5, 00:00:33, 3.78 m  
Line deviates right



6, 00:00:41, 4.37 m  
General photograph taken at this point



7, 00:00:54, 6.51 m  
Finish node, other special chamber, reference: Downpipe, Internal downpipe reached



|          |                      |          |                  |                      |
|----------|----------------------|----------|------------------|----------------------|
| Item No. | Inspection Direction | PLR      | Client's Job Ref | Contractor's Job Ref |
| 42       | Upstream             | DOWNPIPE | TSA-23-2537      | TSA-23-2537          |

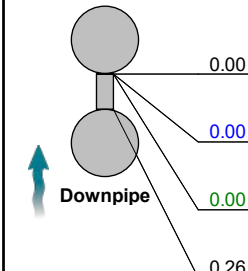


5, 00:00:15, 2.45 m  
Finish node, other special chamber, reference: Downpipe,  
Internal downpipe reached

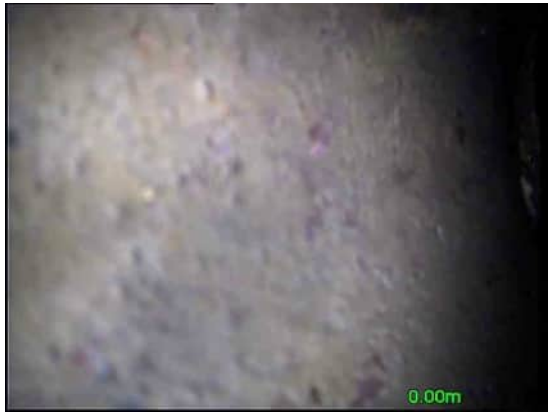
|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 43            | 1         | 17/10/23 | 9:09 | TSA-23-2537      | No Rain Or Snow | No            | DOWNPIPE       |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |          |
|---------------------|-----------------------|-----------------------|----------------|------------------------|----------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | DOWNPIPE |
| Road:               | The Bank              | Inspected Length:     | 0.26 m         | Upstream Pipe Depth:   |          |
| Location:           | Property or buildings | Total Length:         | 0.26 m         | Downstream Node:       | MH18 D   |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |          |
| Use:                | Foul                  | Pipe Shape:           | Circular       |                        |          |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |          |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |          |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |          |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |          |

Comments:  
Recommendations:

| Scale:                                                                               | 1:50 | Position [m] | Code | Observation                                                                  | MPEG     | Photo | Grade |
|--------------------------------------------------------------------------------------|------|--------------|------|------------------------------------------------------------------------------|----------|-------|-------|
| Depth: m                                                                             |      |              |      |                                                                              |          |       |       |
| MH18 D                                                                               |      |              |      |                                                                              |          |       |       |
|  |      | 0.00         | MH   | Start node, manhole, reference: MH18 D                                       | 00:00:00 |       |       |
|                                                                                      |      | 0.00         | WL   | Water level, 0% of the vertical dimension                                    |          |       |       |
|                                                                                      |      | 0.00         | LR   | Line deviates right                                                          | 00:00:01 | 1     |       |
|                                                                                      |      | 0.26         | OCF  | Finish node, other special chamber, reference: Downpipe:<br>Downpipe reached | 00:00:07 | 2     |       |
| Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

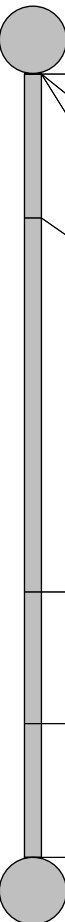


1, 00:00:01, 0.00 m  
Line deviates right



2, 00:00:07, 0.26 m  
Finish node, other special chamber, reference: Downpipe,  
Downpipe reached

|                     |                       |                       |                    |                        |        |
|---------------------|-----------------------|-----------------------|--------------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream           | Upstream Node:         | GULLY  |
| Road:               | The Bank              | Inspected Length:     | 7.62 m             | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 7.62 m             | Downstream Node:       | MH19 B |
| Surface Type:       |                       | Joint Length:         |                    | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular           |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm             |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Polyvinyl chloride |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining          |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining          |                        |        |
| Comments:           |                       |                       |                    |                        |        |
| Recommendations:    |                       |                       |                    |                        |        |

| Scale:                                                                               | 1:66 | Position [m] | Code | Observation                                  | MPEG     | Photo | Grade |
|--------------------------------------------------------------------------------------|------|--------------|------|----------------------------------------------|----------|-------|-------|
| Depth: m                                                                             |      |              |      |                                              |          |       |       |
| MH19 B                                                                               |      |              |      |                                              |          |       |       |
|  |      |              |      |                                              |          |       |       |
|                                                                                      | 0.00 | MH           |      | Start node, manhole, reference: MH19 B       | 00:00:00 |       |       |
|                                                                                      | 0.00 | WL           |      | Water level, 0% of the vertical dimension    |          |       |       |
|                                                                                      | 0.00 | LU           |      | Line deviates up                             | 00:00:03 | 1     |       |
|                                                                                      | 1.40 | GP           |      | General photograph taken at this point       | 00:00:12 | 2     |       |
|                                                                                      | 5.04 | LU           |      | Line deviates up                             | 00:00:33 | 3     |       |
|                                                                                      | 6.32 | GP           |      | General photograph taken at this point       | 00:00:45 | 4     |       |
|                                                                                      | 7.62 | GYF          |      | Finish node, gully, reference: Gully reached | 00:00:54 | 5     |       |
| Gully Depth: 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 |
| 0                     | 0.0      | 0.0      | 0.0       | 1.0       | 0                                  | 0.0      | 0.0      | 0.0       | 1.0       |

Section Pictures - 17/10/2023 - Gully

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 44       | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



1, 00:00:03, 0.00 m  
Line deviates up



2, 00:00:12, 1.40 m  
General photograph taken at this point



3, 00:00:33, 5.04 m  
Line deviates up



4, 00:00:45, 6.32 m  
General photograph taken at this point

Section Pictures - 17/10/2023 - Gully

|          |                      |       |                  |                      |
|----------|----------------------|-------|------------------|----------------------|
| Item No. | Inspection Direction | PLR   | Client's Job Ref | Contractor's Job Ref |
| 44       | Upstream             | GULLY | TSA-23-2537      | TSA-23-2537          |



5, 00:00:54, 7.62 m  
Finish node, gully, reference: Gully reached

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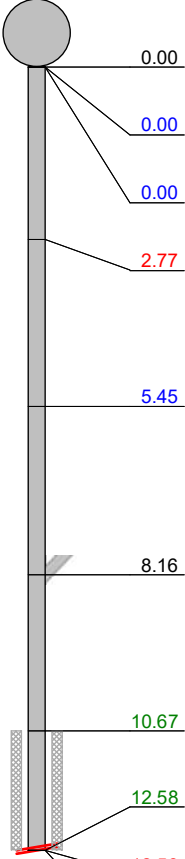
Section Inspection - 17/10/2023 - MH20 X

|               |           |          |      |                  |                 |               |                |
|---------------|-----------|----------|------|------------------|-----------------|---------------|----------------|
| Item No.      | Insp. No. | Date     | Time | Client's Job Ref | Weather         | Pre Cleaned   | PLR            |
| 45            | 1         | 17/10/23 | 9:09 | TSA-23-2537      | No Rain Or Snow | No            | MH20 X         |
| Operator      |           | Vehicle  |      | Camera           | Preset Length   | Legal Status  | Alternative ID |
| Dominic White |           | LM21 UHU |      | Minicam Solopro  | Not Specified   | Not Specified | Not Specified  |

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Downstream     | Upstream Node:         | MH20 X |
| Road:               | The Bank              | Inspected Length:     | 12.58 m        | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 12.58 m        | Downstream Node:       | MH21   |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |

Comments:

Recommendations:

|                                                                                    |       |              |      |                                                              |                                                                 |          |       |   |
|------------------------------------------------------------------------------------|-------|--------------|------|--------------------------------------------------------------|-----------------------------------------------------------------|----------|-------|---|
| Scale:                                                                             | 1:109 | Position [m] | Code | Observation                                                  | MPEG                                                            | Photo    | Grade |   |
| Depth: m<br>MH20 X                                                                 |       |              |      |                                                              |                                                                 |          |       |   |
|  |       | 0.00         | MH   | Start node, manhole, reference: MH20 X                       | 00:00:00                                                        |          |       |   |
|                                                                                    |       | 0.00         | WL   | Water level, 0% of the vertical dimension                    |                                                                 |          |       |   |
|                                                                                    |       | 0.00         | GP   | General photograph taken at this point                       | 00:00:02                                                        | 1        |       |   |
|                                                                                    |       | 2.77         | CCJ  | Crack, circumferential at joint from 11 o'clock to 5 o'clock | 00:00:13                                                        | 2        | 2 / 2 |   |
|                                                                                    |       | 5.45         | GP   | General photograph taken at this point                       | 00:00:21                                                        | 3        |       |   |
|                                                                                    |       | 8.16         | JN   | Junction at 11 o'clock, 100mm dia                            | 00:00:31                                                        | 4        |       |   |
|                                                                                    |       | 10.67        | S01  | DER                                                          | Settled deposits, coarse, 10% cross-sectional area loss, start  | 00:00:41 | 5     | 3 |
|                                                                                    |       | 12.58        | C01  | DER                                                          | Settled deposits, coarse, 35% cross-sectional area loss, change | 00:00:50 | 6     |   |
|                                                                                    |       | 12.58        | FC   | Fracture, circumferential from 12 o'clock to 12 o'clock      | 00:00:50                                                        | 7        | 3 / 2 |   |
|                                                                                    |       | 12.58        | SA   | Survey abandoned: Unable to pass debris                      | 00:00:50                                                        |          |       |   |

|                       |          |          |           |           |                                    |          |          |           |           |
|-----------------------|----------|----------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| 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 |
| 2                     | 40.0     | 4.0      | 50.0      | 3.0       | 3                                  | 1.0      | 0.3      | 4.0       | 2.0       |

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Section Pictures - 17/10/2023 - MH20 X

|          |                      |        |                  |                      |
|----------|----------------------|--------|------------------|----------------------|
| Item No. | Inspection Direction | PLR    | Client's Job Ref | Contractor's Job Ref |
| 45       | Downstream           | MH20 X | TSA-23-2537      | TSA-23-2537          |



1, 00:00:02, 0.00 m  
General photograph taken at this point



2, 00:00:13, 2.77 m  
Crack, circumferential at joint from 11 o'clock to 5 o'clock



3, 00:00:21, 5.45 m  
General photograph taken at this point



4, 00:00:31, 8.16 m  
Junction at 11 o'clock, 100mm dia

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5, 00:00:41, 10.67 m  
Settled deposits, coarse, 10% cross-sectional area loss, start

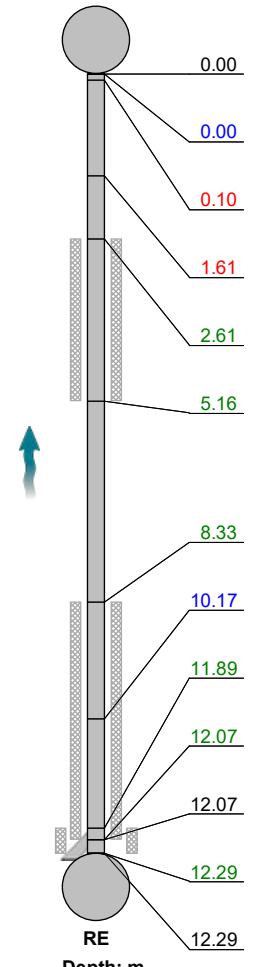


6, 00:00:50, 12.58 m  
Settled deposits, coarse, 35% cross-sectional area loss, change



7, 00:00:50, 12.58 m  
Fracture, circumferential from 12 o'clock to 12 o'clock

|                     |                       |                       |                |                        |        |
|---------------------|-----------------------|-----------------------|----------------|------------------------|--------|
| Town or Village:    | London                | Inspection Direction: | Upstream       | Upstream Node:         | RE     |
| Road:               | The Bank              | Inspected Length:     | 12.29 m        | Upstream Pipe Depth:   |        |
| Location:           | Property or buildings | Total Length:         | 12.29 m        | Downstream Node:       | MH20 A |
| Surface Type:       |                       | Joint Length:         |                | Downstream Pipe Depth: |        |
| Use:                | Surface water         | Pipe Shape:           | Circular       |                        |        |
| Type of Pipe:       | Gravity drain/sewer   | Dia/Height:           | 100 mm         |                        |        |
| Flow Control:       | No flow control       | Pipe Material:        | Vitrified clay |                        |        |
| Year Constructed:   | Not Specified         | Lining Type:          | No Lining      |                        |        |
| Inspection Purpose: | Routine inspection    | Lining Material:      | No Lining      |                        |        |

|                                                                                      |          |              |           |                                                                 |                                    |          |          |           |           |
|--------------------------------------------------------------------------------------|----------|--------------|-----------|-----------------------------------------------------------------|------------------------------------|----------|----------|-----------|-----------|
| Comments:                                                                            |          |              |           |                                                                 |                                    |          |          |           |           |
| Recommendations:                                                                     |          |              |           |                                                                 |                                    |          |          |           |           |
| Scale:                                                                               | 1:107    | Position [m] | Code      | Observation                                                     |                                    | MPEG     | Photo    | Grade     |           |
| Depth: m                                                                             |          |              |           |                                                                 |                                    |          |          |           |           |
| MH20 A                                                                               |          |              |           |                                                                 |                                    |          |          |           |           |
|  |          |              |           |                                                                 |                                    |          |          |           |           |
|                                                                                      | 0.00     | MH           |           | Start node, manhole, reference: MH20 A                          |                                    | 00:00:00 |          |           |           |
|                                                                                      | 0.00     | WL           |           | Water level, 0% of the vertical dimension                       |                                    |          |          |           |           |
|                                                                                      | 0.10     | FC           |           | Fracture, circumferential from 9 o'clock to 11 o'clock          |                                    | 00:00:03 | 1        | 3 / 2     |           |
|                                                                                      | 1.61     | CCJ          |           | Crack, circumferential at joint from 10 o'clock to 2 o'clock    |                                    | 00:00:10 | 2        | 2 / 2     |           |
|                                                                                      | 2.61     | S01          | DER       | Settled deposits, coarse, 20% cross-sectional area loss, start  |                                    | 00:00:14 | 3        |           |           |
|                                                                                      | 5.16     | F01          | DER       | Settled deposits, coarse, 20% cross-sectional area loss, finish |                                    | 00:00:25 | 4        | 4         |           |
|                                                                                      | 8.33     | S02          | RF        | Roots, fine, start                                              |                                    | 00:00:34 | 5        |           |           |
|                                                                                      | 10.17    | GP           |           | General photograph taken at this point                          |                                    | 00:00:40 | 6        |           |           |
|                                                                                      | 11.89    | S03          | DER       | Settled deposits, coarse, 25% cross-sectional area loss, start  |                                    | 00:00:46 | 7        | 4         |           |
|                                                                                      | 12.07    | F02          | RF        | Roots, fine, finish                                             |                                    | 00:00:49 |          | 2         |           |
|                                                                                      | 12.07    | JN           |           | Junction at 3 o'clock, 100mm dia                                |                                    | 00:00:49 | 8        |           |           |
|                                                                                      | 12.29    | C03          | DER       | Settled deposits, coarse, 75% cross-sectional area loss, change |                                    | 00:00:53 | 9        |           |           |
|                                                                                      | 12.29    | REF          |           | Finish node, rodding eye, reference: RE reached                 |                                    | 00:00:53 | 10       |           |           |
| RE                                                                                   |          |              |           |                                                                 |                                    |          |          |           |           |
| Depth: 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 |
| 2                                                                                    | 40.0     | 4.1          | 50.0      | 3.0                                                             | 5                                  | 5.0      | 2.1      | 26.0      | 4.0       |

| Section Pictures - 17/10/2023 - RE |                      |     |                  |                      |
|------------------------------------|----------------------|-----|------------------|----------------------|
| Item No.                           | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 46                                 | Upstream             | RE  | TSA-23-2537      | TSA-23-2537          |



1, 00:00:03, 0.10 m  
Fracture, circumferential from 9 o'clock to 11 o'clock



2, 00:00:10, 1.61 m  
Crack, circumferential at joint from 10 o'clock to 2 o'clock



3, 00:00:14, 2.61 m  
Settled deposits, coarse, 20% cross-sectional area loss, start



4, 00:00:25, 5.16 m  
Settled deposits, coarse, 20% cross-sectional area loss, finish

| Section Pictures - 17/10/2023 - RE |                      |     |                  |                      |
|------------------------------------|----------------------|-----|------------------|----------------------|
| Item No.                           | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
| 46                                 | Upstream             | RE  | TSA-23-2537      | TSA-23-2537          |



5, 00:00:34, 8.33 m  
Roots, fine, start



6, 00:00:40, 10.17 m  
General photograph taken at this point



7, 00:00:46, 11.89 m  
Settled deposits, coarse, 25% cross-sectional area loss, start



8, 00:00:49, 12.07 m  
Junction at 3 o'clock, 100mm dia