



FOUL WATER & UTILITIES STATEMENT

PROJECT:

Independence House, Richmond

PROJECT NUMBER:

P2738

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KENT (HQ)

Unit 3 Grove Dairy Farm Business Centre | Bobbing Hill | Bobbing | Sittingbourne | Kent | ME9 8NY

LONDON

One Bridge Wharf | 56 Caledonian Road | London | N1 9UU



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1.0 INTRODUCTION

QuinnRoss Energy was commissioned to investigate the provision of Foul water drainage system to accompany planning application for the proposed development at Independence House, 84 Lower Mortlake Rd, Richmond TW9. This report will summarise the existing foul water drainage system relevant to the Independence House and identify the potential constraints presented to the proposed development within the vicinity and how the proposed development may be served.

2.0 Richmond local plan

Applicants for major development proposals (both residential as well as non-residential) are required to **provide evidence that adequate capacity exists in the public sewerage and water supply network to serve their development** in the form of written confirmation. This statement should be submitted as part of the planning application.

The development is proposed to convert existing office (class B) space into 21 residential units with plant room, refuse, gym, cycle store and carpark spaces.

The drainage statement details the design methodology and assumptions that have been considered when determining the most effective drainage solution. The effectiveness of the drainage layout plan is based on the most cost-efficient drainage network which achieves the requirements of Thames Water Assets (TWA).

The site is located on London, in the borough of Richmond Upon Thames. See image below:

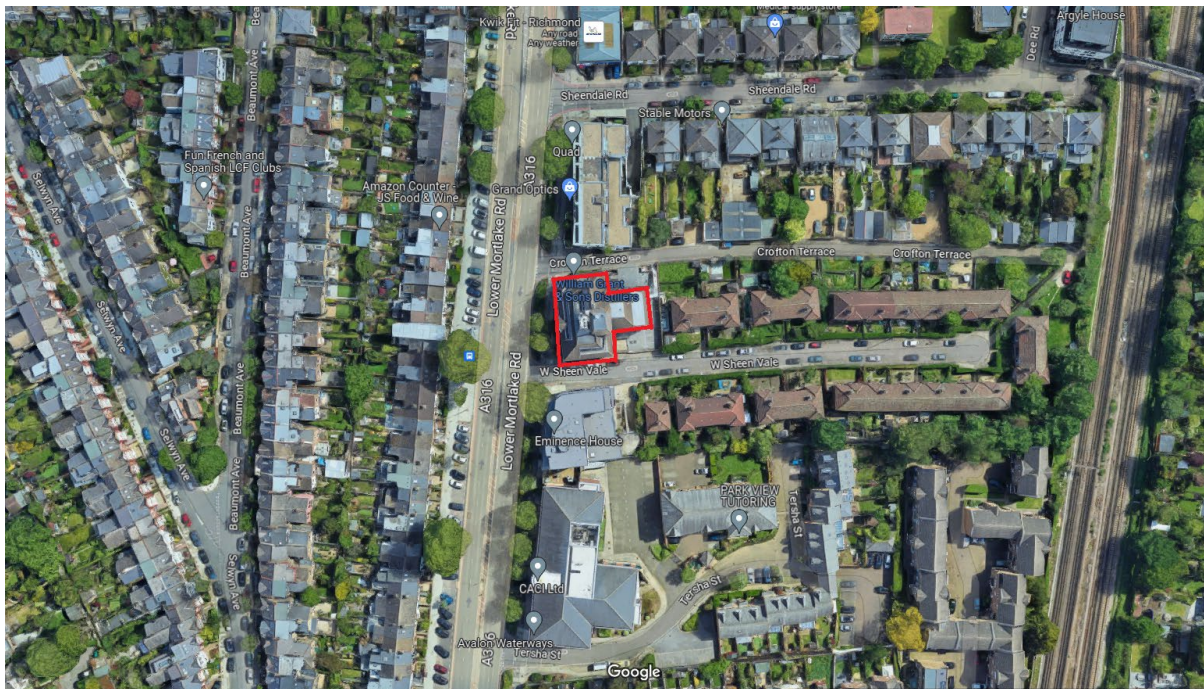


Figure 01: Google Map image of site

3.0 EXISTING FOUL WATER DRAINAGE INFRASTRUCTURE

Description of System

The existing drainage system serving the premises are separate foul and surface water.

Ground Floor - The foul water drainage system collects the discharge from the ground and upper floor levels of the building as well as the external car park sump (PC2) before discharging to the TWA foul water sewer in West Sheen Vale via a 150dia vitrified clay (VC) sewer outfall from MH3. The FW drainage system also collects the discharge from the basement car park oil interceptor.

The surface water drainage system collects the discharge from the building roofs and hard standing areas before discharging to the TWA surface water sewer in West Sheen Vale via a 150dia vitrified clay sewer outfall from MH4.

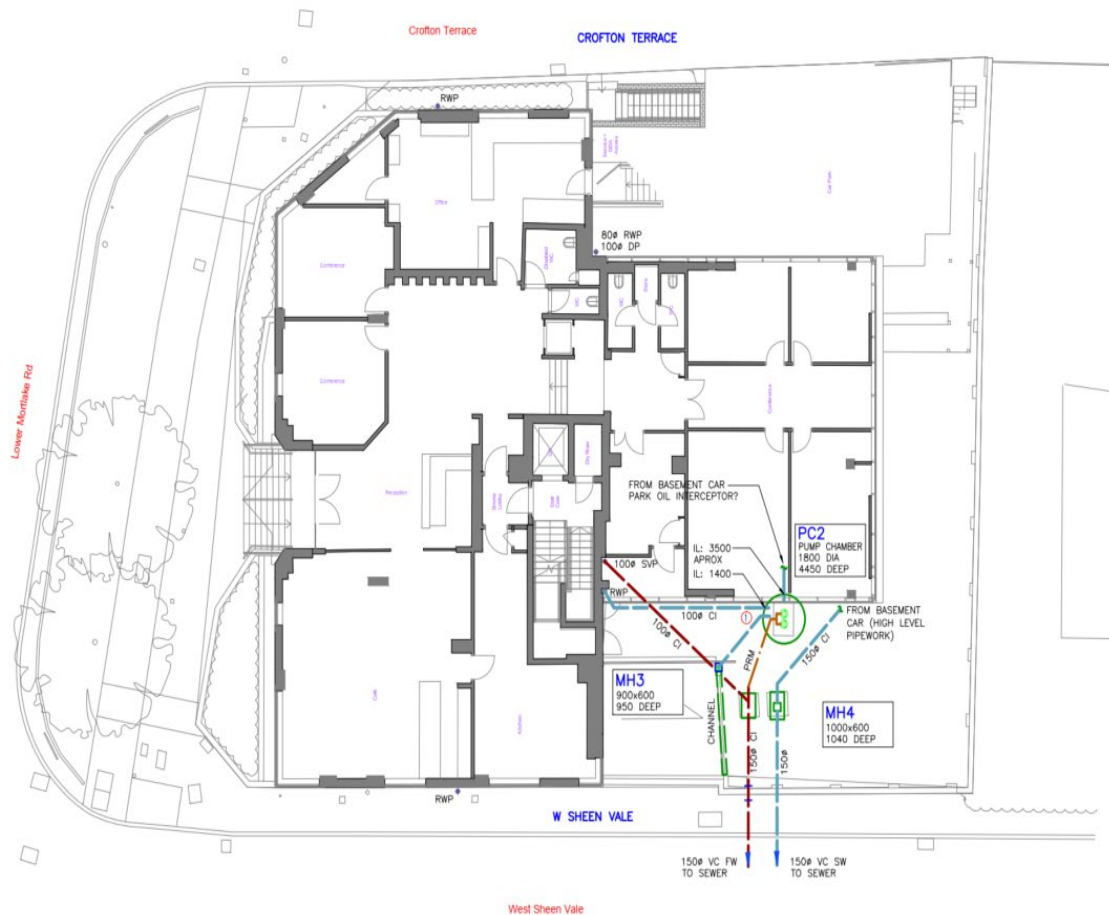


Figure 02: Existing Basement Drainage Layout

4.0 PROPOSED FOUL WATER DRAINAGE SYSTEM

The site is to be re-developed to provide residential dwellings with other amenities such as concierge, gym, cycle store etc.

The proposed drainage system should be in-line with The Building Regulations Part H - drainage and waste disposal (also known as Approved Document H) gives in-depth information on drainage, surface water and foul (waste) water in both homes and non-dwellings. The Part H Building Regulations has technical guidance on workmanship and materials for drainage and waste disposal, covering sewage pipes, treating wastewater, septic tanks, storing solid waste and installing hygienic pipework. Approved Document H also discusses building over and around existing sewers.

It is proposed that the new foul drainage system for the re-developed site collect all discharges from the 21 dwellings and drain by gravity to the West Sheen Vale Road to allow connection with the existing foul manhole (refer Figure 2).

The proposed surface water drainage system for the re-development is proposed to drain flows from the new 21 dwellings and associated paved areas. This system will drain to the site prior to discharging at existing manhole. This proposed drain will be located parallel to the existing foul sewer drain towards West Sheen Vale (refer Figure 2).

FOUL WATER DRAINAGE LOADING

The volume of foul drainage for the proposed masterplan has been determined using the following reference data in-line with BSEN 12056-2 and Building Regs Part – H:

- Frequency factor (K Value) of 0.5 – Intermittent use (dwelling, guest house, office)
- Loading unit based on system III with filling degree of 70%
- Swept discharge branch type.

Stack Reference	Quantity of listed fittings and demand loadings for chosen system									Total DU	Flow rate l/s	Stack Diameter	AAV min. air
	WC	Basin	Bath	Sh	Urinal	WM	DW	Sink	Floor Gully				
	1.5	0.3	1.3	0.4	0.4	0.6	0.2	1.3	1.3				2
Proposed										0	0.00	100	0.00
Level - 03	5	5	3	1		3	3	3		19.6	2.21	100	4.43
Level - 02	8	8	7	2		7	7	7		39	3.12	100	6.24
Level - 01	8	8	7	2		7	7	7		39	3.12	100	6.24
Ground	7	7	6			4	4	4		28.8	2.68	100	5.37
Street level										0	0.00	100	0.00
Basement										0	0.00	100	0.00
										0	0.00	100	0.00
Combine drain										126.4	5.62	150	11.24



5.0 CONCLUSIONS

It is considered that the site can demonstrate it can suitably dispose of Foul / surface water via the existing drainage hierarchy and as such the detailed drainage matters can be considered at a later date, such as via a condition survey.

It is to be noted that there are suitable outfall routes for both foul and surface water and that appropriate and existing drainage systems can be designed to serve the proposed development site.