



Drainage Strategy Report

7 Deepdale Avenue
Manchester
M20 1GU

MAC01 2025

Citystruct LTD

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www.citystruct.com



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Quality Assurance – Approval Status

This document has been prepared and checked in accordance with Citystruct's internal governing processes

Issue	Date	Prepared by	Checked by	Approved by
P01	25/03/2025	LS	MB	MB

Comments

Comments

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1. Introduction

CityStruct have been instructed to provide a Drainage Strategy Report for the proposed residential development at 7 Deepdale Avenue, Manchester, M20 1GU. This report will outline the methods and assumptions behind the design and detail how the site is being developed in accordance with national and local sustainable drainage guidance.

This report is to accompany CityStruct drawings MAC01-CTY-HGN-ZZ-DR-D-0300 Proposed Drainage Layout.

This strategy has been developed in conjunction with the CityStruct Flood Risk Assessment, reference MAC01-CTY-HGN-ZZ-RP-D-0501.

1.1 Site Description

The site is located to the north of Deepdale Avenue and is approximately 0.051ha. The generous plot hosts an existing residential dwelling being No. 7 Deepdale Drive in the south east corner and a timber shed to the south west corner. The north of the site is currently a turfed garden.

The centre of the site is located at 384129, 393800. The site is bound by residential dwellings to the east, a public right of way and the Platt Brook to the north and a new residential infill development to the west. The site is accessed directly from Deepdale Avenue.

A topographic survey has been undertaken which indicates the site fall generally from west to east from a maximum of c.31.9 down to 31.5mAOD to the north west of the site.

Critical United Utilities infrastructure has been located in the northern part of the site. This comprises three watermain which are known collectively as Thirlmere Aqueduct. Proposals include an appropriate easement away from these assets.

1.2 Development Proposals

The development proposals are to construct a new residential dwelling within the generous plot of no.7 Deepdale Avenue. A Proposed Site Plan has been included as Appendix A.



Figure 1 Proposed Site Plan (c/o MD Design Consultancy)

2. Surface Water Drainage

2.1 Overview

It is a requirement that sustainable drainage systems (SuDS) are incorporated into new developments to provide effective drainage whilst mitigating against new flood risk and providing an opportunity to address existing flood risk issues.

This SuDS Strategy has been developed in accordance with the Non-statutory technical standards for sustainable drainage systems, The SuDS Manual Ciria C753 and the Lead Local Flood Authorities (LLFA) specific requirements.

The LLFA for this site is Manchester City Council.

2.2 Discharge location

The surface water discharge locations has been determined using the hierarchical approach which requires that each of the following are considered in priority order.

1. Into the ground (infiltration);
2. To a surface water body or watercourse;
3. To a surface water sewer or highway drain;
4. To a combined sewer.

Infiltration is the preferred method of water disposal as this reflects the natural ground conditions, recharges aquifers, lowers the risk of flooding as a result of urbanisation and reduces the risks of pluvial flooding to surrounding areas.

The site is located immediately south of Platt Brook and therefore poor infiltration potential was suspected. A desktop study was conducted using the LandIS Soilsclapes viewer which described the local soils as slowly permeable loamey and clayey soils. The built up nature of the brownfield site also means that siting a soakaway more than 5m away from existing and proposed property is not viable. Infiltration has therefore been discounted as a means of surface water disposal.

The Platt Brook is located north of the site however a public right of way and critical United Utilities (UU) water infrastructure divides this from the site. A connection to this watercourse would therefore be unviable.

United Utilities sewer maps have been obtained for the development of the associated drainage Strategy. These indicate an oversized surface sewer and a foul sewer in Deepdale Road immediately outside the proposed dwelling. These then discharge to a combined system 20m east of the site. UU mapping has been included as Appendix C.

The hierarchical approach would favour a connection to the surface system over the combined. A connection to the surface water would interrupt the design of the oversized pipe attenuation feature serving the recent development to the west. This surface sewer discharges to a combined system just 20m east of the site. A connection to the UU combined system is therefore proposed.

All surface water runoff will therefore be restricted to 1l/s which is recognised as the minimum achievable discharge rate and as close to the greenfield runoff rate as practical.

3. Proposed Surface Drainage

3.1 Surface Water - Roofs Areas

Roof water will be collected via traditional gutters and gullies. These will be connected to a below ground piped drainage system which will route flows towards the front of the property. All rainwater downpipes will be fitted with silt traps to manage sediment.

3.2 Surface Water – Private Driveways

The proposed private drive will consist of a permeable pavement construction with a block paved or resin bound finish. Surface water will percolate through the pavement construction layers and through the sub-base consisting of minimum 30% voids. The pavement will be fully lined to prevent ingress of groundwater. The formation of the pavement will be laid at falls to a perforated pipe.

Surface water will then be restricted to 1l/s via an orifice plate into the combined system.

A Proposed Drainage Layout Drawing is included as Appendix A.

3.3 Modelled Results

The network described above has been modelled using Causeway Flows drainage software for a variety of scenarios including the 2 year, 30 year and 100 year (including 40% uplift for climate change) storms. Modelled results indicate no flooding in all modelled storm scenarios.

The proposed permeable pavement provides adequate attenuation volumes for all storms included above.

Modelled results are included as Appendix B.

4. Proposed Foul Drainage

A below ground gravity drainage system will convey domestic foul water flows from the proposed dwellings into the public sewer. The below ground gravity drainage system has been designed to ensure self-cleansing velocities are achieved. Foul drainage will be designed in accordance with Building Regulations and discharge units contained within BS EN 12056-2:2000.

The proposed method of foul water disposal is to connect into the United Utilities Combined manhole located in Deepdale Avenue. This connection is subject to agreement with United Utilities. A plan of existing United Utilities Assets has been included as Appendix C.

In accordance with 'Design and Construction Guidance' the proposed peak foul flows have been calculated as follows:

4000 litres per dwelling per day; 1 dwellings x 0.05 l/s = 0.05 l/s

The foul system will remain separate from surface water until immediately upstream of the offsite connection.

A Proposed Drainage Layout Drawing is included as Appendix A.

5. Maintenance

It is crucial that the elements mentioned in the drainage elements and water quality are maintained to a sufficient standard to ensure that the devices can still function. Generally, the maintenance requirements are either from CIRIA 753, or manufacturer's guidance.

Maintenance of the proposed drainage systems shall remain the responsibility of the property maintenance company to ensure long term performance to design parameters. The piped network has been designed to ensure self-cleansing velocities therefore regular specialist maintenance is not envisaged.

The suggested maintenance regime for the pervious pavement is in line with the CIRIA SuDS Manual recommendations as per Figure 3 below.

Operation and maintenance requirements for pervious 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 observations of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is 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 50 mm 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, 48 h after large storms in first six months
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Figure 2 Porous Paving Maintenance Requirements (Source: CIRIA 753)

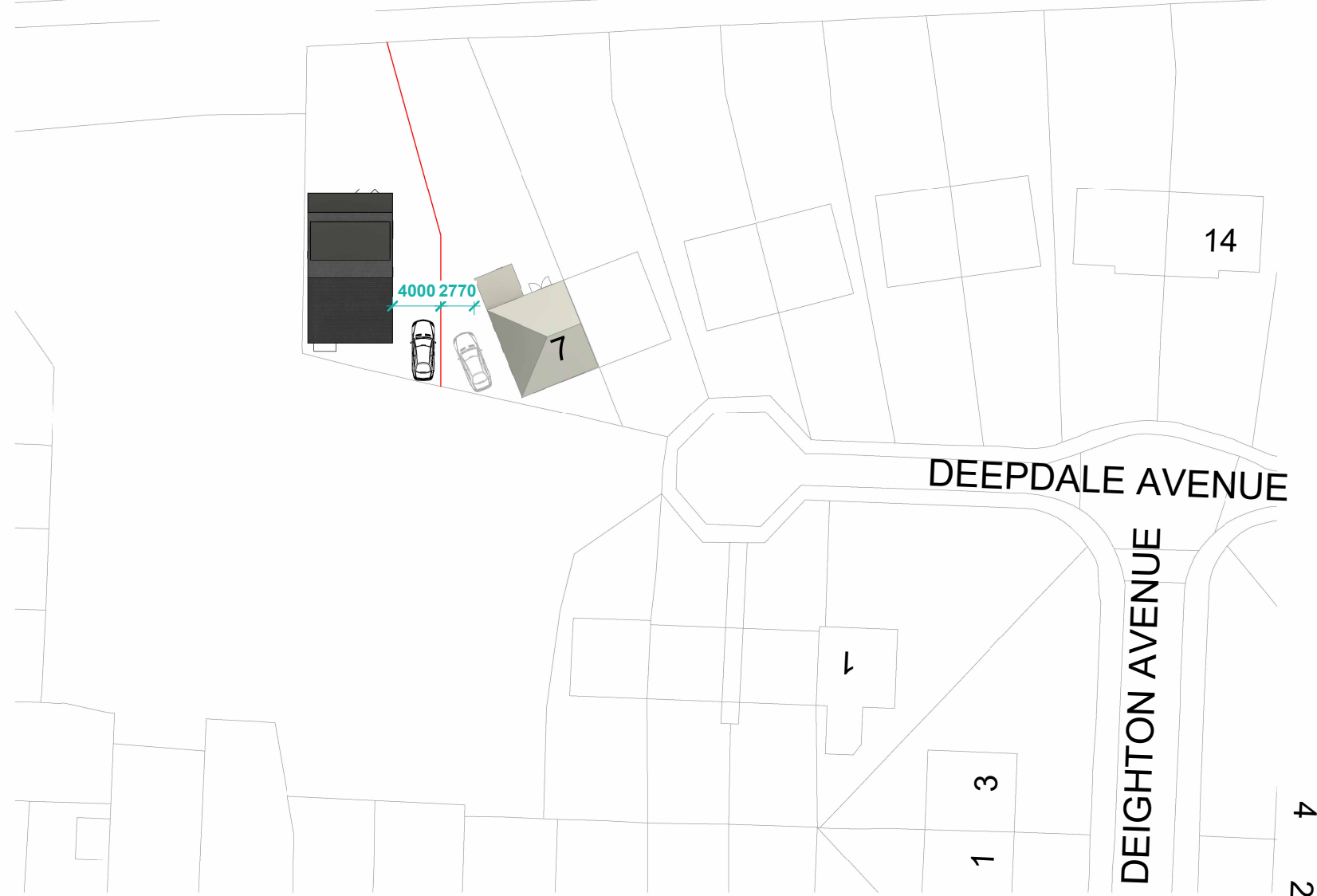


Appendix A – Proposed Drawings



VISUAL SCALE 1:500 @ A3

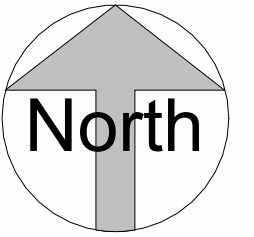
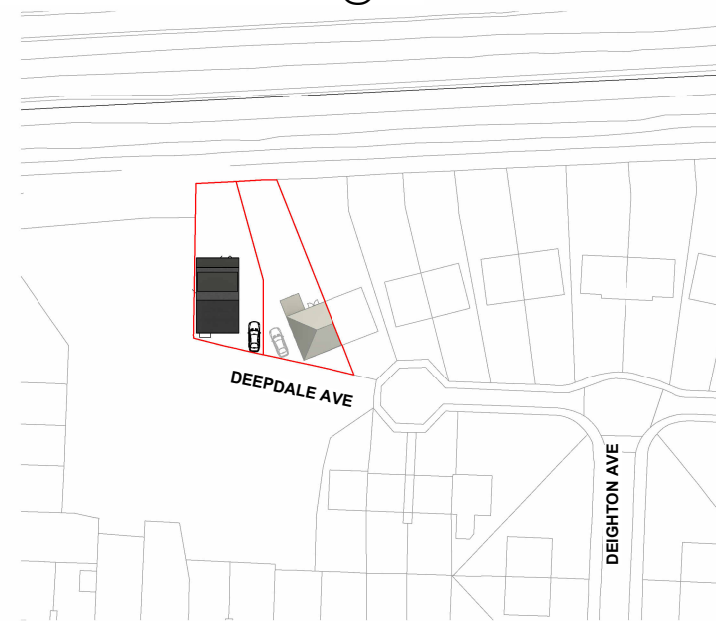
Platt Brook



Proposed Site Plan
1 : 500



VISUAL SCALE 1:1250 @ A3



Proposed Location Plan
1 : 1250



Existing level access/drop kerb to be made wider to allow for proposed driveway access.

See page A206 for boundary treatments and details.

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Erection Of A Single Detached Dwelling House

Proposed Plans (DR) A200

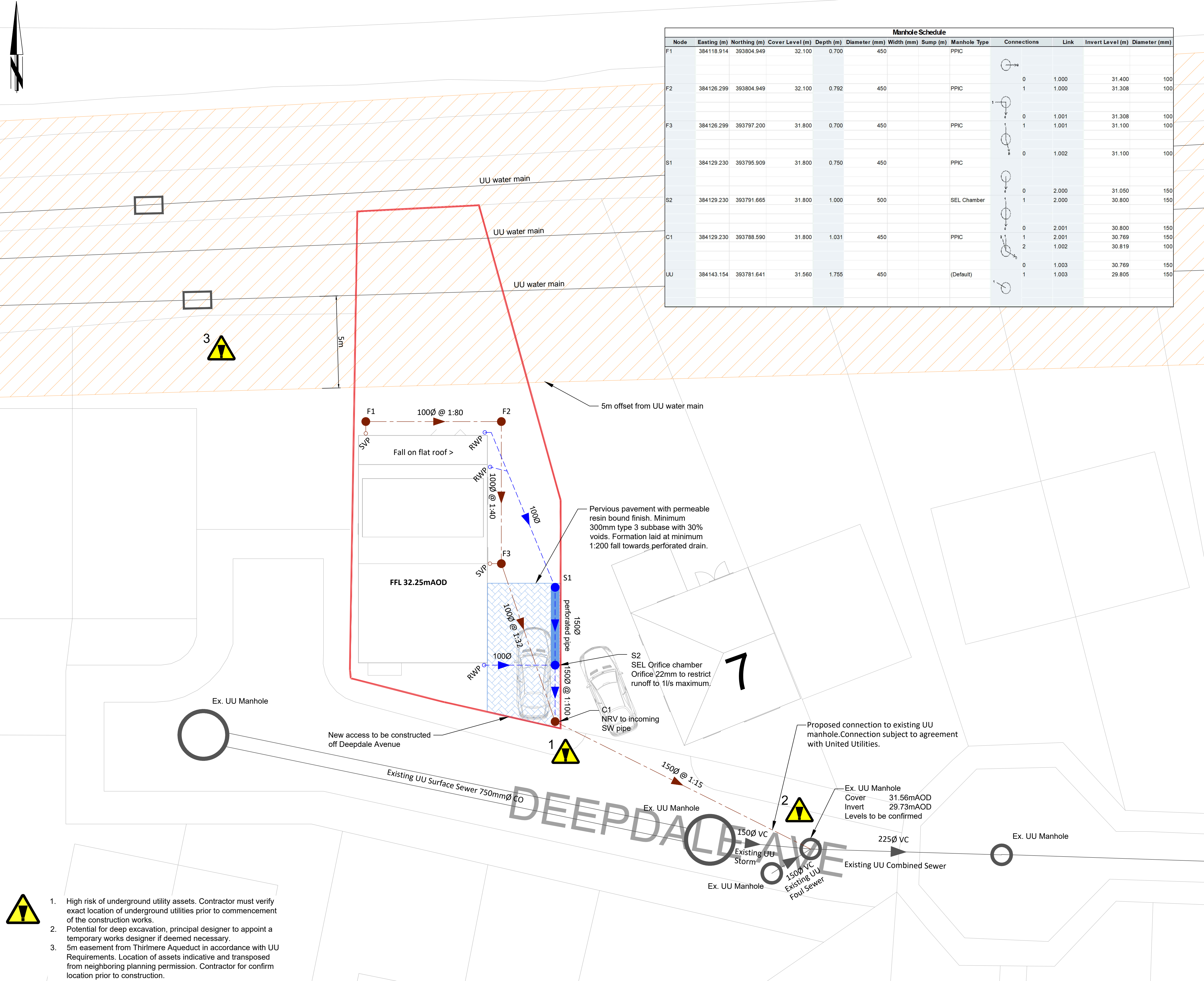
Project Number
0021

Client Name
Muhammad Asif

Drawn By
MDR

Rev	Description	Date
A	First Draft Issue	21.03.24
B	Plans Ammended	23.03.24
C	Issued For Planning	29.03.24
D	Revised Plans	16.09.24

Revision **D**



General notes:

- This drawing is to be read in conjunction with all Engineer's, Architect's, Street Lighting or other relevant drawings and specifications.
- All dimensions and levels are to be checked on site by the contractor prior to preparing any working drawings or commencing on site. any discrepancies shall be reported to the site supervisor. all dimensions are in meters unless stated otherwise.
- The contractor must ensure and will be held responsible for the overall stability of the building/structure/excavation at all stages of the work.
- The contractor has the responsibility to scan for underground utilities and verify, if necessary, with trial holes the location of underground utilities prior to carrying out excavation works, please refer to GPR survey and utility C2 returns.
- Pavement material suggestions are based on a general design spec, contractor shall amend if deemed necessary to a similar specifications given that it is in line with the MCHW Clause specified.
- Reinstatement of Carriageway surface must be done in accordance with the practices of the specification for reinstatement of opening in highways which is specified on this standard detail.
- Should there be any conflict between the details indicated on this drawing and those indicated on other drawings the Project Engineer shall be informed prior to construction.
- Until technical approval has been obtained from the relevant authority, it should be understood that all drawings issued are preliminary and not for construction. Should the contractor commence site work prior to such approval being given, it is entirely at their own risk.
- All 100Ø proposed foul drainage pipes shown are to be laid at a max gradient of 1:80.
- All 150Ø proposed foul drainage pipes shown are to be laid at a max gradient of 1:150.
- All existing land drains encountered on site during construction are to be re-connected.
- Pipes to be structured walled to BS EN 13476, Polypropylene to BE EN 1852 or PVC-U to BS EN 1401.
- Both clay and concrete pipes shall be strength class 120 (100/150mm min crushing strength 28kN/m). Thermoplastic pipes shall have a minimum ring stiffness of SN8.
- Private pipes which run adjacent to buildings shall be installed in strict accordance with Building Regulations Part H, clauses 2.23 to 2.25, and adoptable pipes in accordance with Design and Constructo Guidance
- Class Z concrete bed and surround to all foul and surface water pipes with less than 900mm cover depth. Type S granular bed and surround to all foul and surface water pipes with greater than 900mm cover depth.
- All manholes and inspection chambers to have D400 load-rated covers and frames to BS EN 124.
- All private foul and surface water pipes to be constructed to Building Regulations Part H, and adoptable foul and surface water pipes to be constructed in accordance with Design and Construction Guidance.
- If soft spots are encountered the whole area is to be excavated until firm ground is encountered and all excavated material disposed. Material excavated from soft spots should not be used for fill on site. The excavation should be reinstated with MOT Type 3 compacted in 100mm-150mm layers.
- Adoptable sewers to be constructed in accordance with Design and Construction Guidance.
- Private connections to adoptable sewers are to be a minimum of 100mm diameter and laid soffit-to-soffit.

- 
1. High risk of underground utility assets. Contractor must verify exact location of underground utilities prior to commencement of the construction works.
 2. Potential for deep excavation, principal designer to appoint a temporary works designer if deemed necessary.
 3. 5m easement from Thirlmere Aqueduct in accordance with UL Requirements. Location of assets indicative and transposed from neighboring planning permission. Contractor for confirm location prior to construction.



Appendix B – Model results

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	17.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	0.600
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	4.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
F1		4.00	32.100	450	384118.914	393804.949	0.700
F2			32.100	450	384126.299	393804.949	0.792
F3			31.800	450	384126.299	393797.200	0.700
S1	0.005	4.00	31.800	450	384129.230	393795.909	0.750
S2	0.007	4.00	31.800	500	384129.230	393791.665	1.000
C1			31.800	450	384129.230	393788.590	1.031
UU			31.560	450	384143.154	393781.641	1.755

Links (Input)

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	F1	F2	7.385	0.600	31.400	31.308	0.092	80.0	100	4.14	50.0
1.001	F2	F3	7.749	0.600	31.308	31.100	0.208	37.3	100	4.24	50.0
1.002	F3	C1	9.095	0.600	31.100	30.819	0.281	32.4	100	4.36	50.0
2.000	S1	S2	4.244	0.600	31.050	30.800	0.250	17.0	150	4.03	50.0
2.001	S2	C1	3.075	0.600	30.800	30.769	0.031	99.2	150	4.08	50.0
1.003	C1	UU	15.562	0.600	30.769	29.805	0.964	16.1	150	4.46	50.0

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	17.000	Additional Storage (m³/ha)	20.0
Ratio-R	0.400	Starting Level (m)	
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

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

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

Node S2 Online Orifice Control

Flap Valve	x	Design Depth (m)	1.000	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	1.0		
Invert Level (m)	30.800	Diameter (m)	0.021		

Node S2 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	31.370	Slope (1:X)	200.0
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	37	Depth (m)	0.300
Safety Factor	2.0	Width (m)	7.500	Inf Depth (m)	
Porosity	0.30	Length (m)	4.000		

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	F1	1	31.400	0.000	0.0	0.0000	0.0000	OK
15 minute summer	F2	1	31.308	0.000	0.0	0.0000	0.0000	OK
15 minute summer	F3	1	31.100	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S1	23	31.162	0.112	0.6	0.0326	0.0000	OK
30 minute winter	S2	23	31.162	0.362	1.4	0.1215	0.0000	SURCHARGED
30 minute winter	C1	24	30.781	0.012	0.5	0.0019	0.0000	OK
30 minute winter	UU	24	29.817	0.012	0.5	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	F1	1.000	F2	0.0	0.000	0.000	0.0000	
15 minute summer	F2	1.001	F3	0.0	0.000	0.000	0.0000	
15 minute summer	F3	1.002	C1	0.0	0.000	0.000	0.0000	
15 minute summer	S1	2.000	S2	0.8	0.248	0.018	0.0543	
30 minute winter	S2	2.001	C1	0.5	0.565	0.030	0.0030	
30 minute winter	C1	1.003	UU	0.5	0.852	0.012	0.0098	1.1

Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	F1	1	31.400	0.000	0.0	0.0000	0.0000	OK
15 minute summer	F2	1	31.308	0.000	0.0	0.0000	0.0000	OK
15 minute summer	F3	1	31.100	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S1	25	31.407	0.357	1.2	0.1043	0.0000	SURCHARGED
30 minute winter	S2	25	31.407	0.607	1.9	0.4491	0.0000	SURCHARGED
30 minute winter	C1	26	30.782	0.013	0.7	0.0021	0.0000	OK
30 minute winter	UU	26	29.818	0.013	0.7	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	F1	1.000	F2	0.0	0.000	0.000	0.0000	
15 minute summer	F2	1.001	F3	0.0	0.000	0.000	0.0000	
15 minute summer	F3	1.002	C1	0.0	0.000	0.000	0.0000	
15 minute summer	S1	2.000	S2	1.2	0.219	0.028	0.0747	
30 minute winter	S2	2.001	C1	0.7	0.611	0.040	0.0036	
30 minute winter	C1	1.003	UU	0.7	0.927	0.016	0.0118	2.1

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	F1	1	31.400	0.000	0.0	0.0000	0.0000	OK
15 minute summer	F2	1	31.308	0.000	0.0	0.0000	0.0000	OK
15 minute summer	F3	1	31.100	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S1	48	31.561	0.511	1.4	0.1493	0.0000	FLOOD RISK
60 minute winter	S2	48	31.561	0.761	3.1	1.8889	0.0000	FLOOD RISK
60 minute winter	C1	48	30.783	0.014	0.8	0.0022	0.0000	OK
60 minute winter	UU	48	29.819	0.014	0.8	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	F1	1.000	F2	0.0	0.000	0.000	0.0000	
15 minute summer	F2	1.001	F3	0.0	0.000	0.000	0.0000	
15 minute summer	F3	1.002	C1	0.0	0.000	0.000	0.0000	
15 minute winter	S1	2.000	S2	2.9	0.275	0.066	0.0747	
60 minute winter	S2	2.001	C1	0.8	0.633	0.044	0.0039	
60 minute winter	C1	1.003	UU	0.8	0.958	0.018	0.0128	4.8



Appendix C – United Utilities Information

Stormflow Solutions

**34
Wallis Avenue,
Lincoln,
LN6 8AS**

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: 7 Deepdale
Our Ref: UUPS-ORD-633600
Date: 25/02/2025**

Dear Sirs**Location: 7 DEEPPALE AVENUE, MANCHESTER, M20 1GU**

I acknowledge with thanks your request dated 19/02/2025 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

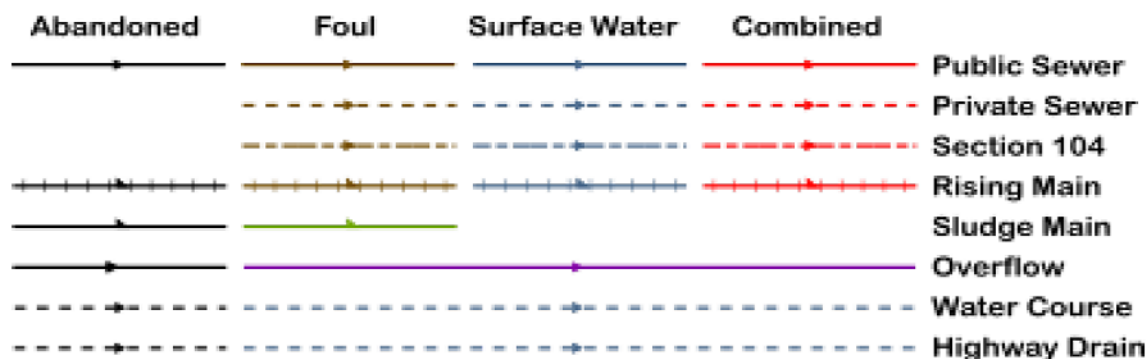
TERMS AND CONDITIONS - WASTEWATER AND WATER DISTRIBUTION PLANS

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	DNM Network Monitoring Point
Drop Shaft	Change of Characteristic
Orifice Plate	



Scale: 1:1250
Date: 25/02/2025

SEWER RECORDS

Address or Site Reference: 7 DEEPPDALE AVENUE, MANCHESTER, M20 1GU
Printed by: Property Searches

 **United
Utilities**
Water for the North West

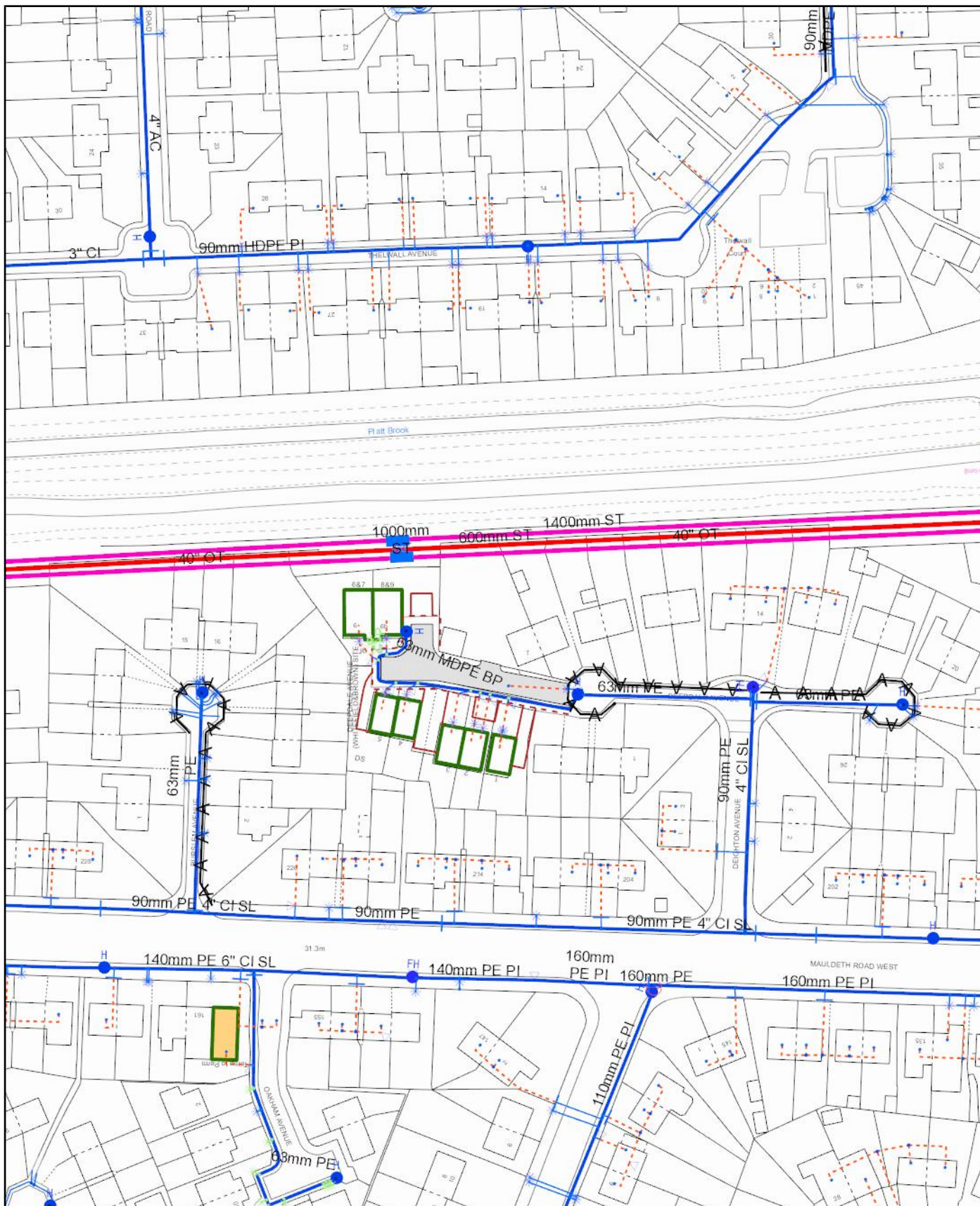
The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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Clean Water Symbolology

Proposed	Abandoned	Live	
			Distribution Main
			Trunk Main
			Comms Pipe
			Private Pipe
			Concessionary Service
			Raw Water
			LDTM Raw Water
			LDTM Treated Water
			Air Valve
			AC Valve, open
			AC Valve, closed
			CC Valve, open
			CC Valve, closed
			Non Return Valve
			Pressure Management Valve
			OMS Valve
			Stop Tap
			Flow Meter
			Domestic Meter
			Commercial Meter
			Pump
			Hydrant
			Fire Hydrant
			Anode
			Chlorination Point
			De-chlorination Point
			Strainer Point
			Access Point
			Hatch Box
			IP Point
			Sampling Station
			Logger Box
			Bore Hole
			Inlet Point
			Bulk Supply Point
			End Cap
			Site Termination
			Change of Characteristic
			Condition Report
			<u>Property Types</u>
			Water Tower
			Valve House
			Booster Pumping Station
			Intake Pumping Station
			Water Treatment Works
			Supply Reservoir
			Service Reservoir
			Impounding Reservoir
			Pipe Bridge

Symbology for proposed assets is the same as above, but shown in **green**
 Symbology for abandoned assets is the same as above, but shown in **black**



Scale: 1:1250
Date: 25/02/2025

WATER MAINS RECORDS

Address or Site Reference: 7 DEEPALE AVENUE, MANCHESTER, M20 1GU
Printed by: Property Searches



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