

Euro Garages Ltd: Cheetham Hill Road, Cheetham Hill, Manchester

Drainage Strategy Report

Client: Euro Garages Ltd

Date: 14th July 2022

Project No: P15633

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Revision:		Signature	Date
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Checked by:			
Revision Notes:			

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1.0 Introduction

Goodson Associates have been appointed by Euro Garages Ltd to prepare a Drainage Strategy for the proposed commercial development at 490 Cheetham Hill Road in Manchester. The purpose of this report is to describe in principle the design approach of the foul and surface water drainage systems for the development.

2.0 Existing Site

2.1 General Description

The proposed development site is located at the junction of Cheetham Hill Road and Shirley Road in Cheetham Hill, Manchester M8 0PL (Grid Ref: 384226, 401188). Figure 1.0 shows an aerial photograph of the area with the approximate site boundary highlighted in red.

The existing site contains a petrol filling station with associated carparking within the south east area, and densely wooded landscaping to the north west area of the site. The site is bounded by Cheetham Hill Road to the south, Shirley Road and a private access road to terraced properties to the east, a similar private access road to terraced properties off Avondale Street to the north, and a commercial garage and associated carparking area to the west.

2.2 Site Topography

As Figure 1.0 shows, the site is a partially developed area of irregular shape and is approximately 0.269ha in area.

The site falls gently from west to east with ground levels ranging from 68.29m AOD in the south west corner of the site falling by around a metre to 67.21m AOD at the eastern boundary.



Figure 1.0 - Aerial Photograph showing the approximate site boundary

2.3 Existing Natural Drainage Features

No watercourse is present on the site or in the immediate proximity to the site boundaries. The closest watercourse is the River Irk located around 0.9 km to the east of the site.

2.4 Existing Drainage Infrastructure

United Utilities records show that there are existing public sewers in the area. A 400mm dia combined sewer is present in Cheetham Hill Road to the immediate south of the site boundary, with a further 300mm dia combined sewer located in Shirley Road to the east and a 100mm dia combined sewer running along the northern boundary. A Drainage CCTV Survey for the area has been carried out, and existing foul and storm sewer connections serving the existing development and connecting to the adopted United Utilities sewers have been confirmed towards the mid-eastern boundary of the site, connecting to what appears to be an adopted (but unrecorded) 150mm becoming 225mm dia sewer running along the access road to the rear of the terraced properties to Shirley Road. An extract of the United Utilities sewer plan is provided in Figure 2 below and a full copy of the associated correspondence and CCTV Survey extracts are included in the Section 6 appendices.



Figure 2.0 – United Utilities Sewer Record Plan – extract

3.0 Proposed Development

The proposed development consists of a new petrol filling station and associated shop to the south east area of the site with a separate drive through café located to the west of the site, along with associated car parking, access road and landscaping. A copy of the architects proposed layout plan is included in the Section 6 appendices.

4.0 Flood Risk Assessment

The possible sources of flooding have been considered for the site and Figures 3.0 and 4.0 below show the extent of flooding in the site location for fluvial and surface water flooding. It is indicated in Figure 3.0 that the site is within an area classified as Flood Zone I, an area of land having a less than 0.001% (1 in 1,000) annual probability of river or sea flooding.

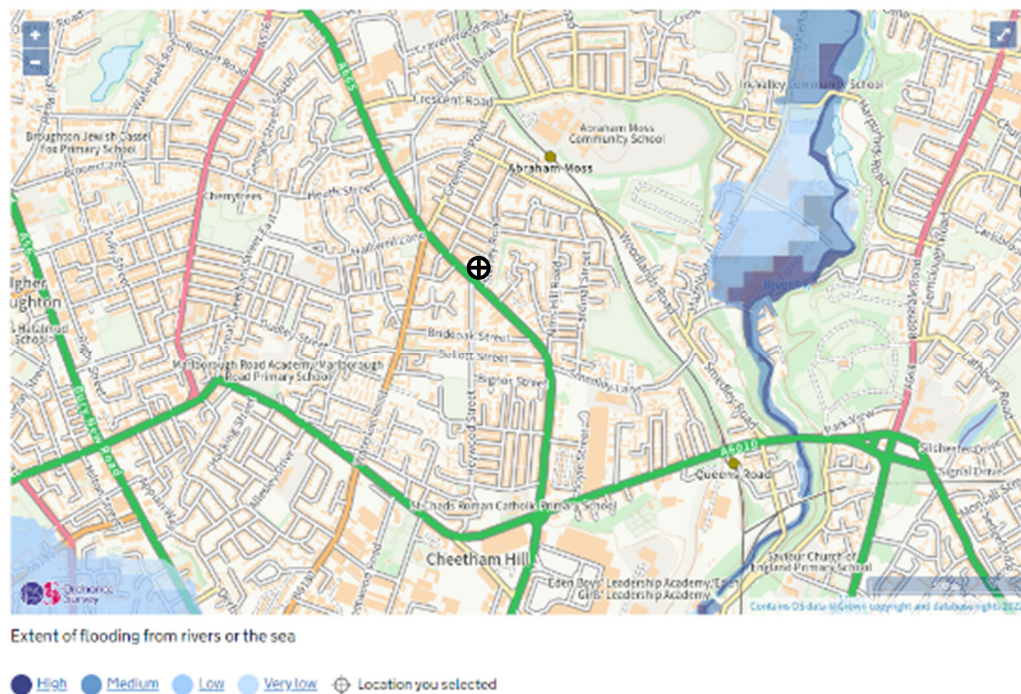


Figure 3.0 Flood Risk from Rivers and the Sea

From Figure 4.0 it appears that the site is at a low risk of surface water flooding, with only very localised areas of surface water flooding indicated to the northern boundary of the site and just off site within Shirley Road to the east. The proposed development will be designed to current surface water standards and the buildings will be set at a slightly higher level with external areas falling away to minimise surface water flood risk to the new development.

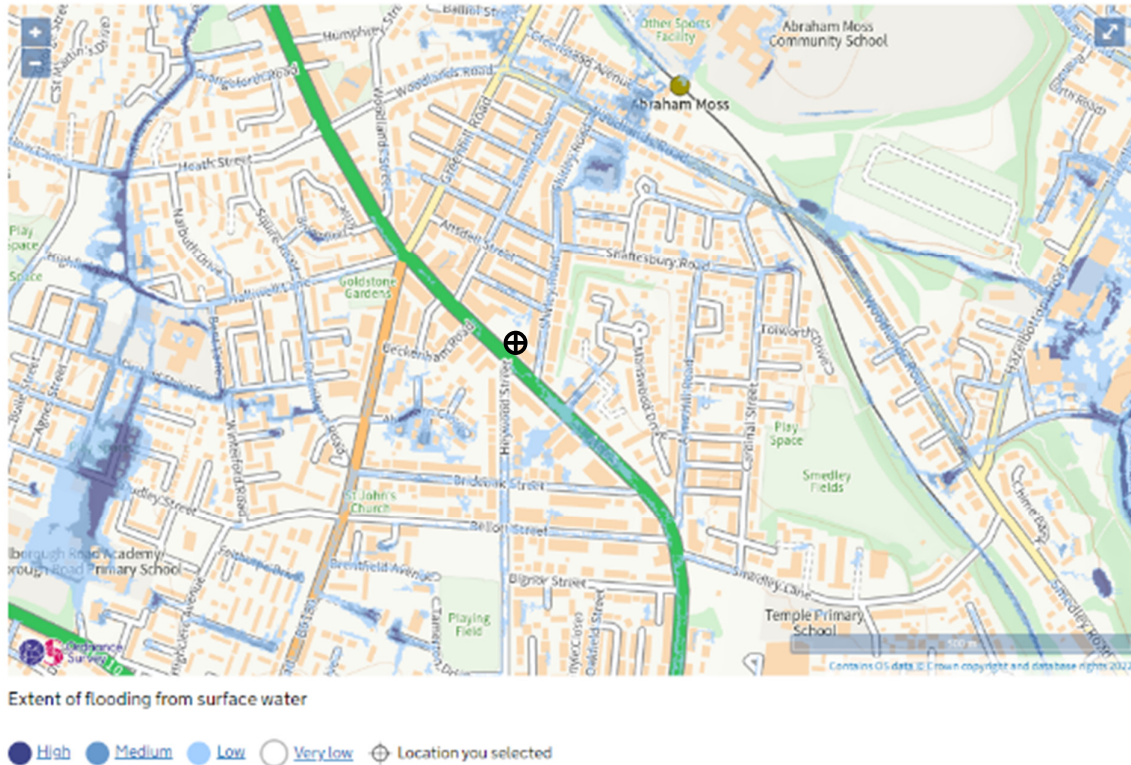


Figure 4.0 Flood Risk from Surface Water

5.0 Site Drainage

- The proposed development will have separate foul and surface water drainage systems, with discharge arrangements proposed as detailed below.
- Layout proposals for the on-site drainage and the re-use of the existing off-site drainage connections are contained in Section 6.0 below

5.1 Foul Drainage

- The proposed foul flows will collectively drain to the mid-eastern site boundary before discharging via the existing connection into the United Utilities adopted combined sewer running along the rear of the Shirley Road terraced properties.

5.2 Surface Water System

- SuDS hierarchy has been used for the surface water design.
- Borehole logs taken from the recent Geo2 Site Investigation indicate that the site substrata consists of varying thicknesses of Made Ground (between 0.3m and 1.0m thick) overlying gravely sandy soils. While such soils may have soakaway / infiltration potential, given the historic and proposed use of the site as a Petrol Filling Station and the higher ground contamination risk associated with such it is not proposed to infiltrate stormwater to the ground to reduce the potential for spreading unknown contamination to a wider area. The Geo2 SI Report highlights the same concerns and a relevant extract of their report is included in the Section 6.0 appendices for ease of reference.
- There are no practically accessible watercourses in close proximity to the site.
- It is therefore proposed to discharge surface water run-off from the new development via the existing site connection into the adopted combined sewer located along the eastern site boundary, which connects into the northern combined sewer, which is in line with United Utilities requirements. Full details can be found in the Section 6.0 appendices to this report.
- The surface water design flows are calculated on the proposed new development impermeable area of 0.226 ha and a design storm intensity of a 100-year return period plus 40% climate change allowance.
- Existing 1 in 1 year brownfield run-off for the site has been calculated at 15.8 l/s. However United Utilities in their Pre-Planning Sewerage Enquiry response have requested that the discharge for the new development be reduced to 7.5 l/s, which is a reduction greater than 50% for what is a much larger rainfall intensity. The proposed surface water drainage system has therefore been based on the reduced discharge rate of 7.5 l/s for the new development. Full details and correspondence can be found in the Section 6.0 appendices to this report.
- MicroDrainage calculations provided in Section 6.0 determine that 77.5m³ of cellular storage will be required to achieve this discharge rate of 7.5 l/s. Cellular surface water attenuation tanks will be provided to ensure no on-site or off-site flooding will occur during a 1 in 100 year + 40% climate change storm event, and a pumped discharge will be required to achieve this connection due to the relatively high invert level of the connecting “CHE02” discharge manhole.

6.0 Drawings and Calculations

Architectural Planning Site Layout (ADS Architects)

Topographical Survey & Survey Extract (RJP Ltd)

Site Investigation Report extract (Geo2)

United Utilities Sewer Records

United Utilities PPSE Response

CCTV Drainage Survey extracts (Underground Surveys UK Ltd)

PI5633-500 Proposed Drainage Layout Plan (Goodson Associates)

PI5633-501 Impermeable Area Plan (Goodson Associates)

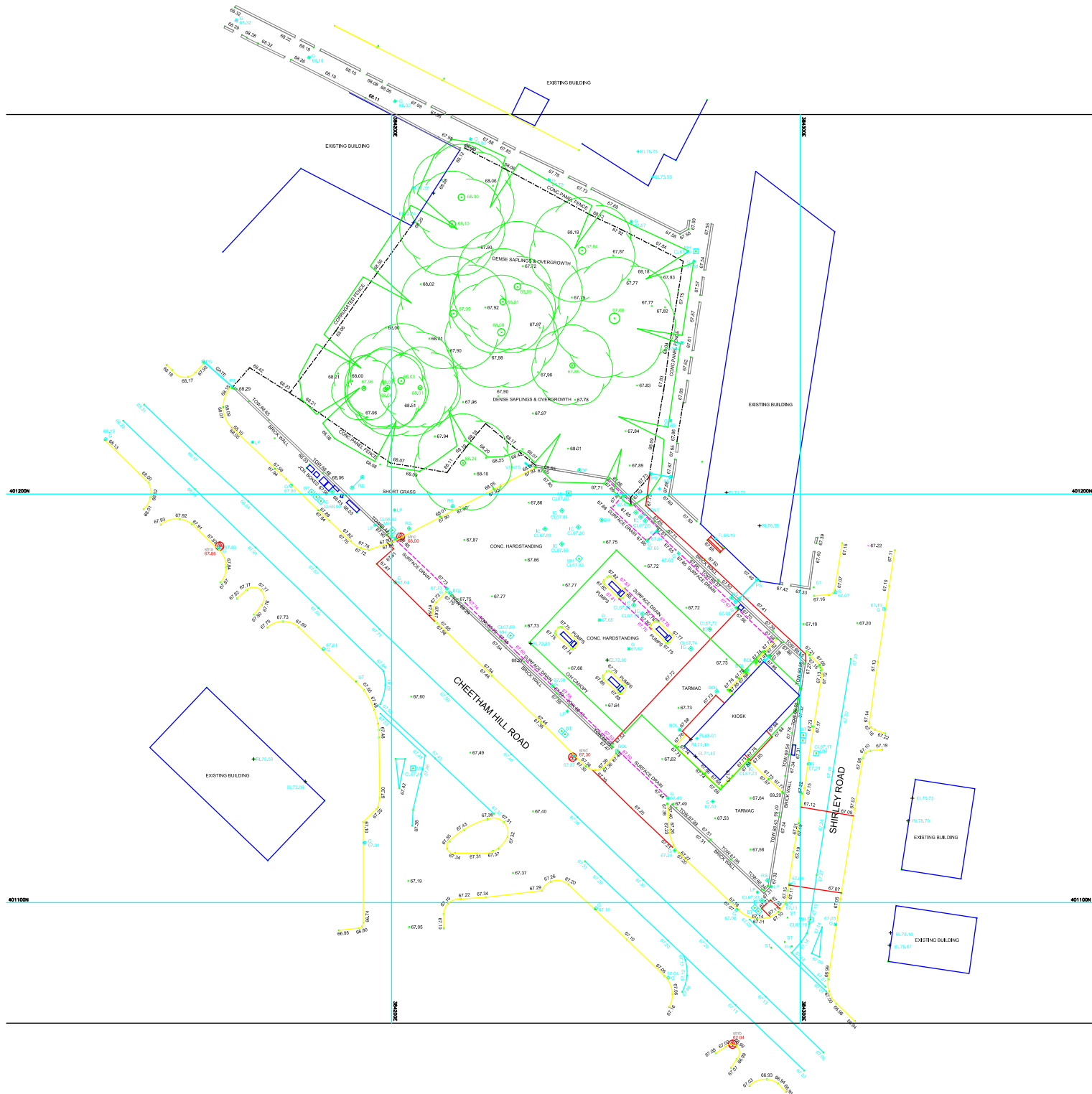
PI5633 SW Attenuation Calculations (Goodson Associates)



SCHEME SUBJECT TO TRACKING ANALYSIS AND TOPOGRAPHICAL SURVEY



REVISIONS	
CLIENT	EURO GARAGES LTD
PROJECT	SHIRLEY ROAD MANCHESTER M8 OPL
TITLE	FEASIBILITY
DATE	26.04.22
SCALE	1:200 @ A1
JOB ID	2007
DWG	4



COORDINATED STATIONS			
STATION	EASTING	NORTHING	LEVEL (ft)
A	384178.988	401193.619	67.880
B	384241.745	401132.647	67.040
C	384201.102	401194.711	67.997
D	384322.170	401167.781	67.300

ABBREVIATIONS

AV	AIR VALVE/VENT	IC	INSPECT CHAMBER
BZ	BELLARD	IN	INHERIT LEVEL
BM	BENCH MARK	JNW	JANAPHIA KNIGHT MEKE
BN	BELONG BEACON	LA	LAP HOLE
BD	BELOW LEVEL	LAP	LAMP POST
BS	BUS STOP	MP	MANE PLATE
BT	BRITISH TELECOM	MM	MAHOLE
BR	BROW LEVEL	PN	POST/PIAN POST
DN	DISPLACED	PR	POST BOX
DS	DESSED	PS	PORTHORN SERVICE
EL	ELONG LEVEL	RC	ROCKING CHIEF
EL	ELECTR. JUNCT. BOX	RD	RODGE LEVEL
EM	EMERGENCY	RS	ROAD SIGN
FI	FIRE HYDRANT	ST	STOP
FL	FLOOR LEVEL	TH	THRAL HOE
FS	FLANK OF SEDIMENT	TL	TRAIL LIGHT
FL	FLAG POLE	TE	TELEVISION POLE
GL	GULLY	TV	CABLE TV BOX
GM	GAZ METER	UN	UNABLE TO LIFT
GV	GRASS VALVE	UT	WATER NETTER

SYMBOLS

	SURVEY STATION		TREE
	OH ELEC CABLE		BENCH MARK
	OH PHONE LINE		TRIAL PIT
	CANOPY/HEDGE		BOREHOLE

NOTES

- A) ONLY MANHOLES AND SERVICES VISIBLE AT TIME OF SURVEY SHOWN
- B) 0.5 GRID USED AND ORIENTATED TO TRUE NORTH
- C) LEVELS IN METRES RELATED TO G.P.S.
- D) DRAINAGE INFORMATION MUST BE CHECKED PRIOR TO WORK COMMENCING

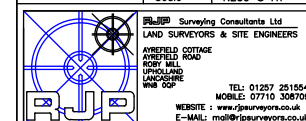
Rev	Description	Date
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PROPOSED DEVELOPMENT AT
SHIRLEY ROAD, CHEETAM HILL

EUROGARAGES LTD

TOPOGRAPHICAL SURVEY

EG325 / T00	Surveyed	AB / OJ
	Drawn	SF
	Date	MAY 2022
	Scale	1:200 @ A1



6.0 Site Investigation

In order to provide an assessment of each of the identified contamination linkages, an intrusive investigation was specified to obtain further information regarding the geology of the site and the quality of the soils and groundwater.

At the time of the investigation, only Area A, as shown in Figure A was accessible.

6.1 Site Investigation

Eight soil bores (WS1–8) were constructed on 20th June 2022 to depths of up to 5.0 m below ground level (m bgl) at locations indicated on Figure 3 presented in Appendix A. The soil bores were constructed using window sampling techniques. As a result of the drilling techniques, relatively undisturbed soils were able to be obtained for field and laboratory analysis and for logging of ground conditions. Field analysis comprised the examination of each of the samples for visual and olfactory indications of contamination. Analysis was also conducted for volatile hydrocarbons using a photo-ionisation detector (PID).

The site investigation was limited by the existence of buried services. Borehole positions were chosen strategically so to target areas of the site most likely to be contaminated. Table 9 below, shows the location rationale of boreholes.

WS1 and WS5 were cored in the soft landscaped areas. WS2–WS4, WS6, and WS8 were cored in the hard standing concrete, and WS7 was cored in the hardstanding tarmac.

Target / Rational for Investigative Locations	Location							
	WS1	WS2	WS3	WS4	WS5	WS6	WS7	WS8
General Site Coverage	✓	✓	✓		✓			
Shop							✓	
Tank Farm								✓
Historic Tank Farm						✓	✓	
Interceptor						✓		
Forecourt			✓	✓				

Table 9. Borehole Location Rationale

6.1.1 Soakaways

Soakaway testing was originally scoped as a part of the investigation.

However, the soakaway tests were not possible due to the collapse of soils. Geo² understand that planning authorities typically prefer not to permit soakaways on potentially high-risk sites due to the potential for high permeability pathways being created. In the event of a contaminative incident, these high permeability pathways could allow rapid transmission of contaminants to the subsurface, with the superficial aquifer underlying the site designated as a Secondary A Aquifer.

6.2 Ground Conditions

The logs of the boreholes, which are presented in Appendix D, detail the ground conditions and the sampling depths together with the visual and olfactory characteristics of the soils.

Goodsons Associates Leeds

**Fountain House
4 South Parade, Goodsons Associates Leeds
Leeds,
LS1 5QX**

FAO:

How to contact us:

**United Utilities Water Limited
Property Searches
Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP**

Telephone: 0370 7510101

E-mail: propertysearches@uuplc.co.uk

**Your Ref: P15633 Cheetham Hill Road
Our Ref: UUPS-ORD-399733
Date: 06/06/2022**

Dear Sirs

Location: SHIRLEY SERVICE STATION 332 CHEETHAM HILL ROAD, MANCHESTER, M8 0PL

I acknowledge with thanks your request dated 30/05/2022 for information on the location of our services.

Please find enclosed plans showing the approximate position of United Utilities' apparatus known to be in the vicinity of this site.

The enclosed plans are being provided to you subject to the United Utilities terms and conditions for both the wastewater and water distribution plans which are shown attached.

If you are planning works anywhere in the North West, please read United Utilities' access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

I trust the above meets with your requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please [contact us](#).

Yours Faithfully,



Karen McCormack
Property Searches Manager

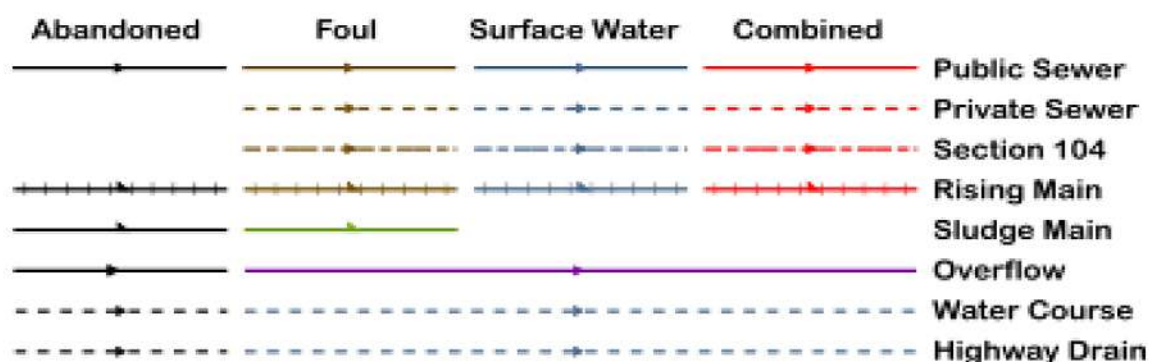
TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

- This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.
- This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.
- In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.
- The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.
- The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.
- This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.
- No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.
- If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.
- This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

Wastewater Symbolology



All point assets follow the standard colour convention: **red** – combined **brown** - foul
blue – surface water **purple** - overflow

Manhole	Side Entry Manhole
Head of System	Outfall
Extent of Survey	Screen Chamber
Rodding Eye	Inspection Chamber
Inlet	Bifurcation Chamber
Discharge Point	Lamp Hole
Vortex	T Junction / Saddle
Penstock	Catchpit
Washout Chamber	Valve Chamber
Valve	Vent Column
Air Valve	Vortex Chamber
Non Return Valve	Penstock Chamber
Soakaway	Network Storage Tank
Gully	Sewer Overflow
Cascade	Ww Treatment Works
Flow Meter	Ww Pumping Station
Hatch Box	Septic Tank
Oil Interceptor	Control Kiosk
Summit	
Drop Shaft	Change of Characteristic
Orifice Plate	

Subject: P15633: Pre Development Enquiry for: 490 Cheetham Hill Rd, Cheetham Hill, Manchester M8 0PL UU Reference Number : 02409572

originalItemMapiKey: 0000000099FA4BD1E3F8304DBAF4B48296B6461E070093CF3BD0CE0EC746A3993B117160BF580000000010C000093CF3BD0CE0EC746A3993B117160BF580000EE82DC150000:0000000038A1BB1005E5101AA1BB08002B2A56C20000454D534D44422E444C4C00000000000000001B55FA20AA6611CD9BC800AA002FC45A0C0000004E6967656C40676F6F64736F6E736C656564732E636F6D002F6F3D45786368616E67654C6162732F6F753D45786368616E67652041646D696E6973747261746976652047726F7570202846594449424F484632335350444C54292F636E3D526563697069656E74732F636E3D38353262656331643939633434303835623764363239343161653865376537332D4E6967656C00E94632F44200000002000000100000004E006900670065006C00400067006F006F00640073006F006E0073006C0065006500640073002E0063006F006D0000000000

From: wastewaterdeveloperservices@uuplc.co.uk <wastewaterdeveloperservices@uuplc.co.uk>
Sent: 11 July 2022 10:27
To: Phillip Harrington <phil@goodsonsleeds.com>
Subject: Pre Development Enquiry for: 490 Cheetham Hill Rd, Cheetham Hill, Manchester M8 0PL UU Reference Number : 02409572

Good Morning, Phil

Pre Development Enquiry for: 490 Cheetham Hill Rd, Cheetham Hill, Manchester M8 0PL UU Reference Number : 02409572

We have carried out an assessment of your application which is based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your drainage strategy will need to be reviewed by other competent authorities as part of the planning process, and we advise that you carry out the necessary site investigations to confirm the viability of your proposals.

If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 6723 723 or refer to the link below:

<https://www.unitedutilities.com/builders-developers/working-near-our-assets/>

Foul Water

Foul flow from this site will be allowed to drain into the public foul water/combined sewer system.

Our preferred point of discharge would be to the 100mm diameter public combined sewer located to the North of your proposed development at an unrestricted rate.

If you are able to identify an alternative, more suitable point of discharge, we request that you contact us at your earliest convenience so that we can assess suitability.

In accordance with our infrastructure plans we may ask you to change your point of connection. Therefore please contact us when you are ready to formalise your drainage proposals, we would suggest before you submit for Full Planning.

Surface Water

All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80, (Reference ID: 7-080-20150323), of the National Planning Practice Guidance. We also recommend you prioritise the use of multi-functional sustainable drainage systems for the management of surface water in accordance with national planning policy.

Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.

This is outlined as follows, in order of priority:

1. **into the ground (infiltration);**
2. **to a surface waterbody;**
3. **to a surface water sewer or highway drain;**
4. **to a combined sewer.**

For guidance, The [North West SuDS Pro-Forma](#) provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted.

The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area).

The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining cost viability of a proposed drainage scheme, such assessments are outside of the jurisdiction of United Utilities.

Infiltration

Surface water runoff generated from this development should discharge to the ground via infiltration system where feasible.

A detailed evidence based feasibility assessment must be carried out in line with Chapter 25 of the CIRIA SuDS Manual 2015 to determine whether infiltration is a suitable method of surface water disposal.

Particular attention must be paid to Ground Water Source Protection Zones to ensure that the risk of pollution to these valuable resources is not compromised. Details can be obtained from the government website:

<https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs#find-groundwater-spzs>

If your site is in a Groundwater Source Protection Zone, you should have regard to the Environment Agency's approach to Groundwater Protection. Information on this is available via the link below:

<https://www.gov.uk/government/publications/groundwater-protection-position-statements>

Please note that such a location could have implications for the principle of your development and the need for additional mitigating measures to protect the groundwater environment and public water supply in the detailed design of your site.

Highway Drainage

If an evidence based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you investigate the possibility of draining surface water to the highway drain where this ultimately discharges to a watercourse, by contacting the relevant Highway Authority.

Public Sewer

In accordance with the hierarchy of drainage options within the National Planning Practice Guidance, both discharge to ground via infiltration and discharge to a waterbody should be discounted prior to consideration of discharging surface water to the public sewer system. Evidence should be provided to demonstrate how these have been discounted, as outlined in the North West SuDS pro-forma.

Once evidence is provided as outlined above, United Utilities will consider a connection to the 100mm diameter public combined sewer located North of the proposed site at a pass forward flow to be agreed by the Lead Local Flood Authority. United Utilities request that any agreed rate does not exceed 7.5l/s.

As a Water Company, we have no obligation to accept highway drainage into our public sewer network. However, should your proposals include runoff from highways, we would request that consideration is given to SuDS components that deliver source control are incorporated within the design of the scheme to reduce the volume and frequency of discharges of these flows to the public sewer.

Levels

For low-lying sites, (where the ground level of the site or the level of a basement is below the ground level at the point where the drainage connects to the public sewer), care should be taken to ensure that the property is not at increased risk of flooding. If these circumstances exist, we recommend that you contact us to discuss further. It could affect the detailed design of your site and result in the need to incorporate appropriate mitigating measures in your drainage scheme.

Land drainage / Overland flows / track drainage

United Utilities have no obligation, and furthermore we do not accept land drainage, overland flows or track drainage into the public sewerage network under any circumstances

Existing Wastewater Assets Crossing the Site

We have reviewed our records and can confirm that there does not appear to be any charted public sewers located within the boundary of proposed development. However, due to the accuracy of the records and the public sewer transfer legislation in 2011, not all public sewers are shown on our records so we would ask that you proceed with caution and carry out your own site investigation works. If any uncharted sewers are identified while carrying out your works we would ask that you contact United Utilities at the earliest opportunity so that we can offer guidance and update our records.

Please be aware that any proposed diversion may require modelling. This process may take up to 6 months in order to reach an acceptable design.

Please refer to the link below to obtain full details of the processes involved with sewer diversions:

<https://www.unitedutilities.com/builders-developers/larger-developments/wastewater/sewer-diversions/>

Existing Water Assets Crossing the Site

It is the developer responsibility to identify utilities on-site. Where clean water assets are shown on our records, we recommend that you contact our Water Pre-Development Team, via the following email address: DeveloperServicesWater@uuplc.co.uk. Further information for this service can be found on our website via the link below:

<https://www.unitedutilities.com/builders-developers/larger-developments/pre-development/water-pre-dev/>

Connection Application

Although we may discuss and agree discharge points and rates in principle, please be aware that you will have to

apply for a formal sewer connection. This is so that we can assess the method of construction, Health & Safety requirements and to ultimately inspect the connection when it is made. Details of the application process and the form itself can be obtained from our website by following the link below:

<https://www.unitedutilities.com/builders-developers/wastewater-services/sewer-connections/sewer-connection/>

We recommend that the detailed design should confirm the locations of all utilities in the area and ensure that any proposed drainage solution considers routing and clash checks where required.

If we can be of any further assistance please don't hesitate to contact us further.

Codes For Adoption

The new Codes for Adoption are outlined on the Water UK Website. The link below takes you to their webpage:

<https://www.water.org.uk/technical-guidance/developers-services/codes-for-adoption/>

A free copy of the new Design & Construction Guidance can be downloaded via the link below:

<https://www.water.org.uk/sewerage-sector-guidance-approved-documents/>

Many thanks and kind regards,



Gary Jaundrell

Assistant Developer Engineer
Developer Services & Metering
Customer Services
T: 07388 715 589
unitedutilities.com

If you have received a great service today why not tell us?
Visit: [unitedutilities.com/wow](https://www.unitedutilities.com/wow)

Did you know we now have a live chat facility available to you Mon to Friday 8 -5pm. You just click on the orange live chat box on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry <https://www.unitedutilities.com/builders-developers/> or you can email us at WastewaterDeveloperServices@uuplc.co.uk

Coronavirus | Prevent the spread



Wash your
hands



Disinfect
common surfaces



Practise social
distancing



FEVER +
COUGH

Stay home if you
have symptoms

[Click for our message to customers](#)

----- Original Message -----

From: wastewaterdeveloperservices@uuplc.co.uk [wastewaterdeveloperservices@uuplc.co.uk]

Sent: 08/07/2022 13:10

To: phil@goodsonsleds.com

Subject: Our reference - 02409572



PRE DEVELOPMENT APPLICATION AT: – UU Ref 02409572

Please accept this email as receipt of your application received on 06.07.2022 for the above development. This has now been logged on our system and the job reference is 02409572 we would ask that you quote this reference in all future correspondence.

I have reviewed your application (and attachments) and can confirm this is suitable to be passed to Gary Jaundrell for technical assessment. You will receive their response within 8 working days.

Kind regards

If you would like to discuss this by phone, please give me a call between 8am and 6pm Monday to Friday, I'm on 0345 072 6067 ext. 33050. Alternatively, you can reply to this email and I will get back to you as soon as possible.

Kind regards,
Lucie Gaskell

Did you know we now have a live chat facility available to you between 8am and 5pm Monday to Friday. Just click on the link on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry <https://www.unitedutilities.com/builders-developers/>

If I am unavailable on the number above and you need to speak to someone else, our office number is 0345 072 6067



Registered in England and Wales. Company number 6559020.

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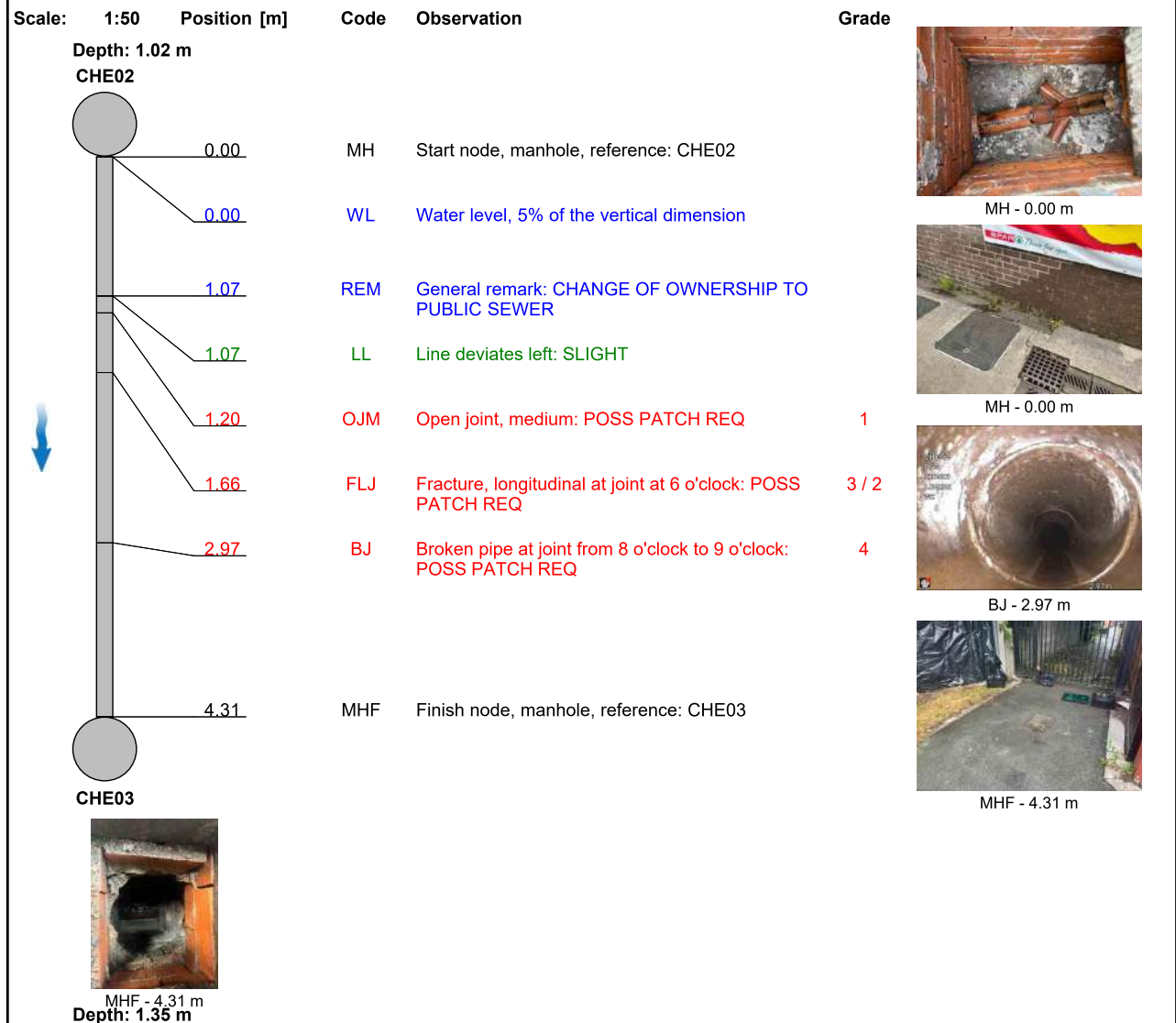


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Section Inspection - 29/06/2022 - CHE02X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
2	1	29/06/22	11:09	EURO GARAGES	No Rain Or Snow	No	CHE02X
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID		
LS	RJ16HKB	Proteus	0.60 m	Private Drain	Not Specified		

Town or Village:	Cheetham Hill	Inspection Direction:	1	Upstream Node:	CHE02
Road:	Shirley Road	Inspected Length:	4.31 m	Upstream Pipe Depth:	1.020 m
Location:	Property or buildings	Total Length:	4.31 m	Downstream Node:	CHE03
Surface Type:	Asphalt Footway	Joint Length:	1.00 m	Downstream Pipe Depth:	1.350 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		
Comments:	None				
Recommendations:	None				



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
3	80.0	28.1	121.0	4.0	1	1.0	0.2	1.0	2.0

Section Pictures - 29/06/2022 - CHE02X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	1	CHE02X	EURO GARAGES	14821



1, 00:00:00, 0.00 m
 Start node, manhole, reference: CHE02



2, 00:00:00, 0.00 m
 Start node, manhole, reference: CHE02



CHE02
 D/S
 CHE03
 150MM
 VC
 2.97m
 Broken pipe at joint from 8 o'clock to 9 o'clock, POSS PATCH
 REQ



4, 00:01:21, 4.31 m
 Finish node, manhole, reference: CHE03

Section Pictures - 29/06/2022 - CHE02X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	1	CHE02X	EURO GARAGES	14821



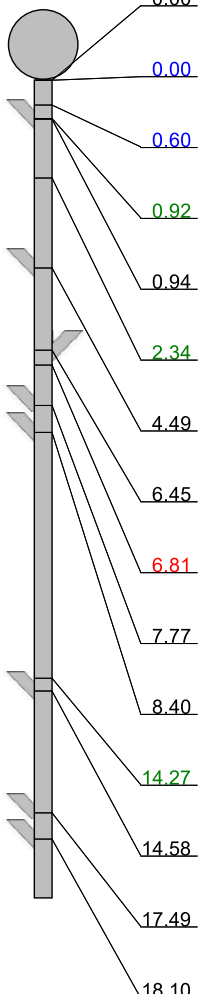
5, 00:01:21, 4.31 m

Finish node, manhole, reference: CHE03

Section Inspection - 29/06/2022 - CHE03X

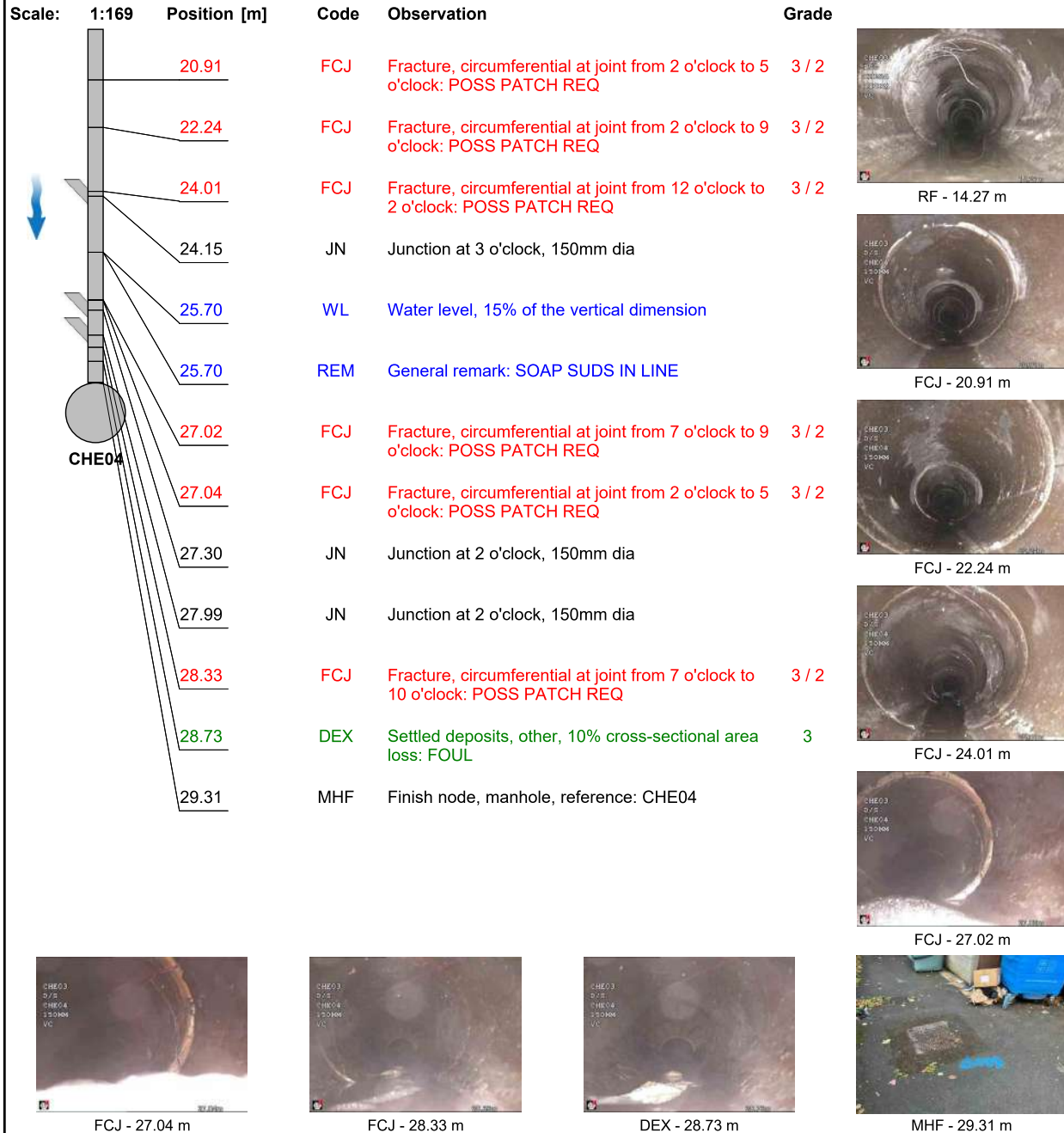
Item No. 3	Insp. No. 1	Date 29/06/22	Time 11:10	Client's Job Ref EURO GARAGES	Weather No Rain Or Snow	Pre Cleaned No	PLR CHE03X
Operator LS	Vehicle RJ16HKB	Camera Proteus	Preset Length 0.60 m	Legal Status Public Sewer	Alternative ID Not Specified		

Town or Village:	Cheetham Hill	Inspection Direction:	1	Upstream Node:	CHE03
Road:	Shirley Road	Inspected Length:	29.31 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	29.31 m	Downstream Node:	CHE04
Surface Type:	Asphalt Footway	Joint Length:	1.00 m	Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		
Comments:	None				
Recommendations:	Repair (incl Patch line)				

Scale: 1:169	Position [m]	Code	Observation	Grade	
Depth: 0.00 m CHE03					
	0.00	MH	Start node, manhole, reference: CHE03		
	0.00	WL	Water level, 5% of the vertical dimension		
	0.60	REM	General remark: WRONG SIZE PIPE ON FOOTAGE		
	0.92	DEX	Settled deposits, other, 10% cross-sectional area loss: FOUL AND RAGS	3	
	0.94	JN	Junction at 3 o'clock, 150mm dia		
	2.34	DEX	Settled deposits, other, 10% cross-sectional area loss: FOUL AND RAGS	3	
	4.49	JN	Junction at 2 o'clock, 150mm dia		
	6.45	JN	Junction at 10 o'clock, 150mm dia		
	6.81	FCJ	Fracture, circumferential at joint from 12 o'clock to 1 o'clock: POSS PATCH REQ	3 / 2	
	7.77	JN	Junction at 2 o'clock, 150mm dia		
	8.40	JN	Junction at 2 o'clock, 150mm dia		
	14.27	RF	Roots, fine: POSS PATCH REQ	2	
	14.58	JN	Junction at 2 o'clock, 150mm dia		
	17.49	JN	Junction at 2 o'clock, 150mm dia		
	18.10	JN	Junction at 2 o'clock, 150mm dia		

Section Inspection - 29/06/2022 - CHE03X

Item No. 3	Insp. No. 1	Date 29/06/22	Time 11:10	Client's Job Ref EURO GARAGES	Weather No Rain Or Snow	Pre Cleaned No	PLR CHE03X
Operator LS		Vehicle RJ16HKB		Camera Proteus	Preset Length 0.60 m	Legal Status Public Sewer	Alternative ID Not Specified



Section Inspection - 29/06/2022 - CHE03X

Item No. 3	Insp. No. 1	Date 29/06/22	Time 11:10	Client's Job Ref EURO GARAGES	Weather No Rain Or Snow	Pre Cleaned No	PLR CHE03X
Operator LS		Vehicle RJ16HKB		Camera Proteus	Preset Length 0.60 m	Legal Status Public Sewer	Alternative ID Not Specified



MHF - 29.31 m

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
7	80.0	9.6	280.0	3.0	11	2.0	0.5	14.0	3.0

Section Pictures - 29/06/2022 - CHE03X

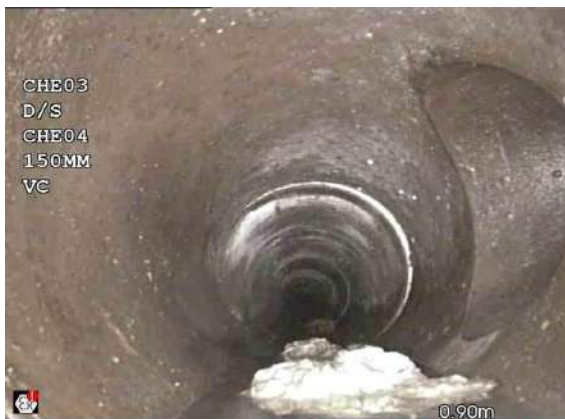
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	1	CHE03X	EURO GARAGES	14821



1, 00:00:00, 0.00 m
 Start node, manhole, reference: CHE03



2, 00:00:00, 0.00 m
 Start node, manhole, reference: CHE03



3, 00:00:33, 0.92 m
 Settled deposits, other, 10% cross-sectional area loss, FOUL
 AND RAGS



4, 00:00:57, 2.34 m
 Settled deposits, other, 10% cross-sectional area loss, FOUL
 AND RAGS

Section Pictures - 29/06/2022 - CHE03X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	1	CHE03X	EURO GARAGES	14821



5, 00:02:00, 6.81 m
 Fracture, circumferential at joint from 12 o'clock to 1 o'clock,
 POSS PATCH REQ



6, 00:03:13, 14.27 m
 Roots, fine, POSS PATCH REQ



7, 00:04:02, 20.91 m
 Fracture, circumferential at joint from 2 o'clock to 5 o'clock,
 POSS PATCH REQ



8, 00:04:15, 22.24 m
 Fracture, circumferential at joint from 2 o'clock to 9 o'clock,
 POSS PATCH REQ

Section Pictures - 29/06/2022 - CHE03X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	1	CHE03X	EURO GARAGES	14821



9, 00:04:29, 24.01 m
 Fracture, circumferential at joint from 12 o'clock to 2 o'clock,
 POSS PATCH REQ



10, 00:05:04, 27.02 m
 Fracture, circumferential at joint from 7 o'clock to 9 o'clock,
 POSS PATCH REQ



11, 00:04:56, 27.04 m
 Fracture, circumferential at joint from 2 o'clock to 5 o'clock,
 POSS PATCH REQ



12, 00:05:20, 28.33 m
 Fracture, circumferential at joint from 7 o'clock to 10 o'clock,
 POSS PATCH REQ

Section Pictures - 29/06/2022 - CHE03X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	1	CHE03X	EURO GARAGES	14821



13, 00:05:29, 28.73 m
 Settled deposits, other, 10% cross-sectional area loss, FOUL



14, 00:05:35, 29.31 m
 Finish node, manhole, reference: CHE04



15, 00:05:35, 29.31 m
 Finish node, manhole, reference: CHE04

STC25 COMPUTERISED SEWER RECORDS (CHE02)

Forms for use with

STC25 COMPUTERISED SEWER RECORDS

NODE REFERENCE

GRID REFERENCE

LOCATION

DRAINAGE AREA CODE

YEAR LAID

STATUS

FUNCTION

S

NODE TYPE

MH

SURVEY DATE

COVER

SHAPE

R

HINGED

N

LOCK

N

DUTY

H

SIZE (mm)

(diam)

TOXIC ATMOSPHERE

SHAFT

SIDE ENTRY

N

REGULAR COURSES

N

DEPTH (m)

1.02

SIZE (mm)

EVIDENCE OF VERMIN

CHAMBER

SOFFIT

S

STEPS

0

LADDERS

0

LANDINGS

0

SIZE (mm)

CONSTRUCTION CODE

DEPTH OF FLOW (mm)

DEPTH OF SILT (mm)

HEIGHT SURCHARGE (mm)

COVER LEVEL (m)

INCOMING PIPES

	UPSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (mm diam)	BACKDROP DIAM (mm)	PIPE MATERIAL	LINING MATERIAL	DEPTH FROM COVER (m)	INVERT LEVEL
A	CHE05	C	100		VC		1.000	68.465
B	CHE02B	C	150		VC		0.980	68.485
C	CHE06	C	100		VC		1.000	68.465

OUTGOING PIPES

	DOWNSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (mm diam)	COND	CRIT'Y	PIPE MATERIAL	LINING MATERIAL	DEPTH FROM COVER (m)	INVERT LEVEL
X	CHE03	C	150			VC		1.020	68.445

CONDITION COVER IRONS/LADDERS SHAFT CHAMBER BENCHING OTHER
 (Y if attention required)

INSPECTION REMARKS

STC25 COMPUTERISED SEWER RECORDS (CHE03)

Forms for use with

STC25 COMPUTERISED SEWER RECORDS

NODE REFERENCE

GRID REFERENCE

LOCATION

DRAINAGE AREA CODE

YEAR LAID

STATUS

FUNCTION

C

NODE TYPE

LH

SURVEY DATE

COVER

SHAPE

R

HINGED

N

LOCK

N

DUTY

L

SIZE (mm)

x

TOXIC ATMOSPHERE

SHAFT

SIDE ENTRY

N

REGULAR COURSES

DEPTH (m)

SIZE (mm)

x

EVIDENCE OF VERMIN

CHAMBER

SOFFIT

STEPS

0

LADDERS

0

LANDINGS

0

SIZE (mm)

CONSTRUCTION CODE

BR

DEPTH OF FLOW (mm)

DEPTH OF SILT (mm)

HEIGHT SURCHARGE (mm)

COVER LEVEL (m)

INCOMING PIPES

	UPSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (mm diam)	BACKDROP DIAM (mm)	PIPE MATERIAL	LINING MATERIAL	DEPTH FROM COVER (m)	INVERT LEVEL
A	CHE02	C	150		VC		1.350	64.931

OUTGOING PIPES

	DOWNSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (mm diam)	COND	CRIT'Y	PIPE MATERIAL	LINING MATERIAL	DEPTH FROM COVER (m)	INVERT LEVEL
X	CHE04	C	225			VC		1.400	64.881

CONDITION

COVER

IRONS/LADDERS

SHAFT

CHAMBER

BENCHING

OTHER

(Y if attention required)

INSPECTION REMARKS

STC25 COMPUTERISED SEWER RECORDS (CHE04)

Forms for use with

NODE REFERENCE

STC25 COMPUTERISED SEWER RECORDS

GRID REFERENCE

LOCATION

DRAINAGE AREA CODE

YEAR LAID

STATUS

FUNCTION

C

NODE TYPE

MH

SURVEY DATE

COVER

SHAPE

R

HINGED

Y

LOCK

N

DUTY

H

SIZE (mm)

TOXIC ATMOSPHERE

SHAFT

SIDE ENTRY

N

REGULAR COURSES

N

DEPTH (m)

SIZE (mm)

EVIDENCE OF VERMIN

CHAMBER

SOFFIT

S

STEPS

1

LADDERS

0

LANDINGS

0

SIZE (mm)

CONSTRUCTION CODE

BR

DEPTH OF FLOW (mm)

DEPTH OF SILT (mm)

HEIGHT SURCHARGE (mm)

COVER LEVEL (m)

INCOMING PIPES

	UPSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (mm diam)	BACKDROP DIAM (mm)	PIPE MATERIAL	LINING MATERIAL	DEPTH FROM COVER (m)	INVERT LEVEL
A	CHE03	C	225		VC		1.450	67.632
B	CHE11	C	225		VC		1.430	67.652

OUTGOING PIPES

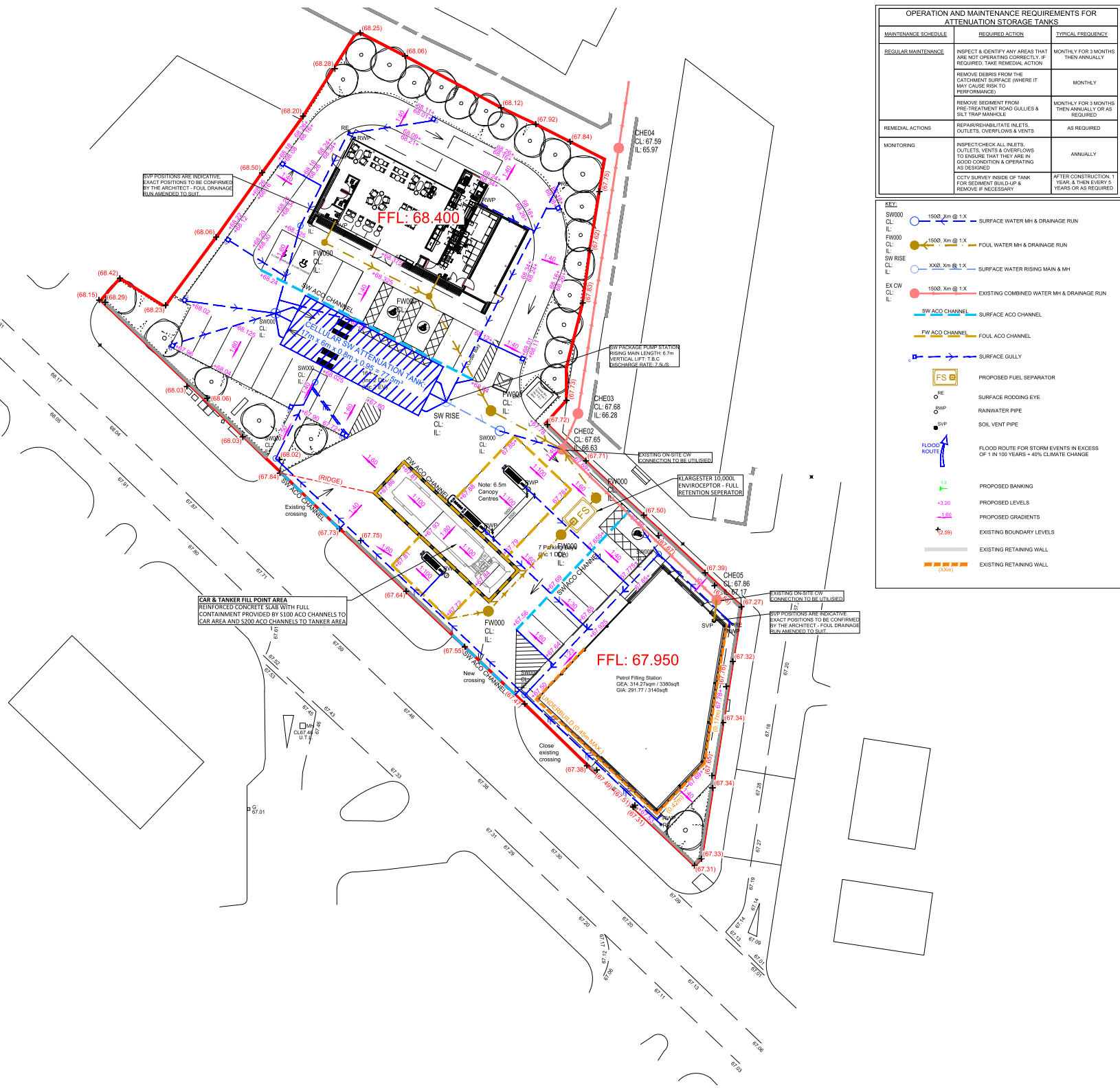
	DOWNSTREAM REFERENCE	PIPE SHAPE	PIPE SIZE (mm diam)	COND	CRIT'Y	PIPE MATERIAL	LINING MATERIAL	DEPTH FROM COVER (m)	INVERT LEVEL
X	.	C	225			VC		1.500	67.582

CONDITION COVER IRONS/LADDERS SHAFT CHAMBER BENCHING OTHER
 (Y if attention required)

INSPECTION REMARKS

ASSET REMARKS

flow monitor installed



Euro Garages Ltd

Proposed PFS & Drive 'Thru' Restaurant
Cheetham Hill Road, Manchester

Drainage Layout Plan

Goodson Associates

Tel: +44 (0)113 369 7925
Fax: -
Email: leeds@goodsons.com
Web: www.goodsons.com

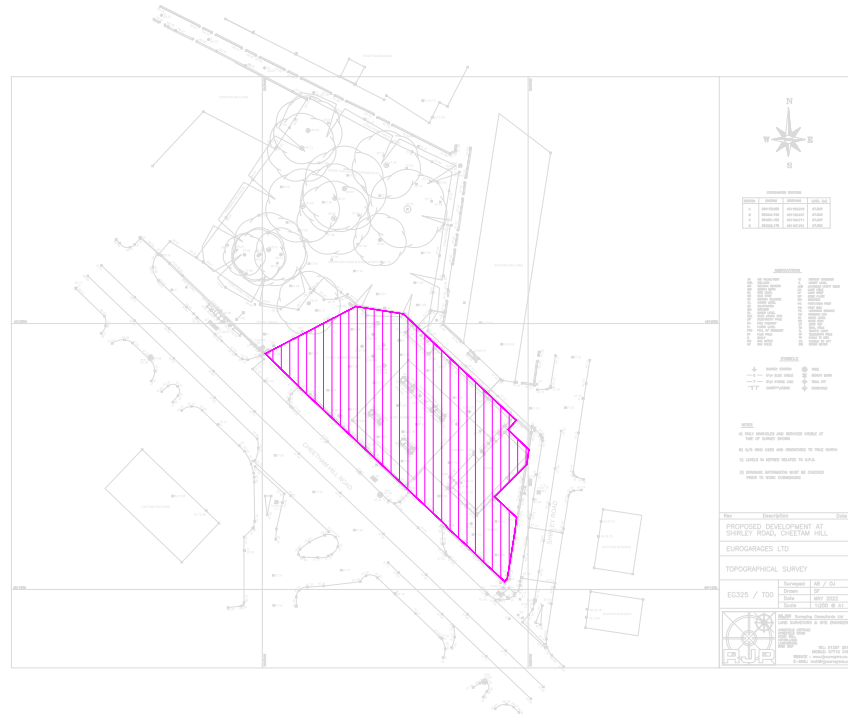
Consulting Civil, Structural & Transportation Engineers
Fountain House, 4 South Parade,
Leeds, LS1 5QX
Also at Aberdeen, Edinburgh & Glasgow.

PLANNING

DATE CREATED: July 2022 SCALE: 1:200 @ A1

CONTRACT No: P15633 DRAWING No: 500 REV: -

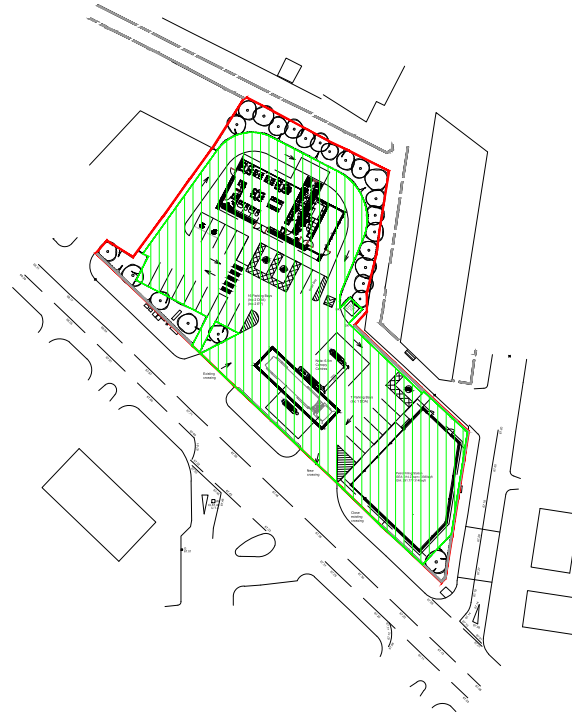
DO NOT SCALE, IF IN DOUBT ASK. DO NOT INTERROGATE CAD BASE



EXISTING IMPERMEABLE AREA: 1140m² (0.114 Ha)
EXISTING SW RUN-OFF: 2.78 x 0.114 x 50 = 15.8 L/S - 53% = 7.5 L/S*
(*AS AGREED WITH UNITED UTILITIES)

PROPOSED IMPERMEABLE AREA: 2260m² (0.226 Ha)

APPROX. SITE BOUNDARY: 2960m² (0.269Ha)



REV.	DATE	REVISION	BY	CHK.
-		FIRST ISSUE	PH	NB
A	13.07.22	PROPOSED IMPERMEABLE AREA ADDED.	PH	NB

Euro Garages Ltd

Proposed PFS & Drive 'Thru' Restaurant
Cheetham Hill Road, Manchester

Impermeable Area Plan

Goodson Associates

Tel: +44 (0)113 369 7925
Fax: -
Email: leeds@goodsons.com
Web: www.goodsons.com

Consulting Civil, Structural & Transportation Engineers
Fountain House, 4 South Parade,
Leeds, LS1 5QX
Also at Aberdeen, Edinburgh and Glasgow.

PLANNING			
DATE CREATED:	July, '22	SCALE:	1:500 @ A1
CONTRACT No:	P15633	DRAWING No:	501
		REV:	A

Goodson Associates		Page 1					
53 Melville Street Edinburgh EH3 7HL							
Date 13/07/2022 09:18		Designed by PhilH					
File P15633-SW Attenuation.SRCX		Checked by					
XP Solutions		Source Control 2020.1.3					
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 86 minutes.							
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	0.437	0.437	0.0	7.5	7.5	42.3	O K
30 min Summer	0.566	0.566	0.0	7.5	7.5	54.8	O K
60 min Summer	0.656	0.656	0.0	7.5	7.5	63.6	O K
120 min Summer	0.677	0.677	0.0	7.5	7.5	65.6	O K
180 min Summer	0.657	0.657	0.0	7.5	7.5	63.6	O K
240 min Summer	0.625	0.625	0.0	7.5	7.5	60.6	O K
360 min Summer	0.550	0.550	0.0	7.5	7.5	53.3	O K
480 min Summer	0.480	0.480	0.0	7.5	7.5	46.5	O K
600 min Summer	0.414	0.414	0.0	7.5	7.5	40.1	O K
720 min Summer	0.353	0.353	0.0	7.5	7.5	34.2	O K
960 min Summer	0.251	0.251	0.0	7.5	7.5	24.3	O K
1440 min Summer	0.126	0.126	0.0	7.5	7.5	12.2	O K
2160 min Summer	0.084	0.084	0.0	6.3	6.3	8.1	O K
2880 min Summer	0.068	0.068	0.0	5.1	5.1	6.5	O K
4320 min Summer	0.049	0.049	0.0	3.7	3.7	4.8	O K
5760 min Summer	0.039	0.039	0.0	2.9	2.9	3.8	O K
7200 min Summer	0.033	0.033	0.0	2.5	2.5	3.2	O K
8640 min Summer	0.029	0.029	0.0	2.2	2.2	2.8	O K
10080 min Summer	0.025	0.025	0.0	1.9	1.9	2.4	O K
15 min Winter	0.497	0.497	0.0	7.5	7.5	48.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)			
15 min Summer	118.498	0.0	50.2	23			
30 min Summer	79.373	0.0	67.2	36			
60 min Summer	50.812	0.0	86.1	62			
120 min Summer	31.483	0.0	106.7	98			
180 min Summer	23.483	0.0	119.4	132			
240 min Summer	18.956	0.0	128.5	166			
360 min Summer	13.897	0.0	141.3	234			
480 min Summer	11.157	0.0	151.2	300			
600 min Summer	9.402	0.0	159.3	364			
720 min Summer	8.170	0.0	166.1	424			
960 min Summer	6.541	0.0	177.4	542			
1440 min Summer	4.773	0.0	194.1	758			
2160 min Summer	3.476	0.0	212.0	1104			
2880 min Summer	2.772	0.0	225.5	1468			
4320 min Summer	2.011	0.0	245.4	2204			
5760 min Summer	1.600	0.0	260.3	2936			
7200 min Summer	1.339	0.0	272.3	3648			
8640 min Summer	1.157	0.0	282.4	4320			
10080 min Summer	1.023	0.0	291.2	5072			
15 min Winter	118.498	0.0	56.2	23			
©1982-2020 Innovyze							

Goodson Associates		Page 3
53 Melville Street Edinburgh EH3 7HL		
Date 13/07/2022 09:18	Designed by PhilH	
File P15633-SW Attenuation.SRCX	Checked by	
XP Solutions		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.359	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.226

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.075	4 8	0.075	8 12	0.075

Goodson Associates		Page 4
53 Melville Street Edinburgh EH3 7HL		
Date 13/07/2022 09:18 File P15633-SW Attenuation.SRCX	Designed by PhilH Checked by	
XP Solutions Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 2.000

Cellular Storage Structure

Invert Level (m) 0.000 Safety Factor 2.0

Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95

Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	102.0	0.0	0.801	0.0	0.0
0.800	102.0	0.0	2.000	0.0	0.0

Pump Outflow Control

Invert Level (m) 0.000

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	7.5000	0.900	7.5000	1.700	7.5000	2.500	7.5000
0.200	7.5000	1.000	7.5000	1.800	7.5000	2.600	7.5000
0.300	7.5000	1.100	7.5000	1.900	7.5000	2.700	7.5000
0.400	7.5000	1.200	7.5000	2.000	7.5000	2.800	7.5000
0.500	7.5000	1.300	7.5000	2.100	7.5000	2.900	7.5000
0.600	7.5000	1.400	7.5000	2.200	7.5000	3.000	7.5000
0.700	7.5000	1.500	7.5000	2.300	7.5000		
0.800	7.5000	1.600	7.5000	2.400	7.5000		

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