

62 Station Rd, Hayes, London, UB3 4DF

Reference: 684 -Rev - V3

Aug-25

www.rida-reports.co.uk

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Drainage Strategy

Purpose of this report

- 1.1 The purpose of this statement is to provide the Surface Water drainage strategy to accompany the planning application of this development.

Site Characteristics

- 2.1 The site background is clearly identified through answers to the questions in table 1 below.

Table 1: Site Characteristics . See appendix B for support documentation

TOPIC	QUESTION	ANSWER
Protected species or habitat	Is the site near to designated sites and priority habitats?	No
Flood Plain	Is the site located in the flood plain?	No
Soils and Geology	Soil permeability? - See appendix B for results	No
Space constraints	Space for SuDS components?	No
Topography	Sited on a flat site?	Yes
	Sited on a steep slope (5-15%)	No
	Sited on a very steep slope (>15%)	No
Groundwater	Is the site at groundwater flood risk?	Yes
Contaminated land	Are there contaminated soils on site?	Unknown
Source Protection Zone	Is the site within a SPZ 3?	No
Runoff characteristics	Is the development in a high risk flooding area?	Yes

Existing and Proposed Site

- 2.2 The distribution of catchment areas for existing and proposed site is as per table 2 below and shows there is no change from existing condition. See appendix A for details.

Table 2 : Existing and Proposed catchment areas in hectares

Description	Existing Site	Proposed Site
Impermeable Areas	0.040	0.040
Permeable Areas		
Connected to Drainage	0.000	0.000
Self Draining Areas	0.000	0.000
Areas Draining Away from drainage System	0.014	0.014
Total Development Area	0.054	0.054

- 2.3 It has been assumed that the positively drained areas will have different runoff coefficients depending on the type of surface as follow:

Impermeable Surface	1.0
Permeable Surfaces	0.5
Grass Areas	0.3

Evaluation of Discharge Point

3.1 The SuDS design takes into account Building Regulations Section H3 and the National Planning Practice Guidance. The aim is to discharge surface water run-off as high up the drainage hierarchy, as reasonably practicable:

1. into the ground (infiltration);
2. to a surface water body;
3. to a surface water sewer, highway drain, or another drainage system;
4. to a combined sewer.

3.2 The discharge point has been evaluated following the NPPG and Building regulations. The findings are in table 3 below.

Table 3: Drainage Hierarchy evaluation

Superficial geology classification	The British Geological Society records show that the superficial deposits are Langley Silt Member - Clay and Silt.
Bedrock geology classification	The British Geological Society records of the site show that it is located within the London Clay Formation - Clay, Silt and Sand.
Landis Top Soil Infiltration	The SOILSCAPE's records of the site show that it is located within an area of freely draining soils.
Groundwater	The British Geological Survey's flood risk susceptibility maps show that the development has potential for groundwater flooding above ground level. Groundwater levels would tend to vary seasonally and are influenced by ground and meteorological conditions and proximity to water features.
Is infiltration feasible?	Infiltration is not possible on this site due to the findings on groundwater and soils within the site. The groundwater level is likely to be very high on site.
Is a discharge to a watercourse possible?	There is an existing watercourse near the site. The existing building rainwater downpipes and car park gullies already discharge to this watercourse, with on-going license to discharge clean surface water provided in Appendix B. It is proposed that the new development re-uses the existing downpipe connections, with no intended changes to the outfall to the canal.
Is a discharge to a surface water sewer possible?	There is a surface water sewer in the proximity to the site. It is possible to connect to the surface water sewer. However it is proposed to discharge to the watercourse.
Is a discharge to a combined sewer possible?	There is no combined water sewers in the proximity to the site.

Existing and Proposed Peak Run-off Calculations

- 4.1 The current site is a Brownfield. The peak runoff rate for the existing site was calculated as per table 4 and discharge rates as per table 5.

Table 4: Peak run-off rate calculation method for existing site

Method Used	Calculation Method
	Report 124 Flood Estimation for Small Catchments method has been used to estimate the site peak flow rates
✗	This is a brownfield site, runoff rates are calculated in accordance with best practice simulation modelling and using the modified rational method
	This is a brownfield site where the pre-development drainage isn't known. The runoff rates are calculated using the Greenfield model with soil type 5

- 4.2 The runoff flow produced by the development will be controlled as per table 5.

Table 5: Runoff discharge rate control

Control Used	Description of runoff discharge
✗	Impermeable area and roof layout is unchanged from existing condition. Development will not incur a worsening of current drainage regime, therefore propose to re-use existing drainage network of the building, discharging into the Grand Union Canal as authorised by the existing license to discharge provided in Appendix B.

Table 6: Peak discharge rates for proposed drainage system - refer to Appendix C

Return Period Event	Discharge Rate (l/s)		
	Existing Greenfield	Existing Brownfield	Proposed
Qbar	0.10	N/A	N/A
1 in 1	0.10	7.30	7.30
1 in 2	0.10	9.40	9.40
1 in 30	0.20	17.40	17.40
1 in 30 + CC	N/A	N/A	24.36
1 in 100	0.20	22.10	22.10
1 in 100 + CC	N/A	N/A	30.94

- 5.2 The proposed drainage system is to re-use existing down pipes and associated below ground networks identified in the CCTV survey provided in Appendix B. Downstream connection and discharge rates to remain as existing, into the Grand Union Canal with no alterations to the existing outfall, as approved by the license to discharge provided in Appendix B.
- 5.3 The proposed drainage strategy presents one possible solution to demonstrate that the development can be sustainably drained, to comply with the requirements of the NPPF. Other solutions may be feasible and may prove to be better suited to the site. These will become apparent during the detailed design stage. The strategy above should not therefore be interpreted as the definitive scheme solution.

Maintenance and Management plan responsibility

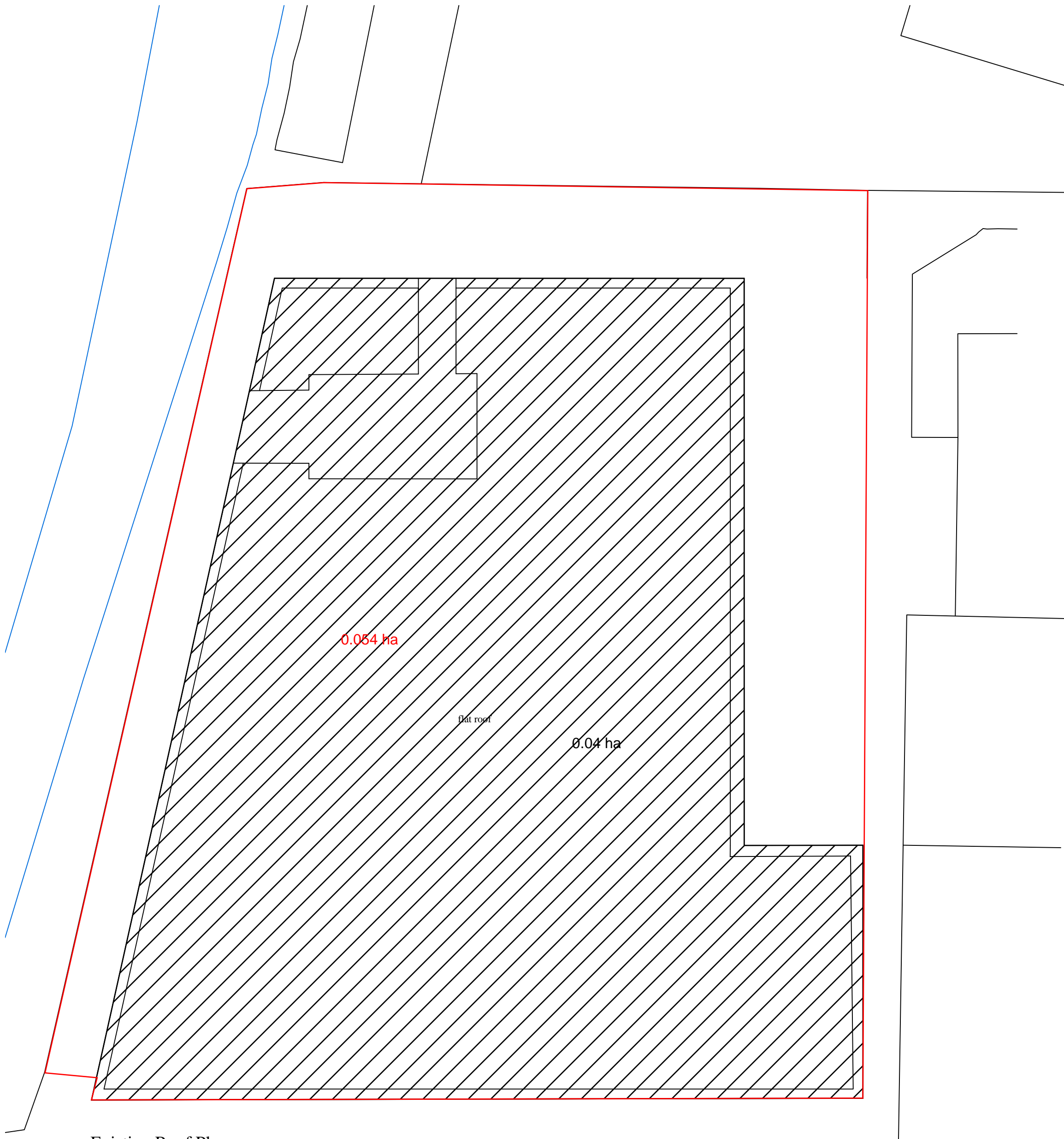
- 6.1 The drainage system will be maintained by The Owner the property

Maintenance and Management plan for proposed drainage

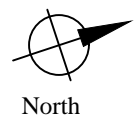
- 6.2 The maintenance and Management Plan Guidance from the SuDS Manual, CIRIA C753 (CIRIA, 2015) is to be followed for the effective maintenance of the proposed SuDS techniques outlined above. The maintenance for SuDS structures are as follow:

INLETS, OUTLETS, CONTROLS AND INSPECTION CHAMBERS	
Regular Maintenance	Frequency
Inlets, outlets and surface control structures	
Inspect surface structures removing obstructions and silt as necessary. Check there is no physical damage.	Monthly
Strim vegetation 1m min. surround to structures and keep hard aprons free from silt and debris	Monthly
Inspection chambers and below ground control chambers	
Remove cover and inspect ensuring water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in autumn	Annually
Occasional Maintenance	
Check topsoil levels are 20mm above edges of baskets and chambers to avoid mower damage	As necessary
Remedial work	Frequency
Unpack stone in basket features and unblock or repair and repack stone as design detail as necessary.	As required
Repair physical damage if necessary.	As required

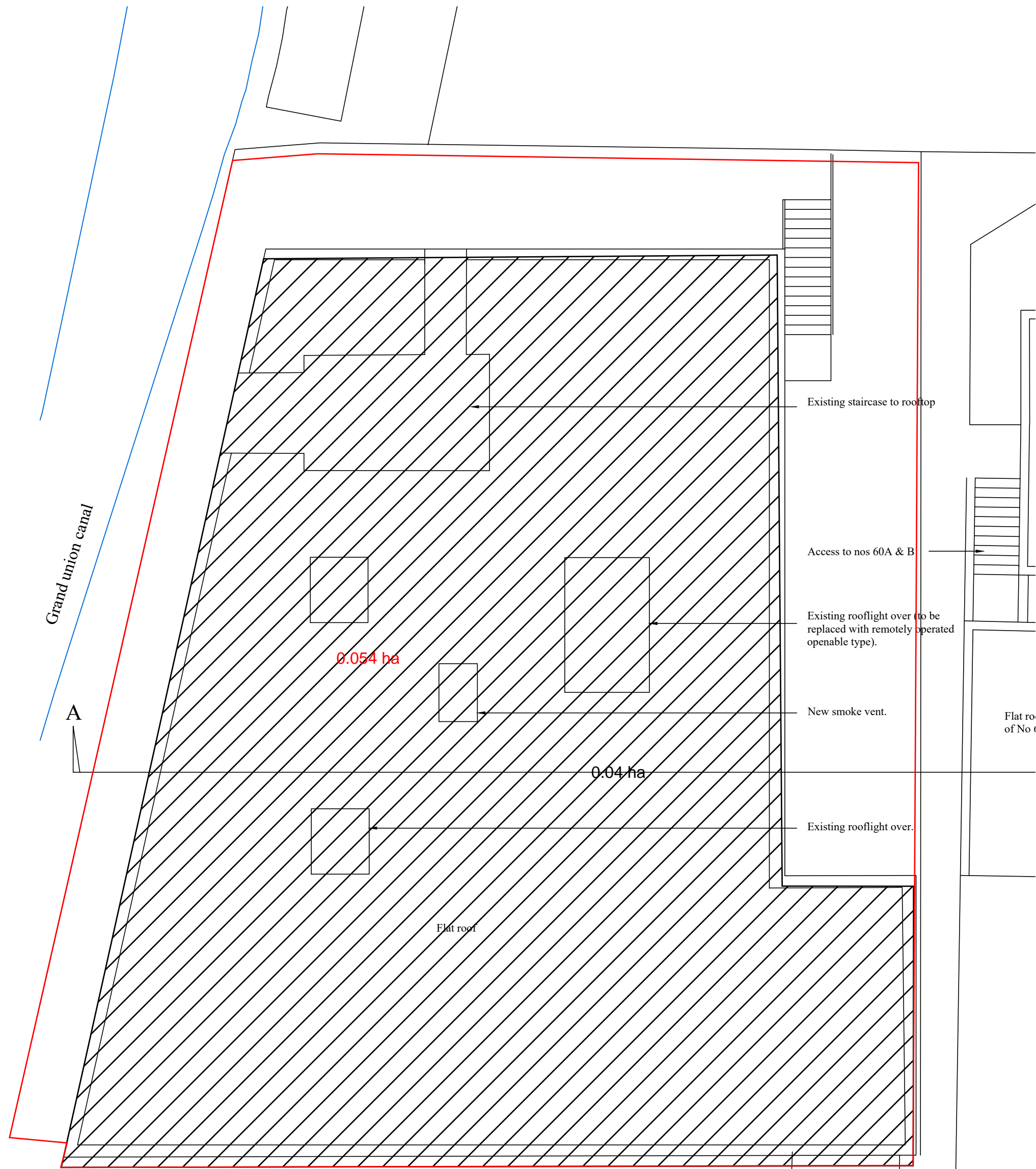
Appendix A



Existing Roof Plan



EXISTING SITE 1:100



Roof Plan



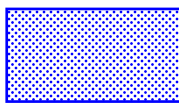
PROPOSED SITE 1:100

Do not scale from this drawing. Refer to figured dimensions only. RIDA Reports Ltd registered in England and Wales No. 10590566. This drawing is copyright of RIDA Reports Ltd.

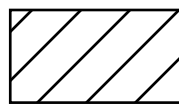
Drawing Scale Bar		Drawing Scale Bar	
Drawing scale	Line length	Drawing scale	Line length
1:5	= 0.25 metres	1:200	= 10.0 metres
1:10	= 0.5 metres	1:250	= 12.5 metres
1:20	= 1.0 metres	1:500	= 25.0 metres
1:25	= 1.25 metres	1:1000	= 50.0 metres
1:50	= 2.5 metres	1:1250	= 62.5 metres
1:100	= 5.0 metres	1:2500	= 125 metres
Measure length of line above for checking of scale			

GENERAL NOTES

KEY



PERMEABLE AREAS



IMPERMEABLE AREAS



STUDY AREA

Rev	Details	Date	By	Chd

Drawing Status: **PRELIMINARY**



4 Bean Acre Road, Hook Norton, Banbury, Oxfordshire
e: info@rida-reports.co.uk
t: 01608 510 121
www.rida-reports.co.uk

Client:

Project:
62 Station Rd, Hayes, London, UB3 4DF

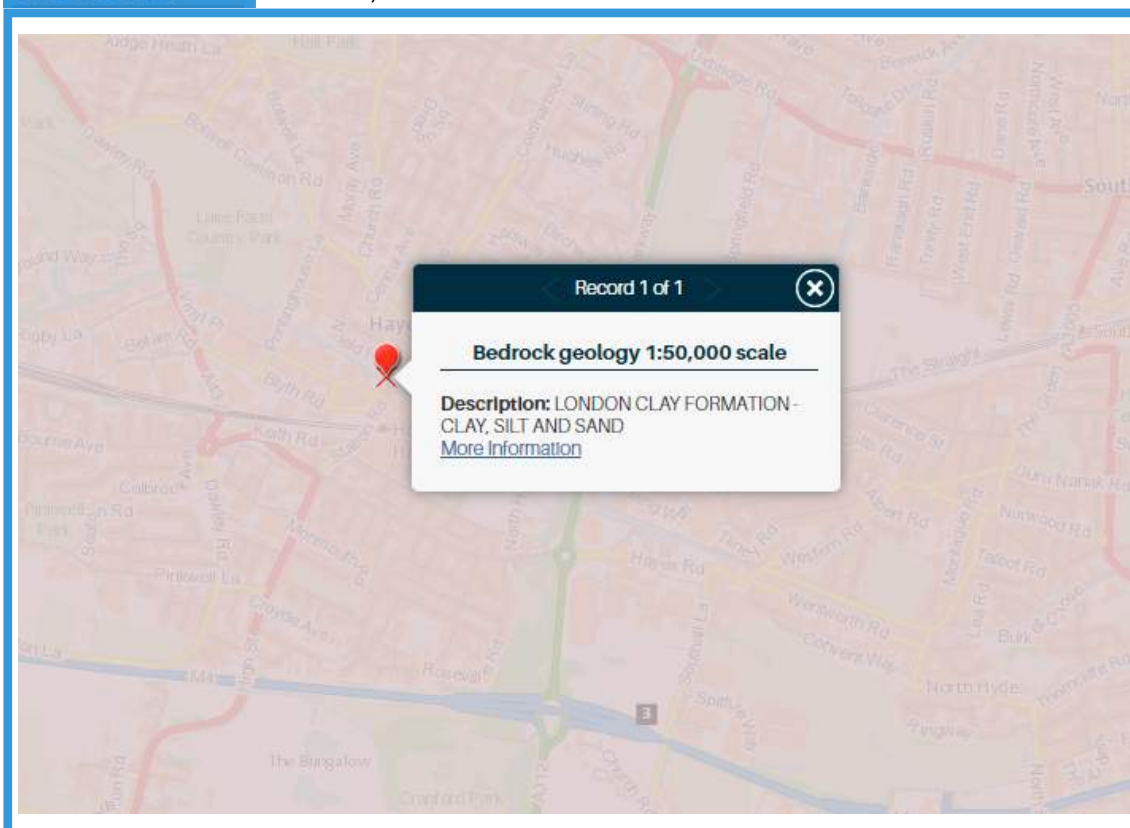
Drawing:
**Existing and Proposed Areas
Permeable and Impermeable**

Print Size:	Project No:	Drawing No:	Revision:
A1	0684	002	P1

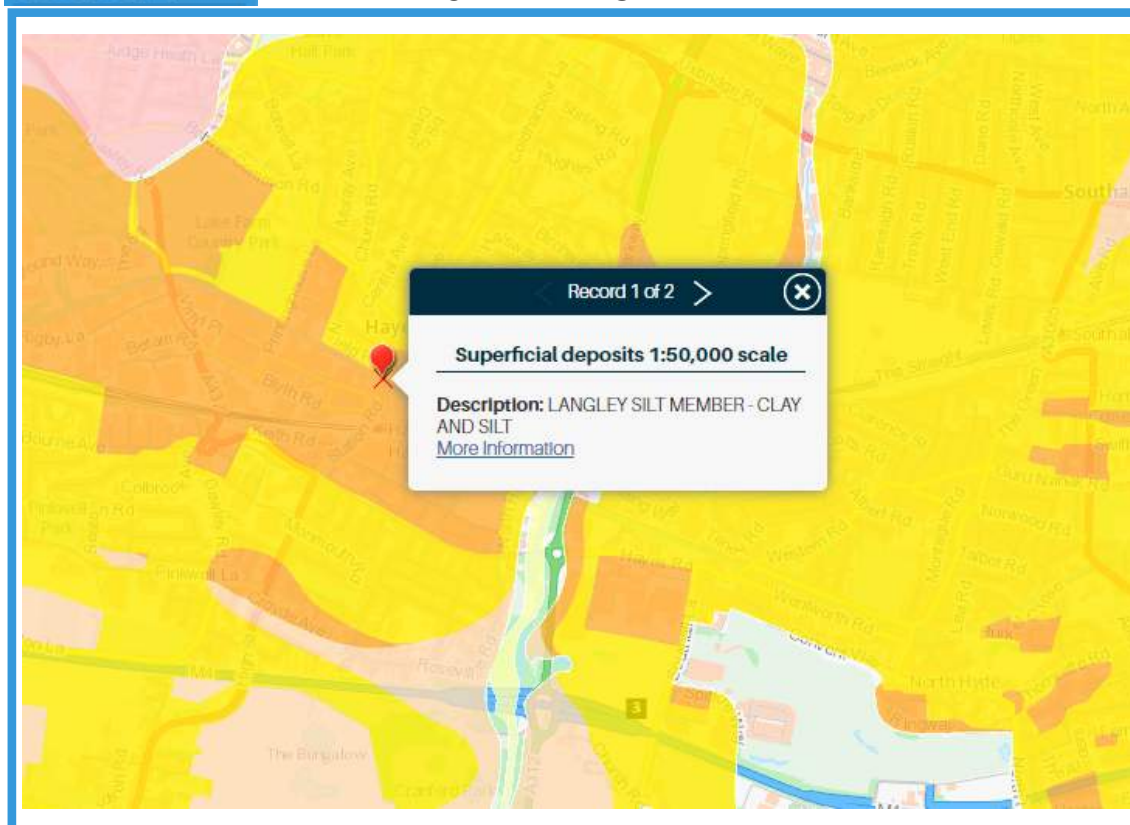
Appendix B



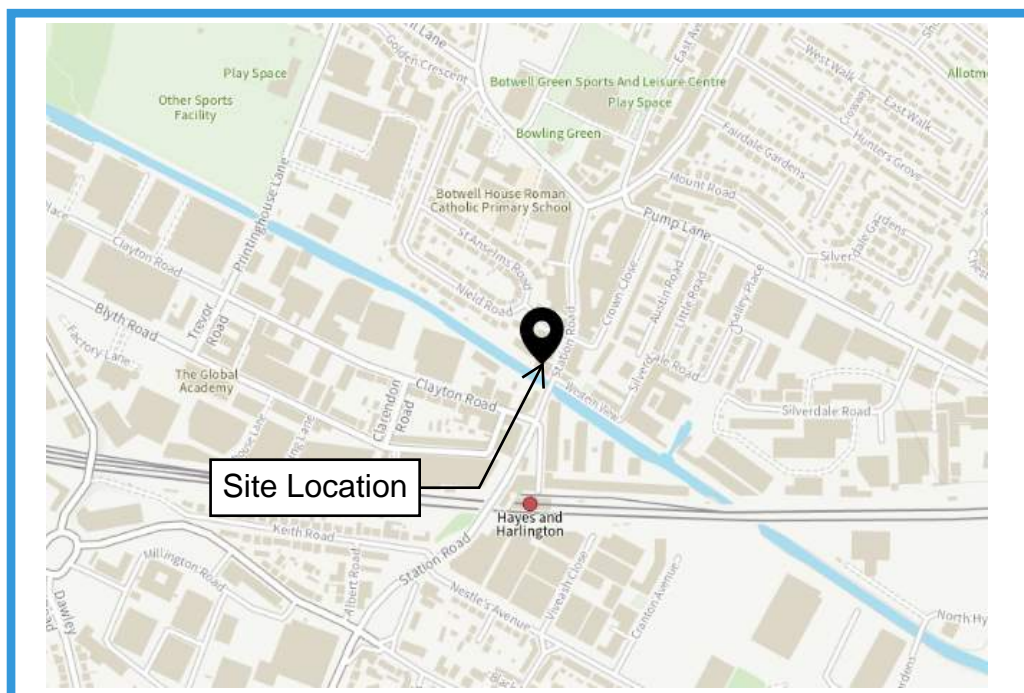
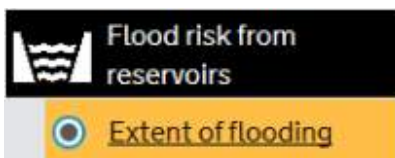
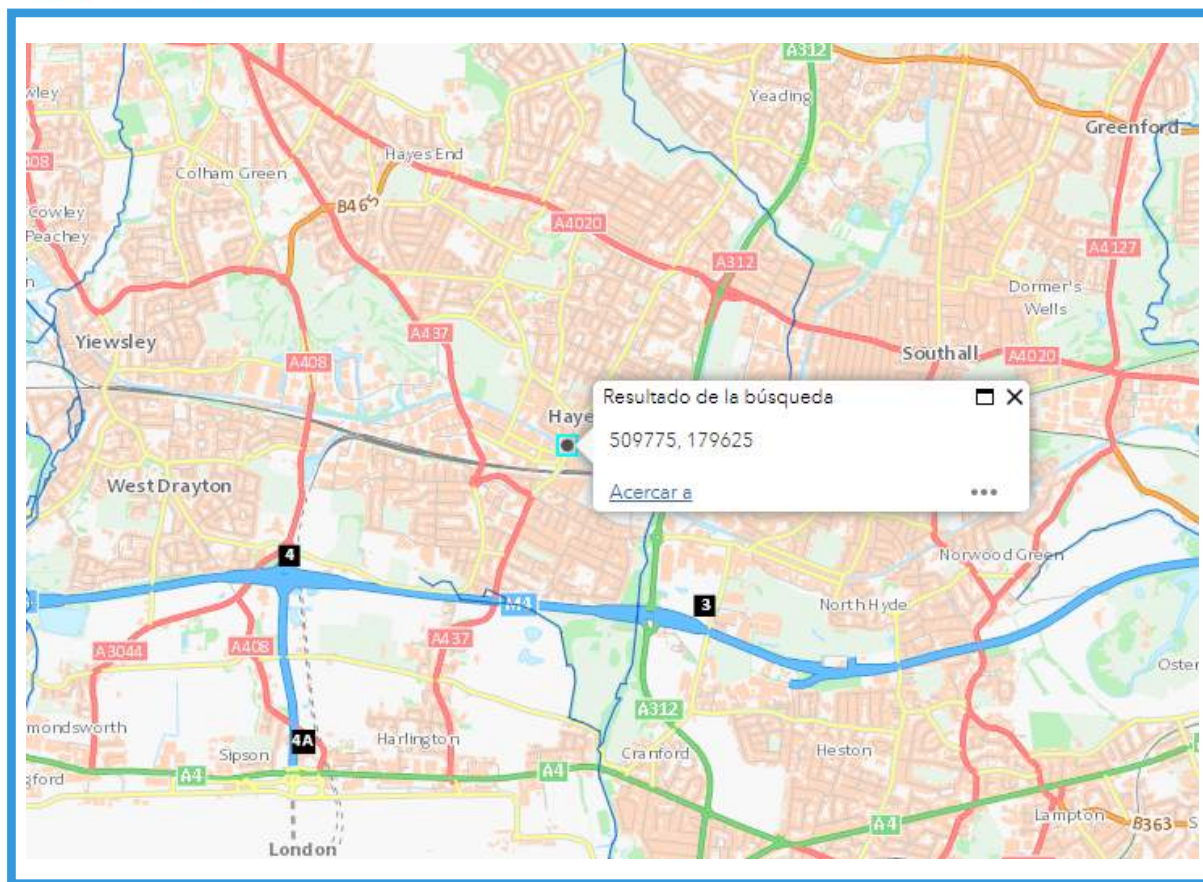
GEOLOGY - BEDROCK - LONDON CLAY FORMATION - CLAY, SILT AND SAND



GEOLOGY - SUPERFICIAL DEPOSITS - LANGLEY SILT MEMBER - CLAY AND SILT

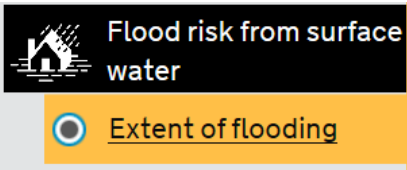


Main River Map

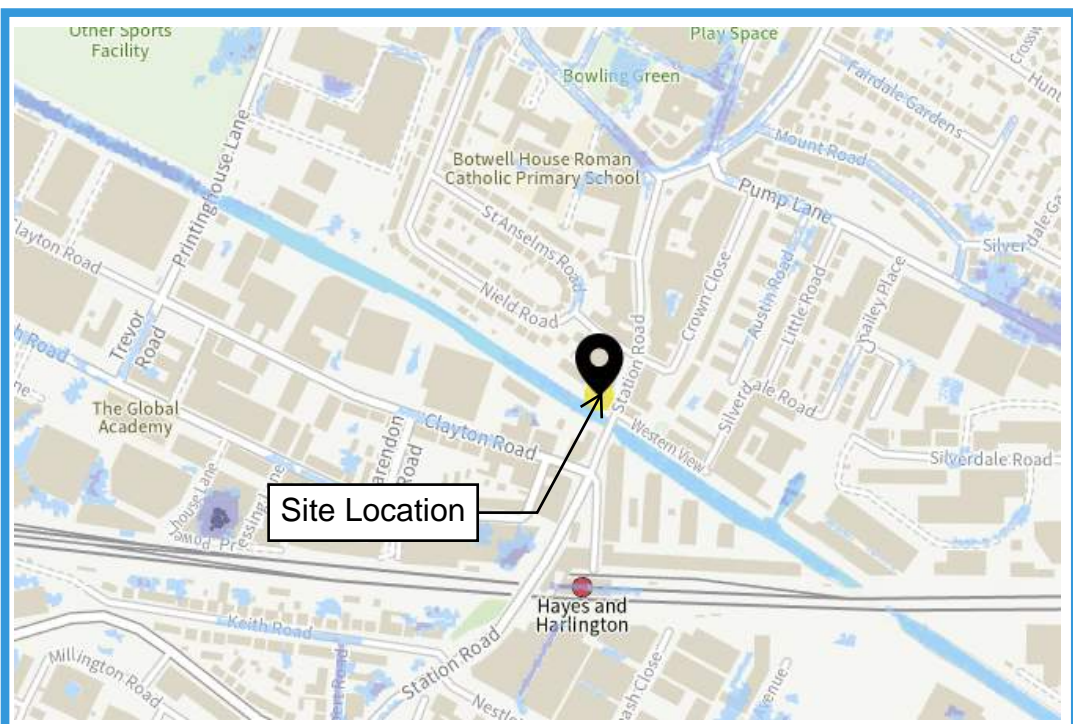
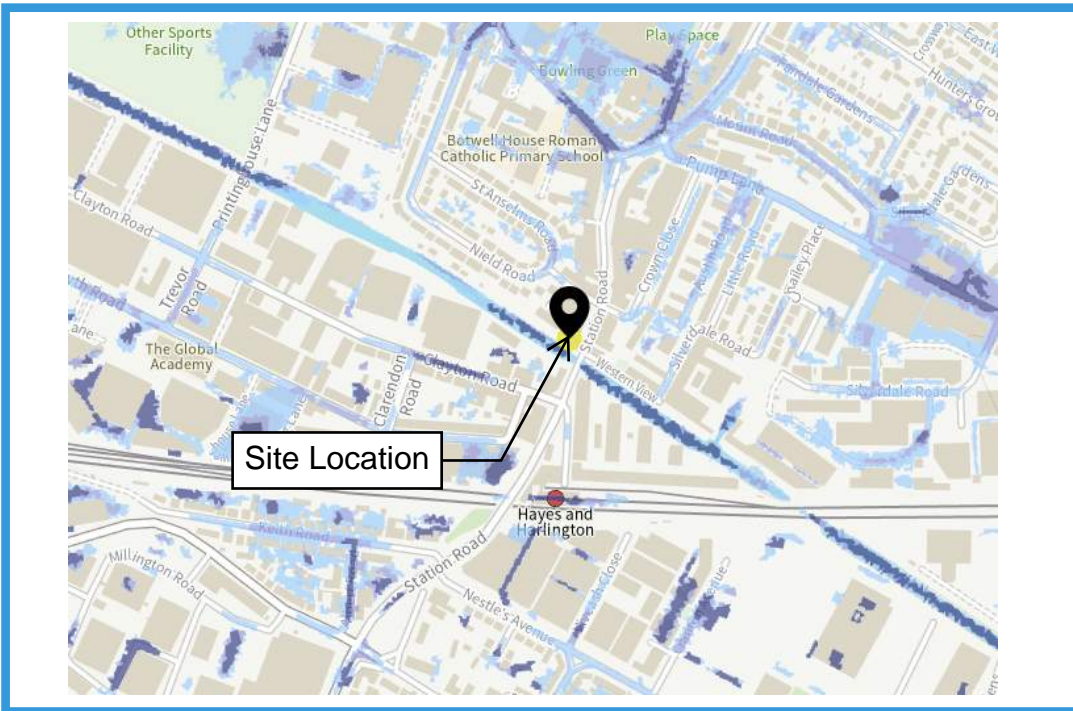


- When river levels are normal
- When there is also flooding from rivers

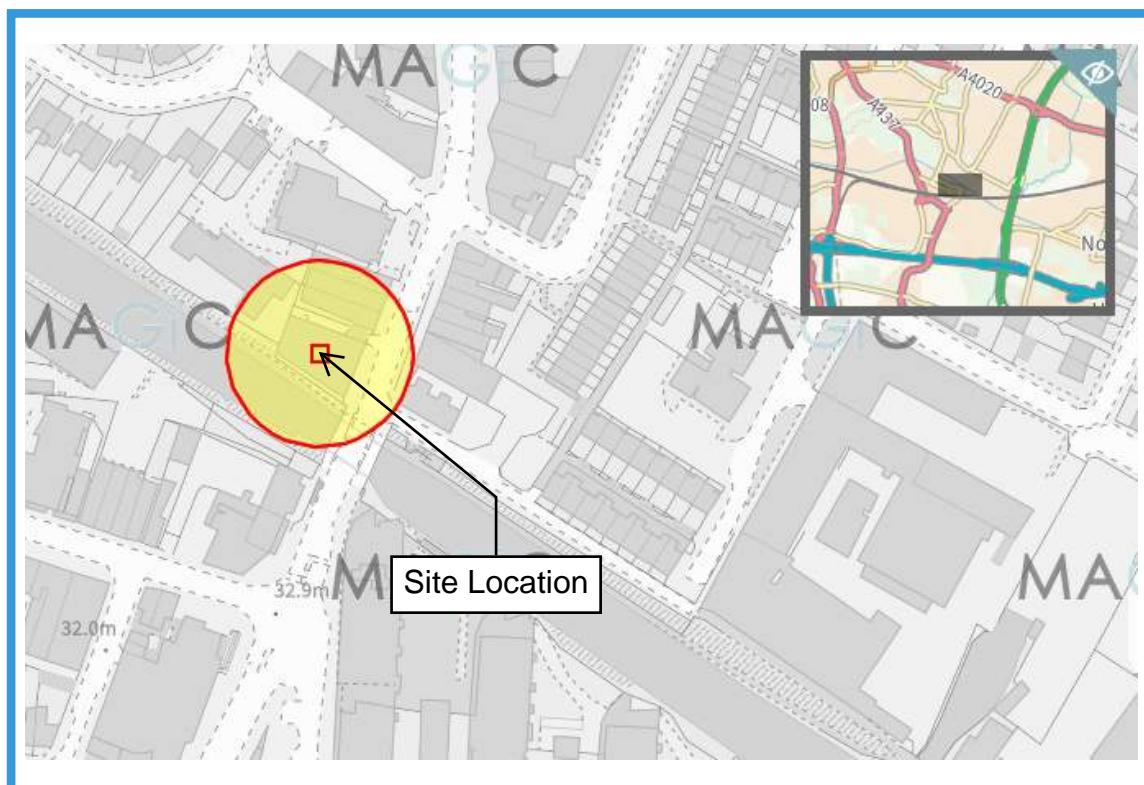
SITE FLOOD RISK



High risk means a chance of flooding greater than 3.3% (1:30)
 Medium risk means a chance of flooding of btw 1% (1:100) and 3.3%
 Low risk means a chance of flooding of btw 0.1% (1:1000) and 1%
 Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding



MAGIC RESULTS



Site Check Results

Site Check Report Report generated on Wed Jun 26 2024

You selected the location: Centroid Grid Ref: TQ09777962

The following features have been found in your search area:

Aquifer Designation Map (Bedrock) (England)

Typology

Unproductive

Aquifer Designation Map (Superficial Drift) (England)

Typology

Principal

Typology

Unproductive

Source Protection Zones merged (England)

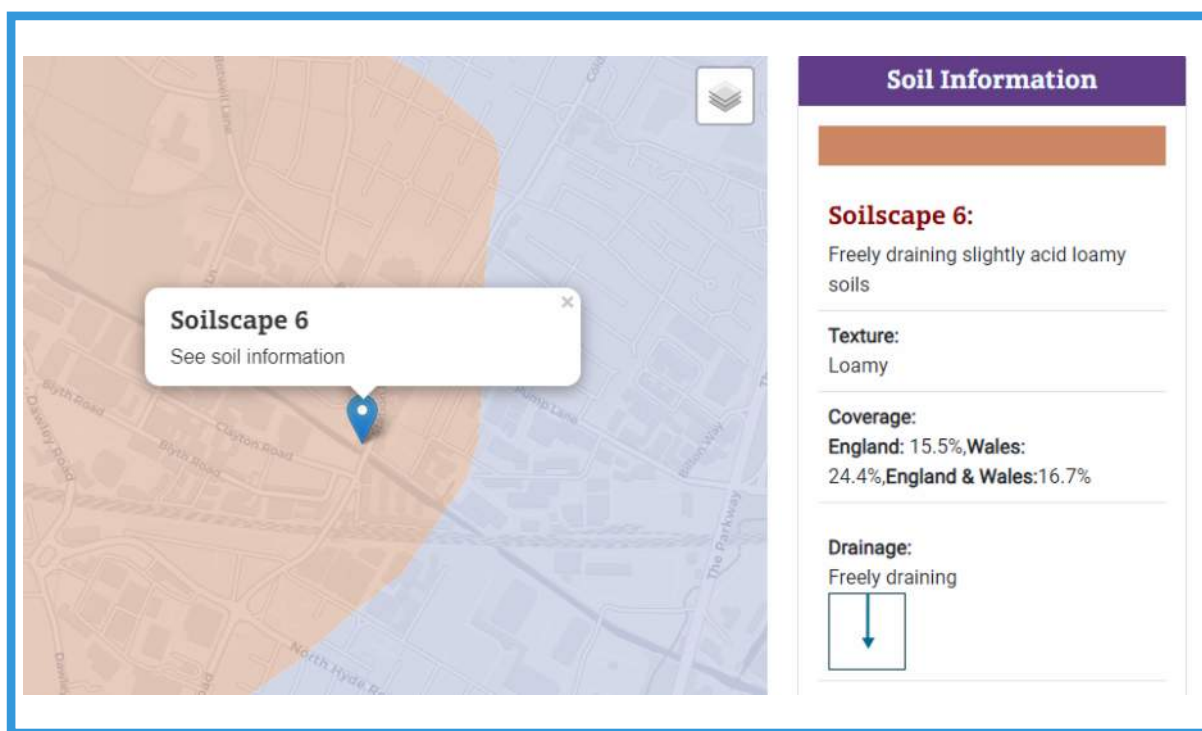
No Features found

OK

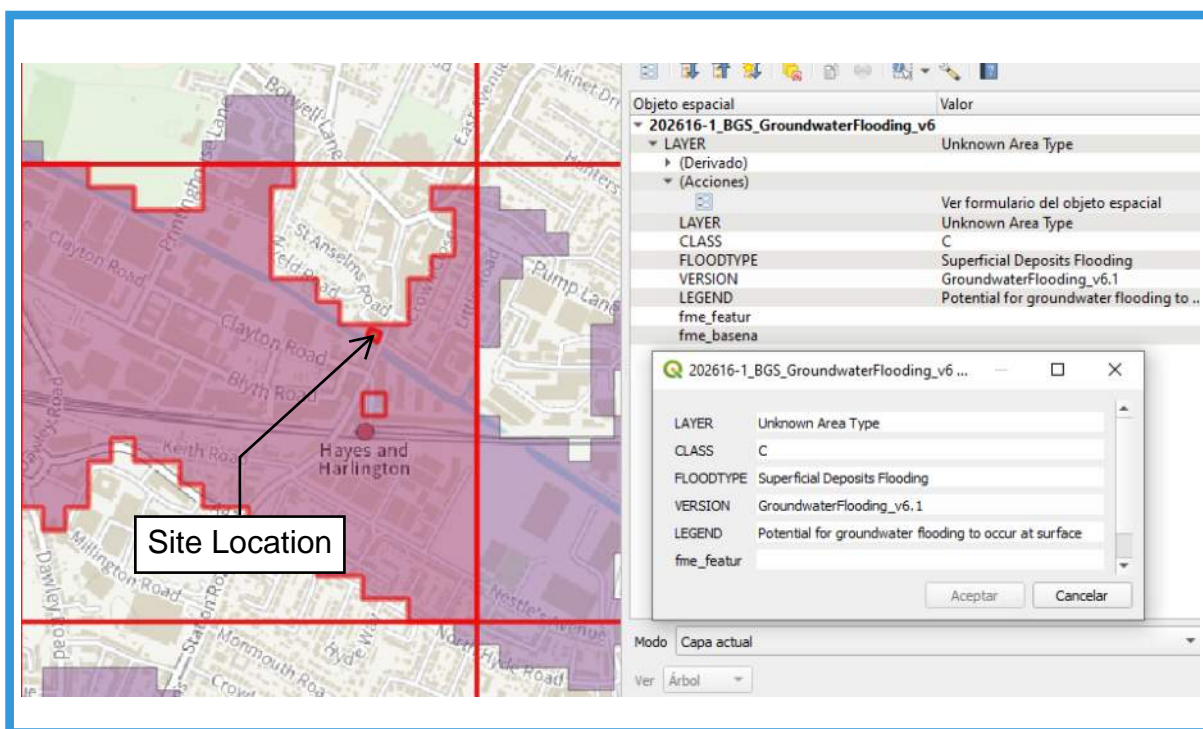
Cancel

Export to CSV

Print



GROUND WATER FLOOD RISK



Rida Reports Limited
4Bean Acre Road,
HOOK NORTON
BANBURY
OX15 5UA

Search address supplied Barclays Bank Plc
62
Station Road
Hayes
UB3 4DF

Your reference 0684 Station Road

Our reference ALS/ALS Standard/2024_5024124

Search date 22 July 2024

Notification of Price Changes

From 1st April 2024 Thames Water Property Searches will be increasing the prices of its CON29DW Residential and Commercial searches along with the Asset Location Search. Costs will rise in line with RPI as per previous years, which is sat at 6%.

Customers will be emailed with the new prices by February 28th 2024.

Any orders received with a higher payment prior to the 1st April 2024 will be non-refundable. For further details on the price increase please visit our website at www.thameswater-propertysearches.co.uk.



Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW



searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk



0800 009 4540

Search address supplied: Barclays Bank Plc, 62, Station Road, Hayes, UB3 4DF

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This search provides maps showing the position, size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0800 009 4540, or use the address below:

Thames Water Utilities Ltd
Property Searches
PO Box 3189
Slough
SL1 4WW

Email: searches@thameswater.co.uk

Web: www.thameswater-propertysearches.co.uk

Waste Water Services

Please provide a copy extract from the public sewer map.

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority.

Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners.

This report relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus.

The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the developer.

Clean Water Services

Please provide a copy extract from the public water main map.

With regard to the fresh water supply, this site falls within the boundary of another water company. For more information, please redirect your enquiry to the following address:

Affinity Water Ltd
Tamblin Way
Hatfield
AL10 9EZ
Tel: 0345 3572401



For your guidance:

- Assets other than vested water mains may be shown on the plan, for information only.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Payment for this Search

A charge will be added to your suppliers account.

Further contacts:

Waste Water queries

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. For further information please contact our Customer Centre on Tel: 0845 920 0800. Alternatively, a survey can be arranged, for a fee, through our Customer Centre on the above number.

If you have any questions regarding sewer connections, budget estimates, diversions, building over issues or any other questions regarding operational issues please direct them to our service desk. Which can be contacted by writing to:

Developer Services (Waste Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Clean Water queries

Should you require any advice concerning clean water operational issues or clean water connections, please contact:

Developer Services (Clean Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

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

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

Manhole Reference	Manhole Cover Level	Manhole Invert Level
7516	133.28	131.86
8607	n/a	n/a
8622	31.39	n/a
86ZD	n/a	n/a
86MH	n/a	n/a
86MG	n/a	n/a
8604	31.45	30.69
86MD	n/a	n/a
86HE	n/a	n/a
8619	31.89	n/a
8616	n/a	n/a
86MC	n/a	n/a
76XC	n/a	n/a
7503	32.86	31.26
761A	n/a	n/a
76XZ	n/a	n/a
76XY	n/a	n/a
761B	n/a	n/a
7518	33.02	31.77
762C	n/a	n/a
761D	n/a	n/a
7602	n/a	n/a
7603	n/a	n/a
8615	n/a	n/a
8612	32.06	30.86
8501	n/a	n/a
85JQ	n/a	n/a
86JP	n/a	n/a
86JR	n/a	n/a
86JN	n/a	n/a
8504	30.77	28.73
86JL	n/a	n/a
86JM	n/a	n/a
8502	33.25	29.64
86JH	n/a	n/a
86HH	n/a	n/a
8613	31.49	30.27
86JJ	n/a	n/a
8609	31.33	30.53
8614	31.51	30.2
76XA	n/a	n/a
7704	32.45	31.11
7703	n/a	n/a
762B	n/a	n/a
76XG	n/a	n/a
7605	n/a	n/a
76XD	n/a	n/a
76XF	n/a	n/a
77XF	n/a	n/a
76HA	n/a	n/a
772D	n/a	n/a
772C	n/a	n/a
8606	n/a	n/a
8708	n/a	n/a
8602	n/a	n/a
8709	n/a	n/a
8603	n/a	n/a
8707	n/a	n/a
8716	n/a	n/a
86GC	n/a	n/a
86JG	n/a	n/a
86JD	n/a	n/a
86JE	n/a	n/a
8624	n/a	n/a
8623	n/a	n/a
7507	32.14	30.51
7506	32.08	30.78
7501	32.24	30.29
751G	n/a	n/a
751C	n/a	n/a
751E	n/a	n/a
751F	n/a	n/a
7508	32.23	29.38
7509	32.23	29.11
7512	32.51	30.79
7513	33.03	31.21
7502	32.83	30.82
7514	33.27	31.62
7504	33.14	31.32
7515	33.38	31.88
67QM	n/a	n/a
n/a	n/a	n/a
6702	n/a	n/a
6704	n/a	n/a
751B	n/a	n/a
651M	n/a	n/a
751H	n/a	n/a
7511	31.36	29.11
751D	n/a	n/a
651L	n/a	n/a
751A	n/a	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
7601	n/a	n/a
76XB	n/a	n/a
76XE	n/a	n/a
67QD	n/a	n/a
76QG	n/a	n/a
76QE	n/a	n/a
76QH	n/a	n/a
76QA	n/a	n/a
67QL	n/a	n/a
67QJ	n/a	n/a
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.		



Asset Location Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

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

Other Sewer Types (Not operated and maintained by Thames Water)

	Sewer
	Culverted Watercourse
	Proposed
	Decommissioned Sewer
	Content of this drainage network is currently unknown
	Ownership of this drainage network is currently unknown

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plan are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.

Sewer Fittings

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

	Air Valve		Meter
	Dam Chase		Vent
	Fitting		

Operational Controls

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

	Ancillary		Drop Pipe
	Control Valve		Weir

End Items

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

	Inlet		Outfall
	Undefined End		

Other Symbols

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

	Change of Characteristic Indicator		Public / Private Pumping Station
	Invert Level		Summit

Areas

Lines denoting areas of underground surveys, etc.

	Agreement
	Chamber
	Operational Site

Ducts or Crossings

	Casement	Ducts may contain high voltage cables. Please check with Thames Water.
	Conduit Bridge	
	Subway	
	Tunnel	

5) 'na' or '0' on a manhole indicates that data is unavailable.

6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.

Payment Terms and Conditions

All sales are made in accordance with Thames Water Utilities Limited (TWUL) standard terms and conditions unless previously agreed in writing.

1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
3. All invoices are strictly due for payment within 14 days of the date of the invoice. Any other terms must be accepted/agreed in writing prior to provision of goods or service or will be held to be invalid.
4. Penalty interest may be invoked by TWUL in the event of unjustifiable payment delay. Interest charges will be in line with UK Statute Law 'The Late Payment of Commercial Debts (Interest) Act 1998'.
5. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
6. A charge may be made at the discretion of the company for increased administration costs.

A copy of Thames Water's standard terms and conditions are available from the Commercial Billing Team (cashoperations@thameswater.co.uk).

We publish several Codes of Practice including a guaranteed standards scheme. You can obtain copies of these leaflets by calling us on 0800 980 8800.

If you are unhappy with our service, you can speak to your original goods or customer service provider. If you are still not satisfied with the outcome provided, we will refer the matter to a Senior Manager for resolution who will provide you with a response.

If you are still dissatisfied with our final response, and in certain circumstances such as you are buying a residential property or commercial property within certain parameters, The Property Ombudsman will investigate your case and give an independent view. The Ombudsman can award compensation of up to £25,000 to you if he finds that you have suffered actual financial loss and/or aggravation, distress, or inconvenience because of your search not keeping to the Code. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.

If the Goods or Services covered by this invoice falls under the regulation of the 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0300 034 2222 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

Ways to pay your bill

Credit Card	BACS Payment	Telephone Banking
Please Call 0800 009 4540 quoting your invoice number starting CBA or ADS	Account number 90478703 Sort code 60-00-01 A remittance advice must be sent to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW. or email ps.billing@thameswater.co.uk	By calling your bank and quoting: Account number 90478703 Sort code 60-00-01 and your invoice number

Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.



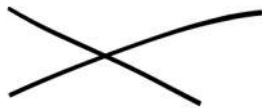
FS Drainage Services

Wadham Lodge, Kitchener Road
Walthamstow, London
E17 4JP

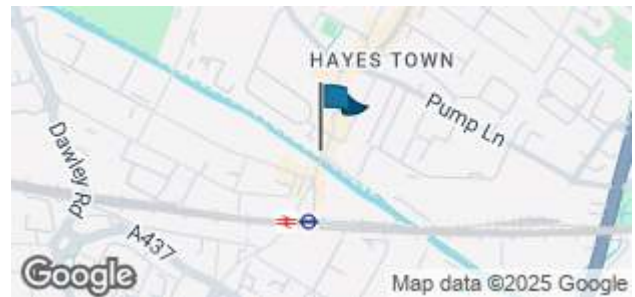
Domestic CCTV Surveys



Customer	UPINDER GREWAL	Resource	Josh Flood
Contact	Upinder Grewal		
Address	62 Station Road Hayes UB3 4DF	Job type	Domestic CCTV Surveys
		Reference	JN-183165
		Date	04/08/2025 08:00 - 09:00
		Job duration	01:00:00
		Driving duration	00:31:08
		Distance travelled	0 mi



Upinder Grewal



1 Risk Assessment		
	Answer	Notes
Select all hazards associated with completing this task	No hazards or serious consequences likely to cause any injury are apparent	
Select all PPE you will be using on this job	Hand protection	
Select any access controls used	No Access Issues Identified	
Identify environmental issues associated with the job	No environmental issues	
What is the highest consequence of the biggest risk you identified while completing this report	Minor	
Risk Assessment completed to the best of my ability	Josh	

powered by: **BigChange**



FS Drainage Services

Wadham Lodge, Kitchener Road
Walthamstow, London
E17 4JP

3 General CCTV Survey Worksheet

	Answer	Notes
Arrival Time	09:39	
Customer acknowledgement of arrival time	Upinder	
Description of property	Commercial unit	
Type of drainage system	Foul	
Use of drainage system	Private	
Circumstances	General investigation works	
Chambers and depths	N/A	
Photo of property		



FS Drainage Services

Wadham Lodge, Kitchener Road
Walthamstow, London
E17 4JP

Photos of completed works

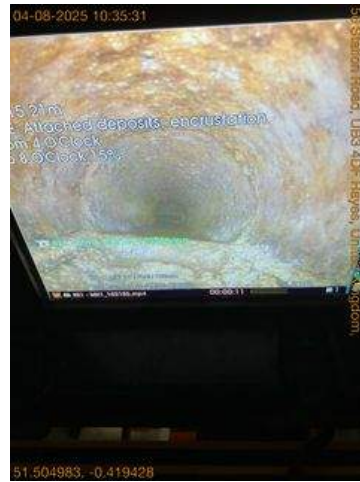


Photo of completed works 2



Photo of completed works 3





FS Drainage Services

Wadham Lodge, Kitchener Road
Walthamstow, London
E17 4JP

Photo of completed works 4





FS Drainage Services

Wadham Lodge, Kitchener Road
Walthamstow, London
E17 4JP

Description of work carried out	<p>Arrived at the address to conduct a CCTV Survey of the foul drainage system.</p> <p>Found no manholes on the ground floor or internal basement area.</p> <p>Found an underground car park. Accessed the car park and lifted 4 covers. Found a surface water manhole that serves the gullies in the car park as well as the rainwater down pipes. This runs into a petrol interceptor.</p> <p>Found no foul manholes in the car park but did find a 100mm pipe running along the wall towards the front of the building.</p> <p>Removed the cap on the pipe and surveyed up and downstream.</p> <p>Found that the pipe runs upstream towards the stack pipe serving all toilets on the 1st floor and downstream towards the manhole at the front of the building on ground level.</p> <p>Found no major defects such as cracks, breaks or large displacements.</p> <p>Found around 10-15% limescale build up throughout.</p> <p>There are rodent droppings in the pipe indicating that they have travelled up from the main sewer.</p> <p>Attempted to lift the chamber cover at the front but was unable to as it is seized in.</p>
Materials used:	No



FS Drainage Services

Wadham Lodge, Kitchener Road
Walthamstow, London
E17 4JP

Have you used any van stock	No
Recommendations	Highly recommend that a Descale is conducted on the line with a 4 inch flex shaft and carbide tips. 2 operatives would be needed for this.
Can you guarantee the work?	No
Completion Time	10:55
Preferred method of payment	Card

JN_183165_1



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FS Drainage Services

Wadham Lodge, Kitchener Road
Walthamstow, London
E17 4JP

JN_183165_2



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E17 4JP

JN_183165_3



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FS Drainage Services

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Walthamstow, London
E17 4JP

JN_183165_4



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BA4808 - BOX BA5145

packet 20

13386

7169

Licence

Please do not write above this line

Delete As appropriate

ATIS REAL

DTZ



THIS LICENCE is made the *Twelfth* day of *November* One thousand nine hundred and sixty six BETWEEN the BRITISH WATERWAYS BOARD (hereinafter called "the Board") of the one part and BARCLAYS BANK LIMITED whose registered office is at 4 Lombard Street in the City of London (hereinafter called "the Licensees") of the other part

WHEREAS the Board are the owners as part of their undertaking of the Grand Union Canal (hereinafter called "the Canal") and of the land adjoining at Station Road Hayes in the London Borough of Hillingdon and the Licensees have applied to the Board for their consent to the construction of the works hereinafter described and the Board have agreed to grant their formal consent to such construction and to the maintenance of the said works upon the terms and conditions hereinafter contained

NOW THIS LICENCE WITNESSETH as follows:-

1. IN consideration of the yearly sum hereinafter reserved or made payable by the Licensees to the Board and of the agreements on the part of the Licensees and the conditions hereinafter contained the Board so far as they can and lawfully may hereby grant to the Licensees LICENCE AND AUTHORITY
 - (a) To lay and maintain along the tow path of the Canal an Electricity Supply Main in the position indicated in blue on the Plan hereto annexed
 - (2) For their servants agents contractors and workmen to enter upon the Board's land for the purposes of laying inspecting maintaining repairing renewing and replacing or removing the hereinbefore mentioned works or any part thereof (such works being hereinafter together called "the Licensed Works" which expression shall include all works ancillary thereto)

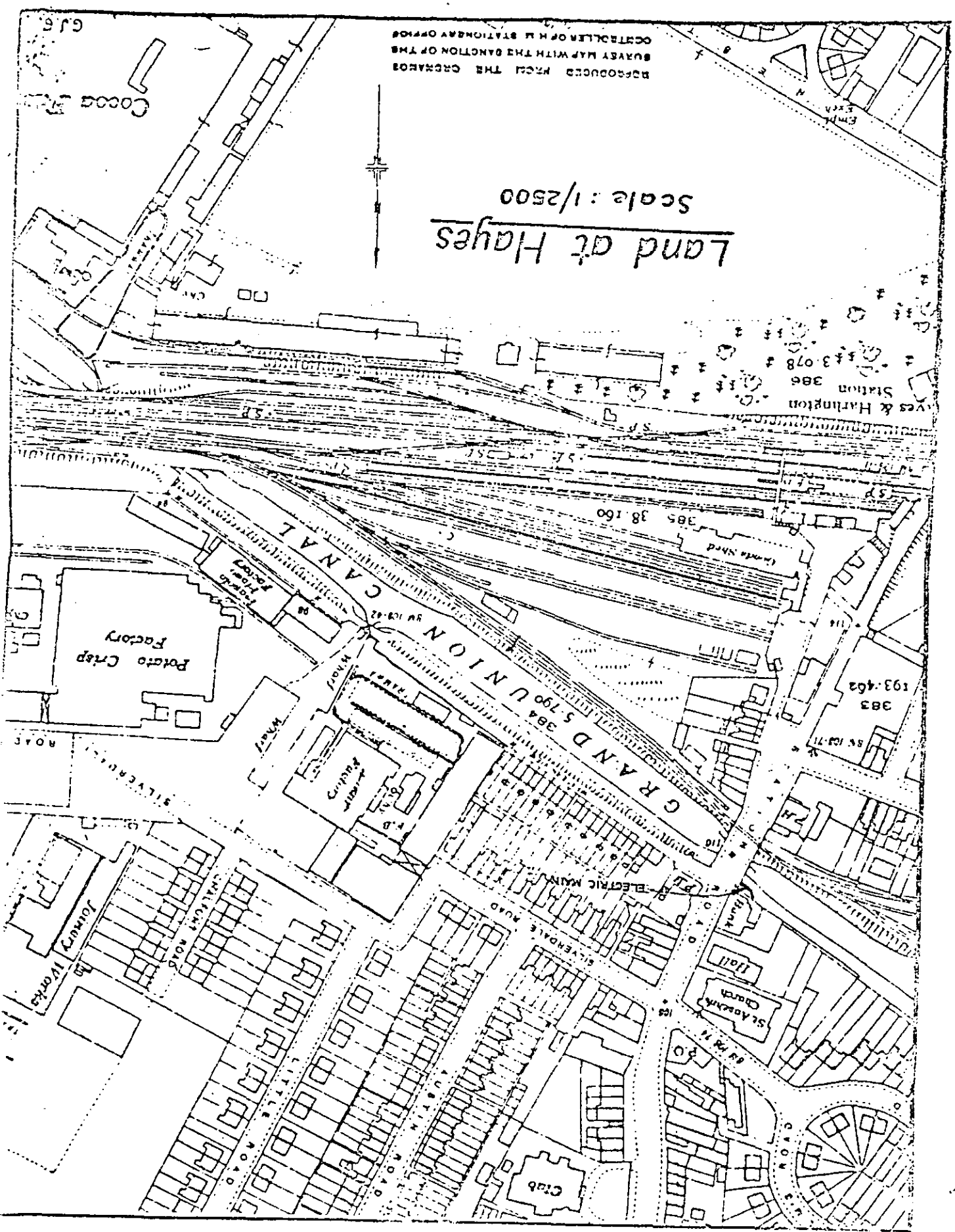
TO HOLD the Licence and Authority hereby granted unto the Licensees from the *Twenty-ninth* day of *September* One thousand nine hundred and sixty *five* until determination or revocation as hereinafter mentioned

2. THE Licensees hereby agree with the Board that the Licensees and their successors in title will at all times hereafter during the continuance of this Licence :-
 - (1) Pay to the Board for the Licence and Authority hereby granted the yearly sum of *Three pounds three shillings* payable yearly in advance on the *Twenty fifth* day of *March* in every year the first payment to be a proportionate part thereof for the period from the commencement of the Licensed Works to the *Twenty fifth* day of *March* next succeeding to be made on the completion hereof
 - (2) Pay all existing and future rates taxes charges duties impositions assessments and outgoings whatsoever for the time being payable by the Board or the Licensees in respect of or charged or imposed upon the Licensed Works or the said Licence and Authority hereby granted
 - (3) Carry out the Licensed Works at their own expense in accordance with details plans sections and specifications already or hereafter first submitted to and approved by

and to the reasonable satisfaction of the Board's Engineer (hereinafter called "the Engineer") and to indemnify the Board from all costs and expense already incurred by the Licensees in constructing the Licensed Works

- (4) At all times during the construction of the Licensed Works and during any repair renewal replacement or removal or other work keep the Licensed Works and the property of the Board affected by the same properly and adequately watched supervised and lighted and provide suitable marker plates
- (5) At their own expense maintain and keep the Licensed Works in good and substantial repair and condition to the satisfaction of the Engineer
- (6) Make all necessary arrangements with obtain all necessary consents from and satisfy all claims by the owners or occupiers of adjoining lands and local or other Authority and any person who may otherwise be affected by the Licensed Work or any part thereof or the Licence and Authority hereby granted and fully and effectually indemnify the Board from and against any such claims
- (7) If and so often as the Board shall for the purpose of their undertaking require the position of the Licensed Works or any part thereof to be altered at their own expense under the supervision and to the satisfaction of the Engineer and in accordance with details sections and plans to be approved by the Engineer remove or alter the Licensed Works or such part thereof as may be affected and replace or relay the same in such other position or manner as the Board shall require and the provisions of this licence shall apply to such removal or alteration and replacement and to the Licensed Works as replaced or altered
- (8) Not do or permit to be done during the construction maintenance repair inspection renewal replacement or removal of the Licensed Works or at any time anything which may cause any obstruction or endangerment to the use of the Canal or other property of the Board or any loss or obstruction to the flow of the water in the Canal or any pollution thereof or any injury or damage to the said land or other property of the Board or delay to Navigation on the Canal
- (9) Not make or cause or permit to be made any alteration whatever in the position or otherwise of the Licensed Works or any part thereof or any addition or connection to the same without the consent in writing of the Board first had and obtained
- (10) Immediately upon the completion of the construction of the Licensed Works restore and make good at their own expense under the supervision and to the satisfaction of the Engineer any damage to property of the Board affected by the construction of the Licensed Works and shall also to the like satisfaction from time to time as often as occasion shall require make good damage caused by the maintenance user repair removal replacement removal or otherwise attributable to the existence of the Licensed Works
- (11) To make good all defects or wants of repair therein of which notice in writing shall be given by the Board within one calendar month after the giving of such





Land at Hayles

Scale: 1/2500

REPRODUCED FROM THE CENARIOS
SURVEY MAP WITH THE SANCTION OF THE
OCCUPATION OF THE STATIONARY OFFICE

Potato Crisp
Factory

GRAND UNION
CANAL

GRAND UNION
CANAL

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383 193.462

St. Andrew's
Church

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- (12) Not assign or otherwise part with the Licence hereby granted or any part thereof or any interest therein without the previous consent in writing of the Board
- (13) Construct lay maintain use repair inspect renew replace and remove the Licensed Works at their own risk and be responsible for and release and indemnify the Board and their servants and agents from and against all liability for personal injury (whether fatal or otherwise) loss or damage to property and any other loss damage costs and expenses however caused or incurred (whether by the act or neglect of the Board or other servants or agents or not) which would not have arisen but for the exercise of the rights of the parties under this Licence whether by express grant or implication
- (14) From time to time on demand pay to the Board the reasonable costs and expenses of the Board (including the fees of the Engineer) as certified by the Engineer in connection with the supervision of the construction of the Licensed Works and otherwise in connection therewith or with the carrying out of any of the provisions hereof and pay to the Board the costs of preparing this Licence and a Counterpart thereof together with the total stamp duty thereon and all such other legal costs as the Board may have from time to time and which but for the exercise of the Licence hereby granted would not have arisen

3. PROVIDED AND IT IS HEREBY ~~AGREED~~ by and between the parties hereto as follows:-

- (1) In case of default by the Licensees in respect of any of the provisions of this Licence the Board without prejudice to any other right or remedy shall be entitled themselves to carry out any of the works from time to time required to be carried out by the Licensees in compliance therewith and to make good any damage to the property of the Board caused by so doing and to carry out works which in the opinion of the Engineer are necessary to safeguard or secure the property of the Board against any damage or interference caused or apprehended by reason of any such default on the part of the Licensees and in any such case the Licensees shall pay to the Board upon demand the cost (as certified by the Engineer) of all works so carried out by the Board
- (2) If and whenever any part of the said yearly sum hereby reserved shall be in arrear and unpaid for twenty one days (whether the same shall have been legally demanded or not) or if and whenever there shall be a breach or non-observance of any of the agreements hereinbefore contained on the part of the Licensees which shall not have been remedied within twenty one days after notice in writing to the Licensees the Board may revoke this Licence but without prejudice to the rights of the Board in respect of any Antecedent breach of any of the agreements herein contained
- (3) Either party may determine this Licence at any time by giving to the other not less than six months previous notice in writing expiring at any time but such determination shall be without prejudice to the rights of either party in respect of anything previously done omitted or suffered or anything falling to be done on

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the determination hereof and upon determination the Licensees shall at their own expense remove the Licensed Works and restore the Board's property to the reasonable satisfaction of the Engineer

4. ANY notice which under the provisions of this Licence is to be given to the Board shall be deemed effectively served if addressed to the Board and served upon their Estate Officer (South East) at his office at "Willow Grange" Church Road Watford in the County of Hertford or such other person as the Board may from time to time in writing designate And any notice in writing that is to be given by the Board to the Licensees shall be deemed effectively served if sent through the post in a registered letter addressed to the Secretary of the Licensees at their Registered Office

I N W I T N E S S whereof William Harold Wells the person appointed by the Board in that behalf has hereunto set his hand and the Licensees have caused their Common Seal to be hereunto affixed the day and year first above written

(THE COMMON SEAL of BARCLAYS BANK
(LIMITED was hereunto affixed in
(the presence of:-

Director

H. E. A. Rice

Assistant
Secretary

D. H. J. Winson

FS2600



BARCLAYS

BARCLAYS BANK PLC
Group Property Division, South East Regional Office
City House, 65 Southwark Street, London, SE1 0HU
Telephone: 01-626 1567 Ext. 2383

Our Ref: MJH/JFC/WIN/B02
Your Ref: Es/Lic.225/JFWM

British Waterways Board
Willow Grange
Church Road
WATFORD WD1 3QA

12th December, 1983

Dear Sirs

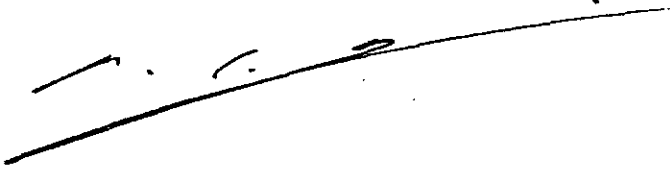
HAYES, MIDDLESEX :
STATION ROAD

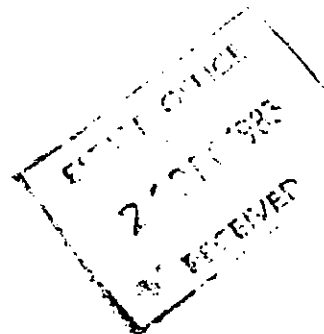
We would refer to your letter of the 18th October regarding the above agreement, and write to confirm that we wish to continue with the benefit of the facility.

We would confirm that we have obtained Management Approval to the payment of this increased Licence fee of £25.00 per annum with effect from the 1st May 1984, and we shall amend our records accordingly.

We further agree that this matter can rest on correspondence and copies of these letters will be attached to the Licence document.

Yours faithfully


M K BEADLE
STAFF SURVEYOR



Ea/Lic.225/JFM

October 18th 1983

Barclays Bank Ltd.,
Property Division Chief Office,
Britannia House,
16/17 Old Bailey,
London. EC4M 7DN

Dear Sirs,

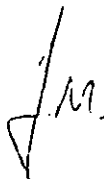
Re: Electricity Supply Main in Tow Path, Station Road, Hayes
Agreement dated November 10th 1966

I am presently revising the annual considerations payable in respect of licences which were completed a number of years ago.

Accordingly, I would advise you that an increase in the annual consideration to £25 is required with effect from May 1st 1984. The remaining terms and conditions of the agreement will continue unaltered.

Will you please confirm that you wish to continue with the benefit of the facility on the revised terms, whereupon copies of the correspondence should be appended to the licence document for purposes of record.

Yours faithfully,



p.p. J.C. Sanders.
Estate Officer(South East)

LICENCE TO DISCHARGE CLEAN SURFACE WATER

A LICENCE made the First day of May 1994 between (1) THE BRITISH WATERWAYS BOARD of Brindley House, Corner Hall, Hemel Hempstead, HP3 9YT ("the Board") and (2) The party named in Schedule 1 ("the Licence").

The Board and the Licensee hereby agree as follows :-

1. The Board sofaras it can and lawfully may hereby grant to the Licensee licence and authority to discharge clean surface water only from the land described in Schedule 2 ("the Licensee's Property") into the waterway described in Schedule 3 ("the Waterway") until this agreement shall be terminated as hereinafter provided.

2. The Licensee shall pay the fee ("the fee") referred to in Schedule 4 at the times set out in Schedule 4.

3. The Licensee shall :

(a) pay all existing and future rates taxes including any Value Added Tax (at the rate appropriate at the time of supply) charges duties impositions assessments and outgoings whatsoever for the time being payable by the Board or the Licensee in respect of or charge or imposed upon (i) the licence and authority hereby granted and (ii) the Licensee's fixtures fittings chattels plant equipment and works of construction used or made by the Licensee in or for the exercise of the said licence and authority ("the Works")

(b) use maintain repair remove or replace the Works at the Licensee's own risk and be responsible for and release and indemnify the Board and their servants and agents from and against all liability for personal injury (whether fatal or otherwise) loss of or damage to property and any other loss damage costs and expenses however caused or incurred (except by the act of neglect of the Board or their servants or agents) which would not have arisen but for the exercise of the rights of the parties under this Licence whether by express grant or implication

(c) use the Works only for the drainage of clean surface water from the Licensee's Property only and not permit any oil silt foul deleterious objectionable or solid matter to pass in the Waterway through the Works and observe and comply at all times with the provisions of the Water Act 1989 or any statutory amendment or modification thereof and all other statutes bye-laws regulations or requirements of any competent water authority or other authority

(d) not do or permit to be done during the licence anything (including but not limited to any use alteration maintenance repair or removal of the Works) which may cause any interference with navigation upon or endangerment to the use of the Waterway or any obstruction or delay to traffic on or the users of the Waterway or to the flow or loss or pollution of the water in the Waterway or any injury or damage to any other property of the Board

(e) on the determination of this licence to remove the works and restore the Board's property affected by the Works or their removal to its former condition and in default of the Licensee doing so within seven days of determination to permit the Board to do so and to pay the Board on demand all costs incurred by the Board in removing the Works and restoring the site (including supervision costs of its Managers or Engineers)

4. It is Agreed

(a) If the fee or any part of it shall remain unpaid for 21 days after becoming due or if there shall be any breach of any of the Licensee's obligations contained herein this Licence may be determined at any time by the Board by giving written notice to the Licensee but without prejudice to the rights and remedies of the Board under this deed

(b) This Licence may be determined at any time by either party by giving 6 month's written notice to the other but without prejudice to the rights and remedies of the Board under this Licence

(c) This Licence shall be personal to the Licensee and shall not be capable of being assigned to a third party

(d) The Board shall have the right to stop up the discharge of surface water if contaminated without notice to the Licensee whereupon (1) this Licence shall determine immediately and (2) the Board shall not be liable for such stopping up or determination to the Licensee who shall indemnify the Board against ant such liability to any other person and the Licensee shall reimburse the Board for all their costs (including supervision costs of its Managers or Engineers) of or incidental to such stopping up

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(e) Any notice required to be given by either of the parties under this Licence may be sent by post to the address of the addressee as set out in this Licence or to such other address as the addressee may from time to time have notified for this purpose. Communications sent by post shall be deemed to have been received forty-eight hours after posting. In proving service by post it shall only be necessary to prove that the communication was contained in an envelope which was duly addressed and posted in accordance with this clause

SCHEDULE 1: Licensee's Name and Address:

BARCLAYS BANK PLC
Property Services Department
250 Euston Road
London
NW1 2PZ

SCHEDULE 2: Licensee's Property

BARCLAYS BANK PLC
Station Road
Hayes

6" SWD STATION RD HAYES

SCHEDULE 3: The Waterway

Grand Union

SCHEDULE 4: The Fee

BAND NUMBER 3

AMOUNT £ 160.00

1. £ 160.00 per annum effective from date of this agreement or such greater amount as the Board may from time to time notify to the Licensee according to its then current charging structure and Value Added Tax (if any) thereon

2. Payable six monthly in advance on the First day of April and the First day of October in each year a proportionate payment based on the annual amount calculated on a daily basis to be paid on the date hereof for the period from the date hereof to the next payment date and a similarly apportioned amount to be due in the case of termination in respect of the period from the last regular payment date before termination to termination

SIGNED

for and on behalf of the Board

Date

SIGNED

for and on behalf of the Licensee

Date

8.3.94

Agreement Number 616
Site Number 105
Property Number 105

Appendix C



Simulation Settings

Rainfall Methodology	FSR	Drain Down Time (mins)	240
FSR Region	England and Wales	Additional Storage (m³/ha)	0.0
M5-60 (mm)	20.000	Check Discharge Rate(s)	✓
Ratio-R	0.400	1 year (l/s)	0.1
Summer CV	1.000	2 year (l/s)	0.1
Winter CV	1.000	30 year (l/s)	0.2
Analysis Speed	Normal	100 year (l/s)	0.2
Skip Steady State	x	Check Discharge Volume	x

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
2	0	0	0
30	0	0	0
30	40	0	0
100	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)	0.054	Betterment (%)	0
SAAR (mm)	616	QBar	0.1
Soil Index	2	Q 1 year (l/s)	0.1
SPR	0.30	Q 2 year (l/s)	0.1
Region	6	Q 30 year (l/s)	0.2
Growth Factor 1 year	0.85	Q 100 year (l/s)	0.2
Growth Factor 2 year	0.88		



Simulation Settings

Rainfall Methodology	FSR	Drain Down Time (mins)	240
FSR Region	England and Wales	Additional Storage (m³/ha)	0.0
M5-60 (mm)	20.000	Check Discharge Rate(s)	✓
Ratio-R	0.400	1 year (l/s)	7.3
Summer CV	1.000	2 year (l/s)	9.4
Winter CV	1.000	30 year (l/s)	17.4
Analysis Speed	Normal	100 year (l/s)	22.1
Skip Steady State	x	Check Discharge Volume	x

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
2	0	0	0
30	0	0	0
30	40	0	0
100	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Brownfield	Betterment (%)	0
Brownfield Method	MRM	Q 1 year (l/s)	7.3
Contributing Area (ha)	0.040	Q 2 year (l/s)	9.4
PIMP (%)	100	Q 30 year (l/s)	17.4
CV	1.000	Q 100 year (l/s)	22.1
Time of Concentration (mins)	6.00		