50-52 MONMOUTH STREET

7930

DRAINAGE STRATEGY & FLOOD RISK ASSESSMENT

MARCH 2024

REPORT NO: 7930-FUR-ZZ-XX-RP-D-0901

London
20 Britton Street, London, EC1M 5TX
www.furnesspartnership.com

Bradford
The Paper Hall, Anne Gate, Bradford BD1 4EQ
info@furnesspartnership.com

London
20 Britton Street, London, EC1M 5TX
www.furnesspartnership.com
Bradford
The Paper Hall, Anne Gate, Bradford BD1 4EQ
info@furnesspartnership.com

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Revision	Date	Issue Status	Prepared by	Checked by
P01	06.03.24	For Planning	PS	HP

Contents

List of Figures

List of Tables

1 Introduction

This document comprises a Flood Risk Assessment and Drainage Strategy in accordance with the National Planning Policy Framework (NPPF) including its technical guidance in support of a planning application for redevelopment of the site at 50-52 Monmouth Street, in Seven Dials.

Furness Partnership have been commissioned to identify and set out the principles of approaching and managing flood risk pertaining to the proposed development.

The objective of this report is to:

1) Collect and review available information to make a qualitative assessment of all sources of flooding to the development including drainage infrastructure; fluvial and tidal sources; groundwater sources and artificial sources.
2) Assess the flood risk to the application site under existing and post-development conditions; and
3) Outline any mitigating measures needed to meet the requirement of the NPPF.
4) Present a drainage design solution.

1.1 Data Sources / References

Data collected during the course of this assessment is presented in Table 1 below:

Purpose	Data and Source	Comment
Identification of Existing Flood Risk	Level 1 Strategic Flood Risk Assessment (SFRA) Jan 2024	Strategic assessment of flood risk across the London Borough of Camden
	Thames Water Sewer records	Identification of the local drainage system near the application site
	Environment Agency	Site specific flood risk data
Identification of Historical Flooding	Level 1 Strategic Flood Risk Assessment (SFRA) Jan 2024	Details of Historic flooding

Table 1 - Sources of Data Reviewed

2 Site Description and Location

2.1 Location

The site (see Figure 1 below) is located at 50-52 Monmouth Street, London. The site is on the corner where Monmouth Street and Tower Street intersect. The full address and Ordnance Survey Grid Reference is given in Table 2 below. A site plan has been included in Appendix A.

Site Referencing Information	
Site Address	50-52 Monmouth Street
Grid Reference	TQ 30050 81006

Table 2 - Site Referencing Information

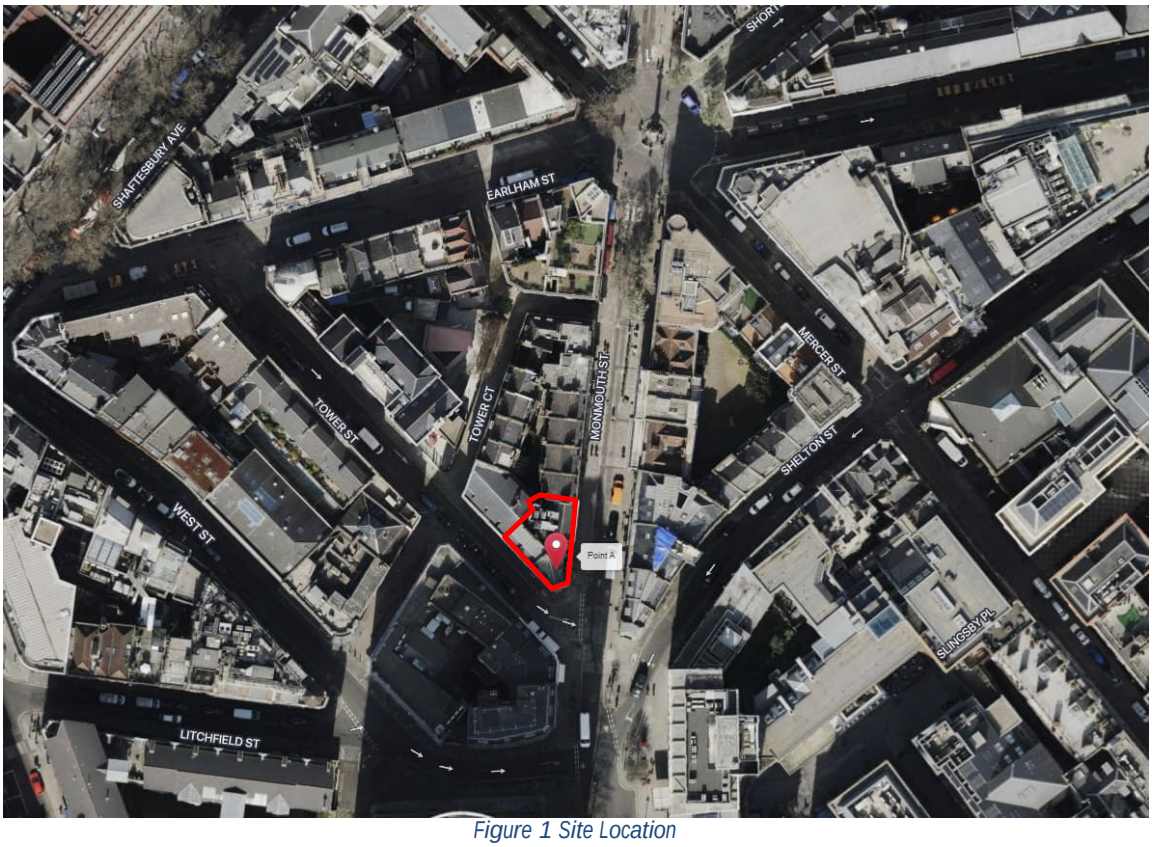

Figure 1 Site Location

2.2 Existing Development

The site consists of an existing 4-storey building and a basement which is irregular in shape. The basement, ground and first floors are currently occupied by Rossopomodoro, a restaurant and the remaining floors are offices. The building footprint covers a plan area of approximately 185m². Refer to Appendix B for the existing floor plan.

2.3 Proposed Development

The proposed development comprises of:

- Lowering the existing basement to increase the headroom by up to 1.1m, such that the ground and basement can be refurbished as a new restaurant unit.

The footprint of the existing building will remain the same. Refer to Appendix C for the proposed floor plan.

2.4 Topography

The existing ground floor finished floor level is +20.00m AOD, which is slightly above the external street level. The main entrance to the proposed building is located on the corner where Monmouth Street and Tower Street meet, which has a level of +19.46m AOD. The level of the side entrance at

the back of the building on Monmouth Street is +19.66m AOD. There seems to be a slight slope from the north towards the south of the site footprint.

2.5 Hydrology & Hydrogeology

The nearest water feature to the site is the River Thames, which is located approximately 500m north. The site is underlain by a Secondary A Aquifer. Further site investigation needs to be done to determine the groundwater level of the site.

According to the DEFRA 'Magic Map' source, the site is not within a groundwater source protection zone (SPZ).

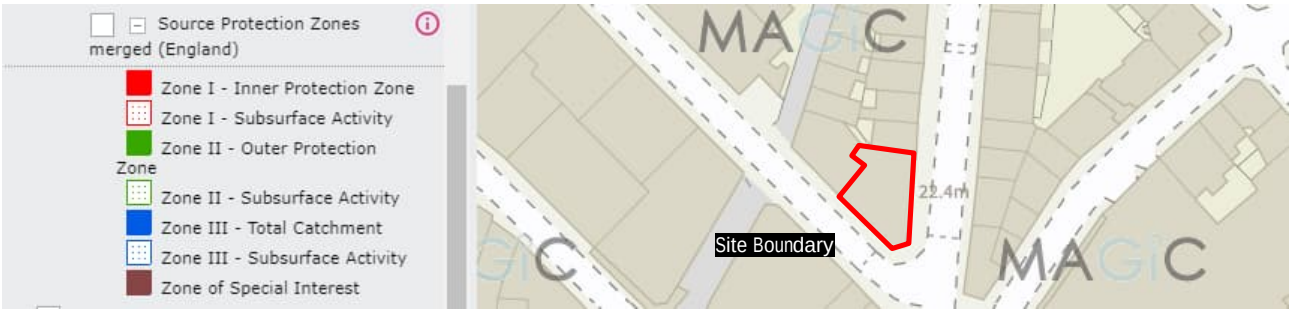

Figure 2 Groundwater Source protection zone (SPZ) – DEFRA, MagicMap

2.6 Geology

According to the British Geological Survey (BGS) 'Geology' viewer tool, the site geological composition is:

- Superficial Geology – Hackney Gravel Member;
- Bedrock geology – London Clay Formation – Chalk, silt and sand.

Figure 3 BGS Site Geology Map

A borehole record obtained from the BGS website, which was undertaken in close proximity to the site, identifies brown silty sand/gravel to a depth of 3.45m and stiff clay beneath that to a depth of 20m. This can be seen in Appendix D of this report.

3 Policy Context

3.1 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (latest version issued in July 2021) Section 14, paragraphs 159 – 169, outlines the latest guidance on Planning and Flood Risk. The policy outlines:

- The need to avoid inappropriate development in areas at risk of flooding and direct development to low-risk areas.
- The use of the Sequential Test and Exception Test as appropriate, consideration of all flood risks and consideration of safeguarding land for current or future flood management.
- A site-specific Flood Risk Assessment should be provided as appropriate.

The NPPF retains a risk-based approach to planning and categorises three Flood Zones: Zone 1, Zone 2 and Zone 3 (further split into Zone 3a and Zone 3b), as the basis for applying the Sequential Test to proposed developments. The purpose of the Sequential Test is to guide development to those areas at less risk of flooding, as it is expected that the extent of higher risk areas will grow with climate change. For the purpose of applying the Sequential Test and quantifying flood risk from fluvial and tidal source, Flood Zones are defined as per Figure 4 below:

Flood Zone	Definition
Zone 1 Low Probability	Land having a less than 1 in 1,000 annual probability of river or sea flooding. (Shown as 'clear' on the Flood Map – all land outside Zones 2 and 3)
Zone 2 Medium Probability	Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding. (Land shown in light blue on the Flood Map)
Zone 3a High Probability	Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding.(Land shown in dark blue on the Flood Map)
Zone 3b The Functional Floodplain	This zone comprises land where water has to flow or be stored in times of flood. Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

Figure 4 Classification of Flood Zones

3.1.1 Sequential Test

The existing site is used for hospitality and commercial purposes. The proposed redevelopment site lies within the category of 'Less Vulnerable' and Flood Zone 1. The Environment Agency (EA) flood map can be found in Appendix E.

Figure 5 shows the classification of flood risk vulnerability and Flood Zone compatibility according to the Technical Guidance of the NPPF i.e., the Sequential Test is required for all planned development. The scheme is considered appropriate within the designated Flood Zone for the site, therefore, based on this classification, the Exception Test is not required.

Flood Risk Vulnerability Classification		Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Flood Zone	1	✓	✓	✓	✓	✓
	2	✓	✓	Exception Test Required	✓	✓
	3a	Exception Test Required †	✓	✗	Exception Test Required	✓
	3b	Exception Test Required *	✓	✗	✗	✗

✓ - Exception Test is not required ✗ - Development should not be permitted

† – In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

* – In Flood Zone 3b (functional floodplain) essential infrastructure that has to be there and has passed the Exception Test, and water-compatible uses, should be designed and constructed to:

- remain operational and safe for users in times of flood
- result in no net loss of floodplain storage
- not impede water flows and not increase flood risk elsewhere

Figure 5 Sequential Test Summary (Table 3 – PPG, 2022)

The Critical Drainage Areas and Local Flood Risk Zones map shown in Figure 16 of the Level 1 Strategic Flood Risk Assessment (SFRA) and Appendix H of this report, located the site within the local critical drainage area Group 3_005. Group 3_005 comprises a large part of the City of Westminster and parts of the LBC. The development site is not situated within EA flood risk zones but the majority of the Borough is located within a Local Critical Drainage Area.

3.2 Flood and Water Management Act

The Flood and Water Management Act (FWMA) 2010 outlines roles and responsibilities for the implementation of Sustainable Drainage Systems (SuDS) in developments. Drainage systems must comply with national standards. Camden Council is the Lead Local Flood Authority (LLFA) for the development area and in accordance with the FWMA are responsible for coordinating the management of flood risk from surface, groundwater, and ordinary watercourses. The LLFA acts a statutory consultee on Surface Water and SuDS proposals.

3.3 Surface Water Management Plan (SWMP)

The Surface Water Management Plan for the London Borough of Camden was carried out by Halcrow in 2011. The SWMP outlines the plan to manage site-specific surface water.

In consultation with Thames Water, the Environment Agency, Transport for London, and partners responsible for surface water management and drainage, the SWMP study was undertaken as part of the Drain London Project.

3.4 Level 1 Strategic Flood Risk Assessment (SFRA)

The Strategic Flood Risk Assessment (SFRA) report for the London Borough of Camden was carried out by AECOM Infrastructure & Environment UK Limited in 2023 and the final report was published in 2024. The SFRA provides an overview of the Borough in terms of overall flood risk, identifying areas at risk of flooding from all sources (including groundwater, surface water, foul sewer flooding, main fluvial and tidal flooding) whilst assessing the variation in flood risk across the Borough.

As per the SFRA report:

"*Flooding from surface water and sewer sources pose the greatest risk to the London Borough of Camden. The risk is interconnected, due to the prevalence of the combined water sewer system which serves the Borough".*

4 Definitions of Types of Flood Hazard

4.1 Fluvial and Tidal Flood Risk

River (fluvial) flooding takes place when a river's capacity is exceeded and it bursts its banks, forcing the overtopping water onto surrounding land. As per the SFRA report: "*All main rivers historically located within LBC are now culverted and incorporated into the TWUL sewer network and therefore there is no fluvial flood risk within LBC."*

The EA's indicative flood zone map, Figure 6 below, indicates that the proposed site has been assessed as having <0.1% (1 in 1000) annual probability of flooding from river and/or the sea i.e., a very low risk of flooding.

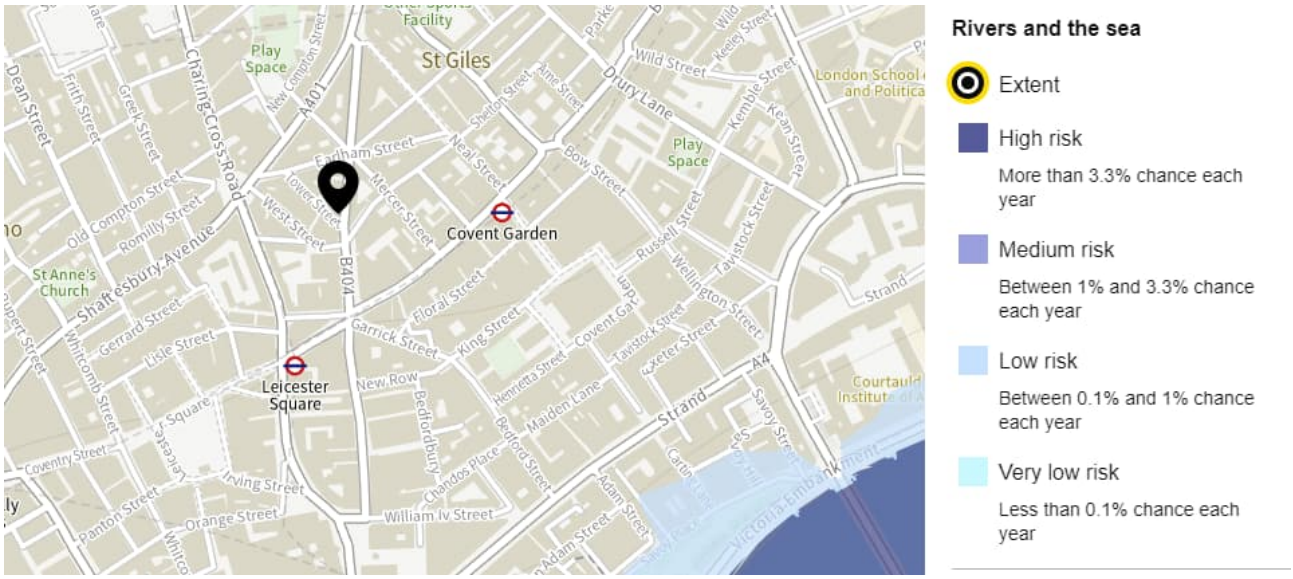

Figure 6 Risk of flooding from fluvial sources

4.2 Flooding from Artificial Sources

Artificial flood sources include raised channels such as canals or storage features such as ponds and reservoirs. There are number of artificial flood sources within London Borough of Camden. The EA has produced a map which identifies areas at a risk of reservoir flooding, i.e., when a large reservoir may fail. Figure 7 below shows that the site lies within an area at low risk of reservoir flooding.

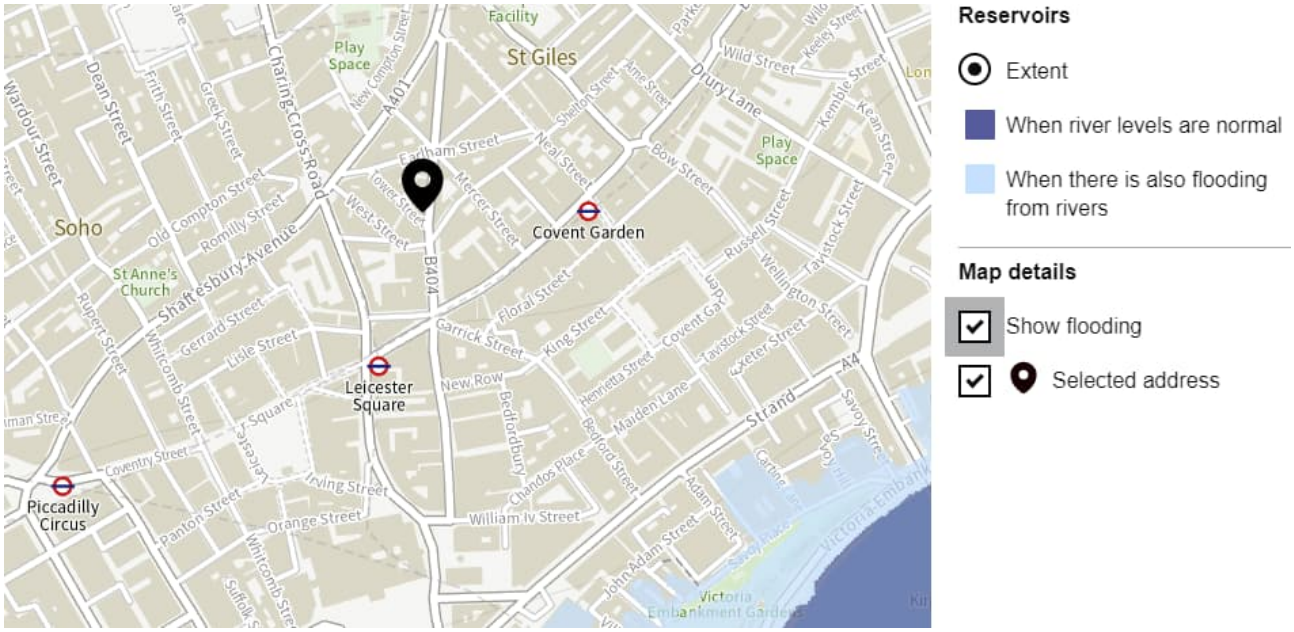

Figure 7 Risk of flooding from reservoirs

4.3 Groundwater Flooding

As per Figure 8, the site is within an area that is susceptible to flooding below ground level.

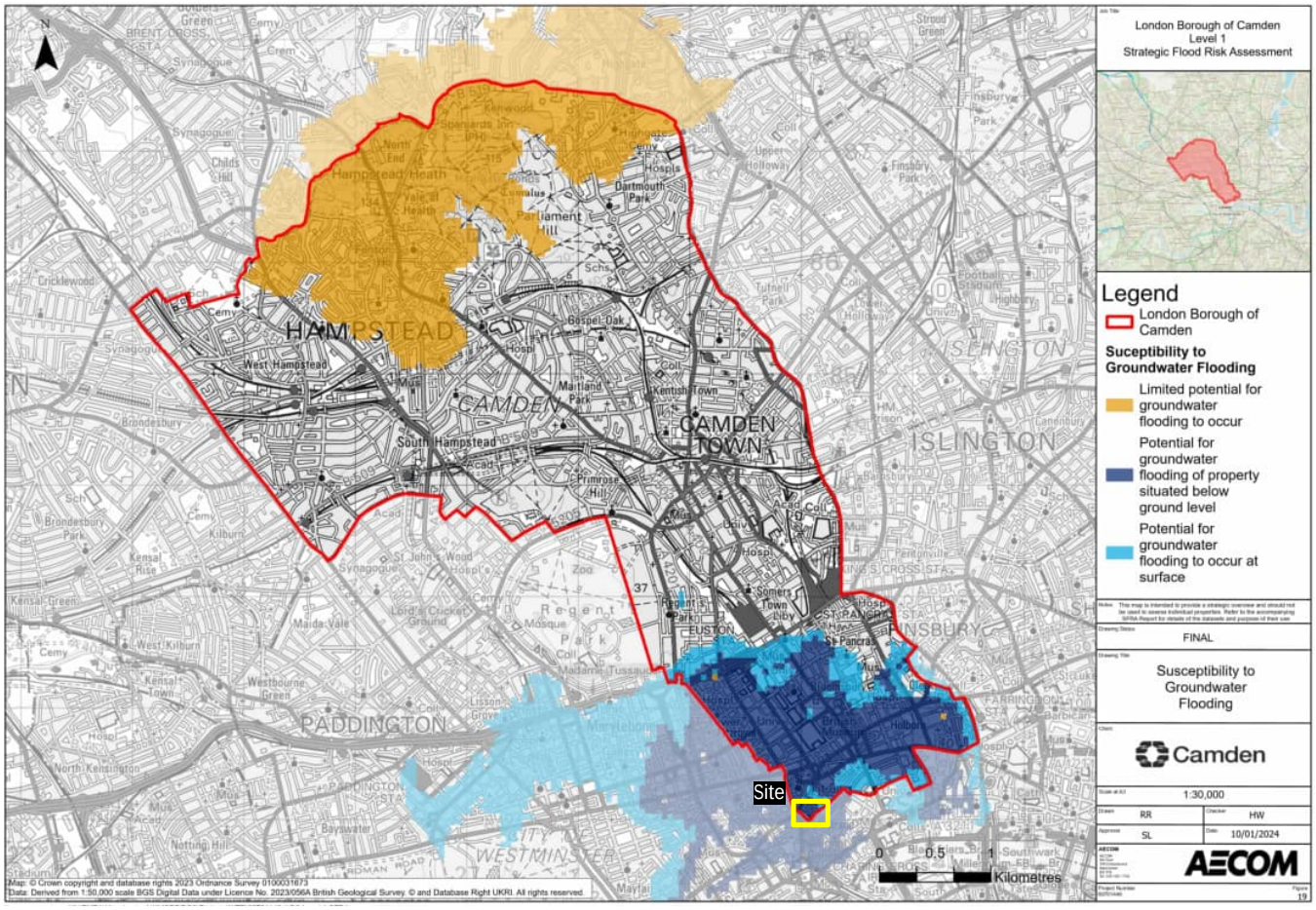

Figure 8 Susceptibility to groundwater flooding (Figure 19 – SFRA, 2024)

4.4 Sewer Flooding

The sewer system in LBC is mostly combined water sewers which receive both surface and foul water. During heavy rainfall the pipes could fill up leading to manholes surcharging or causing sewer overflow. Thames Water is responsible for managing the flood risk of public sewers in the LBC.

As per Figure 9, the site is located in an area that has experienced 6-20 sewer incidents within a 10-year period (2013-2023), which is the lower end of the incident scale.

The likelihood of sewer flooding may change over time due to increases in development, changing the extent of impermeable areas draining to a sewer, and climate change affecting rainfall patterns. As a result, sewer flooding may become more frequent in the future.

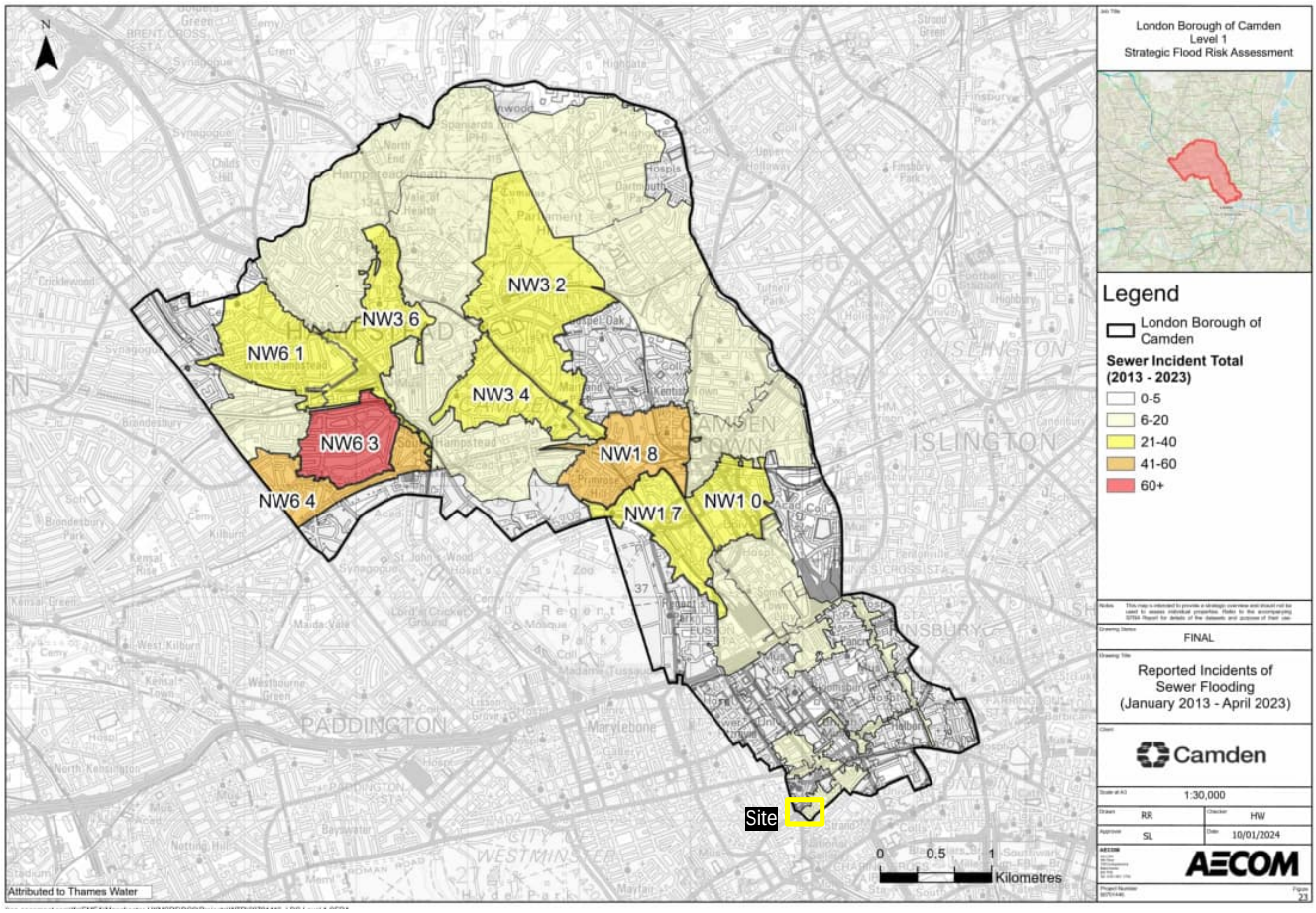

Figure 9 Reported sewer flooding (Figure 23 – SFRA, 2024)

4.5 Overland Flooding

Overland flooding is caused when water does not penetrate into the ground due to the surface being impermeable (not porous). It also occurs when the ground is already saturated or because drains are not functional or overwhelmed. This leaves the water with nowhere to go to and as a result, it will remain or flow on the surface.

As shown in Figure 10 below, the site lies within a low-risk area of surface water flooding, and hence, overland flooding.

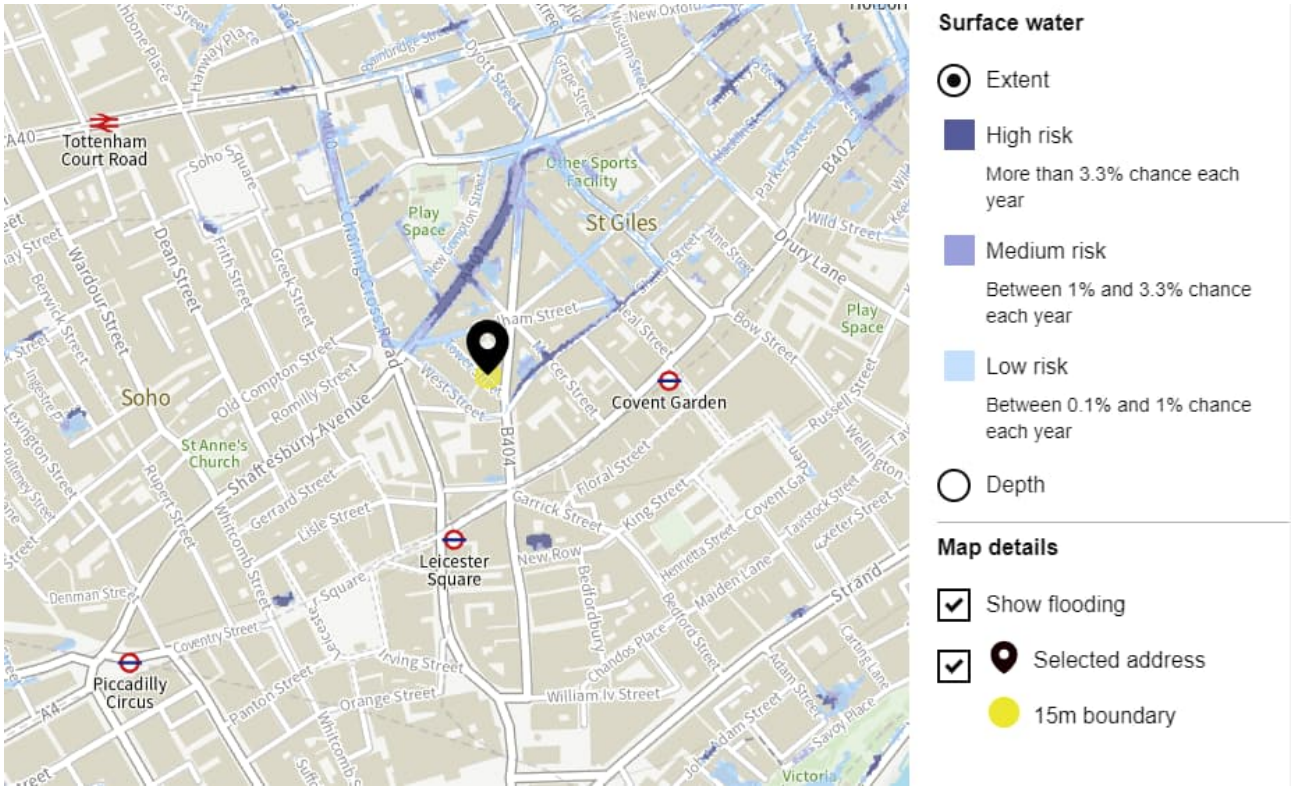

Figure 10 Risk of flooding from surface water

4.6 Flood Defences

The EA map for flood defences and AIMS Structures (assets that are used to control the flow of water) is shown below in Figure 11, which shows that there are no EA owned flood defences or AIMS Structures within the Borough's administrative boundary. So, it is assumed that flooding from infrastructure failure associated with river and sea defence is very low.

As per the Level 1 SFRA report:

"*There is 'no statutory obligation for the London Borough of Camden to deliver flood defence or alleviation schemes', however in its role as Lead Local Flood Authority, Camden Council seek opportunities to deliver flood risk alleviation projects across the Borough.*"

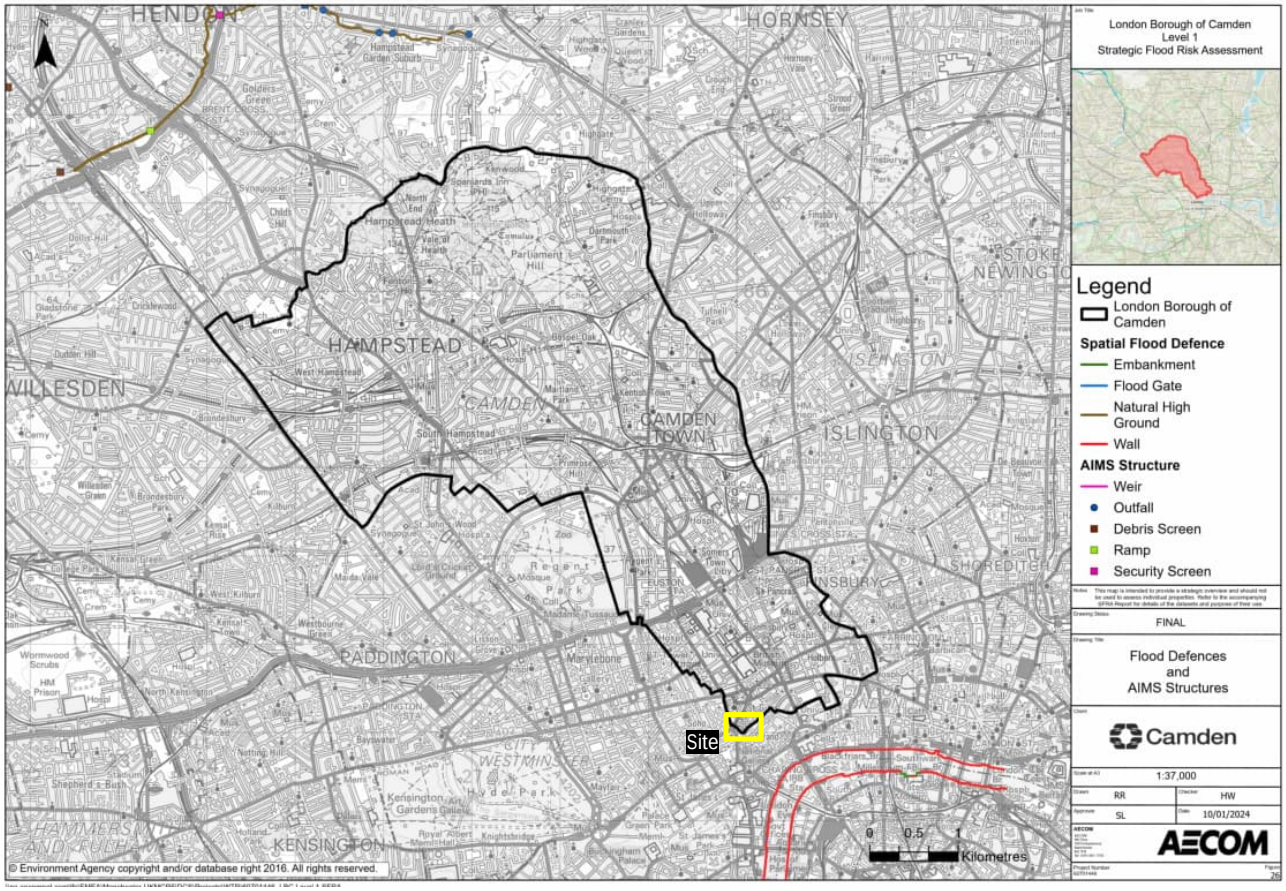

Figure 11 Flood Defences and AIMS Structures (Figure 26 – SFRA, 2024)

4.7 Climate Change

Climate change can affect flood risk in several ways e.g., impact on river flows, sea levels, rainfall intensity, wave height and wind speed. Therefore, the risk of flooding is likely to increase in the future. Climate change allowances are predictions of anticipated change for:

- peak river flow
- peak rainfall intensity
- sea level rise
- offshore wind speed and extreme wave height.

As per the Camden Council Planning Guidance:

"*The Council also expects the drainage system to be designed to accommodate a 20% climate change allowance on top of the 1 in 100-year storms. Applicants should apply a sensitivity test against the 40% climate change allowance to ensure that the additional runoff is wholly contained within the site and that there is no increase in the rate of runoff discharged from the site. This is to understand any implications to people from increased flood hazard (e.g. due to depths or velocities of surface water runoff) and to ensure that under the 40% climate change uplift scenario the development is safe. The additional runoff volume between the 20% and 40% allowances may exceed the storage capacity of attenuation basins and spill into different areas of the site temporarily, but the crucial thing is to ensure that the additional runoff is contained within the site safely and does not contribute to an increased flood risk to third parties elsewhere.*"

5 Drainage Strategy

5.1 Existing Drainage

The existing drainage within the site boundary comprises a private network of combined water drains, which discharge into the public combined water sewer under Monmouth Street to the east.

The existing drainage within the basement will likely need to be removed as part of the works due to the level of the existing basement floor level. An underground drainage CCTV survey has been undertaken to determine the extent of drains that exist. During the next design stage, we will assess whether they could be retained for re-use. The results of the CCTV survey can be found in Appendix F. However, there are still some details that are unclear, and hence, further on-site investigation is required to determine the location and condition of all existing drains, in particular existing outfall drains to the Thames Water Sewer under Monmouth Street.

The impermeable site area will not change during the redevelopment.

5.2 Evaluation of Sustainable Drainage Systems

In accordance with best practice and requirements set out in the NPPF, SuDS will be utilised where possible. It is proposed to utilise SuDS as is deemed feasible, following the hierarchy for disposal and treatment as outlined below in Table 3.

A summary of comments has been provided for each method with regards to this specific development:

SuDS Hierarchy (most to least preferred)	
METHOD	COMMENTS
Discharge into the ground	Not feasible as there are no external areas which would allow the use of infiltration as a means for the disposal of surface water.
Discharge into a surface water body	No water bodies near the site
Discharge into a surface water sewer	No surface water drains near the site
Discharge into a combined sewer	Existing system discharges to public combined water sewer, which is the most likely method to be retained for drainage discharge from this site

Table 3 - SuDS Hierarchy Summary

The site lies within a local critical drainage area as shown in Appendix H. As per the SFRA report:

"*A Local Critical Drainage Area is defined as a 'discrete geographic area where multiple and interlinked sources of flood risk (surface water, groundwater, sewer, Main River and/or tidal) cause flooding in one or more Local Flood Risk Zones'. It is an area with known flooding problems, impacting people, property and infrastructure. In this instance, the Local Critical Drainage Areas is not an area defined as having drainage issues by the Environment Agency.*"

As per the Non-Statutory Technical Standards:

"*For developments which were previously developed, the peak runoff rate from the development […] for the 1 in 1 year rainfall event and the 1 in 100-year rainfall event must be as close as reasonably*

practicable to the greenfield runoff rate from the development for the same rainfall event, but should never exceed the rate of discharge from the development prior to redevelopment for that event."

As the works will not be increasing the impermeable area generating surface runoff, the site is not habitable, and there are no records of groundwater flooding, the proposed surface water runoff rate will remain the same as the existing rate.

5.3 Proposed Drainage Strategy

The proposed drainage strategy can be found in Appendix G, which will comprise the following features.

The redevelopment work does not increase the total impermeable area, so it is proposed to reuse the existing surface water drainage within the building. Storm water runoff from the roof discharges via several existing outlets on the roof, which enter the building as rainwater downpipes. These flow down to basement level and are picked up by below ground surface water drains.

Due to the limited site area, the ability to implement suitable SUDS features on this development is severely limited and due to the nature and scale of the scheme, is deemed not required. The proposed works will not increase the rate or volume of surface water from the site.

The foul drainage will accommodate flow from WCs and sinks from the upper floors and basement. The foul water will then discharge to the existing combined water sewer, via a new connection to the sewer under Monmouth Street. The foul water design strategy is subject to receiving final architects' plans and pop up locations.

The surface water drains and foul water drains combine within the basement. The redevelopment work involves lowering the existing basement by approx. 0.71-1.1m so it is assumed that with new levels, new drains will need to be laid in the basement and removing existing redundant drains. Due to floor level change the proposed combined water sewer connecting to the public sewer under Monmouth Street may require pumping rather than reusing the existing gravity outfall. If gravity flow can be achieved, a non-return valve may be fitted to the new inlet drain and the chamber cover will be triple sealed so that in case of public sewer flooding, there is less risk of overflow entering the basement.

Further analysis of the drainage strategy should be undertaken at detailed design stage

5.4 Maintenance and Management of the System

Maintenance will be in accordance with best practice and the guidance of CIRIA SuDS Manual C753 and BS EN 752:2017. The drainage infrastructure on site will be maintained by the owner or a site management company. Appendix I outlines the Maintenance Schedule required for the site; however, it should be noted that for the first 3 months post practical completion and handover, maintenance should be carried out every month at a minimum. Regular maintenance schedule reviewing may be required to keep up with best practice and ensure the drainage are remaining effective.

The developer is responsible for providing the Maintenance Plan and O&M Manual to the facilities management team. The O&M manual shall be handed over to each subsequent owner of the site, and within that pack should be included any relevant engineering drawings for ease.

6 Conclusion

The proposed development comprises lowering the existing basement to increase the headroom by approximately 1.1m, such that the basement and ground floor can be refurbished as a new restaurant space, including dining at basement level.

Environment Agency mapping shows that the site lies in Flood Zone 1 (low risk of flooding). It was also found that the site has a low risk of flooding from surface, tidal, fluvial, sewer and reservoir sources.

The proposed development is considered 'less vulnerable' with respect to flood risk. Less vulnerable development is considered acceptable within the Flood Zone 1 (Low Risk), on this basis the proposals are demonstrated as being in accordance with the principles of the Sequential Test.

The drainage strategy comprises reusing existing surface water drainage as the total contributing impermeable area will remain the same as pre-development. The site also has no records of groundwater flooding and is not habitable in nature, hence, SuDS features are deemed as not required in this case.

A new drainage system will be installed beneath the new basement floor slab. The existing drainage within the basement will likely need to be removed. The CCTV survey will need to be reviewed in detail to determine the extent of drains that could be re-used. The new combined water drains will pick up existing rainwater pipes, existing and new soil vent pipes and stub stack pipes. The final combined water sewer will connect to the public sewer underneath Monmouth Street. Further analysis of the drainage strategy is to be undertaken at detailed design stage.

A maintenance and management plan for the proposed drainage strategy has been provided.

APPENDIX A – Existing Site Plan

0 10 20 30 50 100m

Scale 1:1250

Rev	Date	By	Description
-	-	GD	Issued for Planning

Project
50-52 MONMOUTH STREET
CONVENT GARDEN
LONDON

Drawing Title
SITE LOCATION PLAN

Project Status
PRELIMINARY

Client Logo

SHAFTESBURY CAPITAL

Client
SHAFTESBURY CAPITAL

Contract Number
-

Project Number
P23-065

Scale @ A3
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Date
28.11.23

Drawn By
GD

Checked By
GD

Drawing Number Identifier
PL0001

Revision
-

Drawing Number
CGL-ZO-XX-DR-A-PL0001

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London, WC1X 0DS

020 7539 1200
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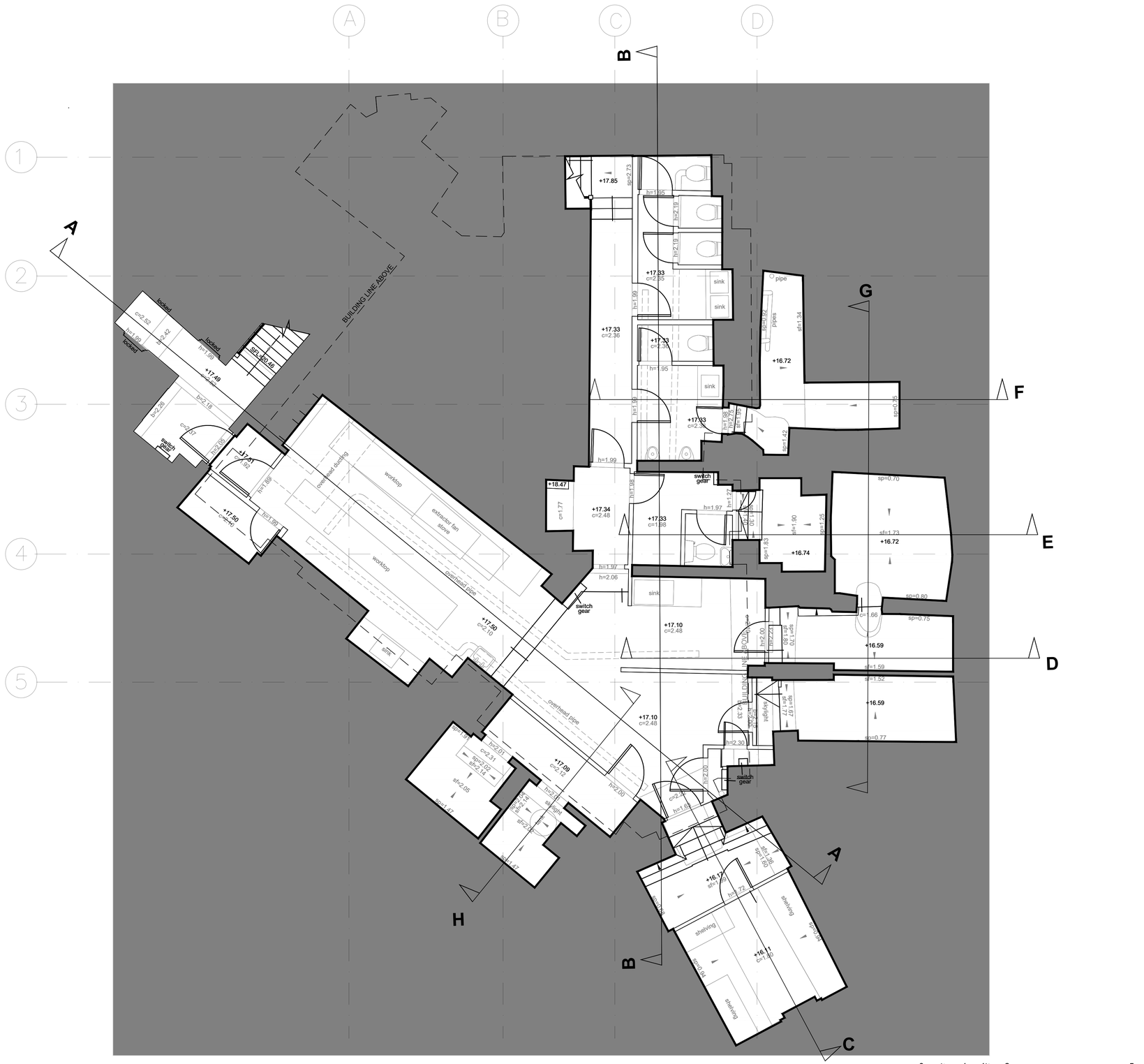
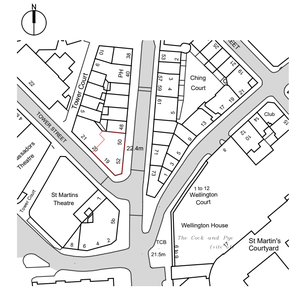
APPENDIX B – Existing Floor Plan





0 ½ 1 1½ 2 5m

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EXISTING BASEMENT FLOOR

Rev	Date	By	Description
	18.01.23	MI	Issued for Planning

Project
50-52 MONMOUTH STREET
COVENT GARDEN
LONDON

Drawing Title
EXISTING BASEMENT FLOOR

Project Status
PLANNING

Client Logo

SHAFTESBURY CAPITAL

Client
SHAFTESBURY CAPITAL

Contract Number
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Project Number
P23-065

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GD

Drawing Number Identifer
PL1001

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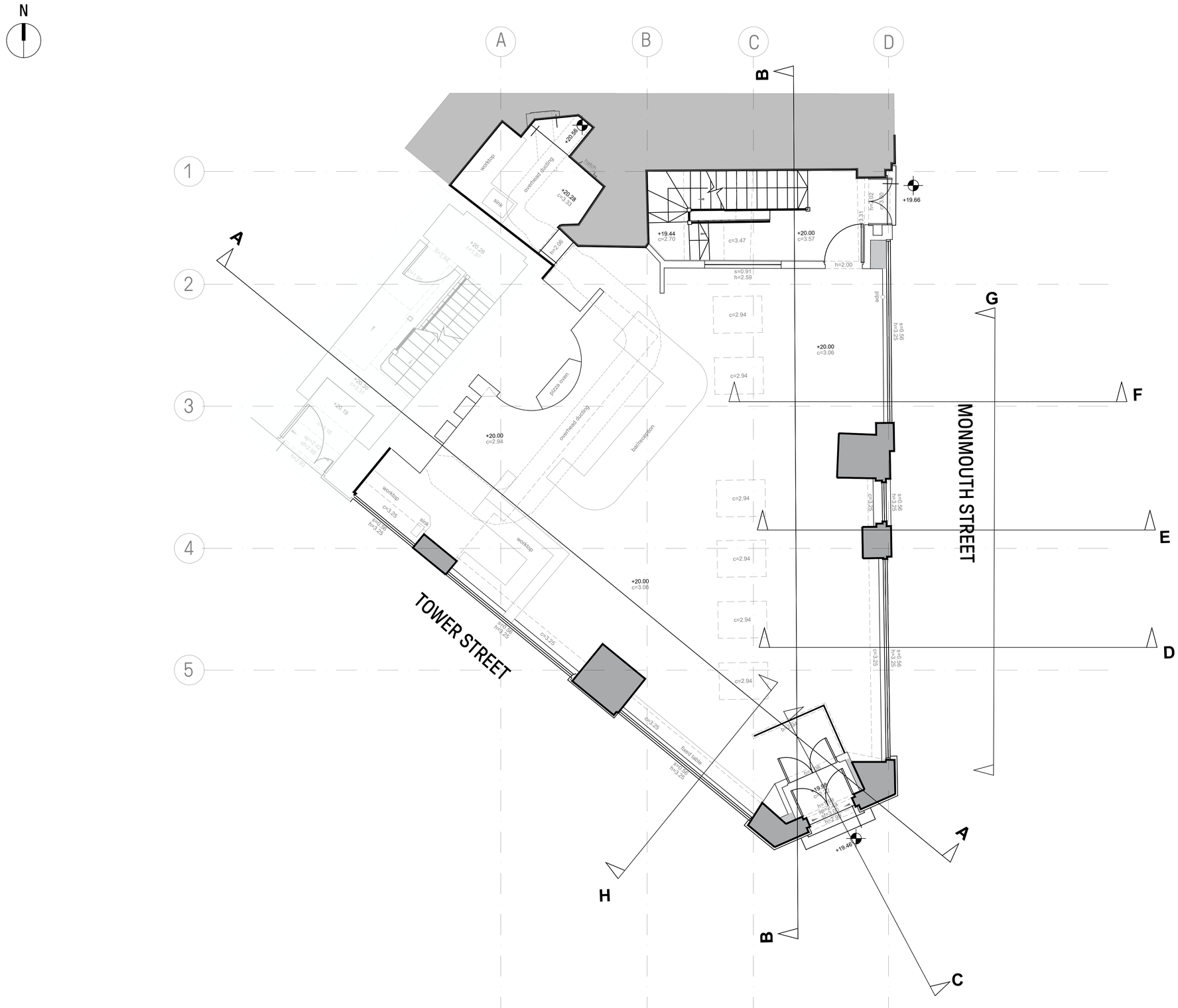

EXISTING GROUND FLOOR

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Rev	Date	By	Description
	18.01.23	GD	Issued for Planning

Project
50-52 MONMOUTH STREET
COVENT GARDEN
LONDON

Drawing Title
EXISTING GROUND FLOOR

Project Status
PLANNING

Client Logo

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Client
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Contract Number
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P23-065

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Drawing Number
CGL-Z1-00-DR-A-PL1002

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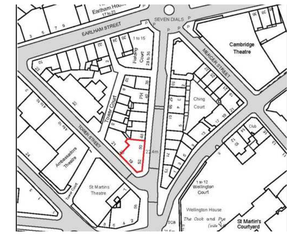
APPENDIX C – Proposed Floor Plan

1 PROPOSED BASEMENT FLOOR - TENANT FIT-OUT
1 : 50

0m 1m 2m 3m 4m 5m
SCALE BAR 1:50 @ A1



Key Plan

BASEMENT FLOOR - PROPOSED

TOTAL GIA: 145sqm

INDICATIVE NIA

	CIRCULATION:	12sqm
	TOTAL SEATING:	89sqm
	MAIN AREA:	51sqm
	VAULT 1:	15sqm
	VAULT 2:	12sqm
	VAULT 3:	11sqm
	STORAGE:	7sqm
	WC:	7sqm
	KITCHEN/BOH:	29 sqm

INDICATIVE SEATING NUMBER: 54

VAULT SCHEDULE

Name	Area	Existing Height	Required Excavation	Required Steps	New FFL
VAULT 1	15 m²	1.80m	400/480mm	4	+15.710
VAULT 2	12 m²	1.59m	610mm	3	+15.980
VAULT 3	11 m²	1.73m	500mm	1	+16.220
VAULT 4	7 m²	1.38m	920mm	3	+16.220
VAULT 5	4 m²	2.02m	700mm to be level with main basement area	0	+16.390
VAULT 5	3 m²	2.02m	700mm to be level with main basement area	0	+16.390

BASEMENT AREA SCHEDULE

Name	Area	Existing Height	Required Excavation	New FFL
SEATING AREA	51 m²	2.48m	710-940mm	+16.390
STAIR	17 m²	2.35m	710-940mm	+16.390
KITCHEN/BOH	30 m²	2.10m	1100mm	+16.390

*Required excavation to achieve 2.2m height

Rev	Date	By	Description

Project
50-52 MONMOUTH STREET
COVENT GARDEN
LONDON

Drawing Title
PROPOSED BASEMENT FLOOR FIT-OUT

Project Status
PLANNING

Client Logo

SHAFTESBURY CAPITAL

Client
SHAFTESBURY CAPITAL

Contract Number
n/a

Project Number
P23-065

Scale @ A1
1 : 50

Date
09/02/24

Drawn By
MI

Checked By
GD

Drawing Number Identifer
PL1103

Revision

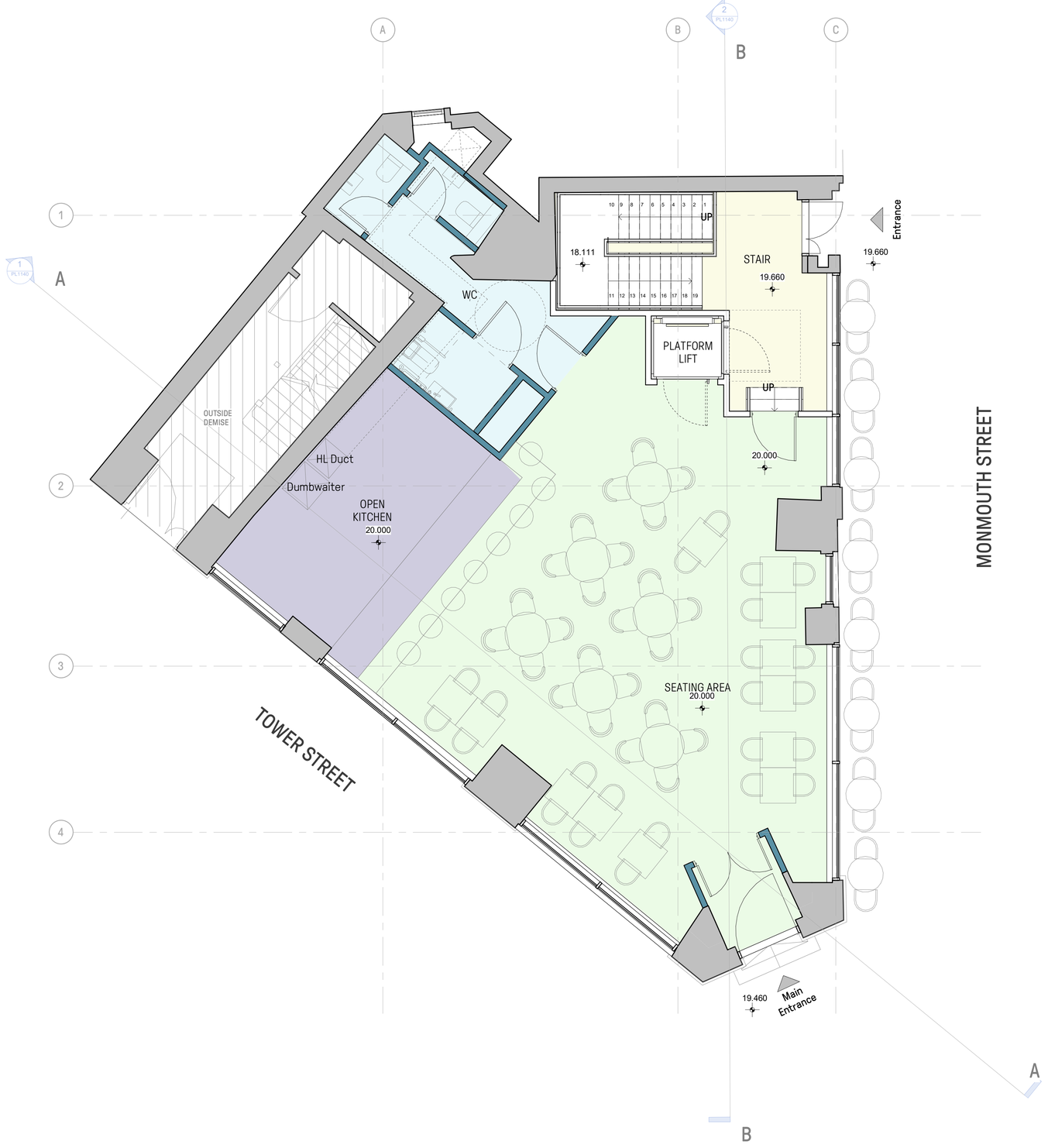
Drawing Number
CGL-Z1-B1-DR-A-PL1103

28A Easton St
London, WC1X 0DS

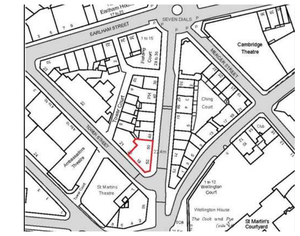
020 7539 1200
www.cgluk.com

Child Graddon Lewis

 Notes - Do not scale from this drawing,except for planning purposes. Check all dimensions on site. Subject to survey. Subject to site inspection. Site boundary lines are indicative only.



1 PROPOSED GROUND FLOOR - TENANT FIT-OUT
1 : 50



Key Plan

GROUND FLOOR - PROPOSED

TOTAL GIA:	139sqm
INDICATIVE NIA	
CIRCULATION:	20sqm
SEATING:	82sqm
WC:	16sqm
OPEN KITCHEN	21 sqm

INDICATIVE SEATING NUMBER: 55 +16 outside

0m 1m 2m 3m 4m 5m

SCALE BAR 1:50 @ A1

Rev	Date	By	Description

Project
50-52 MONMOUTH STREET
COVENT GARDEN
LONDON

Drawing Title
PROPOSED GROUND FLOOR FIT-OUT

Project Status
PLANNING

Client Logo

SHAFTESBURY CAPITAL

Client
SHAFTESBURY CAPITAL

Contract Number
n/a

Project Number
P23-065

Scale @ A1
1 : 50

Date
09/02/24

Drawn By
MI

Checked By
GD

Drawing Number Identifier
PL1104

Revision

Drawing Number
CGL-Z1-00-DR-A-PL1104

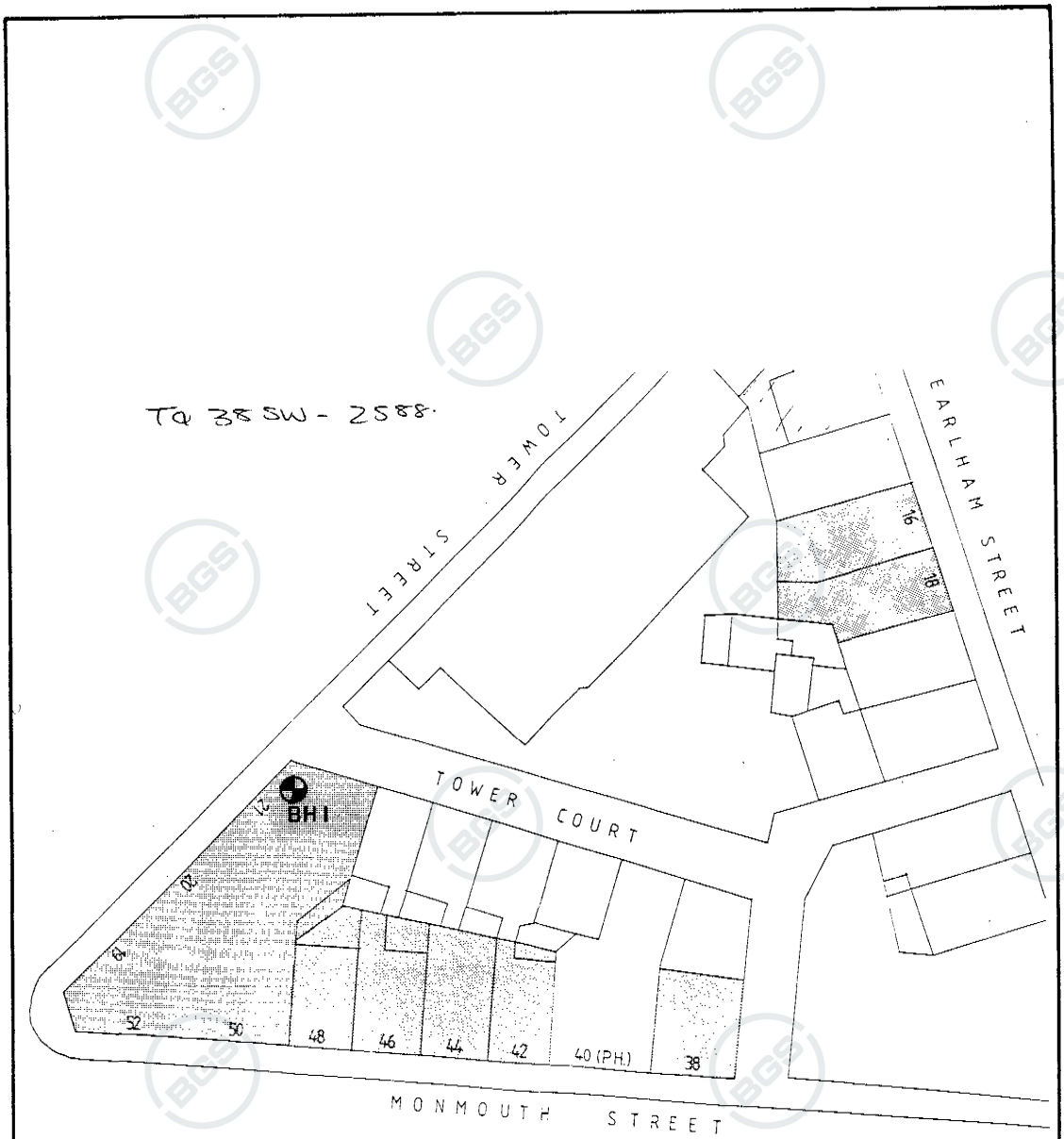
28A Easton St
London, WC1X 0DS

020 7539 1200
www.cgluk.com

Child Graddon Lewis

 Notes - Do not scale from this drawing,except for planning purposes. Check all dimensions on site. Subject to survey. Subject to site inspection. Site boundary lines are indicative only.

APPENDIX D – Borehole Information



SITEPLAN

Terresearch Limited	Report No. S39/664	Figure No. 1

Contract: Monmouth Street
Client: P & O Properties Ltd TQ 38 SW - 2588

Borehole No. 1
Sheet No. 1 Of 2.
Depth 0 to 10 metres.

Equipment and Methods
Light Cable Percussion Boring
150mm Diameter

Orientation Vertical

Ground Level : m.O.D.

Coordinates :
3004 8102

Job Number : S39/664

Location :

Dates : 14/10/89
16/10/89

Daily Prog.	Water Levels	Remarks	In Situ Tests	Samples Taken	Depth (Thick)	Reduced Level	Description	Legend
					0.00			
					0.20		MADE GROUND (concrete and bricks)	
				J 0	0.40		MADE GROUND (brown clayey silt with traces of brick)	
					(0.90)		MADE GROUND (black silt, ash, glass and traces of chalk)	
				J 1	1.30			
				U 2			Firm dark grey and black very silty sandy organic CLAY with scattered fine to medium flint gravel	
				J 3	(1.40)			
				B 4	2.70			
	▽ 16/10			W 30			Brown grey silty coarse to fine SAND with rounded fine to medium flint GRAVEL	
14/10				J 5	(0.75)			
14/10				U 6				
					3.45			
15/10				J 7			Stiff fissured brown silty CLAY	
				U 8				
				J 9	(4.30)			
				U 10				
				J 11				
				U 12	7.75			
				J 13			Stiff fissured greyish brown silty CLAY	
					(3.00)			
				U 14				
					10.00			
							Continued	

Operator
MC

General Remarks:

Appendix
1

Scale
10m/sheet

Sheet No.
1

Contract: Monmouth Street TQ38SW-2588
Client: P & O Properties Ltd

Borehole No. 1
Sheet No. 2 Of 2.
Depth 10 to 20 metres.

Equipment and Methods
Light Cable Percussion Boring
150mm Diameter

Orientation Vertical

Ground Level : m.O.D.

Coordinates :

Job Number : S39/664

Location :

Dates : 14/10/89
16/10/89

Daily Prog.	Water Levels	Remarks	In Situ Tests	Samples Taken	Depth (Thick)	Reduced Level	Description	Legend
				J 15	10.00		Stiff fissured greyish brown silty CLAY	
					(3.00)			
				U 16	10.75		Stiff to very stiff fissured brownish grey silty CLAY with occasional iron pyrites crystals	
				J 17				
				U 18	(3.00)			
				J 19				
				U 20	13.75		Very stiff fissured brownish grey silty CLAY	
				J 21				
15/10								
				U 22	(3.00)			
				J 23				
				U 24	16.75		Very stiff fissured brownish grey silty CLAY with sand partings and occasional iron pyrites crystals	
				J 25				
				U 26	(2.75)			
				J 27				
				U 28	19.50		Very stiff fissured brownish grey silty CLAY with sand partings	
				J 29	(0.50)			
					20.00		End of Borehole	

Operator MC

General Remarks

Appendix 1

Scale 10m/sheet

Sheet No. 2

APPENDIX E – EA Flood Map for Planning

Flood map for planning

Your reference	Location (easting/northing)	Created
50-52Monmouth	**530046/181011**	**23 Feb 2024 13:10**

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Environment Agency

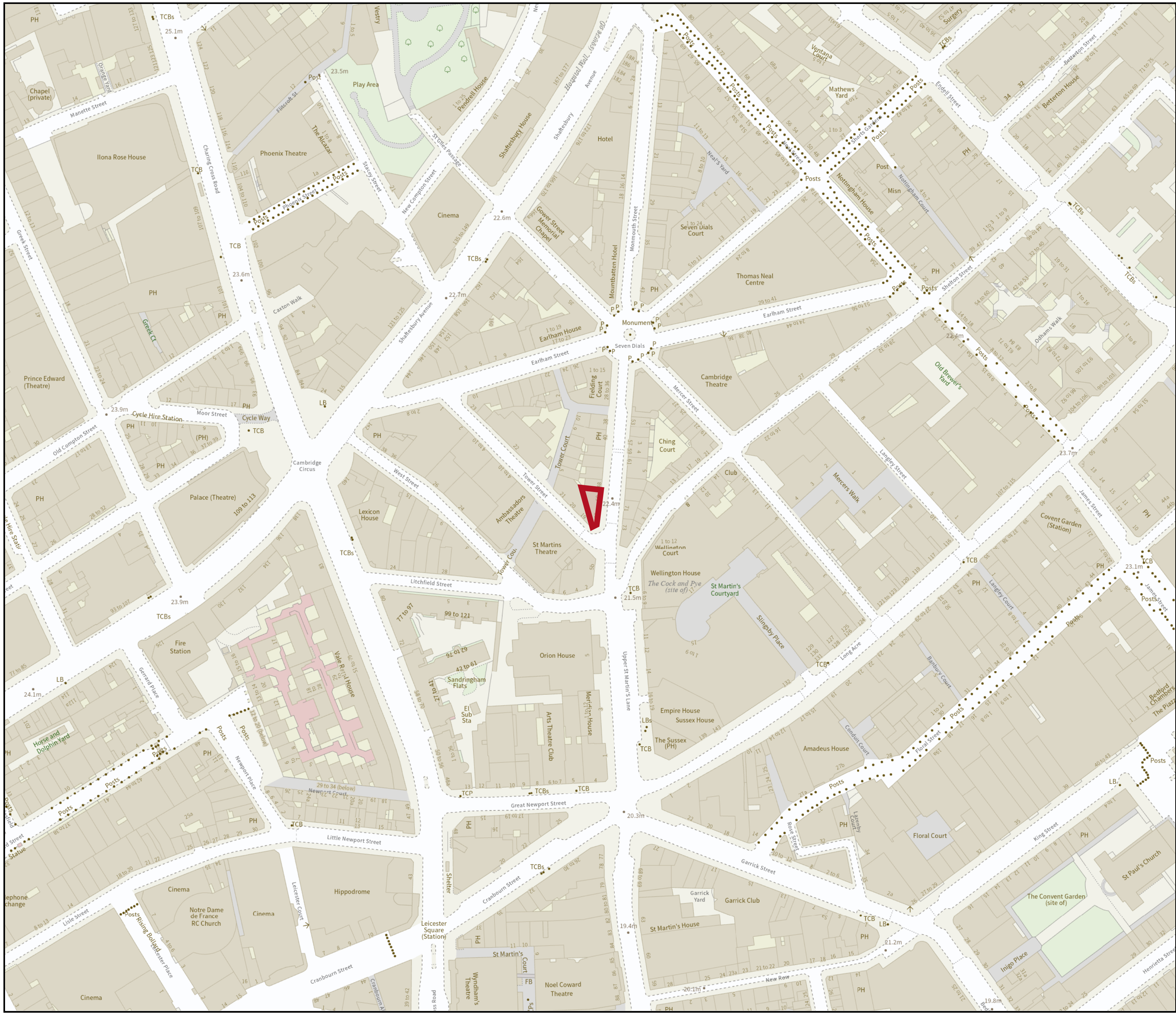
Flood map for planning

Your reference
50-52Monmouth

Location (easting/northing)
530046/181011

Scale
1:2500

Created
23 Feb 2024 13:10



Legend	
	Selected area
	Flood zone 3
	Flood zone 2
	Flood zone 1
	Flood defence
	Main river
	Water storage area

APPENDIX F – CCTV Drainage Survey Report

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Project

Project Name:	AMK151011 50_52 Monmouth Street
Project Description:	CCTV drainage condition survey
Project Number:	AMK151011
Project Status:	Complete
Project Date:	08/01/2024

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Table of Contents

Project Name	Project Number	Project Date
AMK151011 50_52 Monmouth Street	AMK151011	08/01/2024

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Project Information

Project Name	Project Number	Project Date
AMK151011 50_52 Monmouth Street	AMK151011	08/01/2024

Client

Company: Shaftesbury Capital
Street: Regal House, James Street
Town or City: London
Post Code: WC2E 8BU

Site

Company: Shaftesbury Capital
Description: 50/52 Monmouth Street
Contact: Gary Page
Street: Monmouth Street
Town or City: London
Post Code: WC2H 8JP
Email: gary.page@fandt.com

Contractor

Company: Metcor Enviromental Ltd
Description: Unit A3 Lion Business Park
Contact: Ben Goodrich
Street: Dering Way
Town or City: Gravesend
County: Kent
Post Code: DA12 2DN
Phone: 0208 3102000

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Project Information

Project Name	Project Number	Project Date
AMK151011 50_52 Monmouth Street	AMK151011	08/01/2024

Project Notes

Drainage team attended site to carry out the required CCTV survey of the basement drainage system, serving 'Rossopomodoro'. Upon arrival, keys were collected from security, access gained to the unit and multiple manholes were located throughout the basement area. Identified that properties situated above the restaurant also share the drainage system running through the commercial unit, however, CCTV survey was carried out on all belowground drainage serving the property.
Throughout the CCTV survey, no major structural defects were identified within the belowground pipework, however a number of sections were found to be holding settled/attached deposits such as grease and encrusted scale and are recommended to be thoroughly cleaned/descaled.
CCTV identified that Section 6 (BR2-MH3) has 2x large displaced joints which are restricting flow and require patch lining repair works.
Manhole MH4, has an interceptor trap on the outfall and is suspected to flow downstream to the public sewer. However, due to the rodding eye bung being seized in place, this section of belowground pipework has not been surveyed and its outfall to the public sewer is not confirmed.

Recommendations
Drainage team attend site alongside drain lining team to carry out the recommended remedial works identified.
Drainage team to carry out descale to sections highlighted within the report via a combination of high pressure water jetting with specialist nozzles and electromechanical milling machine. Upon completion, CCTV inspect pipework to confirm successful descale.
Drain lining team attend site to undertake the required patch lining works to Section 6 (2x 100mmØ patches are required). Pipework to be thoroughly cleaned via high pressure water jetting prior to patch lining installation. Upon completion of lining works, CCTV inspect pipework to confirm successful installation.

Sections requiring HPWJ and descale
Section 5 BR1-MH3 100mmØ HPWJ/descale
Section 7 BR3-MH3 100mmØ HPWJ/descale
Section 8 MH3-D/S 150mmØ HPWJ/descale
Section 11 BR4-MH4 100mmØ HPWJ/descale
Section 12 BR5-MH4 100mmØ HPWJ/descale

Sections requiring HPWJ and patch lining
Section 6 BR2-MH3 100mmØ displaced joint @ 1.60m, 2.61m (on rest-bend) install 2x patches

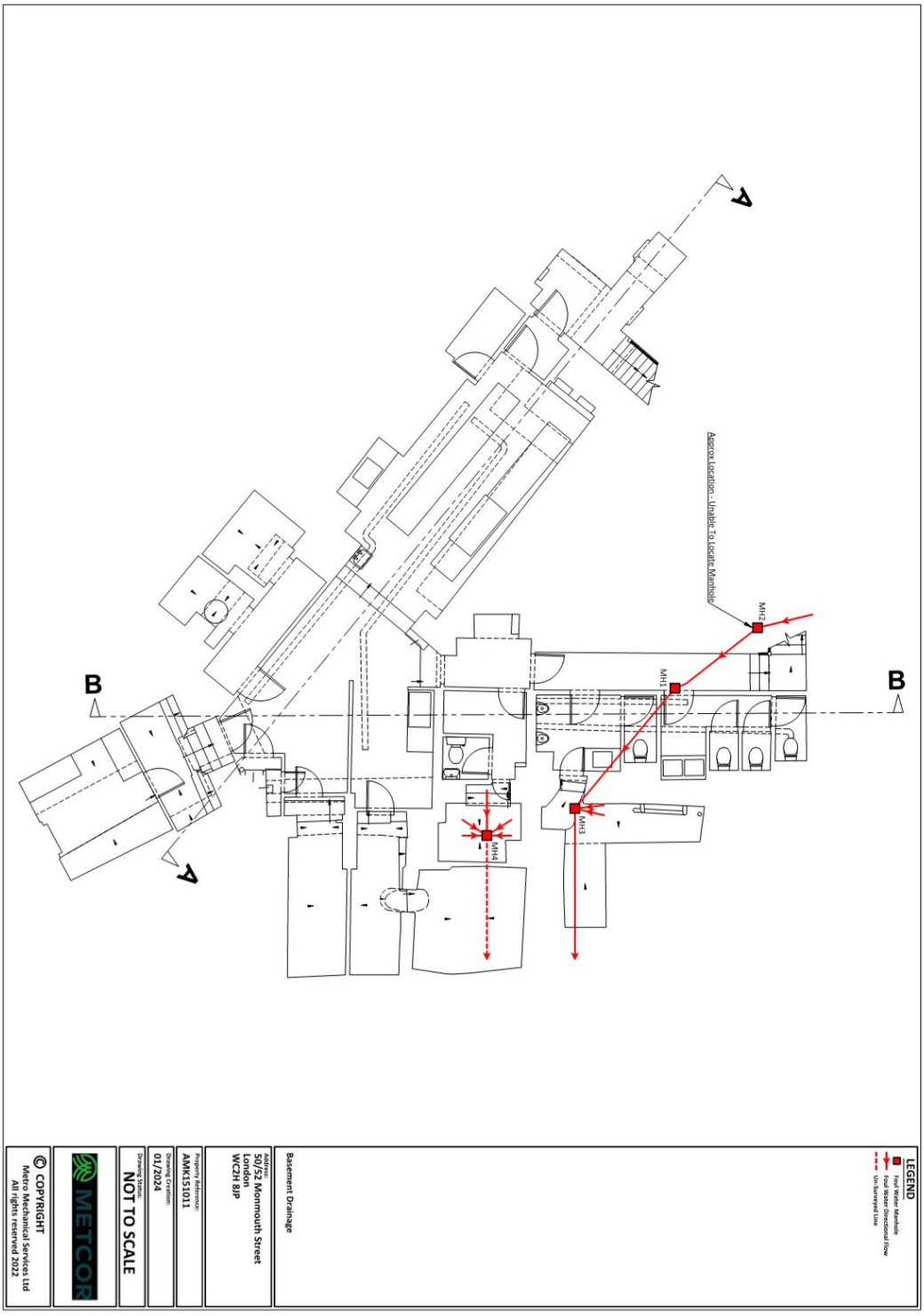
Sections requiring extensive investigation works
Section 8 MH3-D/S 150mmØ further investigate to confirm whether line is live or redundant prior to undertaking descaling works

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Project Information

Project Name	Project Number	Project Date
AMK151011 50_52 Monmouth Street	AMK151011	08/01/2024

Project Drawing, Page 'AMK151011 50_52 Monmouth Street'



Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Scoring Summary

Project Name	Project Number	Project Date
AMK151011 50_52 Monmouth Street	AMK151011	08/01/2024

Structural Defects

Section	PLR	Grade	Description
All inspected pipes are in an acceptable structural condition (< grade 3).			

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
5	BR1X	3	Multiple defects
6	BR2X	4	Joint displaced, large
7	BR3X	4	Settled deposits, other, 20% cross-sectional area loss
8	MH3X	3	Attached deposits, encrustation from 4 o'clock to 8 o'clock, 5% cross-sectional area loss, finish
9	U/SX	3	Settled deposits, other, 15% cross-sectional area loss, finish
11	BR4X	3	Attached deposits, grease at 12 o'clock, 10% cross-sectional area loss, finish
12	BR5X	3	Attached deposits, grease at 12 o'clock, 5% cross-sectional area loss, finis

Abandoned Surveys

Section	PLR	Description
9	U/SX	Survey abandoned

Information

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

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Project Pictures

Project Name	Project Number	Project Date
AMK151011 50_52 Monmouth Street	AMK151011	08/01/2024

Manhole ouside female toilets cracked upon arrival (before lifitng)

Female toilet blocked upon arrival

Female toilet unblocked

Unable to survey MH4 downstream due to seized rodding eye bung

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - U/SX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
1	1	18/12/23	5:50	Not Specified	No Rain Or Snow	No	U/SX

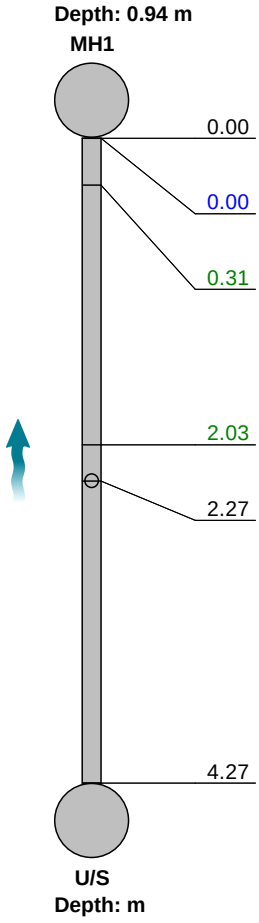
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	U/S
Road:	50-52 Monmouth Street	**Inspected Length:**	4.27 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	4.27 m	**Downstream Node:**	MH1
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.940 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH1	00:00:02		
0.00	WL	Water level, 5% of the vertical dimension	00:00:05		
0.31	LU	Line deviates up: Rest-bend	00:00:17		
2.03	LD	Line deviates down: To horizontal	00:00:29		
2.27	JN	Junction at 12 o'clock, 100mm dia	00:00:40		
4.27	MHF	Finish node, manhole, reference: MH2: Unknown (not in restaurant)	00:01:05	U_SX_d50 0528e-9c8 9-42e3-bf0	

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

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - U/SX

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
1	Upstream	U/SX		AMK151011

U_SX_d500528e-9c89-42e3-bf04-b6d2a6c10aae_20240108_105824_365.jpg, 00:01:05, 4.27 m
Finish node, manhole, reference: MH2, Unknown (not in restaurant)

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Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - U/SX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
2	2	18/12/23	6:16	Not Specified	No Rain Or Snow	No	U/SX

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	U/S
Road:	50-52 Monmouth Street	**Inspected Length:**	2.45 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	2.45 m	**Downstream Node:**	MH2
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.840 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50

Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH2	00:00:03		
0.00	WL	Water level, 5% of the vertical dimension	00:00:06		
0.22	LL	Line deviates left	00:00:11		
2.45	BRF	Finish node, major connection without manhole, reference: US: Rest-bend	00:00:27	U_SX_f8d12d9c-9d52-4e38-91	

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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Tel. 0208 3102000

Section Pictures - 18/12/2023 - U/SX

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
2	Upstream	U/SX		AMK151011

U_SX_f8d12d9c-9d52-4e38-916a-66bbae26ad3b_20240108_105920_342.jpg, 00:00:27, 2.45 m
Finish node, major connection without manhole, reference: US, Rest-bend

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - BR1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
3	3	18/12/23	6:18	Not Specified	No Rain Or Snow	No	BR1X

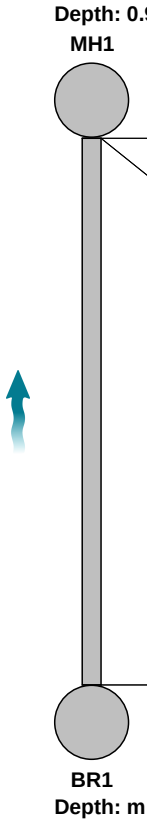
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR1
Road:	50-52 Monmouth Street	**Inspected Length:**	3.62 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	3.62 m	**Downstream Node:**	MH1
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.940 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH1	00:00:02		
0.00	WL	Water level, 5% of the vertical dimension	00:00:06		
3.62	GYF	Finish node, gully, reference: US: Gully	00:00:29	BR1X_4fe66215-f03d-48bc-9c	

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	0.3	1.0	1.0	0	0.0	0.0	0.0	1.0

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - BR1X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
3	Upstream	BR1X		AMK151011

BR1X_4fe66215-f03d-48bc-9c2c-b5c85b7a5cf7_20240108_110120_081.jpg, 00:00:29, 3.62 m
Finish node, gully, reference: US, Gully

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - MH1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
4	4	18/12/23	6:22	Not Specified	No Rain Or Snow	No	MH1X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

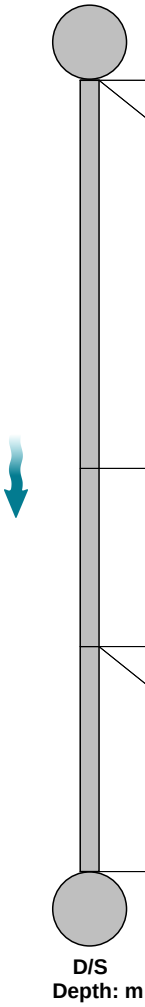
Town or Village:	London	**Inspection Direction:**	Downstream	**Upstream Node:**	MH1
Road:	50-52 Monmouth Street	**Inspected Length:**	5.24 m	**Upstream Pipe Depth:**	0.940 m
Location:	Property or buildings	**Total Length:**	5.24 m	**Downstream Node:**	D/S
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50

Depth: 0.94 m
MH1



D/S
Depth: m

Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH1	00:00:01		
0.00	WL	Water level, 10% of the vertical dimension	00:00:05		
2.57	LD	Line deviates down	00:00:20		
3.75	LL	Line deviates left	00:00:26		
3.75	WL	Water level, 5% of the vertical dimension	00:00:27		
5.24	MHF	Finish node, manhole, reference: MH3: Interceptor manhole	00:00:38	MH1X_e1 9a3b87-b6 34-403f-ad	

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

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - MH1X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
4	Downstream	MH1X		AMK151011

MH1X_e19a3b87-b634-403f-ada4-bc63574c7a53_20240108_111100_236.jpg, 00:00:38, 5.24 m
Finish node, manhole, reference: MH3, Interceptor manhole

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - BR1X

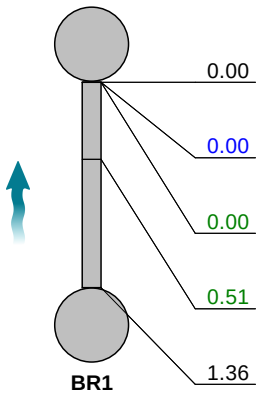
Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
5	5	18/12/23	6:47	Not Specified	No Rain Or Snow	No	BR1X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR1
Road:	50-52 Monmouth Street	**Inspected Length:**	1.36 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	1.36 m	**Downstream Node:**	MH3
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.600 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:



Scale: 1:50 Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH3	00:00:03		
0.00	WL	Water level, 0% of the vertical dimension	00:00:07		
0.00	DEE	Attached deposits, encrustation from 3 o'clock to 9 o'clock, 5% cross-sectional area loss	00:00:12	BR1X_452f3c4c-8cb3-4a56-819	3
0.51	DEE	Attached deposits, encrustation from 10 o'clock to 2 o'clock, 5% cross-sectional area loss	00:00:39	BR1X_0bcf15c4-733b-41c2-ad	3
1.36	BRF	Finish node, major connection without manhole, reference: US: Rest-bend	00:00:52	BR1X_529ad1da-56e0-4df2-b2b	

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	2	2.0	2.9	4.0	4.0

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Dering Way, Gravesend
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Section Pictures - 18/12/2023 - BR1X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
5	Upstream	BR1X		AMK151011

BR1X_452f3c4c-8cb3-4a56-8193-ee032e44716c_20240108_111213_254.jpg, 00:00:12, 0.00 m
Attached deposits, encrustation from 3 o'clock to 9 o'clock, 5% cross-sectional area loss

BR1X_0bcf15c4-733b-41c2-aded-04a98086fe49_20240108_111245_631.jpg, 00:00:39, 0.51 m
Attached deposits, encrustation from 10 o'clock to 2 o'clock, 5% cross-sectional area loss

BR1X_529ad1da-56e0-4df2-b2b4-0fc0c54c73d5_20240108_111517_891.jpg, 00:00:52, 1.36 m
Finish node, major connection without manhole, reference: US, Rest-bend

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Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - BR2X

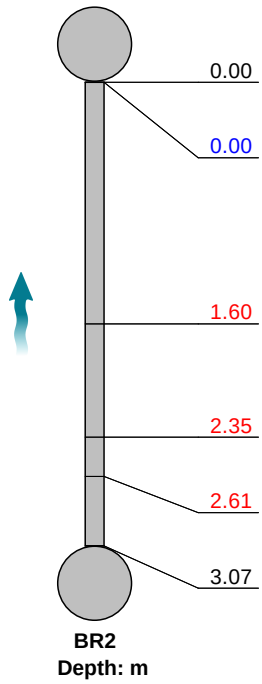
Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
6	6	18/12/23	6:50	Not Specified	No Rain Or Snow	No	BR2X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR2
Road:	50-52 Monmouth Street	**Inspected Length:**	3.07 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	3.07 m	**Downstream Node:**	MH3
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.600 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:



Scale: 1:50 Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH3	00:00:02		
0.00	WL	Water level, 0% of the vertical dimension	00:00:05		
1.60	JDM	Joint displaced, medium	00:00:47	BR2X_f541e4ca-69e3-4271-a8	1 / 3
2.35	CC	Crack, circumferential from 12 o'clock to 4 o'clock	00:01:08		2 / 2
2.61	JDL	Joint displaced, large	00:01:15	BR2X_e39a5c13-c1fe-4e56-b2	1 / 4
3.07	GYF	Finish node, gully, reference: US: Gully	00:01:24	BR2X_e27c44b8-ba9c-4d40-9b	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
3	10.0	4.2	13.0	2.0	3	5.0	2.6	8.0	4.0

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Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - BR2X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
6	Upstream	BR2X		AMK151011

BR2X_f541e4ca-69e3-4271-a8e4-cf0b007e6738_20240108_114833_799.jpg, 00:00:47, 1.60 m
Joint displaced, medium

BR2X_e39a5c13-c1fe-4e56-b267-fdbcd2ab4d19_20240108_115759_634.jpg, 00:01:15, 2.61 m
Joint displaced, large

BR2X_e27c44b8-ba9c-4d40-9bde-be772f1ccc67_20240108_120128_367.jpg, 00:01:24, 3.07 m
Finish node, gully, reference: US, Gully

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Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - BR3X

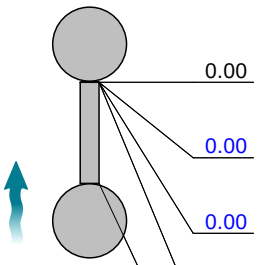
Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
7	7	18/12/23	6:56	Not Specified	No Rain Or Snow	No	BR3X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR3
Road:	50-52 Monmouth Street	**Inspected Length:**	0.67 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	0.67 m	**Downstream Node:**	MH3
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.600 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:



Scale: 1:50 Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH3	00:00:02		
0.00	WL	Water level, 0% of the vertical dimension	00:00:05		
0.00	REM	General remark: Residual tissue in line	00:00:09	BR3X_e535855a-b95d-4030-aa	
0.00	DEX	Settled deposits, other, 20% cross-sectional area loss: Tissue build-up	00:00:09		4
0.67	BRF	Finish node, major connection without manhole, reference: US: Rest-bend	00:00:52	BR3X_50fe1519-7e59-4115-b1	

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	7.5	5.0	5.0

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Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - BR3X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
7	Upstream	BR3X		AMK151011

BR3X_e535855a-b95d-4030-aad8-14c0d10b1db9_20240108_121836_436.jpg, 00:00:09, 0.00 m
General remark, Residual tissue in line

BR3X_50fe1519-7e59-4115-b1e9-d19afffa9ae4_20240108_121952_667.jpg, 00:00:52, 0.67 m
Finish node, major connection without manhole, reference: US, Rest-bend

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Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - MH3X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
8	8	18/12/23	7:06	Not Specified	No Rain Or Snow	No	MH3X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Downstream	**Upstream Node:**	MH3
Road:	50-52 Monmouth Street	**Inspected Length:**	3.60 m	**Upstream Pipe Depth:**	0.600 m
Location:	Property or buildings	**Total Length:**	3.60 m	**Downstream Node:**	D/S
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	150 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50

Position [m]		Code	Observation	MPEG	Photo	Grade
0.00		MH	Start node, manhole, reference: MH3	00:00:01		
0.00		WL	Water level, 5% of the vertical dimension	00:00:04		
0.00	S01	DEE	Attached deposits, encrustation from 4 o'clock to 8 o'clock, 5% cross-sectional area loss, start	00:00:09	MH3X_69520aca-4569-4f93-ba	
1.03		CCJ	Crack, circumferential at joint from 10 o'clock to 5 o'clock	00:00:24	MH3X_16695504-d7f9-4465-92	2 / 2
3.60	F01	DEE	Attached deposits, encrustation from 4 o'clock to 8 o'clock, 5% cross-sectional area loss, finish	00:00:31		3
3.60		BRF	Finish node, major connection without manhole, reference: DS: Main sewer connection	00:00:57	MH3X_4ec746c7-fb51-4628-8d	

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	2.8	10.0	2.0	2	3.0	2.5	9.0	4.0

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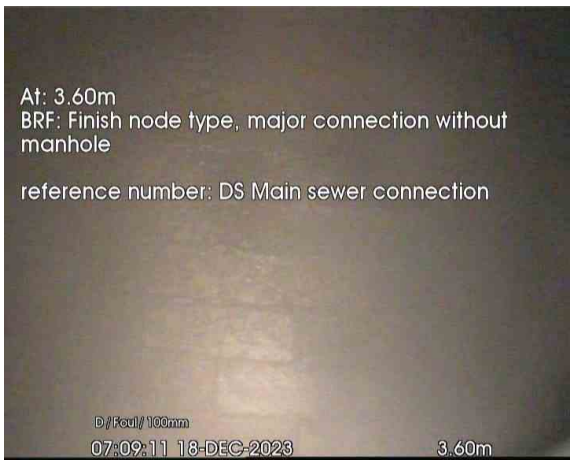
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - MH3X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
8	Downstream	MH3X		AMK151011

MH3X_69520aca-4569-4f93-bacc-3d8f191fe2a0_20240108_124819_461.jpg, 00:00:09, 0.00 m
Attached deposits, encrustation from 4 o'clock to 8 o'clock, 5% cross-sectional area loss, start

MH3X_16695504-d7f9-4465-92df-1be3330858d9_20240108_125000_304.jpg, 00:00:24, 1.03 m
Crack, circumferential at joint from 10 o'clock to 5 o'clock



MH3X_4ec746c7-fb51-4628-8dbe-dacc2bc95543_20240108_124953_983.jpg, 00:00:57, 3.60 m
Finish node, major connection without manhole, reference: DS, Main sewer connection

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Tel. 0208 3102000

Section Inspection - 18/12/2023 - U/SX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
9	9	18/12/23	7:33	Not Specified	No Rain Or Snow	No	U/SX

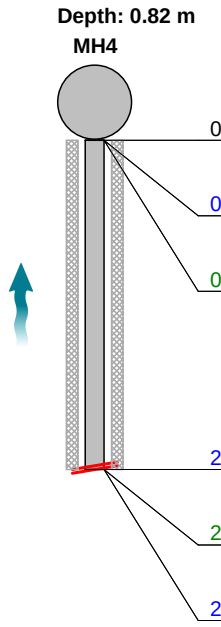
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	U/S
Road:	50-52 Monmouth Street	**Inspected Length:**	2.18 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	2.18 m	**Downstream Node:**	MH4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.820 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	150 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]		Code	Observation	MPEG	Photo	Grade
0.00		MH	Start node, manhole, reference: MH4	00:00:05		
0.00		WL	Water level, 0% of the vertical dimension	00:00:06		
0.00	S01	DEX	Settled deposits, other, 15% cross-sectional area loss, start: Foul sludge	00:00:07	U_SX_4a8f41fa-14b3-43c2-9b1	
2.18		SA	Survey abandoned: Unable to pass	00:00:35	U_SX_ba347d33-7e64-447d-81	
2.18	F01	DEX	Settled deposits, other, 15% cross-sectional area loss, finish: Foul sludge	00:00:35		3
2.18		REM	General remark: Suspected redundant line	00:00:38	U_SX_67b00d8d-7b1c-4d3f-a6b	

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	2.8	6.0	4.0

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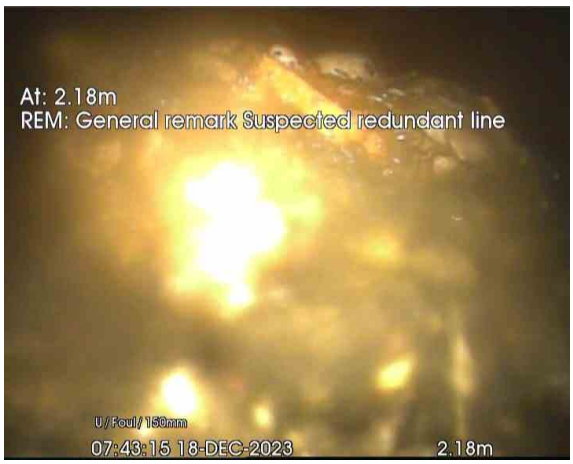
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - U/SX

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
9	Upstream	U/SX		AMK151011

U_SX_4a8f41fa-14b3-43c2-9b1d-47b1ce1923f4_20240108_125222_899.jpg, 00:00:07, 0.00 m
Settled deposits, other, 15% cross-sectional area loss, start, Foul sludge

U_SX_ba347d33-7e64-447d-817e-27166017c21d_20240108_125345_346.jpg, 00:00:35, 2.18 m
Survey abandoned, Unable to pass



U_SX_67b00d8d-7b1c-4d3f-a6bd-ecbe37dd6601_20240108_125400_149.jpg, 00:00:38, 2.18 m
General remark, Suspected redundant line

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Dering Way, Gravesend
Tel. 0208 3102000

Section Inspection - 18/12/2023 - BR3X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
10	10	18/12/23	8:01	Not Specified	No Rain Or Snow	No	BR3X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR3
Road:	50-52 Monmouth Street	**Inspected Length:**	0.00 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	0.00 m	**Downstream Node:**	MH4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.600 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

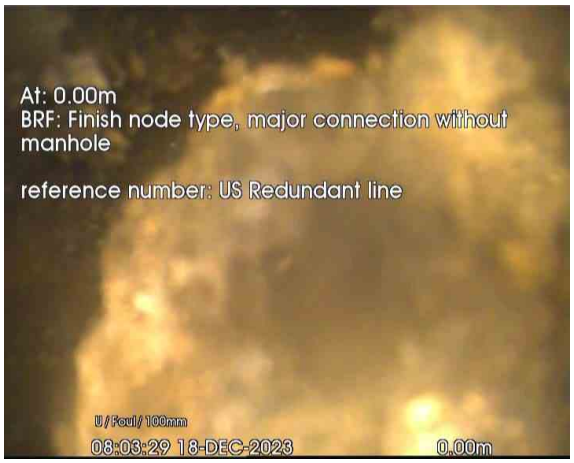
Scale: 1:50 Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 0.60 m					
MH4					
0.00	MH	Start node, manhole, reference: MH4	00:00:02		
0.00	WL	Water level, 0% of the vertical dimension	00:00:06		
BR3					
0.00	BRF	Finish node, major connection without manhole, reference: US: Redundant line	00:00:09	BR3X_7eca9340-759b-42cd-af4	
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

Metcor Enviromental Ltd
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - BR3X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
10	Upstream	BR3X		AMK151011



BR3X_7eca9340-759b-42cd-af44-16c491165e33_20240108_130726_569.jpg, 00:00:09, 0.00 m
Finish node, major connection without manhole, reference: US, Redundant line

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Section Inspection - 18/12/2023 - BR4X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
11	11	18/12/23	8:04	Not Specified	No Rain Or Snow	No	BR4X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR4
Road:	50-52 Monmouth Street	**Inspected Length:**	1.26 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	1.26 m	**Downstream Node:**	MH4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.820 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50 Position [m]		Code	Observation	MPEG	Photo	Grade
0.00		MH	Start node, manhole, reference: MH4	00:00:02		
0.00		WL	Water level, 0% of the vertical dimension	00:00:04		
0.00		LL	Line deviates left	00:00:07		
0.32	S01	DEG	Attached deposits, grease at 12 o'clock, 10% cross-sectional area loss, start	00:00:25	BR4X_cdec9da9-966c-43d6-b6	
0.75		LD	Line deviates down	00:01:01		
1.23		LU	Line deviates up	00:01:10		
1.23	F01	DEG	Attached deposits, grease at 12 o'clock, 10% cross-sectional area loss, finish	00:01:10		3
1.26		BRF	Finish node, major connection without manhole, reference: US: Rest-bend	00:01:14	BR4X_b1b13176-b6ed-4f0a-bb3	

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	4.0	3.2	4.0	4.0

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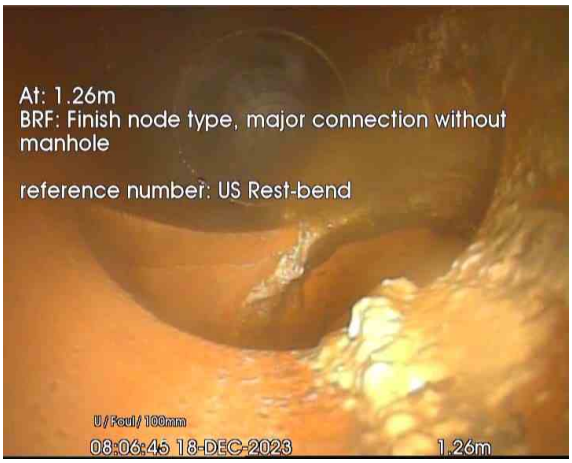
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - BR4X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
11	Upstream	BR4X		AMK151011

BR4X_cdec9da9-966c-43d6-b659-e4e94cae2322_20240108_131042_406.jpg, 00:00:25, 0.32 m
Attached deposits, grease at 12 o'clock, 10% cross-sectional area loss, start



BR4X_b1b13176-b6ed-4f0a-bb39-93c66db45034_20240108_133508_265.jpg, 00:01:14, 1.26 m
Finish node, major connection without manhole, reference: US, Rest-bend

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Section Inspection - 18/12/2023 - BR5X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
12	12	18/12/23	8:07	Not Specified	No Rain Or Snow	No	BR5X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR5
Road:	50-52 Monmouth Street	**Inspected Length:**	0.89 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	0.89 m	**Downstream Node:**	MH4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.820 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50

Position [m]		Code	Observation	MPEG	Photo	Grade
0.00		MH	Start node, manhole, reference: MH4	00:00:02		
0.00		WL	Water level, 0% of the vertical dimension	00:00:04		
0.00	S01	DEG	Attached deposits, grease at 12 o'clock, 5% cross-sectional area loss, start	00:00:07		
0.88	F01	DEG	Attached deposits, grease at 12 o'clock, 5% cross-sectional area loss, finish	00:00:18		3
0.89		BRF	Finish node, major connection without manhole, reference: US: Rest-bend	00:00:18	BR5X_6dfe0a38-4779-4620-ab	

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	4.0	4.5	4.0	4.0

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Tel. 0208 3102000

Section Pictures - 18/12/2023 - BR5X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
12	Upstream	BR5X		AMK151011

BR5X_6dfe0a38-4779-4620-ab05-893938655524_20240108_133920_487.jpg, 00:00:18, 0.89 m
Finish node, major connection without manhole, reference: US, Rest-bend

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Section Inspection - 18/12/2023 - BR2X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
13	13	18/12/23	8:10	Not Specified	No Rain Or Snow	No	BR2X

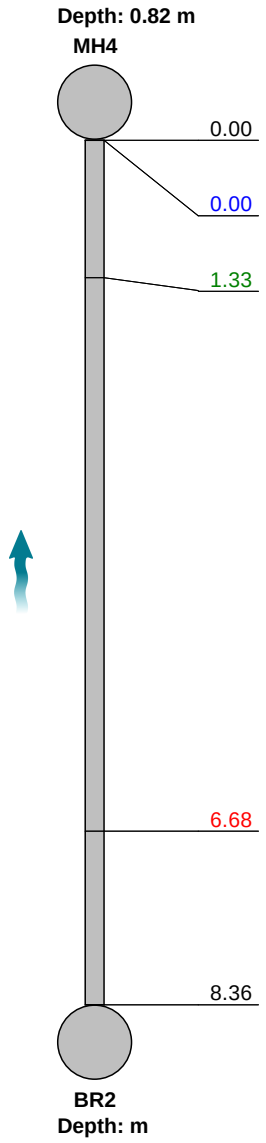
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR2
Road:	50-52 Monmouth Street	**Inspected Length:**	8.36 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	8.36 m	**Downstream Node:**	MH4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.820 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:73



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH4	00:00:01		
0.00	WL	Water level, 0% of the vertical dimension	00:00:02		
1.33	LR	Line deviates right	00:00:19		
6.68	CC	Crack, circumferential from 12 o'clock to 3 o'clock	00:01:34		2 / 2
8.36	GYF	Finish node, gully, reference: US: Gully	00:01:51	USX_1a70 ad66-fa79-4cb5-ad01	

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	1.2	10.0	2.0	1	1.0	0.1	1.0	2.0

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Section Pictures - 18/12/2023 - BR2X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
13	Upstream	BR2X		AMK151011

USX_1a70ad66-fa79-4cb5-ad01-c661f5b8761a_20240108_134406_950.jpg, 00:01:51, 8.36 m
Finish node, gully, reference: US, Gully

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Section Inspection - 18/12/2023 - BR1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
14	14	18/12/23	8:13	Not Specified	No Rain Or Snow	No	BR1X

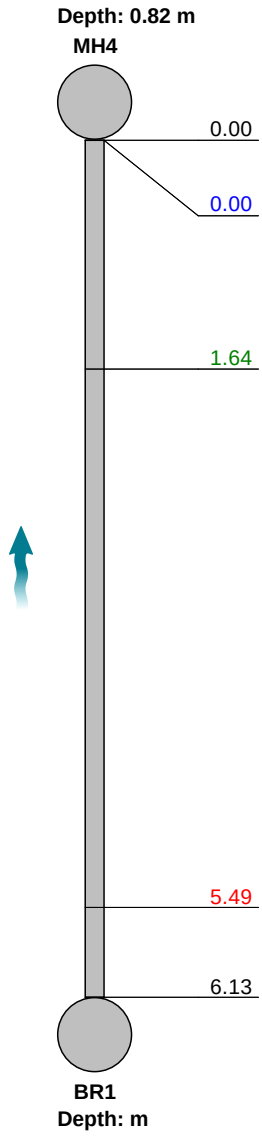
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
K.Claydon	Not Specified	Pushrod	Not Specified	Not Specified	1

Town or Village:	London	**Inspection Direction:**	Upstream	**Upstream Node:**	BR1
Road:	50-52 Monmouth Street	**Inspected Length:**	6.13 m	**Upstream Pipe Depth:**	
Location:	Property or buildings	**Total Length:**	6.13 m	**Downstream Node:**	MH4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.820 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:	Gravity drain/sewer	**Dia/Height:**	100 mm
Flow Control:	No flow control	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Sample condition survey	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:54



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node, manhole, reference: MH4	00:00:02		
0.00	WL	Water level, 0% of the vertical dimension	00:00:05		
1.64	LL	Line deviates left	00:00:16		
5.49	CC	Crack, circumferential from 3 o'clock to 9 o'clock	00:00:47		2 / 2
6.13	GYF	Finish node, gully, reference: US: Gully	00:01:02	BR1X_1030c1bb-aa48-483b-bdf	

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	1.6	10.0	2.0	1	1.0	0.2	1.0	2.0

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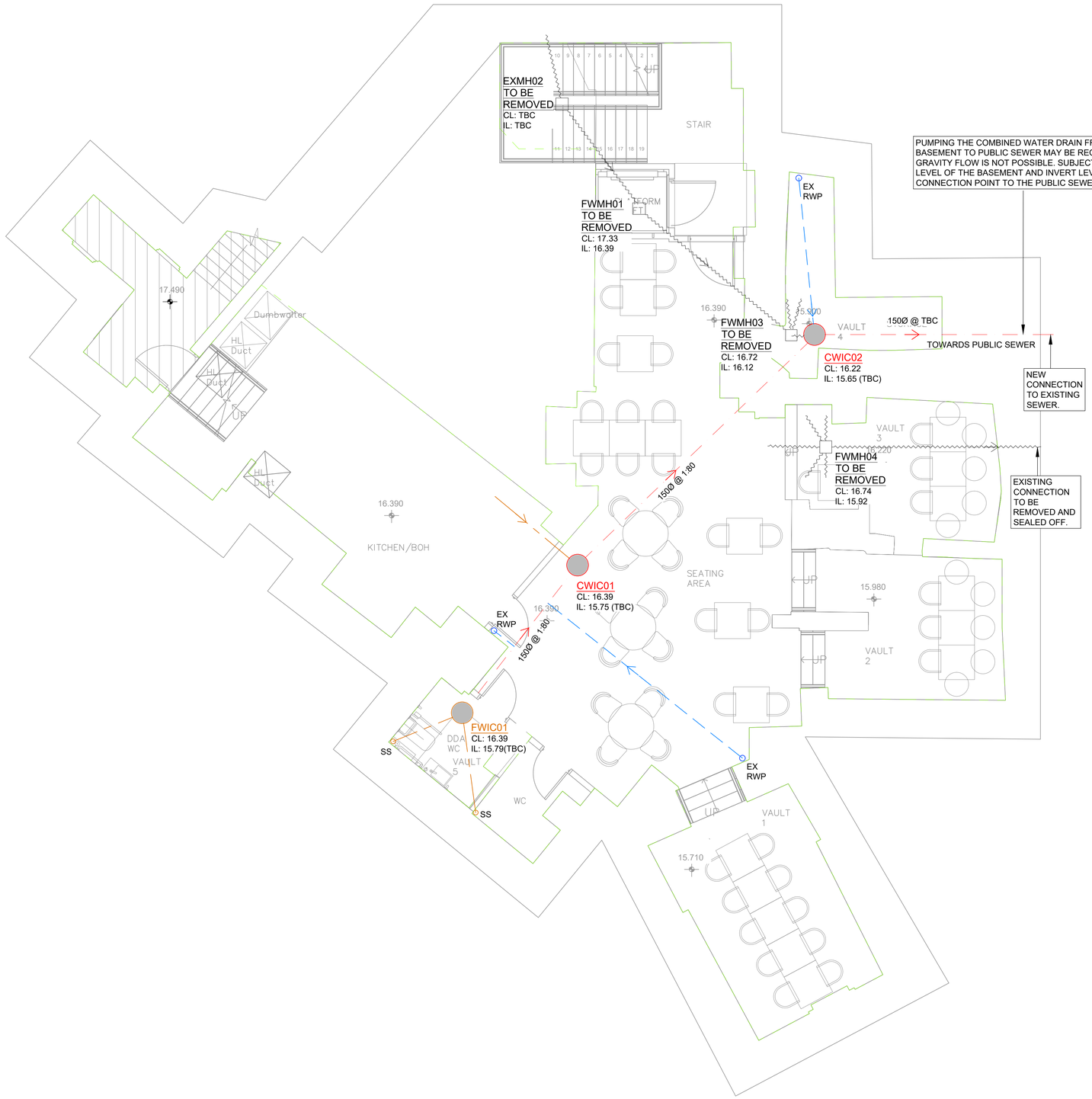
Dering Way, Gravesend
Tel. 0208 3102000

Section Pictures - 18/12/2023 - BR1X

Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
14	Upstream	BR1X		AMK151011

BR1X_1030c1bb-aa48-483b-bdf2-06a4b6a93f39_20240108_160238_796.jpg, 00:01:02, 6.13 m
Finish node, gully, reference: US, Gully

APPENDIX G – Proposed Below Ground Drainage Layout



REFER TO THE ARCHITECT DRAWING "P23-065_CGL-Z1-B1-DR-A-PL1103" FOR PROPOSED BASEMENT FLOOR FIT-OUT.

LOCATION OF EXISTING RAINWATER PIPE TAKEN FROM FRESSON & TEE DRAWING "14390-10K-BASMENT PLAN AS PROPOSED" DATED AUGUST 1996. SUBJECT TO FURTHER SURVEY TO KNOW THE EXACT LOCATIONS OF THE PIPES.

FINAL DRAINAGE STRATEGY TO BE CONFIRMED ONCE STRUCTURAL DESIGN IS RECEIVED.

FURTHER INVESTIGATION NEEDED ON SITE TO DETERMINE EXACT LOCATIONS OF EXISTING DRAINAGE POINTS AND RUNS.

REFER TO "AMK151011 50_52 MONMOUTH STREET" CCTV SURVEY REPORT FOR DETAILS OF EXISTING DRAINAGE.

SUBJECT TO APPROVAL BY LLFA AND CAMDEN COUNCIL.

LEGEND

- NEW FOUL WATER DRAIN
- NEW COMBINED WATER DRAIN
- NEW SURFACE WATER DRAIN
- EXISTING DRAINS TO BE REMOVED
- FXX — NEW FOUL WATER CHAMBER
- CXX — NEW COMBINED WATER CHAMBER
- EX RWP — EXISTING RAIN WATER PIPE
- SVP — NEW SOIL VENT PIPE (RODDABLE ACCESS)
- SS — NEW STUB STACK
- EXTENT OF EXISTING BASEMENT

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. ALL DRAINAGE TO BE TO THE SATISFACTION OF THE LOCAL AUTHORITY BUILDING CONTROL AND MAIN DRAINAGE SECTIONS ON MATTERS INVOLVING PUBLIC SEWERS.
3. ALL PIPEWORK, BENDS AND JUNCTIONS TO BE EXTRA STRENGTH VITRIFIED CLAY TO BS 65:1991, BS EN 295 OR PVCu TO BS EN 1401 TO BE AGREED WITH RELEVANT AUTHORITY.
4. INVERT LEVELS ON EXISTING DRAINS & OUTFALLS TO BE CHECKED PRIOR TO COMMENCEMENT OF WORKS.
5. TRENCH WIDTHS GENERALLY:- AS SMALL AS PRACTICABLE BUT NOT LESS THAN PIPE DIAMETER +300mm OR LARGER IF SPECIFIED. TRENCH SIDES MUST BE VERTICAL FROM BOTTOM UP TO 300mm ABOVE CROWN OF PIPE.
6. WHERE DRAINAGE PIPES HAVE LESS THAN 1.2m COVER IN TRAFFICKED AREAS AND LESS THAN 600mm UNDER LANDSCAPED AREAS PIPES SHALL HAVE A FULL CLASS Z CONCRETE SURROUND. CONCRETE PROTECTION TO BE DISCONTINUED AT EACH PIPE JOINT WITH COMPRESSIBLE MATERIAL. ALL OTHER FLEXIBLE PIPES TO HAVE CLASS S GRANULAR BEDDING DETAIL UNLESS OTHERWISE NOTED. ALL OTHER RIGID PIPES TO HAVE CLASS B GRANULAR BEDDING DETAIL UNLESS OTHERWISE NOTED.
7. GRANULAR BEDDING:
   - 10mm SINGLE SIZED COARSE AGGREGATE SHALL BE USED ON PIPES NOT EXCEEDING 140mm DIAMETER.
   - 2-14mm WELL GRADED COARSE AGGREGATE MAY BE USED ON PIPES EXCEEDING 140mm BUT NOT EXCEEDING 400mm DIAMETER.
   - 4-20mm WELL GRADED COARSE AGGREGATE MAY BE USED ON PIPES EXCEEDING 400mm DIAMETER.
   - THE DEPTH OF GRANULAR BEDDING UNDER THE PIPES SHALL BE X/6 OR 150mm, WHICHEVER IS GREATER, WHERE X=EXTERNAL DIAMETER OF THE PIPE.
8. ALL PRIVATE DRAINAGE WORKS SHALL BE IN ACCORDANCE WITH "THE BUILDING REGULATIONS APPROVED DOCUMENT H" AND BRITISH STANDARD BS EN 752.
9. ALL NEW DRAINAGE TO BE TESTED PRIOR TO BACKFILL OF THE TRENCHES & PRIOR TO HANDOVER TO THE SATISFACTION OF THE BUILDING CONTROL INSPECTOR.
10. THE CONTRACTOR MUST LIAISE WITH THE LOCAL AUTHORITY MAIN DRAINAGE SECTION PRIOR TO COMMENCEMENT OF WORK ON PUBLIC DRAINAGE.
11. TRENCH BACKFILL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 250mm ONCE 300mm COVER HAS BEEN PROVIDED TO THE TOP OF PIPE.
12. THE CONTRACTOR SHALL ALLOW IN HIS RATES FOR MAINTAINING FLOW IN PUBLIC SEWERS AT ALL TIMES DURING DIVERSION WORKS INCLUDING TEMPORARY PUMPING AND ALSO KEEPING EXCAVATIONS FREE FROM GROUNDWATER INCLUDING PUMPING AND FORMATION OF TEMPORARY SUMPS.
13. THE CONTRACTOR SHALL MAKE PROVISIONS FOR AND LIAISE WITH ALL RELEVANT STATUTORY BODIES FOR THE MANAGEMENT OF TRAFFIC WHILE CARRYING OUT WORKS IN THE PUBLIC HIGHWAY.
14. THE CONTRACTOR IS TO SATISFY HIMSELF TO THE POSITION AND AND DEPTH OF THE PUBLIC UTILITIES AND ALLOW FOR TEMPORARY SUPPORT, PROTECTION AND DIVERSION WORKS AS NECESSARY. THE CONTRACTOR SHALL ALSO INCLUDE FOR ANY TRIAL PIT EXCAVATIONS NECESSARY.
15. BACKFILL TO EXCAVATIONS IN PUBLIC HIGHWAYS TO BE WELL COMPACTED GRANULAR TYPE 1 TO CL.803 OF THE DTp SPECIFICATION FOR HIGHWAY WORKS 2009.
16. REFERENCE SHOULD BE MADE TO ARCHITECT AND M&E ENGINEERS DRAWINGS FOR ABOVE GROUND DRAINAGE DETAILS & SET-OUT.

Rev	Date	Comment	By	Check
P01	06.03.24	ISSUED FOR PLANNING.	PS	HP

Status Code: S2

Drawing Status: INFORMATION

This drawing may only be used for construction/manufacture if status is CONSTRUCTION

FURNESS Consulting Engineers

London
20 Britton Street, London, EC1M 5TX
tel: 020 7490 4353 fax: 020 7490 4354
info@furnesspartnership.com

Bradford
The Paper Hall, Anne Gate, Bradford, BD1 4EQ
tel: 01274 392092
mail@furnesspartnership.com

Project

50-52 MONMOUTH STREET

Drawing Title

PROPOSED BELOW GROUND DRAINAGE LAYOUT

FP Job No.	Drawn	Date	Checked	Scale @ A1
7930	PS	MARCH. 2024	HP	1:50

PROJECT	OPERATOR	ZONE / VOLUME	LEVEL / LOCATION	FILE TYPE	ROLE	SHEET No.	Rev.
	FUR	ZZ	BG	DR	D	0910	P01

APPENDIX H – Critical Drainage Areas and Local Flood Risk Zones map

N

Group3_001

Group3_002

Group3_003

Group3_004

Group3_005

Group3_006

Group3_007

Group3_010

Group3_011

York Rise

South End

Frognal Lane

Cannon Hill

Gospel Oak

Maitland Park

Sumatra Road

Goldhurst

Kingsgate

Priory

Primrose Hill

King's Cross

North Swinton Street

South East Regent's Park

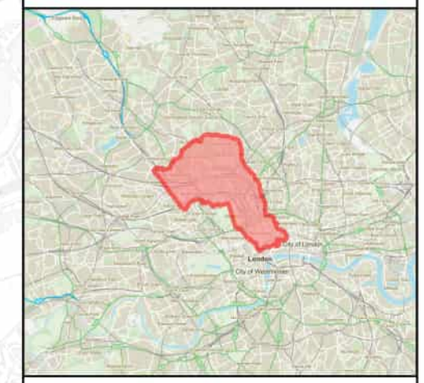
Farringdon

0 0.5 1 Kilometres

Attributed to London Borough of Camden Council

Job Title

London Borough of Camden
Level 1
Strategic Flood Risk Assessment



Legend

- London Borough of Camden
- Local Flood Risk Zone
- New Local Flood Risk Zone
- Local Critical Drainage Area

Notes: This map is intended to provide a strategic overview and should not be used to assess individual properties. Refer to the accompanying SFRA Report for details of the datasets and purpose of their use.

Drawing Status: FINAL

Drawing Title: Critical Drainage Areas and Local Flood Risk Zones

Client: Camden

Scale at A3	1:30,000
Drawn: RR	Checker: HW
Approver: SL	Date: 10/01/2024

AECOM

Project Number: 60701446

Figure: 16

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APPENDIX I – Maintenance and Management Schedule

The drainage systems should be maintained as per the below schedule.

Drainage Infrastructure Item	General maintenance
Drainage pipework	Jet and clean as necessary
Manholes/catchpits/gullies/ channel drains	Remove cover annually to check for any sign of blockage and (jet) clean as necessary. Empty sumps when full/as required.

Table 4 - SuDS Maintenance and Management Schedule

Prepared by: Pranita Shrestha	Signed: Pranita Shrestha	Date: 06.03.24
Reviewed by: Heeta Patel	Signed: Heeta Patel	Date: 06.03.24