



# Hampton Waterworks

## Foul & Surface Water Drainage Strategy

*For Waterfall Hampton Investment Ltd*

---

*Date: 5 September 2022*

*Doc ref: 12193-HYD-XX-ZZ-RP-C-0001*

# DOCUMENT CONTROL SHEET

Issued by	Hydrock Consultants Limited Merchants' House North Wapping Road Bristol BS1 4RW	Tel: 0117 9459225 www.hydrock.com
Client	Waterfall Hampton Investment Ltd	
Project name	Hampton Waterworks	
Title	Foul & Surface Water Drainage Strategy	
Doc ref	12193-HYD-XX-ZZ-RP-C-0001	
Project no.	12193	
Status	S2 - Final issue	
Date	05/09/2022	

Document Production Record		
Issue Number	P06	Name
Prepared by		Robert Cogbill
Checked by		Jason Magee
Approved by		Roger Bareham

Document Revision Record			
Issue Number	Status	Date	Revision Details
P01	S2	27/09/19	Draft for comment
P02	S2	18/11/19	Draft for comment
P03	S2	02/06/20	Issued for Planning
P04	S2	05/09/22	Updated Layout
P05	S2	27/2/23	Updated with minor corrections
P06	S2	30/11/23	SUDS Proforma inserted

Hydrock Consultants Limited has prepared this report in accordance with the instructions of the above named client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

# CONTENTS

INTRODUCTION.....	1
0.1 References.....	1
1. SITE INFORMATION.....	2
1.1 Site Referencing Information.....	2
1.2 Existing Situation.....	2
1.3 Topography.....	3
1.4 Development Proposal.....	4
1.5 Ground Conditions.....	4
1.6 Hydrology, Hydrogeology & Flood Risk.....	5
1.7 Services and Utilities.....	6
1.8 Existing Drainage.....	6
2. SURFACE WATER MANAGEMENT STRATEGY.....	7
2.1 Run-off Destinations.....	7
2.2 Exceedance Flow Management.....	8
2.3 Water Quality Treatment.....	8
2.4 Design Standards.....	8
3. FOUL WATER STRATEGY.....	9
4. MAINTENANCE & OWNERSHIP.....	10
4.1 Responsibility Matrix.....	10
4.2 Risk Assessment and Health & Safety Information.....	11

# Introduction

Hydrock Consultants have been appointed by Waterfall Hampton Investment Ltd to carry out a drainage strategy report to be submitted for planning for the approval of London Borough of Richmond upon Thames.

It is the intention that the proposed drainage strategy will be in accordance with both local and national guidelines and will incorporate a 'best practice' approach in reducing the impact of the flooding caused by the new development.

The report will highlight the key stakeholders in terms of ownership and maintenance to ensure the drainage system is kept well maintained and reduce the risk of failure. Should the network fail at any point, clearly defined ownership liabilities will ensure that problems can be quickly rectified thereby reducing the impact of potential damage caused by flooding.

The information received has been summarised within this report. In the event that the information is relied upon and is subsequently found to be incorrect, Hydrock Consultants Ltd accepts no responsibility for any direct and/or consequential loss that may occur as a result.

## 0.1 References

**Appendix A** - M.J. Rees 8245 Sheet 1 Rev A Oct 2014 Topo & Utilities.

**Appendix B** – LOM Architects Drg No 1685-A-P001 EXISTING SITE PLAN.

**Appendix C** - LOM Architects Drg No 1685-A-100-F PROPOSED SITE PLAN-1685-A-100

**Appendix D** – Thames Water Asset Map.

**Appendix E** - 12193-HYD-00-XX-DR-C-7000 \_P05 – FW & SW Drainage Strategy.

**Appendix F** – Local Lead Flood Authority (LLFA) & Thames Water email correspondence

## 1. SITE INFORMATION

### 1.1 Site Referencing Information

Site Referencing Information	
Site Address	Hampton Waterworks, Upper Sunbury Road, Hampton, TW12 2DS
Grid Reference	TQ 134695 OS X (Eastings):513404 OS Y (Northings): 169505

### 1.2 Existing Situation

The 0.57 ha site is located in the London Borough of Richmond-on-Thames and is bordered to the north by Upper Sunbury Road and on the eastern side by Lower Sunbury Road.

The site was formally used as Hampton Waterworks, operated by Thames Water. The site is within an area that is heavily developed with existing residential development bordering the site to the north and east. To the west is the remainder of the former waterworks along with areas of former filter beds. Filter beds also border the site to the south with the River Thames being around 100m beyond the southern boundary.

The site consists of:

Ruston & Ward Building: Grade II part single, part two storey L-shaped building located on the east of the site.

Karslake Building: Grade II listed part single, part two storey, and part three storey building on the west of the site.

No 3 & No 4 Water Works cottages: Two-storey vacant residential dwelling houses located in the centre of the site, in between Ruston & Ward Building and the Karslake Building.

A single storey 'storehouse' building previously used by Thames Water for storage purposes.

The existing external areas are predominately hardstanding and comprise a mix of concrete and cobblestones. Areas of soft landscaping and uncontrolled undergrowth are in the gardens of the cottages in the centre of the site. Mature trees are in the north eastern and western corners of the site.

The site is currently accessed via a simple priority junction on Lower Sunbury Road which forms the main access to the Hampton Waterworks.

## 1.3 Topography

The site is broadly rectangular in shape and is 145m long west to east and 40m wide from north to south.

The site is set at an elevation of around 10.750m OD on generally level ground. There are areas of elevated ground on the northwest at 12.0m OD. On the northeast of the site the area banks down to an existing retaining wall and Upper Sunbury Road has an elevation of approx. 9.8m AOD.

On the southern boundary there are slopes down to the filter beds at approx. 6.8m AOD

A topographical and utilities survey was undertaken by M.J.Rees.

See **Appendix A** for topographical/utilities layout.

Hampton Water Works - Aerial Photo (Google maps)



## 1.4 Development Proposal

Drg No SK-C-7700 indicates an overview of the proposed development.

The existing industrial buildings, storehouse and cottages will be converted to dwellings/commercial and the existing hard standing areas will be altered to accommodate new car parking & landscaping.

The existing main roofs to Karlslake and Ruston & Ward buildings are to be replaced, however the existing RWP system is to be re-used to maintain the existing surface water distribution to the existing drainage system.

The redevelopment of the site will provide the following:

39 Parking spaces

36 residential units

- 16x 1-Bed
- 11x 2-Bed
- 9x 3+ Bed
- Commercial Space

The site is currently accessed via a simple priority junction on Lower Sunbury Road which forms the main access to the Hampton Waterworks. It is proposed that there will be a one-way system with access / egress on Upper Sunbury Road.

An area of the southern section of the Ruston & Ward building is to be retained by Thames Water. Refer architect's proposed site plan for location. See **Appendix C** for LOM proposed architect's site plan.

## 1.5 Ground Conditions

Refer to Hydrock Geotechnical Phase 1 Ground Conditions Desk Study Report (Ref: 12193-HYD -XX-DS-RP-G-1000) for information on ground conditions.

The following Table 2.5 is an extract:

Table 2.5: Geology

Ref. for Figures	Location	Stratigraphic Name	Description
<b>Superficial Deposits (Figure 2.7)</b>			
KPGR	On site (southern half)	Kempton Park Gravel Member	Sand and gravel, locally with lenses of peat.
TPGR	20m north	Taplow Gravel Member	Sand and gravel, locally with lenses of silt, clay or peat.
ALV	100m south	Alluvium	Clay, silt, sand and gravel deposited by the River Thames.
<b>Solid Geology (Figure 2.8)</b>			
LC	On site.	London Clay Formation	Mainly poorly laminated, blue-grey or grey-brown slightly calcareous, silty to very silty clay, clayey silt and sometimes silt with some layers of sandy clay.



Whilst superficial deposits are not mapped in the north of the site, it is still possible that either Kempton Park Gravel Member and/or Taplow Gravel Member overlie the London Clay beneath the whole site. Given that the site has been subjected to past development some Made Ground is also anticipated.

## 1.6 Hydrology, Hydrogeology & Flood Risk

Refer to Hydrock Flood Risk Assessment Ref: 12193-HYD-XX-XX-RP-FR-0001 for information on flood risk assessment. The following Flood Zone Mapping is an extract:

### Flood Zone Mapping

The entirety of the site and surrounding area is shown to be within Flood Zone 1, i.e. land having a less than 1 in 1,000 annual probability of fluvial or tidal flooding.

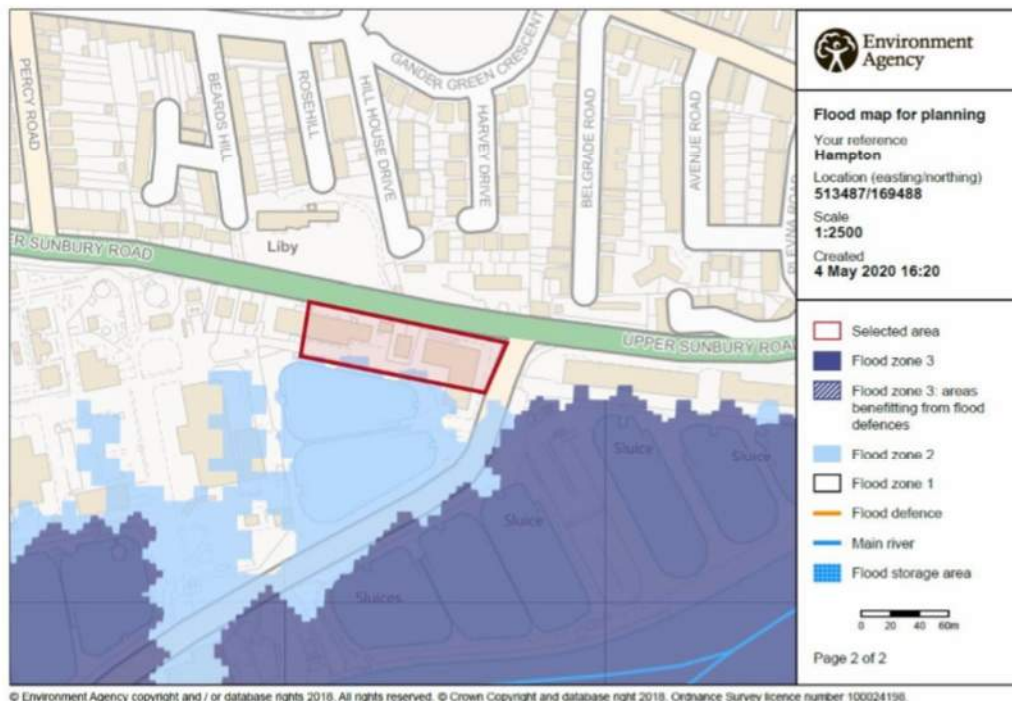


Figure 1: EA Flood Map for Planning

### Fluvial Flooding

The closest watercourse to the site is the River Thames which is around 100m to the south of the site and beyond the existing filter beds.

The extreme 1 in 1000 year flood outlines extends to the southern limit of the site but is not shown to enter the site. As such, and based on the available mapping, the site is confirmed as being outside all modelled flood events, within Flood Zone 1, and at low risk from fluvial flooding.

Owing to the categorisation of the site as Flood Zone 1 the site is also concluded as being at low risk from tidal flooding.

### Surface Water Flooding

The EA's Flood Risk from Surface Water mapping shows the site as being predominantly at 'very low' risk of surface water flooding.

Refer to Hydrock Geotechnical Phase 1 Ground Conditions Desk Study Report (Ref: 12193-HYD -XX-DS-RP-G-1000) for information on Hydrology & Hydrogeology

The following is an extract:

The superficial deposits comprise a Principal Aquifer and the London Clay Formation is an Unproductive Aquifer. The site is not a Source Protection Zone and there are no groundwater abstractions within 500m of the site.

The River Thames is located approximately 180 south of the site and there are filter beds associated with the existing water works extending from approximately 10m south of the site to the River Thames.

The desk study information indicates that there is potential for groundwater flooding at the site.

## 1.7 Services and Utilities

The site has a substantial amount of existing buried services and utilities, some of which we assume are part of the historical water works and are now redundant.

We have recommended that an assessment of utilities to be retained is undertaken.

See **Appendix A** for topographical/utilities layout.

## 1.8 Existing Drainage

There are no drainage as -built archive drawings available.

Drawing No 12193-HYD-00-ZZ-DR-C-7000 in **Appendix A** highlights the existing foul and surface water drainage shown on the M.J Rees topographical/utilities layout.

Thames Water (TW) mapping information indicates a 350mm dia foul sewer on the northern side of Upper Sunbury Road.

The local gravity foul drains that serve the existing buildings have existing foul connections to the TW 350mm dia foul sewer at two locations, TW manholes Ref. 4505 & 5506 (assumed)

The existing roofs and external areas appear to drain via a gravity system of RWP's, drain channels & gullies.

The collection point for existing surface water systems appears to be a 610mm dia sewer on the southern boundary that connects to the TW sewer in Lower Sunbury Road at TW manhole Ref. 5405.

An existing 300mm dia surface water sewer that enters the site on the western boundary and should be maintained in the new works.

See **Appendix D** for sewer asset map.

## 2. SURFACE WATER MANAGEMENT STRATEGY

Drawing No DR-C-7001 indicates the proposed surface water drainage strategy. See **Appendix E**.

The distribution of surface water from the new roofs to the existing drainage system is to be kept as existing. The existing RWP's that will serve the new roofs are to be re-used in the new works.

New permeable paving for new parking areas and access road & soft landscaping will replace existing hardstanding areas. The intention is to connect the new permeable paving into the existing surface water drainage system.

An assessment of the catchments for existing drained area and proposed drained areas are shown on drawing No SK-C-7701 & SK-C-7702. See **Appendix E**.

Existing catchment area = 4612m<sup>2</sup>

Proposed catchment drained area = 4476m<sup>2</sup>

There is a small reduction in drained area.

There is no restriction on surface water discharge, however, betterment will be provided as the Suds permeable paving will slow down surface water flows to the existing sewer system and improve water quality.

Richmond Policy LP21 a requirement to use Sustainable Drainage Systems (SuDS) in all development proposals and to demonstrate that their proposal complies with the following:

- A reduction in surface water discharge to greenfield run-off rates wherever feasible; and
- Where greenfield run-off rates are not feasible, this will need to be demonstrated by the applicant, and in such instances, the minimum requirement is to achieve at least a 50% attenuation of the site's surface water runoff at peak times based on the levels existing prior to the development.

LLFA (Environment Directorate London Borough of Richmond upon Thames) have been consulted and they have confirmed their approval in principle of the surface water proposals based on an overall reduction of impermeable area, the use of permeable paving, and the limited availability of land available for extensive SuDS measures.

See **Appendix F** (LLFA) email correspondence.

### 2.1 Run-off Destinations

The discharge of surface water run-off has been considered in accordance with the hierarchical approach:

#### 2.1.1 Interception

Permeable paving is expected to provide some interception of surface water run-off.

#### 2.1.2 Infiltration

The Hydrock/Getechnical desk study indicates that the site is underlain with London Clay Formation and therefore soakaways are considered not feasible.

#### 2.1.3 Surface water body

There are no immediate surface water bodies within the vicinity.

#### *2.1.4 To dedicated surface water sewer (public, highways or otherwise)*

The run-off from the site will ultimately discharge to the onsite private storm system.

#### *2.1.5 To a combined sewer*

N/A.

#### *2.1.6 Summary*

It is considered that the drainage strategy report has demonstrated compliance with both the recommendations for the 'Non-Technical Standards for Sustainable Drainage' and current national standards by providing Suds permeable paving as a betterment to the existing situation.

### **2.2 Exceedance Flow Management**

In the event that flows from rainfall exceed the 1 in 100-year rainfall event, surface water run-off will be directed via exceedance routes away from the buildings to localised areas e.g. landscaping, thereby not increasing flood risk to critical infrastructure.

### **2.3 Water Quality Treatment**

Consideration will be given to both during construction and post-development water quality treatment to ensure that water quality is not impacted during the construction works:

#### *2.3.1 Quality of Surface Water Run-off: Post-Development*

The new permeable paving system will be incorporated into the existing drainage system and as a result will reduce the risk of silts / salts getting into the surface water network.

#### *2.3.2 Quality of Surface Water Run-off: During Construction*

It is anticipated that the during construction adequate provisions will be put in place to ensure the existing drainage is protected to prevent material which could have a negative impact on water quality entering the system.

### **2.4 Design Standards**

All materials and products relating to the below ground drainage system shall be specified in accordance with their intended use and meet all relevant British Standards and BBA accreditations.

### 3. FOUL WATER STRATEGY

The existing 150mm dia gravity foul drain that serves the existing Karlake building, connects to the TW 350mm dia foul sewer from MH (F1) to TW manhole Ref. 4505 and will be re-used in the new works.

A drain investigations will be undertaken to confirm the details of the existing 150mm dia drain to establish the condition & capacity for the proposed flows.

There appears to be an existing connection from MH (F10) in the northeast corner to the TW foul sewer on the north of Upper Sunbury to TW manhole ref 5506. However, MH(F10) is a shallow manhole with possibly a 100mm dia outlet drain and its re-use in the new works has been discounted unless proved otherwise by a drain investigation.

A new 150mm drain is proposed that crosses Upper Sunbury Road and connects to the TW 350mm dia foul sewer at TW manhole Ref. 5514. This new 150mm dia drain will take the new foul flows from the Ruston & Ward building and the refurbished cottages.

A drain investigations will be undertaken to confirm the location and details of TW manhole Ref. 5514 to confirm the feasibility.

A pre-planning enquiry has been issued to Thames Water and confirmation has been received that the TW system has sufficient capacity for the proposed foul flows

See **Appendix F** (Thames Water) email correspondence.

It is envisaged that foul drainage within the development boundary will be maintained by the owner. A schedule of maintenance activities which ensure the drainage is kept in good working order will be produced and submitted as part of the 'Health & Safety' documentation.

## 4. MAINTENANCE & OWNERSHIP

The key elements of the foul and surface water drainage system will require periodic maintenance to prevent failure of the system and/or a reduction in capacity of the networks as a whole and the following matrix therefore sets out the various drainage items to be maintained, identifies whose is responsible and the frequency of maintenance.

It is anticipated that the drainage within the development will be maintained privately by a management company appointed by the owner / occupier.

### 4.1 Responsibility Matrix

Responsibility	Feature	Maintenance	Frequency
Owner / Occupier Appointed Management Company	Private Drains	Inspection	CCTV survey every 5-10 years.
		Regular Maintenance	Jet clean system fully every 5-10 years. (Recommend prior to CCTV drainage survey)
		Remedial / Occasional Maintenance	Carry out remedial works as identified in CCTV survey.
	Permeable paving	Inspection	Periodically
		Regular Maintenance	Sweep occasionally
		Remedial / Occasional Maintenance	Carry out remedial works as necessary.
	Gullies / Drainage Channels	Inspection	Quarterly
		Regular Maintenance	Remove silt and debris as necessary to prevent build up.
		Remedial / Occasional Maintenance	Carry out remedial works as identified in CCTV survey.

## 4.2 Risk Assessment and Health & Safety Information

The following information should be passed to the development operator to ensure that future maintenance is carried out in a safe and proper manner.

A formal review of the risks should be undertaken on an annual basis.

Operation	Risks	Mitigating Measures
<b>Access to manholes for Inspection and Maintenance.</b>	1. Confined spaces	1. Entry to confined space to be minimised and, where unavoidable, to be carried out by appropriately trained personnel
<b>Removal of silt from drainage channel</b>	1. Risk to members of the public	1. Access to hazardous areas by members of the public to be prohibited

All inspection and maintenance works should take into consideration the implications of 'lone working'. An assessment should be carried out and the risks mitigated accordingly.

## Appendix A

*Topographical & Utilities Survey*

*Hydrock Drg No. DR-C-7000. Indicates existing drainage layout interpreted from Topographical & Utilities Survey*



NOTES:

All levels are based on existing site datum

### STATION CO-ORDINATES

Station	Description	Easting	Northing	Level
1	Parker Kaban Nail	513594.481	169445.780	9.847
2	Parker Kaban Nail	513594.897	169445.787	9.785
10	Parker Kaban Nail	513551.905	169470.495	8.981
25	Parker Kaban Nail	513570.008	169465.481	10.783
R1	Hill Nail	513513.354	169444.652	10.588
R2	Hill Nail	513509.252	169445.013	10.776
R3	Hill Nail	513499.455	169477.821	10.555
R4	Parker Kaban Nail	513501.115	169477.821	10.286
R5	Parker Kaban Nail	513510.309	169497.317	10.477
R6	Parker Kaban Nail	513516.838	169498.717	10.378
R7	Parker Kaban Nail	513540.400	169491.075	10.457
R8	Parker Kaban Nail	513538.220	169493.875	10.323
R9	Parker Kaban Nail	513485.275	169493.875	10.373
R10	Parker Kaban Nail	513491.554	169431.714	6.831
R11	Parker Kaban Nail	513485.275	169493.875	10.373
R12	Parker Kaban Nail	513468.782	169507.206	10.532
R13	Parker Kaban Nail	513470.588	169513.337	11.076
R14	Parker Kaban Nail	513529.681	169510.939	10.003

N.B. Grid is related to existing site grid

### Legend

IAC1	Assumed Connection	KO	Kerb Outlet
IAC2	Above Ground	LV	Live/Off
Agree	Agreement	LB	Lighting Bulb
AR	Assumed Route	LP	Lamp Post
AV	Air Valve	MP	Medium Pressure
B	Bollard	M/F	Medium Pressure Fence
B/WF	Brick Wall Fence	M/C	Medium Pressure Chamber
BP	Brick Pavings	MC	Meta Cole
BT	British Telecom	MS	Manhole
BT-LB	British Telecom LB	MS	Manhole
BS	Brick Road	MS	Manhole
BSW	Brick Retaining Wall	MP	Meta Post
BSF	Brick	MS	Manhole
CB	Control Box	NI	No Further Information
C/SF	Concrete Staircase Fence	PI	Post & Rail Fence
C/LF	Chain Link Fence	PC	Pedestrian Push Control
CDC	Concrete Drainage Channel	PF	Polystyrene
CE	Cable Entry Point	PG	Pipe into Ground
CW	Concrete Headwall	PM	Pumping Manhole
CL	Cast Iron	PNV	Pipe into Wall
CIG	Cable into Ground	RF	Road Records
CP	Concrete Pipe	RG	Road Gully
COW	Concrete Retaining Wall	RS	Road Sign
CT	Cable Television IC	RWP	Rain Water Pipe
D	Drop	S	Siding
DK	Drop Kerb	S	Siding
EP	Electricity IC	SL	Stop Line
EP	Electricity Pole	TL	Traffic Light
EPF	Fire	TOP	Top Of Pipe Level
FH	Fire Hydrant	TOW	Top Of Wall Level
FW	Fire Water	TP	Telephone Pole
FW	Fire Water	TIS	Traffic Island
G	Garth	U	Unknown
GA	Gas Meter	UL	Unable to Lift
GP	Gate Post	UTL	Unable to Trace
GR	Gravel	UTL	Unable to Trace Further
Gy	Gas Valve	V	Valve
H	Hand Rail	VF	Valve Pipe
HR	Hand Rail	W	Water
HV	High Voltage	W/F	Wire Mesh Fence
I/P	Intermediate Pressure	WD	Ward
ISRF	Iron Retained Fence	WDC	Ward Duty Empty
IC	Inspection Cover	WP	Wooden Post
JB	Junction Box	WV	Water Valve

### SERVICE LEGEND

SURVEYED	SERVICE	RECORDS
1	CABLE TELEVISION	1
2	DRAINAGE TOWEL WATER	2
3	DRAINAGE SURFACE WATER	3
4	ELECTRICITY LV	4
5	ELECTRICITY HV	5
6	ELECTRICITY HV OVERHEAD	6
7	ELECTRICITY LV OVERHEAD	7
8	UNIDENTIFIED	8
9	TELEPHONE	9
10	TELEPHONE OVERHEAD	10
11	WATER	11
12	CHAMBER	12

- Although every care has been taken in the location of buried services, due to the nature of the work, the extent, position and identification must be confirmed by a separate survey.
- In the absence of evidence to the contrary the routes of confirmed connections between manholes are assumed to be direct.
- Pipe sizes within manholes are assumed, but at other service depths are measured electronically and therefore may only be approximate.
- Unless otherwise stated, identification shown on this plan has been measured electronically.
- Please note that an attempt has been made to electronically locate services shown that services are shown as having been taken from records or assumed, this is because:
  - Access could not be gained.
  - Application of a tracer signal was unsuccessful.
  - Application of a ground penetrating radar was inconclusive.

### AVAILABILITY OF SERVICE RECORDS

TYPE	COMMENTS	TYPE	COMMENTS
DRAINAGE	YES	ELECTRICITY - HV	YES
WATER	YES	ELECTRICITY - LV	YES
GAS	YES	FIBRE OPTICS	NO
BT	YES	OIL PIPELINES	NO
CABLE TV	NO	OTHER	NO

- See sheet 1 for topographical and buried services survey
- See sheet 2 for Karlake building and Store ground floor plans
- See sheet 3 for Karlake building first floor plan
- See sheet 4 for Karlake building second and third floor plans
- See sheet 5 for Ruston & Ward building ground floor and basement plans
- See sheet 6 for Ruston & Ward building first floor plan
- See sheets 7 & 8 for Ruston & Ward elevations
- See sheets 9 & 10 for Karlake building and Store elevations

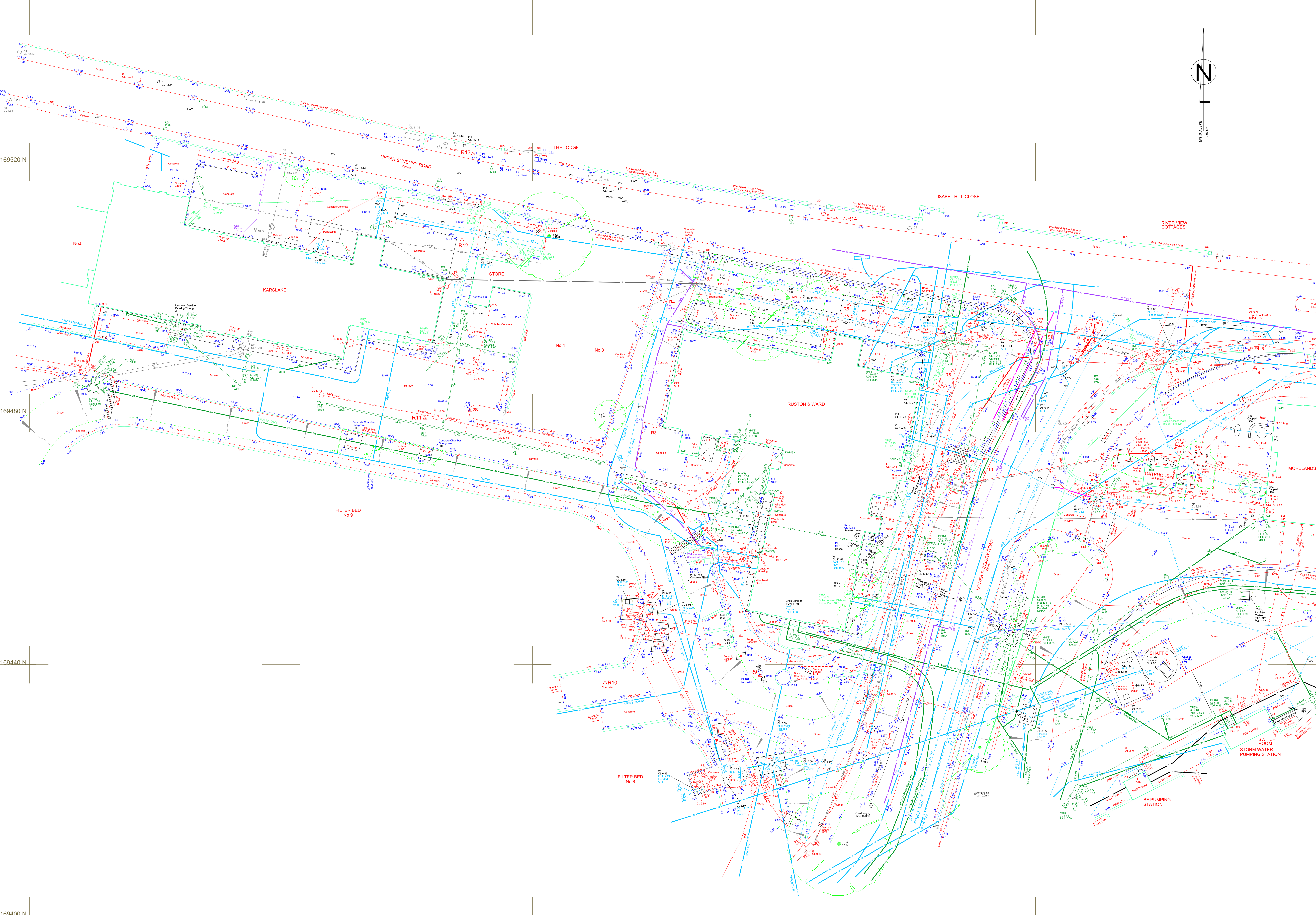
Rev	Date	Amendment
A	10 Oct 2014	Karlake Building BT PABX room details added

**M. J. REES AND COMPANY LTD**  
 Chartered Land Surveyors  
 Land, Engineering and Building Surveys  
 Unit A1 Vantage Office Park  
 Old Gloucester Road  
 Hambrook  
 Bristol BS16 1QW  
 Tel: 01454 339930  
 Email: survey@mjrrees.co.uk  
 www.mjrrees.co.uk

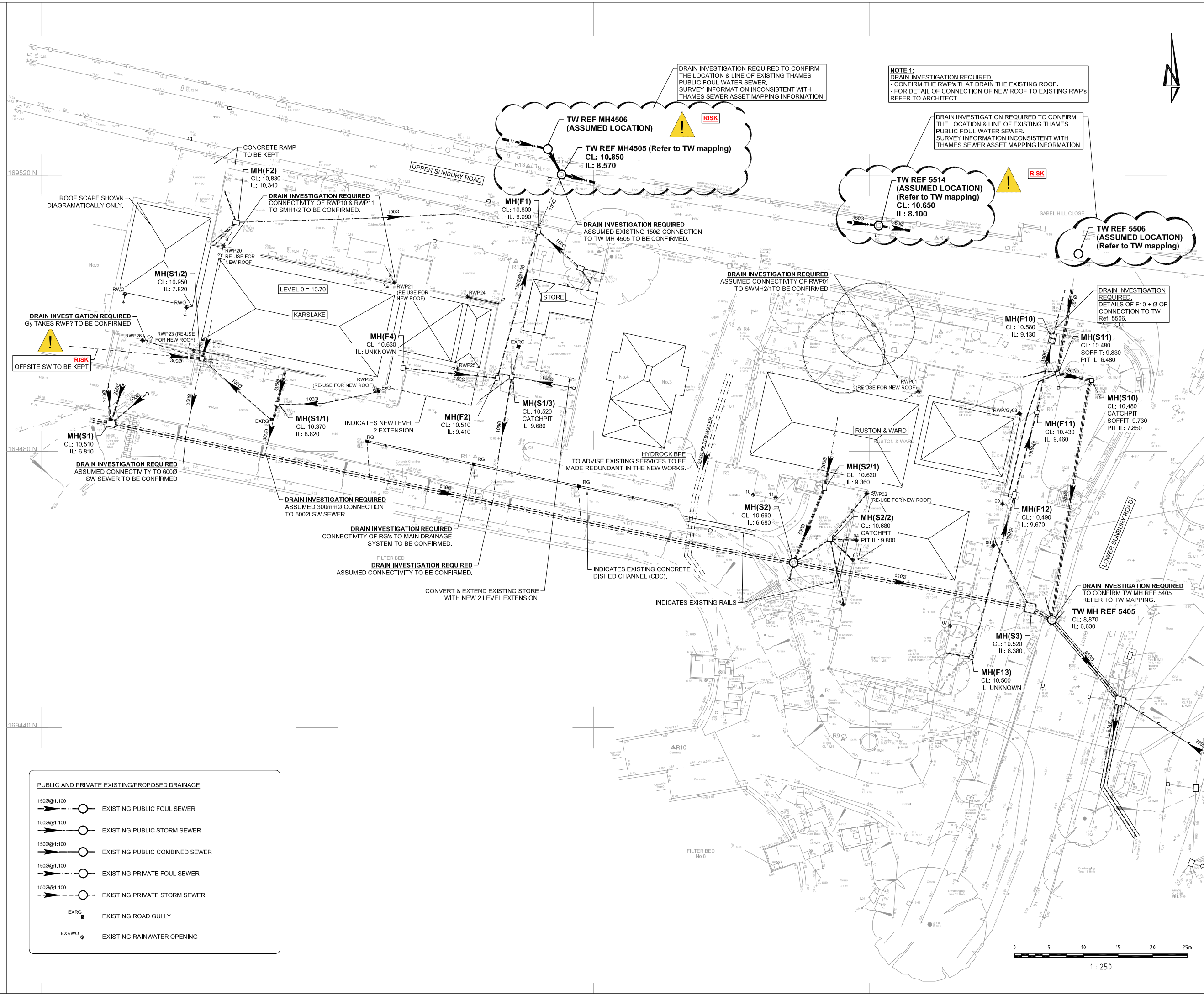
### TOPOGRAPHICAL & BURIED SERVICES SURVEY KARSLAKE AND RUSTON & WARD BLOCS HAMPTON WTW

Job No: 8245 Sheet 1 of 10 Scale: 1/200 @ A0  
 Drawn by: M.P.S. Checked by: L.M.V. Date: September 2014  
 Client: Thames Water Utilities Limited

Thames Water Utilities Limited  
 Cleopatra Court  
 Victoria Road  
 Reading  
 Berkshire  
 RG1 8BB



513400 E 513400 E 513400 E 513400 E 513400 E 513400 E 513400 E 513400 E



**NOTE 1:**  
 DRAIN INVESTIGATION REQUIRED.  
 - CONFIRM THE RWPs THAT DRAIN THE EXISTING ROOF.  
 - FOR DETAIL OF CONNECTION OF NEW ROOF TO EXISTING RWP'S REFER TO ARCHITECT.

**TW REF MH4506 (ASSUMED LOCATION)** **RISK**  
**TW REF MH4505 (Refer to TW mapping)**  
 CL: 10.850  
 IL: 8.570

**TW REF 5514 (ASSUMED LOCATION)** **RISK**  
 CL: 10.650  
 IL: 8.100

**TW REF 5506 (ASSUMED LOCATION)**  
 (Refer to TW mapping)

**RISK**  
 OFFSITE SW TO BE KEPT

**RISK**  
 DRAIN INVESTIGATION REQUIRED  
 ASSUMED CONNECTIVITY TO 6000 SW SEWER TO BE CONFIRMED

**RISK**  
 DRAIN INVESTIGATION REQUIRED  
 ASSUMED 300mmØ CONNECTION TO 6000 SW SEWER.

**RISK**  
 DRAIN INVESTIGATION REQUIRED  
 CONNECTIVITY OF RG'S TO MAIN DRAINAGE SYSTEM TO BE CONFIRMED.

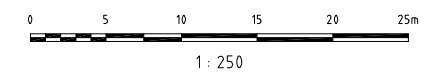
**RISK**  
 DRAIN INVESTIGATION REQUIRED  
 ASSUMED CONNECTIVITY TO BE CONFIRMED.

**RISK**  
 HYDROCK BPE TO ADVISE EXISTING SERVICES TO BE MADE REDUNDANT IN THE NEW WORKS.

**RISK**  
 DRAIN INVESTIGATION REQUIRED  
 TO CONFIRM TW MH REF 5405. REFER TO TW MAPPING.

**PUBLIC AND PRIVATE EXISTING/PROPOSED DRAINAGE**

1500@1:100	EXISTING PUBLIC FOUL SEWER
1500@1:100	EXISTING PUBLIC STORM SEWER
1500@1:100	EXISTING PUBLIC COMBINED SEWER
1500@1:100	EXISTING PRIVATE FOUL SEWER
1500@1:100	EXISTING PRIVATE STORM SEWER
EXRG	EXISTING ROAD GULLY
EXRWO	EXISTING RAINWATER OPENING



NOTES

- All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
- The DWG file is issued for the purposes of coordination only and do not represent formal drawing issue and are not to be reprinted in any form. Formal issue of drawings is via DWF, Adobe PDF files and/or hard copies and their associated information issue sheets.
- Note that all care has been taken with the export of DWG files and their content, but we recommend that you make due dimensional checks before using any DWG file information. Any errors found are to be reported to Hydrock immediately.
- All levels are shown in metres above Ordnance Datum (m AOD).
- All private drainage to comply with current Building Regulations, BS EN-752 Drain and Sewer systems outside Buildings and other relevant British Standards and Codes of Practices.
- Drainage pipework routes under building footprint will require Co-ordination with foundations.
- Final foul pipe connection routes and manholes are subject to confirmation of above ground drainage design discharge points at ground level by others to allow final pipe sizes, configuration and connections.
- Door threshold drainage channel requirements to be advised by others.
- Surface water drainage RWP locations to be confirmed by Architect.
- External levels shown on this drawing relating to the civils, drainage works etc are to be confirmed on receipt of final external levels drawing (by others).
- Foul drainage shown indicative subject to detailed design.

ISSUED FOR PLANNING				
POS	M.GRIFFIN	27/04/20		
ISSUED FOR PLANNING				
P04	W.SANDERCOCK	27/09/19	L DAILY	27/09/19 L DAILY 27/09/19
ISSUED TO TW AS PRE-DEVELOPMENT APPLICATION				
P03	W.SANDERCOCK	23/09/19	L DAILY	23/09/19 L DAILY 23/09/19
ISSUED TO LFA FOR COMMENTS				
P02	R.HUNT	28/08/19	L DAILY	28/08/19 L DAILY 28/08/19
FOR COORDINATION				
P01	W.SANDERCOCK	13/08/19	L DAILY	13/08/19 L DAILY 13/08/19
REVISION NOTES/COMMENTS				
REV	DRAWN BY	DATE	CHECKED BY	DATE

**Hydrock** Merchants' House North  
 Weaving Road  
 Bristol  
 BS1 4RW  
 t: +44 (0)117 945 9225  
 e: bristolcentral@hydrock.com

CLIENT  
**WATERFALL HAMPTON INVESTMENT LTD**

PROJECT  
**HAMPTON WATERWORKS**

TITLE  
**EXISTING DRAINAGE**

HYDROCK PROJECT NO. C-12193-C	SCALE @ A1 1:250	
STATUS DESCRIPTION PLANNING		STATUS S2
DRAWING NO. (PROJECT CODE ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 12193-HYD-00-ZZ-DR-C-7000		REVISION POS

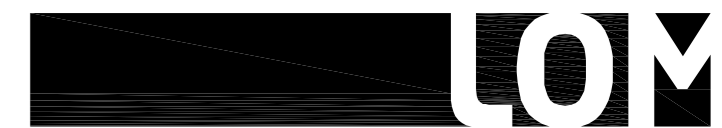
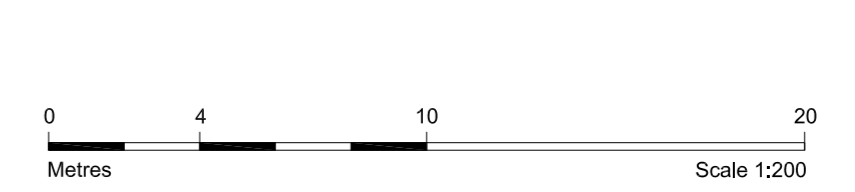
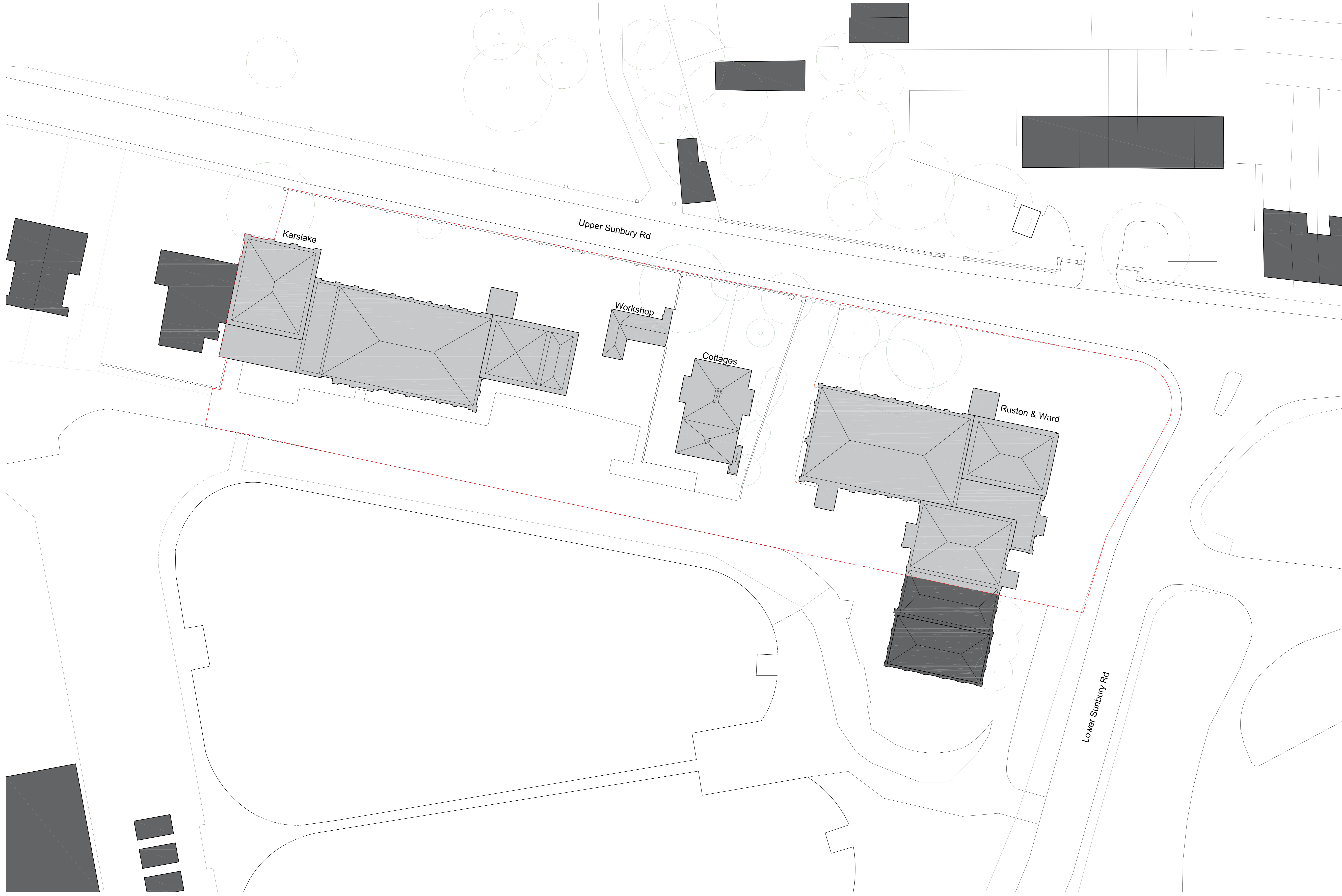
## Appendix B

### *Architects Layout - Existing Site*

**USE OF DRAWINGS**  
 DO NOT SCALE FROM THIS DRAWING. USE WRITTEN DIMENSIONS AND CHECK ON SITE. THIS DRAWING IS BASED ON SITE INFORMATION SUPPLIED BY THIRD PARTIES AND ACCURACY OF EXISTING FEATURES IS NOT GUARANTEED. ANY ERROR, OMISSION OR DISCREPANCY NOTED ON OR BETWEEN DRAWINGS AND OTHER DOCUMENTS MUST BE REPORTED IN WRITING IMMEDIATELY. ALL MECHANICAL, ELECTRICAL AND STRUCTURAL LAYOUTS (COMPONENTS ARE INDICATIVE AND MUST BE CHECKED AND CHECKED BY SPECIALISTS. DO NOT START WORK ON SITE BEFORE CONFIRMING THAT ALL NECESSARY STATUTORY AND OTHER CONSENTS HAVE BEEN OBTAINED. THIS DRAWING IS COPYRIGHT AND MUST NOT BE DISTRIBUTED WITHOUT PERMISSION. ELECTRONIC CAD FILES MUST NOT BE ALTERED OR COPIED.

REV.	DATE	DESCRIPTION	CREATED BY
-	09.03.2020	INITIAL ISSUE	-

**NOTE:**  
 THE INFORMATION SHOWN ON THE DRAWINGS IS FOR PLANNING PURPOSES ONLY. THIS DRAWING IS TO BE READ WITH ALL MEP SERVICES, STRUCTURAL AND CIVILS CONSULTANT INFORMATION. ALL WORKS IN ACCORDANCE WITH BUILDING REGS AND RELEVANT STATUTORY REGULATIONS.



client:  
**WATERFALL HAMPTON INVESTMENT LTD**

project:  
**HAMPTON WATERWORKS**

drawing title:  
**EXISTING SITE LOCATION PLAN**

sheet size: A1  
 scale: 1:200 @ A0

status:  
**PLANNING**

drawing no.: **1685-A-P001**

LOM architecture and design  
 The Glass House, 5 Sclater Street, London E1 6JY, UK  
 Phone +44(0)20 8444 2999 Email mail@lom-fdp.com  
 Web www.lom-architecture.com