

Elm Court, Cholmeley Park, London

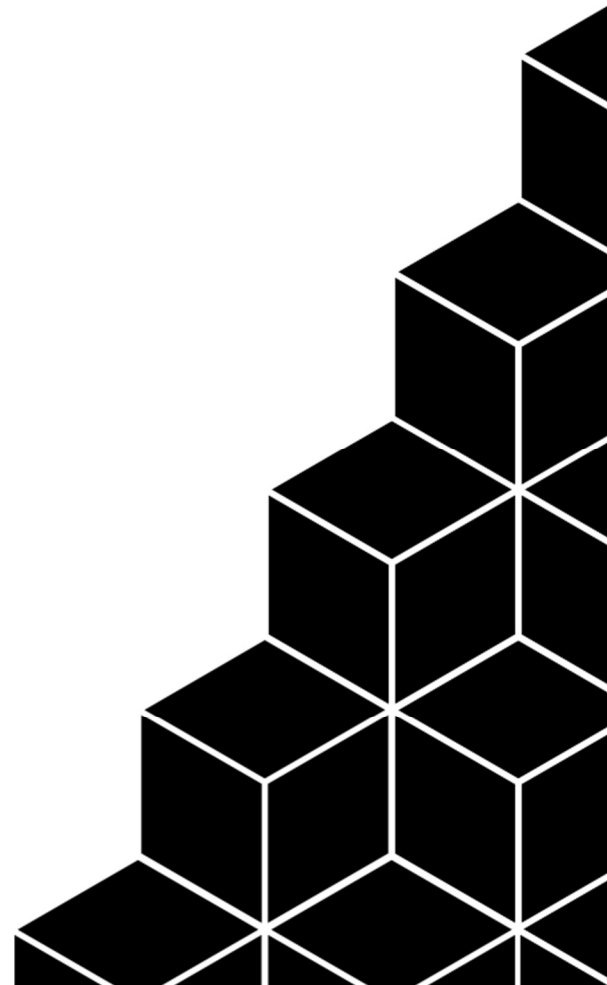
Drainage Strategy

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Elm Court, Cholmeley Park, London

Drainage Strategy

QUALITY CONTROL

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P02	22/12/25	AP	CR	CR	

CONTENTS

Quality Control	1
Contents	2
Executive Summary.....	3
Introduction.....	4
Existing Site.....	5
Site Location	5
Geology and Hydrogeology	5
Existing Drainage	6
Existing Public Sewer Network	6
Existing Onsite Private Sewers	6
Proposed Drainage Strategy	7
Development Proposals	7
Foul Water Drainage.....	7
Drainage Design Parameters	7
Proposed Foul Water Drainage Strategy.....	7
Surface Water Drainage	7
Drainage Design Parameters	7
Surface Water Disposal Hierarchy.....	8
Proposed Surface Water Drainage Strategy.....	8
Critical Drainage Area.....	9
Overland Flow and Exceedance.....	9
Offsite Impact.....	10
Sustainable Drainage Solutions.....	11
Permeable Paving.....	11
SuDS Pod	12
Drainage Maintenance Strategy.....	13
Manholes and Inspection Chambers	13
Catch Pit Chambers.....	14
Gullies and Drainage Channels	15
SuDS Pod	16
Permeable Pavements.....	17

EXECUTIVE SUMMARY

This report has been prepared to support the planning application for the development of Elm Court, London. The project entails the vertical extension of an existing residential building, to create additional residential units at basement and roof level.

The purpose of this document is to establish the site constraints and develop a foul and surface water drainage strategy in accordance with local and national planning policy.

As no changes are proposed to the building footprint and no significant changes are proposed to the external hardstanding areas, the opportunities for the inclusion of SuDS are limited.

The existing building is understood to discharge unrestricted to the offsite public sewers. A thorough review of possible SuDS features has been undertaken with a view to including SuDS to decrease peak discharge rates as well as providing rainwater re-use and biodiversity benefits.

The following sustainable drainage techniques have been utilised across the development:

- SuDS pods (units that provide flow control, attenuation, biodiversity and rainwater harvesting)
- Permeable paving ,
- Discharging footpaths to planted areas where feasible

The existing building rainwater down points will be intercepted and routed into SuDS pods. These are planted rain garden units that contain a flow control device and water storage within the unit itself. Collected rainwater can also be re-used. These units result in a significant reduction in peak discharge from the existing building, whilst also providing biodiversity and water re-use benefits. They are designed to accommodate a 1 in 100 year storm with a 40% allowance for climate change.

Small areas of paving are proposed at ground floor/basement level which are required to provide basement level access. These areas will be discharged to soft landscape where possible, where this is not possible then permeable paving will be provided. Surface water will be collected from the permeable paving sub base and pass through a flow control device to restrict the discharge rate. Water attenuation storage is provided in the pavement sub base.

The proposed scheme therefore results in a significant betterment relative to existing, by combining a variety of SuDS techniques.

The existing dedicated foul water drainage network is proposed to be reused.

These development proposals are in line with planning policy and will reduce the surface water discharge rate from site. This will benefit the site and the wider surrounding area.

INTRODUCTION

Cube Consulting Engineers have been appointed to undertake this Drainage Strategy for the Elm Court Development, London. The purpose of this document is to support the planning application.

This Drainage Strategy has been produced in line with the requirements of the National Planning Policy Framework (NPPF) and the London Borough of Haringey planning guidance.

This Drainage Strategy makes partial use of third party information and may contain Google maps, Environment Agency, BGS and Defra copyright information.

EXISTING SITE

SITE LOCATION

The proposed site is located in North London, off Cholmeley Park in the London Borough of Haringey. The development site is the existing residential building Elm Court, which is broken up into flats. The building is located off Cholmeley Park road, which is located to the west at the front elevation. The building footprint is shown bounded red in the figure below. The surrounding areas outside this red line are unaffected by the proposals and are therefore not considered in this drainage strategy.

The site is centred at:

- Elm Court, Cholmeley Park, London, N6 5EJ
- National Grid Reference: TQ 28837 87483
- Easting, Northing: 528837 , 187483



Figure 1 - Proposed Site

GEOLOGY AND HYDROGEOLOGY

Elm Court lies on the Highgate hillside, where the ground is underlain mainly by the London Clay Formation—a stiff, shrink-swell clay—likely including its upper, slightly sandier Claygate Beds at this elevation. Near the surface, the clay is typically overlain by a thin, variable layer of made ground and slope deposits ("head") made of clay, sand, and gravel derived from the surrounding hill. This combination means shallow soils can be mixed and irregular, but competent London Clay is encountered a few metres down, sometimes with perched groundwater in the sandier horizons. Overall, it is classic Highgate ground: variable near the surface, but predominantly London Clay beneath.

The site is located in Flood Zone 1, with a low risk of flooding from all sources. Refer to the site specific Flood Risk Assessment for further details.

EXISTING DRAINAGE

Existing Public Sewer Network

The public sewer records have been obtained from Thames Water and an extract is provided in Figure 2. Refer to Appendix A for further details. It can be seen that there are dedicated foul and surface water public sewers located in Cholmeley Park which are understood to serve the site. No public sewers cross the development or will be impacted by the proposed works.



Figure 2 – Extract of Public Sewer Records

Existing Onsite Private Sewers

The exact location of the onsite private drainage network is unknown and will be surveyed in due course. The existing block of flats is understood to be served by onsite private below ground foul and surface water drainage networks which are assumed to discharge unrestricted to the offsite public sewers in Cholmeley Park.

PROPOSED DRAINAGE STRATEGY

DEVELOPMENT PROPOSALS

The existing Elm Court building will be retained and its existing footprint unaltered. The building will be extended vertically through the addition of basement and rooftop extensions to the existing building. These extensions will accommodate additional residential units.

Refer to the drainage layout drawing in Appendix B for the site layout.

FOUL WATER DRAINAGE

Drainage Design Parameters

The below ground foul water drainage system will be designed in accordance with Design and Construction Guidance for foul and surface water sewers or "the Code", BS EN 752 Parts 3 & 4, and Building Regulations Approved Document H.

Proposed Foul Water Drainage Strategy

The existing above ground drainage will be reused to serve the rooftop and basement extensions. If required, localised pumping will be employed in basement areas. Limited alterations or additions are therefore expected to be required to the existing below ground drainage network, with new drainage being constructed above ground and connected to the existing below ground network.

Additional local below ground drainage connections may be required from the basement level, which will be designed at detailed design stage.

SURFACE WATER DRAINAGE

Drainage Design Parameters

The below ground surface water drainage system will be designed in accordance with local policy, local Sustainable Drainage System (SuDS) guidance, national standards and best practice. Industry standards along with the Design and Construction Guidance for foul and surface water sewers or "the Code" dictate that for below ground surface water systems:

- The system should not surcharge for a 1 in 2 year storm event;
- The system should not flood any part of the site in a 1 in 30 year storm event; and
- Controlled flooding of the site is permitted in a 1 in 100 year storm event including a climate change allowance provided the flood water is contained within the site and does not affect the safe ingress and egress from the site.

The Environment Agency has completed an assessment of the impacts of Climate Change on peak rainfall intensity for small catchments (less than 5km²). These have been categorised by region across England; the climate change allowances for the site are summarised in Table 1 and are sourced EA guidance 'Flood Risk Assessments: Climate Change allowances' issued on 10th May 2022 with subsequent revisions.

EPOCH	SCENARIO	TOTAL POTENTIAL CHANGE FOR '2050S' (UP TO 2060)	TOTAL POTENTIAL CHANGE FOR '2070S' (2061 TO 2125)
30-year rainfall event	Upper End	35%	35%
	Central	20%	35%
100-year rainfall event	Upper End	40%	40%
	Central	20%	25%

Table 1: Peak rainfall intensity climate change allowances

Surface Water Disposal Hierarchy

In accordance with Building Regulations Approved Document H, all drainage strategies should manage surface water discharge based on the following hierarchy:

1. Infiltration or a soakaway on site;
2. Discharge to a watercourse; or
3. Discharge to a sewer

Infiltration

The Elm Court site on Cholmeley Park lies on the Highgate ridge, where near-surface ground typically comprises Claygate Member sandy/silty clays over stiff London Clay, with occasional capping of Bagshot sands at higher elevations. Although the sandy units can provide minor zones of permeability, they are thin and quickly underlain by low-permeability London Clay, which severely restricts vertical infiltration. As a result, natural infiltration rates are expected to be very low, with a high likelihood of perched groundwater or seepage at sand-clay boundaries. These conditions mean that soakaways are generally not viable for effective drainage on this part of Highgate: they tend to fill rapidly, fail to discharge, or create localised waterlogging or stability issues on the slope.

Infiltration is not considered viable based on expected ground conditions.

Watercourse

The closest open watercourse to the site is Mutton Brook, located approximately 2km to the north west. It is therefore not feasible to connect to a watercourse.

Sewer

The Thames Water asset records indicate that there are dedicated public foul and surface water sewers serving the site, into which the existing building is understood to discharge.

Proposed Surface Water Drainage Strategy

The proposals involve the vertical extension of the existing building to include basement and rooftop extensions. No changes are proposed to the building footprint and no significant changes to the external hardstanding areas are proposed. The opportunities for the inclusion of SuDS are therefore limited.

The existing building is understood to discharge unrestricted to the offsite public sewers. A thorough review of possible SuDS features has been undertaken with a view to including SuDS where feasible to decrease peak discharge rates as well as providing rainwater re-use and biodiversity benefits.

The following sustainable drainage techniques have been utilised across the development:

- SuDS pods (units that provide flow control, attenuation, biodiversity and rainwater harvesting)
- Permeable paving
- Discharging footpaths to planted areas where feasible

The existing building rainwater down points will be intercepted and routed into SuDS pods. These are planted rain garden units that contain a flow control device and water storage within the unit itself. Collected rainwater can also be re-used. These units result in a significant reduction in peak discharge from the existing building, whilst also providing biodiversity and water re-use benefits. They are designed to accommodate a 1 in 100 year storm with a 40% allowance for climate change. The restricted discharge rate provided by each SuDS pod is detailed in the table below. This is also compared to the existing discharge rate.

RETURN PERIOD STORM	CLIMATE CHANGE ALLOWANCE	EXISTING MAX DISCHARGE RATE (CRITICAL STORM)	PROPOSED AVERAGE MAX DISCHARGE RATE (ALL STORMS)	REDUCTION IN AVERAGE MAX DISCHARGE RATE (ALL STORMS)	PROPOSED MAX DISCHARGE RATE (CRITICAL STORM)
1 Year	0%	1.1 l/s	0.21 l/s	91%	0.3 l/s
30 Year	0%	3 l/s	0.59 l/s	90%	1.6 l/s
100 Year	40%	5.4 l/s	1.04 l/s	91%	2.9 l/s

Table 2: Existing and proposed discharge rate from each SuDS Pod area

Small areas of paving are proposed at ground floor/basement level which are required to provide basement level access. These areas will be discharged to soft landscape where possible, where this is not possible then permeable paving will be provided. Surface water will be collected from the permeable paving sub base which will intercept and store rainwater prior to outfall to the existing onsite drainage network.

The proposed scheme therefore results in a significant betterment relative to existing, by combining a variety of SuDS techniques.

Given the site constraints highlighted, and that no significant changes are proposed to the building footprint, then achieving a reduction of existing flows down to the greenfield runoff rate for the site is not feasible. By incorporation of SuDS techniques where feasible then it has been demonstrated that a significant reduction in discharge rates has been achieved. As shown in Table 2, the average max discharge rate for all storms up to and including the 1 in 100 year storm with a 40% climate change allowance is 90-91%.

The proposals are therefore in accordance with Policy DM25 which requires minor developments to aim for greenfield runoff rates and, as a minimum, to achieve a 50% reduction in runoff compared to the existing situation where greenfield is not feasible.

Refer to the drainage layout drawing in Appendix B for further details.

The proposed drainage network is designed not to flood for all storms up to and including the 1 in 100 year return period storm, with an allowance of 40% for climate change.

Critical Drainage Area

The site is in a Critical Drainage Area as defined by the London Borough of Haringey. This does not necessarily mean that the site itself is at high risk of flooding, as the site specific flood risk issues should be considered. A site specific Flood Risk Assessment has been undertaken which found the risk of flooding from all sources to be low.

As demonstrated in this report, it is proposed to significantly reduce the peak surface water discharge rate from the site relative to existing, which will result in decreased risk to both onsite and to downstream properties, by reducing the load on the existing public drainage network. The proposals therefore comply with the requirements of Policy DM26, reducing flood risk within the Critical Drainage Area.

OVERLAND FLOW AND EXCEEDANCE

In the unlikely event of a failure of the onsite drainage network or should an exceedance storm event occur then surface water flows will be directed away from the building thresholds by the site levels. This overland flow will then follow the natural fall of the site from south to north, away from the buildings and towards the soft landscaping and parking areas to the north of the site.

Refer to the drainage drawing in Appendix B for illustration of the exceedance flow paths.

OFFSITE IMPACT

The proposed surface water drainage strategy outlined in this document demonstrates that the proposed drainage network included in the development will manage all surface water run off during events up to and including the 100 year return period storm, including the upper end allowance for climate change. The discharge from the site will be reduced significantly from the existing case.

It is understood that the site currently discharges at an unrestricted rate imparting significant hydraulic load to the surrounding infrastructure, the proposals therefore represent significant betterment relative to existing.

SUSTAINABLE DRAINAGE SOLUTIONS

PERMEABLE PAVING

Pervious pavements provide a hardstanding area suitable for pedestrian and/or vehicular traffic. The surface allows rainwater to percolate down between the paving block units which have been designed with nibs to provide a rigid finish while providing adequate gaps for infiltration. The sub-base of the permeable paving is graded to include no fines which provides a void ratio for temporary water storage. Permeable paving can be provided with a geomembrane below the system to create a sealed storage volume or a permeable geotextile can be used below the system to allow for infiltration into the ground.

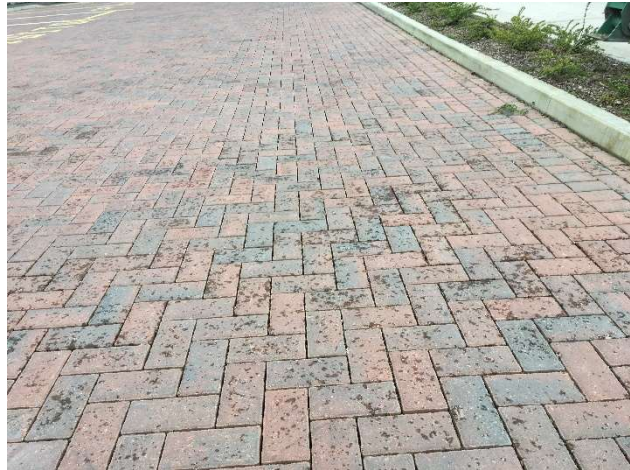
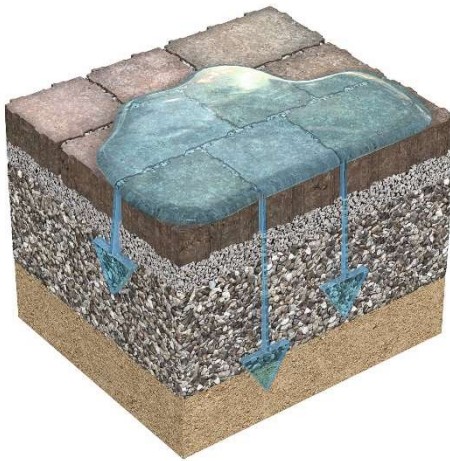


Image courtesy of Marshalls

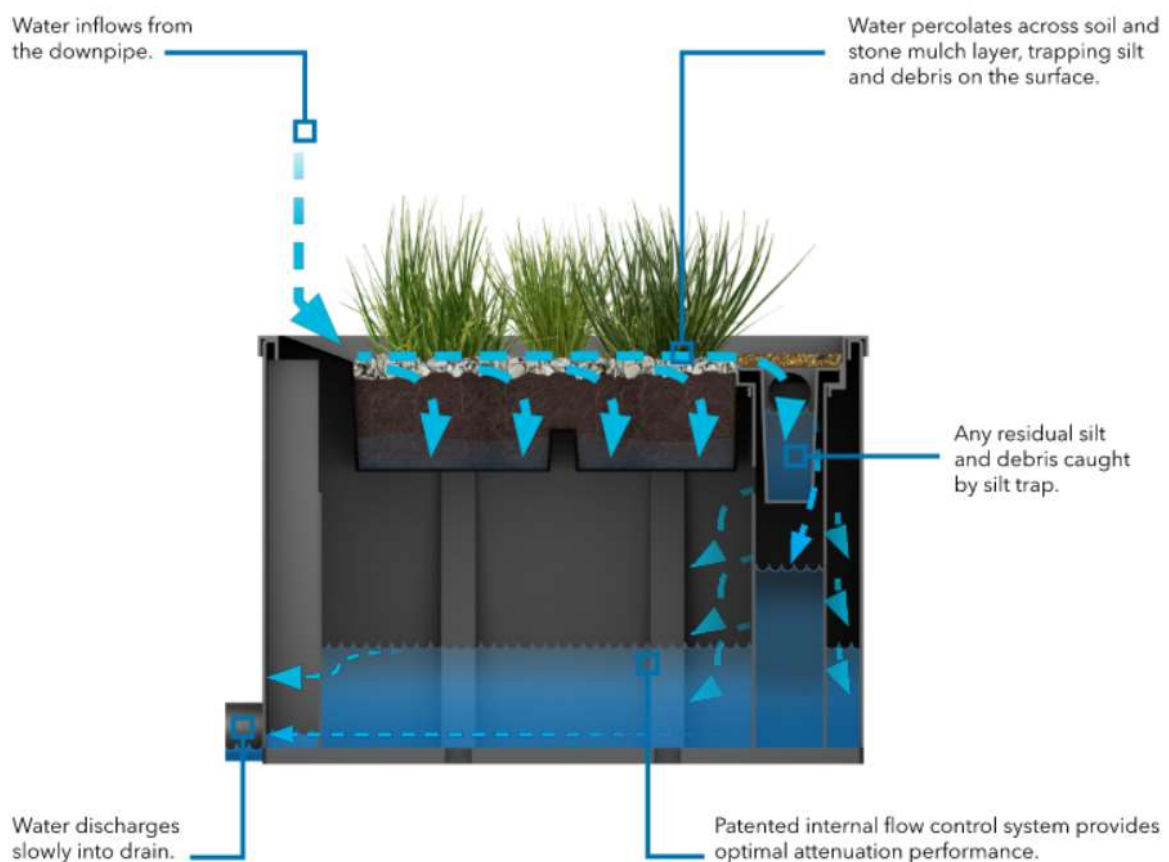
- | | |
|-----------------------|---|
| ADVANTAGES: | Good storage volume ratio,
can be used under public realm areas,
can be used below traffic areas,
can be used for infiltration or as a lined storage only system,
reduction of piped drainage network required,
suitable for high density development,
high pollutant removal |
| DISADVANTAGES: | High cost,
not efficient on steep slopes,
may be damaged by heavy vehicle loads or channelised traffic,
risk of long term clogging due to poor maintenance. |
| WATER QUALITY: | High removal of suspended solids, heavy metals and hydrocarbons. |

SUDS POD

On plot attenuation involves managing stormwater directly at its source, reducing the volume and speed of water entering drainage systems. MicroSuDS, such as above-ground planters, play a key role by slowing down and filtering rainwater before it reaches sewers. These systems offer multiple benefits, including reducing the risk of flooding, lowering pressure on public drainage, and enhancing urban green spaces. By integrating stormwater management into individual properties, microSuDS provide a sustainable, localised solution that supports wider environmental resilience and water quality improvement efforts.

A SuDSPod improves on-plot attenuation, reducing peak flow rates by up to 76% resulting in reduction of pressure on existing sewers. The unit manages stormwater in 98% of rain events, and can be retrofitted to existing properties. The SuDSPod unit adheres to Sustainable Drainage Systems (SuDS) principles, enhancing flood resilience, water quality, and urban sustainability.

How SuDSPod works



ADVANTAGES:

- Reduces peak discharge rates
- Can include rainwater harvesting
- Good removal capability of atmospherically deposited urban pollutants
- Can be retrofitted to existing buildings
- Ecological, aesthetic and amenity benefits

DISADVANTAGES: Maintenance of vegetation,

WATER QUALITY: Improvements in water quality through treatment processes within the soil and root uptake zone, which filter airborne pollutants entrained within rainwater.

DRAINAGE MAINTENANCE STRATEGY

The following drainage maintenance and management strategy has been produced in accordance with the SuDS Manual, best practice and manufactures guidance. This is not intended to be an exhaustive list but outline guidance for the recommended requirements which are to be reviewed and updated based on the specific site requirements. It is expected that the maintenance for the drainage of the proposed development will be undertaken by the residential management company and will be suitably qualified to undertake the required maintenance.

This schedule should be read in accordance with the manufacturer's guidance and the SuDS Manual.

MANHOLES AND INSPECTION CHAMBERS

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY
Regular Maintenance	Inspect chambers (from ground level) to ensure no build-up of water, debris or sediments are occurring in the chamber. If required clean or take remedial action. Do not attempt to enter chambers, refer to remedial actions.	6 monthly
	Any public manholes are the responsibility of the sewerage undertaker and may require permissions to access or lift covers. Maintenance/monitoring of these chamber is not required, should any issues be identified these should be highlighted to the sewerage undertaker.	As deemed necessary by asset owner
Remedial actions	Call out to drainage maintenance company for bespoke advice. Entering manhole chambers is a dangerous task as they are a confined space with potential toxic gas and/or low oxygen environments. Any such, cleaning and repairs should always be handled by a qualified engineer with experience working in confined spaces. Do not attempt to enter inspection chambers.	As required
Monitoring	Visually inspect chambers (from ground level) to monitor any build-up of water, debris or sediments occurring in the chamber.	6 monthly or after large storms

Table 3: Operation and maintenance requirements for manhole and inspection chambers

CATCH PIT CHAMBERS

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY
Regular Maintenance	Inspect chambers (from ground level) to ensure no build-up of debris, floating waste, grease, etc. within the sump / chamber. If required, take remedial action	6 monthly or after large storms
	Empty and clean catchpits using water jetting and vacuumation where possible or digging out catchpits by hand only when unavoidable	Annually or more frequent if required.
	Any public manholes are the responsibility of the sewerage undertaker and may require permissions to access or lift covers. Maintenance/monitoring of these chamber is not required, should any issues be identified these should be highlighted to the sewerage undertaker.	As deemed necessary by asset owner
Remedial actions	Call out to drainage maintenance company for bespoke advice. Entering manhole chambers is a dangerous task as they are a confined space with potential toxic gas and/or low oxygen environments. Any such, cleaning and repairs should always be handled by a qualified engineer with experience working in confined spaces. Do not attempt to enter inspection chambers.	As required
Monitoring	Visually inspect catch pit chambers (from ground level) to monitor any build-up of oils, debris or sediments occurring in the chamber.	6 monthly or after large storms

Table 4: Operation and maintenance requirements for catch pit chambers

GULLIES AND DRAINAGE CHANNELS

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY
Regular Maintenance	Remove debris and litter (including leaf litter) from the catchment surface (where it may cause risks to performance) especially around drainage units Cleaning of gutters and any filters on downpipes	Once a year, after autumn leaf fall, or increased frequency as required, based on site-specific observation of clogging or manufacturer's recommendations
	Inspections will be frequent and regular, depending on local conditions by Site management. Inspections will include gratings; covers including their locking bolts; sumps and sump buckets; exposed concrete surround and adjacent paving.	
	All silt buckets and sumps will be cleaned out replaced back into the units ensuring they are correctly fitted Vacuumation should be used where required on large units where silt buckets are not present to avoid silt or other detritus entering the drainage network. Channels/Gullies will be flushed with water or high pressure jetting (no boiling water or cleaning agent will be used).	
Remedial actions	All gully/channel surfaces, gratings and joints will be checked and repaired as necessary.	As required
Monitoring	Visually inspect catchment surface, gullies, channels and sumps to monitor any build-up of water, debris or sediments.	6 monthly, or after large storm

Table 5: Operation and maintenance requirements for gullies and drainage channels

SUDS POD

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY
Regular inspections	Inspect all components including soil substrate, vegetation, drains, irrigation systems (if applicable), membranes and structure for proper operation, integrity of waterproofing and structural stability	Annually and after severe storms
	Inspect soil substrate for evidence of erosion channels and identify any sediment sources	Annually and after severe storms
	Inspect drain inlets to ensure unrestricted runoff	Annually and after severe storms
	Inspect underside of unit for evidence of leakage	Annually and after severe storms
Regular Maintenance	Remove debris and litter to prevent clogging of inlet drains and interference with plant growth	Six monthly and annually or as required
	During establishment (ie year one), replace dead plants as required	Monthly (but usually the responsibility of the manufacturer)
	Post establishment, replace dead plants as required	Annually (in autumn)
	Remove fallen leaves and debris from deciduous plant foliage	Six monthly or as required
	Remove nuisance and invasive vegetation, including weeds	Six monthly or as required
Remedial actions	If erosion channels are evident, these should be stabilised with extra soil substrate similar to the original material, and sources of erosion damage should be identified and controlled	As required

Table 6: Operation and maintenance requirements for green roofs (from SuDS Manual)

PERMEABLE PAVEMENTS

MAINTENANCE SCHEDULE	REQUIRED ACTION	TYPICAL FREQUENCY
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observation of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this is the most likely to collect the most sediment
Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
Remedial actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm of the level of the paving	As required
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required take remedial action	Three-monthly, 48h after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Table 7: Operation and maintenance requirements for pervious pavements (from the SuDS Manual)

Appendix A

Thames Water Asset Records

Cube Consulting Engineers
1 FORE STREET AVENUE,
LONDON
EC2Y 9DT

Search address supplied Flat 1
Elm Court
Cholmeley Park
London
N6 5EJ

Your reference Elm Court

Our reference ALS/ALS Standard/2025_5257286

Search date 24 November 2025

Keeping you up-to-date

Notification of price changes

We're changing our report prices from 4th June 2025. The price will increase by 3.5% based on Retail Price Index (RPI).

Find our new prices on our website thameswater.co.uk/property-searches

Any Questions? We're happy to talk through the changes with you – give our Property Searches team a call on 0800 009 4540 .



Thames Water Utilities Ltd
Property Searches,
Clearwater Court, Vastern Road, Reading RG1 8DB



property.searches@thameswater.co.uk
thameswater.co.uk/propertysearches



0800 009 4540

Search address supplied: Flat 1, Elm Court, Cholmeley Park, London, N6 5EJ

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 and 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 contact details below:

Thames Water Utilities Ltd
Property Searches
Clearwater Court
Vastern Road
Reading
RG1 8DB

Email: property.searches@thameswater.co.uk

Web: thameswater.co.uk/propertysearches

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. The public sewer map 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.

Enclosed is a map showing the approximate positions of our water mains and associated apparatus. Please note that records are not kept of the positions of individual domestic supplies. For your information, there will be a pressure of at least 10m head at the outside stop valve. If you would like to know the static pressure, please contact our Customer Centre on 0800 316 9800. The Customer Centre can also arrange for a full flow and pressure test to be carried out for a fee.



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.

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. You can do this by emailing customer.feedback@thameswater.co.uk with the email subject header 'Enquiry – TWOSA', along with details of the request.

If you have any questions regarding sewer connections, budget estimates, diversions or building over 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

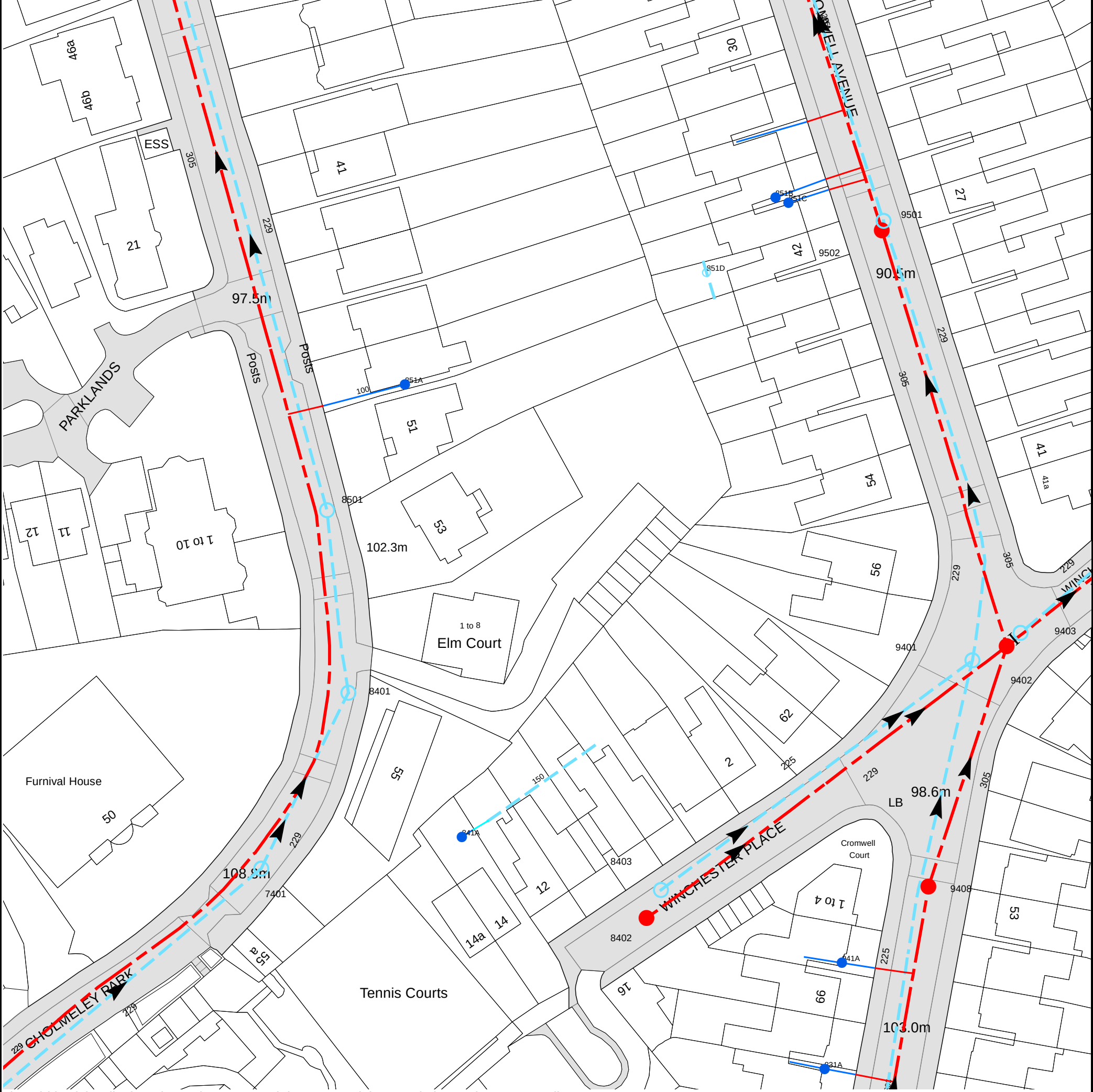
Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Clean Water queries

Should you require any advice concerning clean water 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 width of the displayed area is 200 m and the centre of the map is located at OS coordinates 528847,187495
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.

Based on the Ordnance Survey Map (2024) with the Sanction of the controller of H.M. Stationery Office, License no. AC0000849556 Crown Copyright Reserved.

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
7401	108.02	106.29
8501	101.39	99.38
8401	104.69	102.63
851A	n/a	n/a
841A	n/a	n/a
8402	102.84	100
8403	n/a	n/a
851D	n/a	n/a
851B	n/a	n/a
851C	n/a	n/a
831A	n/a	n/a
941A	n/a	n/a
9502	90.25	85.76
9501	90.15	87.8
9408	100.1	95.33
9401	95.83	92.96
9402	95.83	90.22
9403	95.27	92.38
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.

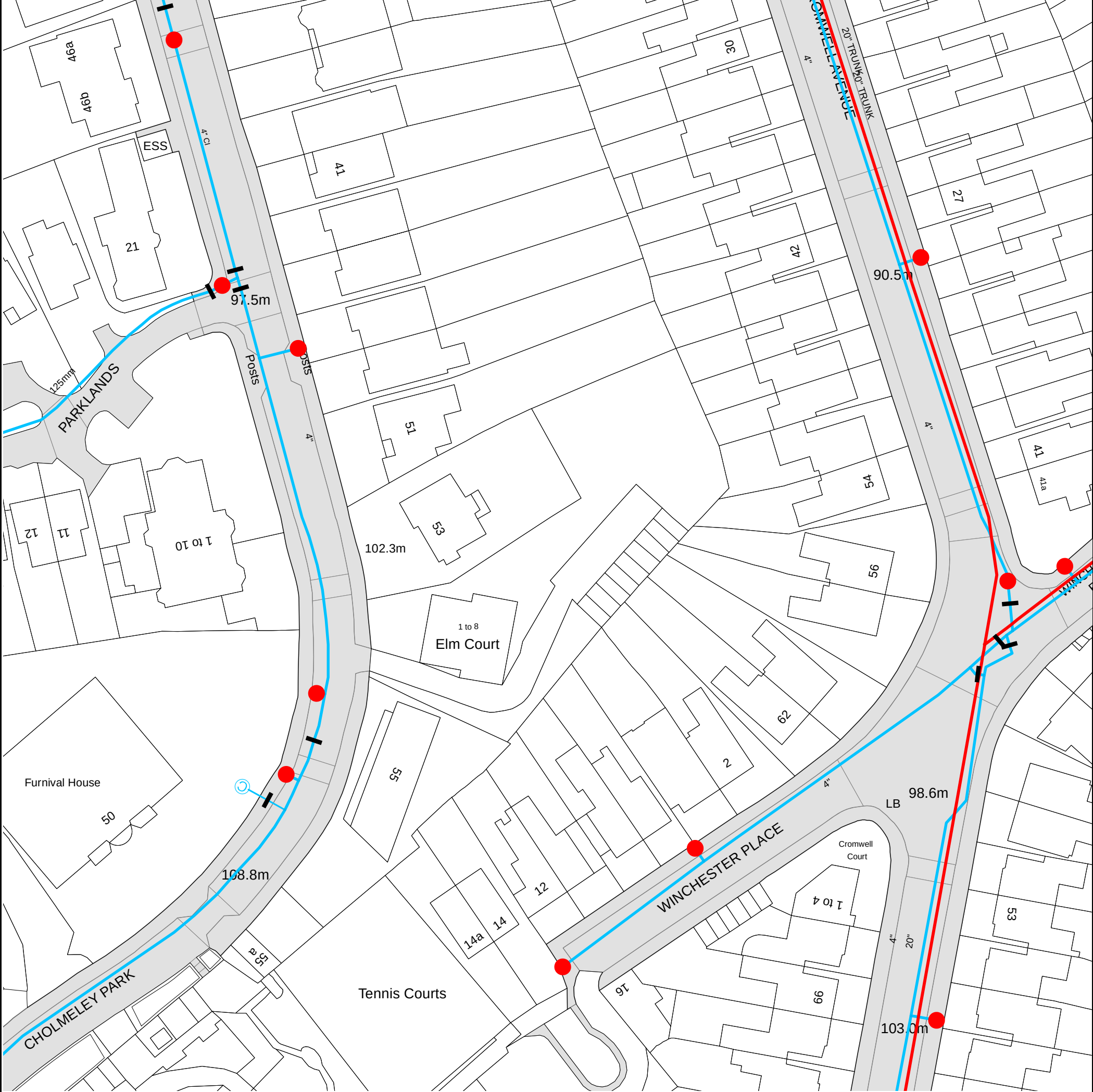
	Agreement
	Chamber
	Operational Site

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.



The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 528847, 187495.
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.

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Asset Location Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

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

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

Valves

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

Hydrants

- Single Hydrant

Meters

- Meter

End Items

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

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

Operational Sites

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

Other Symbols

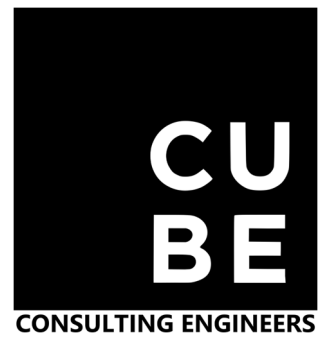
- Data Logger
- Casement:** Ducts may contain high voltage cables. Please check with Thames Water.

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

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

Appendix B

Drainage Layout Drawing



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