

Area 3 Reference Pictures

Watercourse Outfall Exposed for Access



Watercourse Outfall Location View



Pipe route and Location of Possible Chamber/Culvert



Possible Chamber/Brick Culvert



Area 4 Works Overview

Arranged access with Fisheries contact to gain permission and access to the fishing lakes. A walkover survey confirmed the 5-tiered lakes to be fed via a watercourse running below the A627(M). The fishery lakes connect via linked pipework with water flowing to the bottom tier which contains a brick-built chamber and rising 150mm pipe which were confirmed to be surcharged and not flowing.

The location of the chamber and outfall pipe were picked up with GPS to be overlaid & plotted onto a topographical survey plan provided.

Recommendations

- Combination Lorry Jetting Unit to attend site and draw down water level and HPWJ manhole MH1 (see Area 5) located in Stakehill Lane to investigate a possible connection with the fishing lake outlet/provide further recommendations to continue survey.

Area 4 Reference Pictures

Fishery Lake Outfall Location View



Fishery Lake Outfall Chamber & Pipe View



Area 5 Works Overview

Set up temporary traffic management to lift all accessible located manholes within Stakehill Lane and undertake a connectivity survey of the surface water and combined water systems, including recording chamber and pipe measurements for production of manhole cards.

Manhole S1 was confirmed to be the head of the surface water run serving this section of carriageway which then flows through several manholes before continuing downstream into Finlan Road from manhole S4.

Manhole S2 has become compressed into its frame and could not be lifted after repeated attempts to free it with hand tools and a mechanical lifter.

Lifted manhole referenced MH1 (detailed on connectivity plan) and confirmed the chamber to be holding standing water. Further investigation work will be required to establish/confirm whether there is a connection with the fishery lake outfall outlined in Area 4.

The grated manhole cover on C5 has become seized into its frame and could not be lifted after repeated attempts to free it with hand tools and mechanical lifter.

Recommendations

- Combination Lorry Jetting Unit to attend site to empty and HPWJ manhole MH1 and undertake further investigation/CCTV survey of any accessible connecting sections.
- Break out and replace seized manholes S2 & C5 to survey manhole chambers and verify connectivity

Area 5 Reference Pictures

S2 Seized Manhole Cover



C5 Seized Grated Manhole Cover



Undertook a visual survey of the area around Hough Lane to locate manholes and watercourse routes as shown on the plan supplied.

Manhole referenced as MH4 on the connectivity plan was noted to have been damaged cover/frame which have become offset from the cover slab. Care was taken to lift the frame/cover to one side to survey the manhole chamber and electronically traced the downstream line to a concealed manhole on the opposite side of the lane and once completed replaced the cover/frame centrally back over access on the cover slab. Undertook foliage clearance within the area of electronic trace/sonde signal and located/exposed manhole MH5, once lifted recorded all details for manhole card.

Cleared overgrown foliage to access MH7 and noted the current frame/cover to be loose on cover slab. Lifted manhole and confirmed chamber to be surcharged and recorded visible manhole details from the surface.

Walk over visual survey of the area, confirmed the water course outfall to be in the farmers land on the opposite side of the A627(M). Cleared overgrown foliage to access a manhole (reference MH6 on plan) which is located on the downstream line of the culvert as detailed on the plan supplied and confirmed the upstream pipe connection with watercourse.

Recorded manhole details for MH6 and undertook electronic trace of the downstream pipework, due to the depth of flow we were unable to obtain a positive trace.

Setup GPS and picked up all located manhole points to be added to topographical survey plan supplied.

On further review of the layout plan supplied, undertook a visual survey of the area showing the culverts' outfall to an open channel and confirmed another outfall pipe on private property (no access/permission at time of survey).

Recommendations

- Reposition existing cover & frame MH4 onto cover slab including new fillet surround
- Reposition existing cover & frame MH7 onto cover slab including new fillet surround
- 7.5 tonne Combination Lorry Jetting Unit to attend site to empty and HPWJ manhole MH7 and undertake further investigation/CCTV survey of any accessible connecting sections.
- CCTV survey with crawler unit & cradle extension of the downstream line from MH6 to determine connectivity.
- HPWJ/CCTV survey and line trace of 225mm outfall to watercourse (Access to be arranged with property/landowner prior to attendance)



Area 6 Reference Pictures

MH4 Manhole Cover Condition View



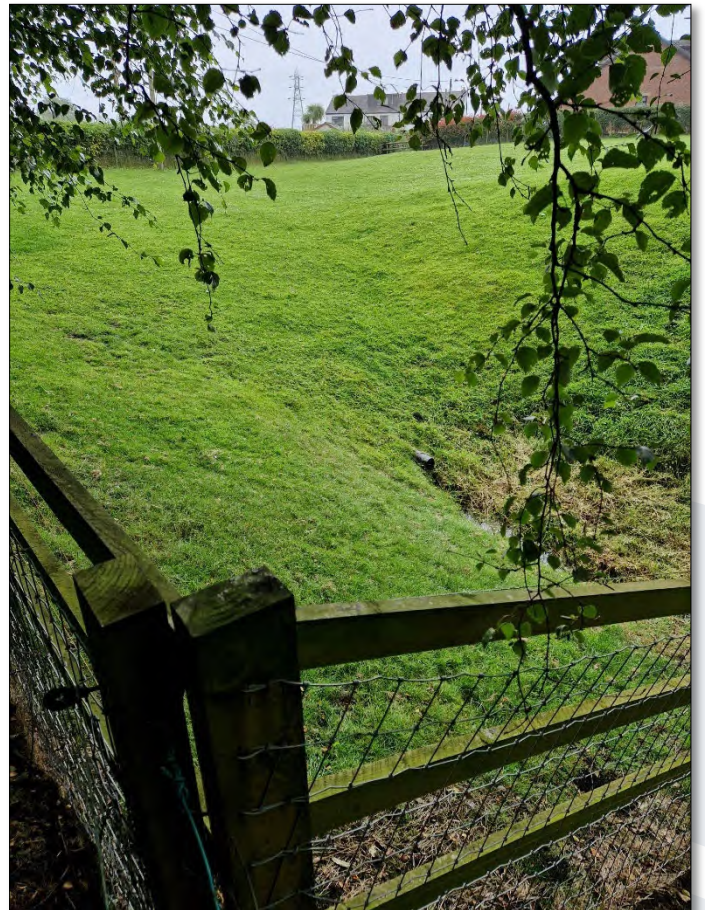
MH7 Location View



MH7 Internal View



Outfall into Watercourse



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	MH1	Surveyor	Neil Symons
Cover Level		Date	08/07/2024
Type			

Cover Details

Service Type		Shape	Square
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	600 x 600mm
Material	Brick	Depth	0.54m
Condition	Good		

Chamber Details

Size	1200mm	Material	PCC
Depth		Condition	Good
Benching Condition		Channel Condition	

Incoming Pipes

Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A					x		
B					x		
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X					x		
Y					x		
Z					x		

Notes

Surcharged manhole no pipes visible

Chamber Sketch

Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	S3	Surveyor	Neil Symons
Cover Level	136.85m	Date	08/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	Triangular
Size	550 x 550mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	1200mm	Material	PCC
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

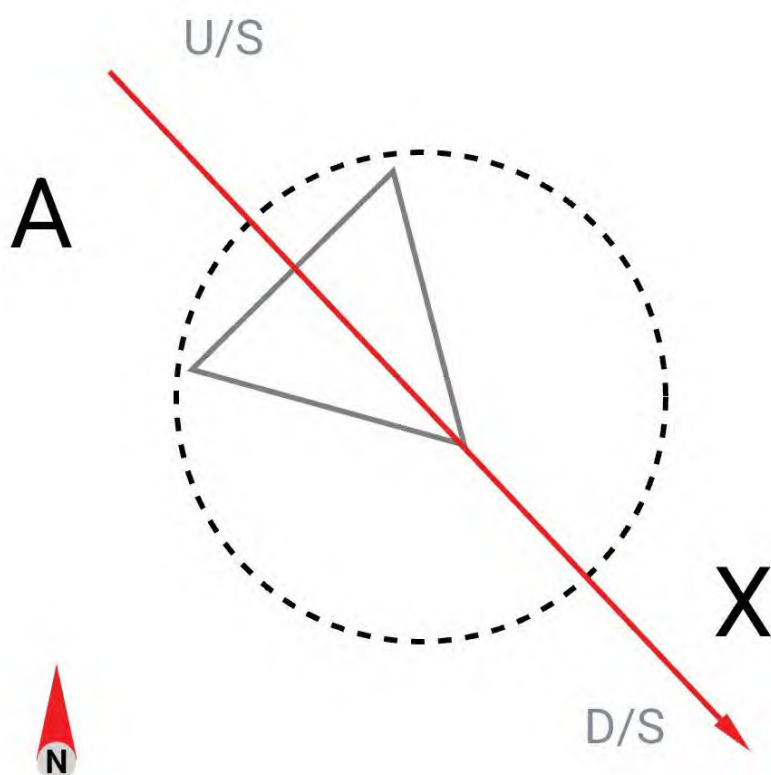
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.76	134.09	Circular	225	x	Vitrified Clay	U/S
B					x		
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	2.77	134.08	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	S4	Surveyor	Neil Symons
Cover Level	136.22m	Date	08/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	Triangular
Size	550 x 550mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	1200mm	Material	PCC
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

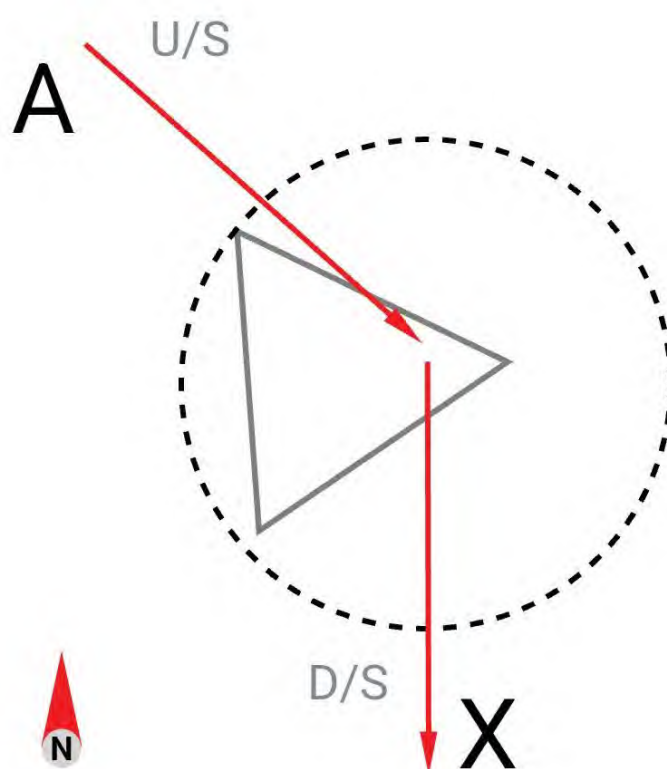
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.62	133.60	Circular	225	x	Vitrified Clay	U/S
B					x		
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	2.62	133.60	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	C1	Surveyor	Neil Symons
Cover Level	136.30m	Date	08/07/2024
Type	Manhole		

Cover Details

Service Type	Combined	Shape	Triangular
Size	550 x 550mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	600 x 600mm
Material	Brick	Depth	0.54m
Condition	Good		

Chamber Details

Size	1200 x 600mm	Material	Brick
Depth		Condition	Good
Benching Condition	Fair	Channel Condition	Good

Incoming Pipes

Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.82	133.48	Circular	225	x	Vitrified Clay	U/S
B					x		
C					x		
D					x		
E					x		
F					x		

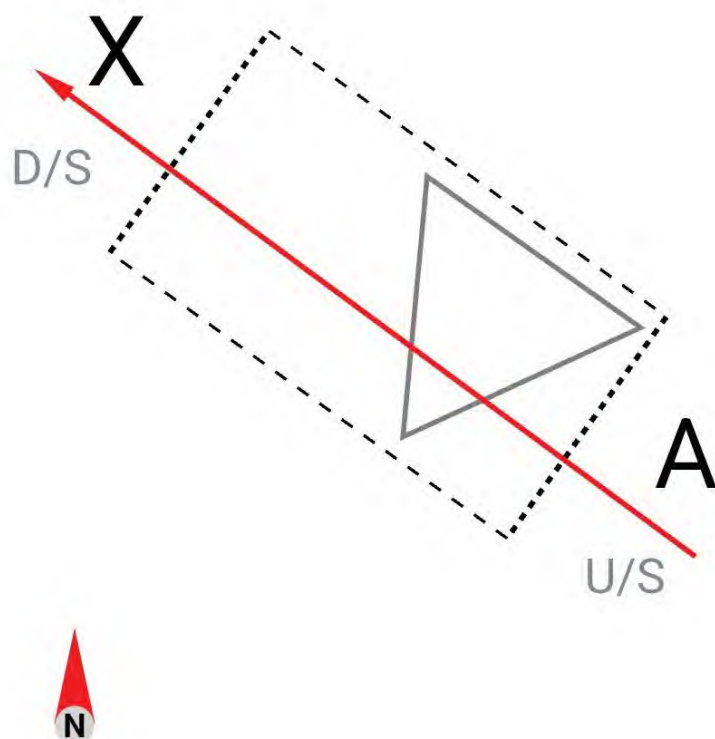
Outgoing Pipes

X	2.83	133.47	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Service running through chamber at 1.12m Surcharged foul debris covering step irons & benching

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	C2	Surveyor	Neil Symons
Cover Level	136.28m	Date	08/07/2024
Type	Manhole		

Cover Details

Service Type	Combined	Shape	2 x Triangle
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	600 x 600mm
Material	PCC	Depth	0.50m
Condition	Good		

Chamber Details

Size	1200mm	Material	PCC
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

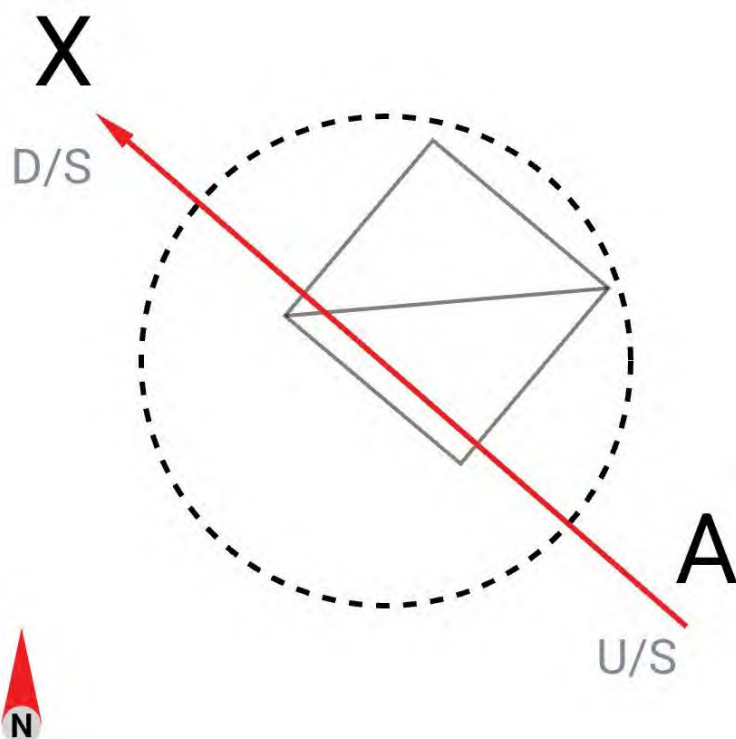
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.79	133.49	Circular	225	x	Vitrified Clay	U/S
B					x		
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

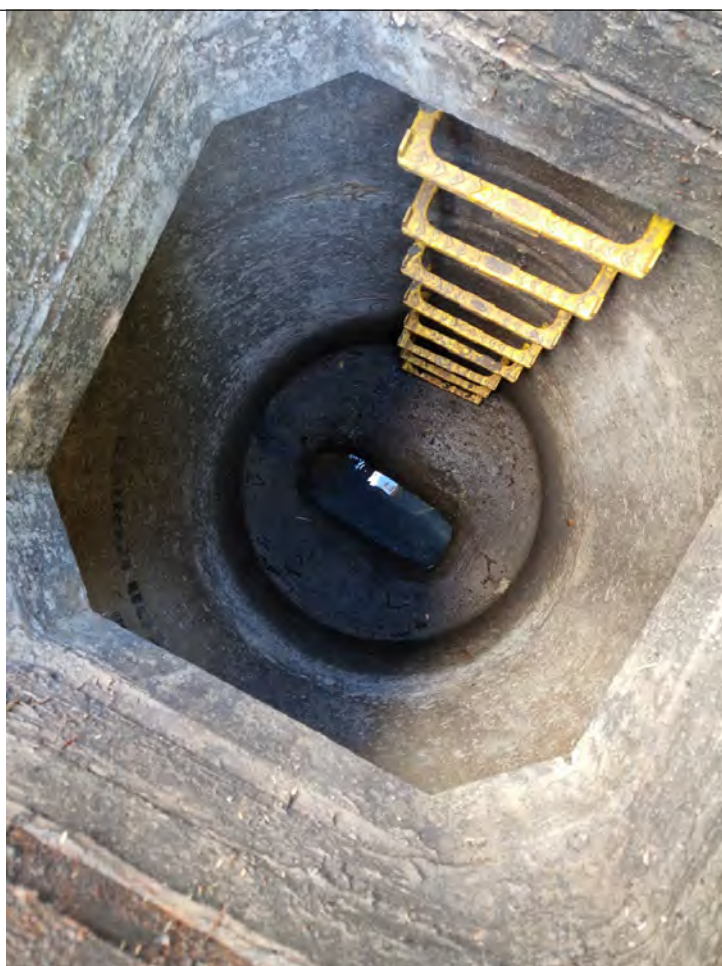
X	2.80	133.48	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	C3	Surveyor	Neil Symons
Cover Level	136.83m	Date	08/07/2024
Type	Manhole		

Cover Details

Service Type	Combined	Shape	Square
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	460 x 460mm
Material	Brick	Depth	0.74m
Condition	Good		

Chamber Details

Size	1200 x 780mm	Material	Brick
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

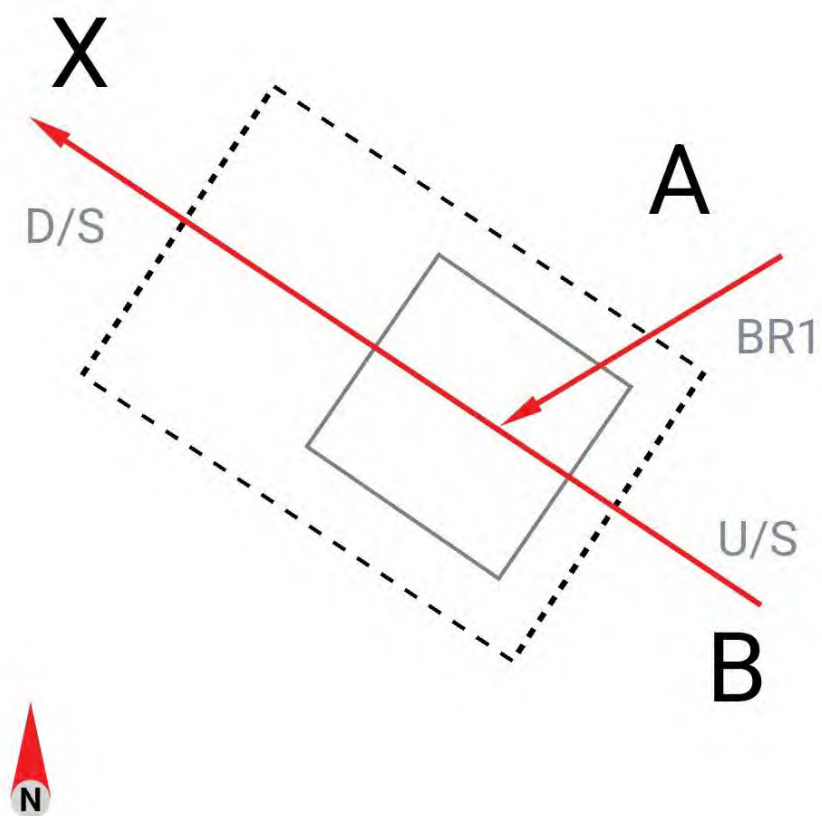
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	3.54	133.29	Circular	150	x	Vitrified Clay	BR1
B	3.72	133.11	Circular	225	x	Vitrified Clay	U/S
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	3.74	133.09	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	C4	Surveyor	Neil Symons
Cover Level	137.24m	Date	08/07/2024
Type	Manhole		

Cover Details

Service Type	Combined	Shape	Triangular
Size	550 x 550mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	600 x 600mm
Material	Brick	Depth	0.92m
Condition	Good		

Chamber Details

Size	1200 x 780mm	Material	Brick
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	3.10	134.14	Circular	150	x	Vitrified Clay	BR1
B	4.54	132.70	Circular	225	x	Vitrified Clay	U/S
C					x		
D					x		
E					x		
F					x		

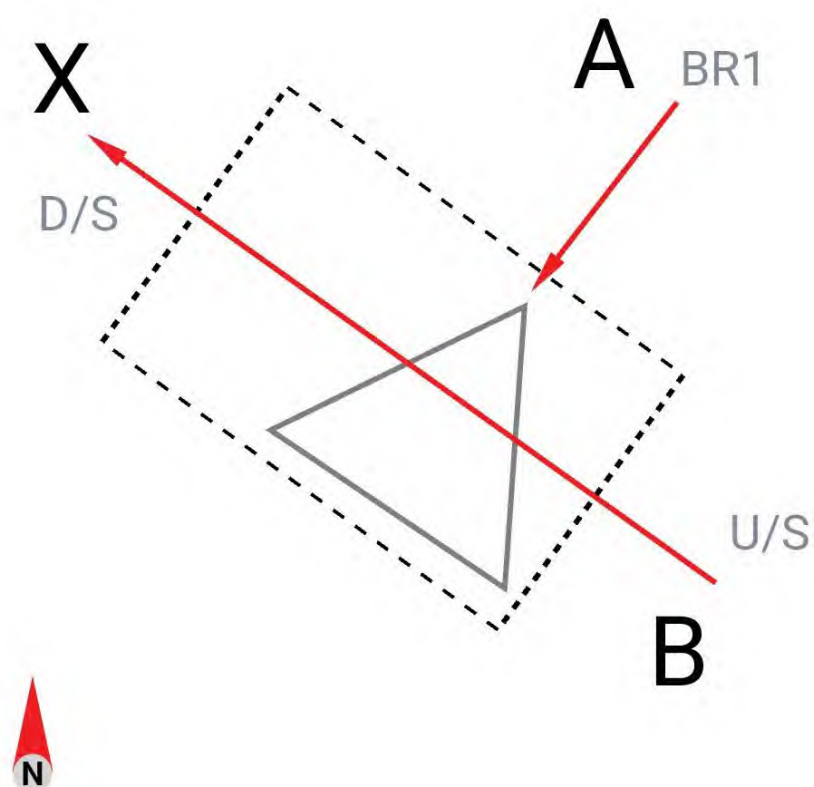
Outgoing Pipes

X	4.55	132.69	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Service running through manhole at 1.13

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	C6	Surveyor	Neil Symons
Cover Level	134.18m	Date	09/07/2024
Type	Manhole		

Cover Details

Service Type	Combined	Shape	Triangular
Size	550 x 550mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	600 x 600mm
Material	Brick	Depth	0.61m
Condition	Good		

Chamber Details

Size	1350mm	Material	PCC
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

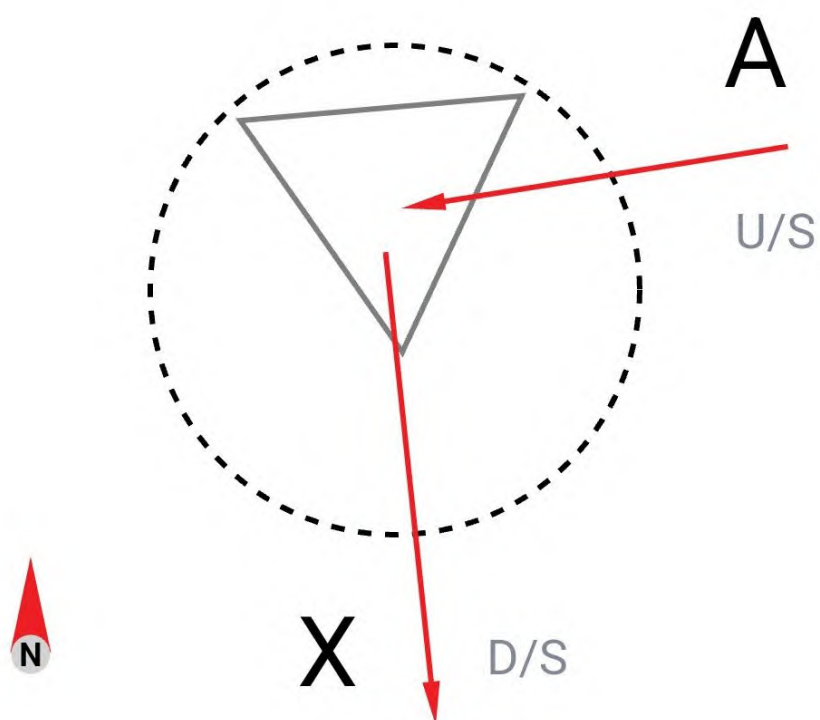
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.81	131.37	Circular	300	x	Vitrified Clay	U/S
B					x		
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	2.83	131.35	Circular	300	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	MH3	Surveyor	Neil Symons
Cover Level	136.01m	Date	09/07/2024
Type	Catchpit		

Cover Details

Service Type	Surface Water	Shape	
Size		Duty	
Material		Condition	
Padlocked		Grade	

Shaft Details

Access		Size	600 x 600mm
Material	Brick	Depth	1.03m
Condition	Fair		

Chamber Details

Size	300mm	Material	Unknown Material
Depth	134.18m	Condition	
Benching Condition		Channel Condition	

Incoming Pipes

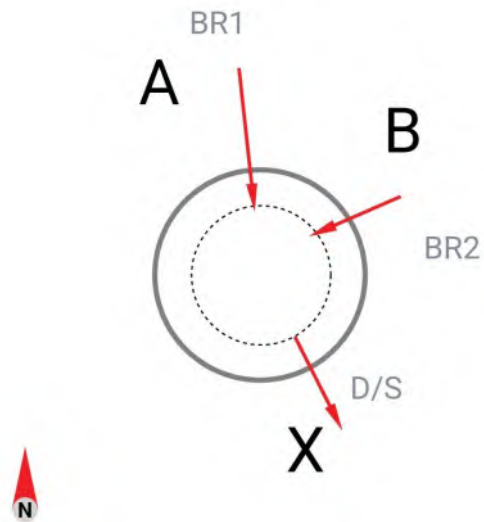
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	1.12	134.89	Circular	300	x	Vitrified Clay	BR1
B	1.12	134.89	Circular	150	x	Cast Iron	BR2
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	1.72	134.29	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph 1



Photograph 2



Photograph 3



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	MH4	Surveyor	Neil Symons
Cover Level	143.61m	Date	10/07/2024
Type	Catchpit		

Cover Details

Service Type	Surface Water	Shape	2 x Triangle
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	Re-Set
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	900mm	Material	PCC
Depth	141.33m	Condition	Good
Benching Condition		Channel Condition	

Incoming Pipes

Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.00	141.61	Circular	150	x	Vitrified Clay	U/S
B					x		
C					x		
D					x		
E					x		
F					x		

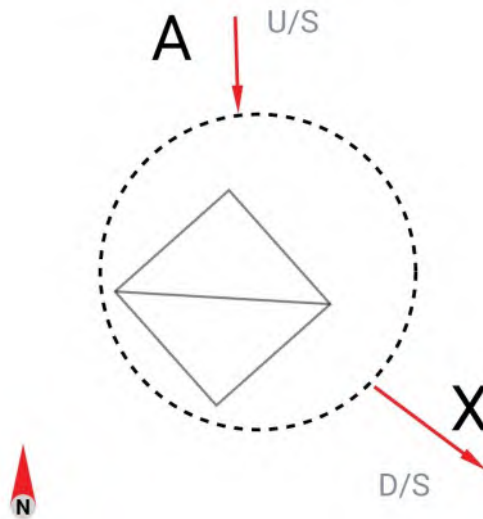
Outgoing Pipes

X	2.02	141.59	Circular	150	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Cover & frame loose

Chamber Sketch



Photograph 1



Photograph 2



Photograph 3



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	MH5	Surveyor	Neil Symons
Cover Level	143.91m	Date	10/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	Circular
Size	600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	1350mm	Material	PCC
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

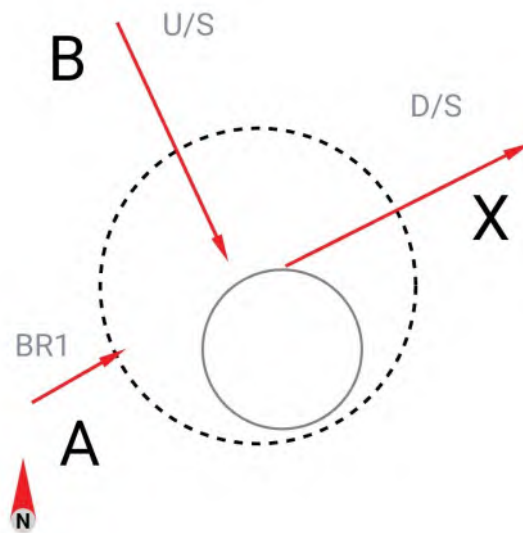
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.68	141.23	Circular	150	x	Vitrified Clay	BR1
B	3.25	140.66	Circular	675	x	Concrete	U/S
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	3.26	140.65	Circular	750	x	Concrete	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph 1



Photograph 2



Photograph 3



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	MH6	Surveyor	Neil Symons
Cover Level	146.79m	Date	10/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	2 x Triangle
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	1350mm	Material	PCC
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

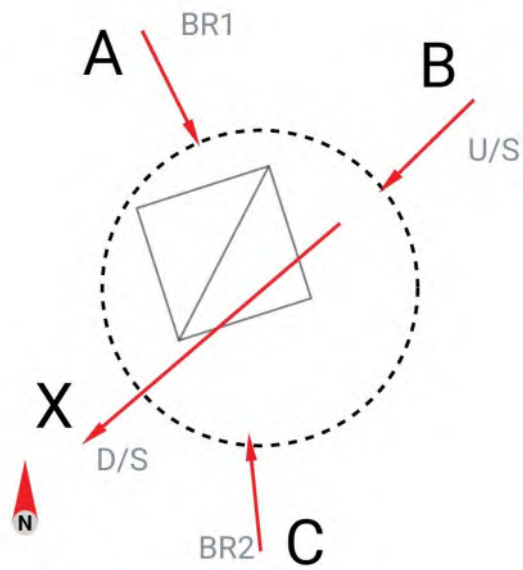
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	2.46	144.33	Circular	150	x	Vitrified Clay	BR1
B	2.70	144.09	Circular	225	x	Vitrified Clay	U/S
C	2.46	144.33	Circular	150	x	Vitrified Clay	BR2
D					x		
E					x		
F					x		

Outgoing Pipes

X	3.05	143.74	Circular	675	x	Concrete	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph 1



Photograph 2



Photograph 3



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	MH7	Surveyor	Neil Symons
Cover Level	144.23m	Date	10/07/2024
Type			

Cover Details

Service Type	Surface Water	Shape	Circular
Size	600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	Re-Set
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	1500mm	Material	PCC
Depth	142.19m	Condition	Unknown
Benching Condition		Channel Condition	

Incoming Pipes

Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A					x		
B					x		
C					x		
D					x		
E					x		
F					x		

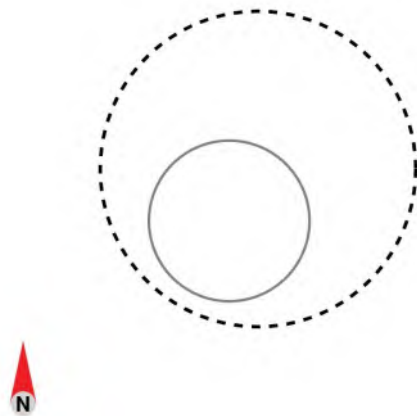
Outgoing Pipes

X					x		
Y					x		
Z					x		

Notes

Cover & frame loose

Chamber Sketch



Photograph 1



Photograph 2



Photograph 3



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	S1	Surveyor	Neil Symons
Cover Level	136.60m	Date	09/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	Triangular
Size	550 x 550mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	1200mm	Material	PCC
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

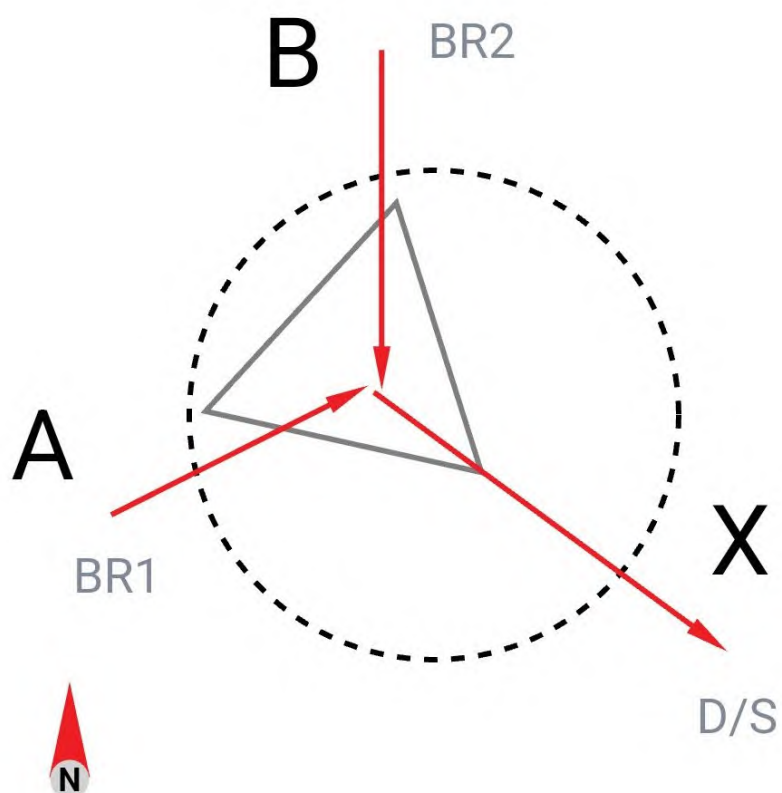
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	1.45	135.15	Circular	150	x	Vitrified Clay	BR1
B	1.45	135.15	Circular	150	x	Vitrified Clay	BR2
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	1.47	135.13	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	S5	Surveyor	Neil Symons
Cover Level	135.63m	Date	09/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	Square
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	960 x 950mm	Material	Brick
Depth		Condition	Good
Benching Condition	Fair/Good	Channel Condition	Good

Incoming Pipes

Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	1.24	134.39	Circular	150	x	Vitrified Clay	BR1
B	1.23	134.40	Circular	150	x	Vitrified Clay	BR2
C					x		
D					x		
E					x		
F					x		

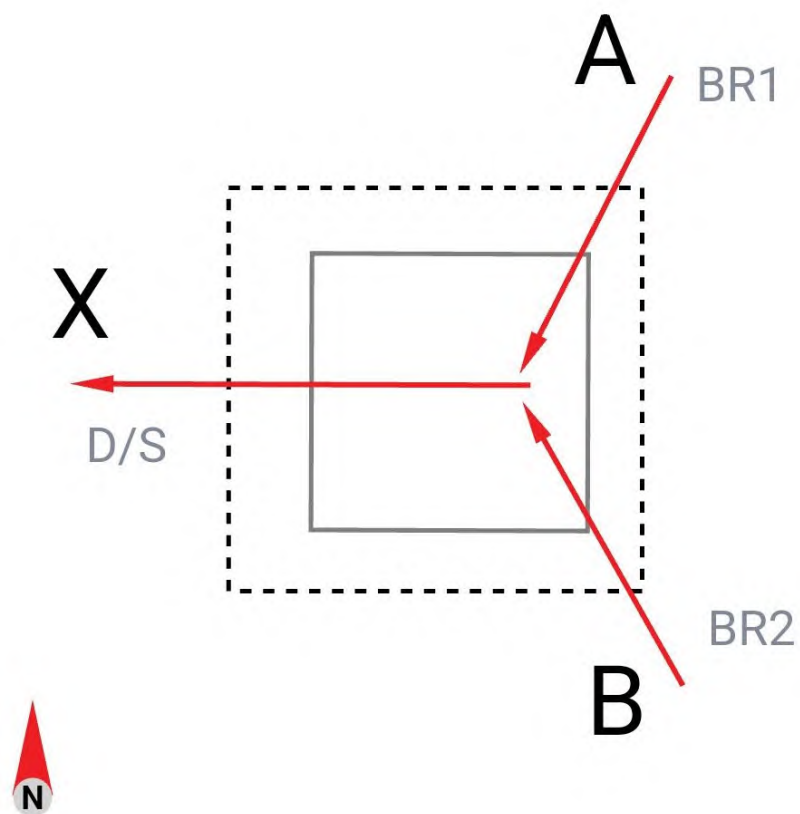
Outgoing Pipes

X	1.51	134.12	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Debris on benching

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
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Manhole ID	S6	Surveyor	Neil Symons
Cover Level	130.18m	Date	09/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	Square
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	960 x 950mm	Material	Brick
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

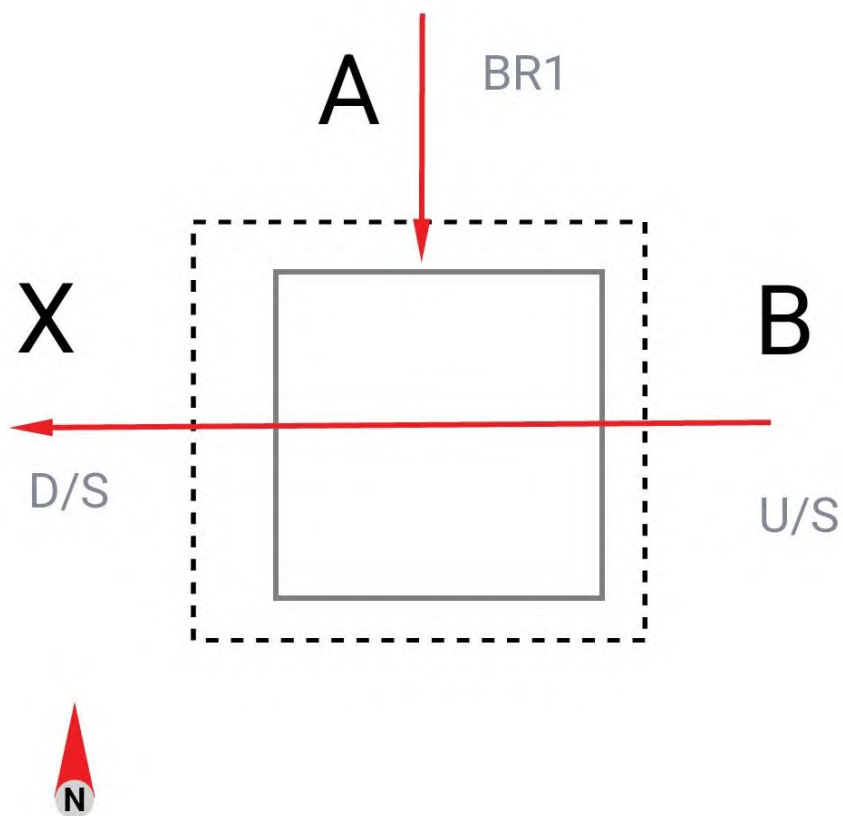
Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	1.36	128.82	Circular	225	x	Vitrified Clay	BR1
B	1.60	128.58	Circular	225	x	Vitrified Clay	U/S
C					x		
D					x		
E					x		
F					x		

Outgoing Pipes

X	1.61	128.57	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Chamber Sketch



Photograph



Manhole Record Card



Job No	TS24-386	Project	Stakehill Industrial Estate
--------	----------	---------	-----------------------------

Manhole ID	S7	Surveyor	Neil Symons
Cover Level	126.94m	Date	09/07/2024
Type	Manhole		

Cover Details

Service Type	Surface Water	Shape	Square
Size	600 x 600mm	Duty	Heavy
Material	Ductile/Cast Iron	Condition	OK
Padlocked	No	Grade	A

Shaft Details

Access	Irons	Size	
Material		Depth	
Condition			

Chamber Details

Size	950 x 900mm	Material	Brick
Depth		Condition	Good
Benching Condition	Good	Channel Condition	Good

Incoming Pipes

Pipe	Depth to invert (m)	Invert Level (m)	Shape	Size (mm)		Pipe Material	Remark
				Height	Width		
A	1.65	125.29	Circular	225	x	Vitrified Clay	U/S
B					x		
C					x		
D					x		
E					x		
F					x		

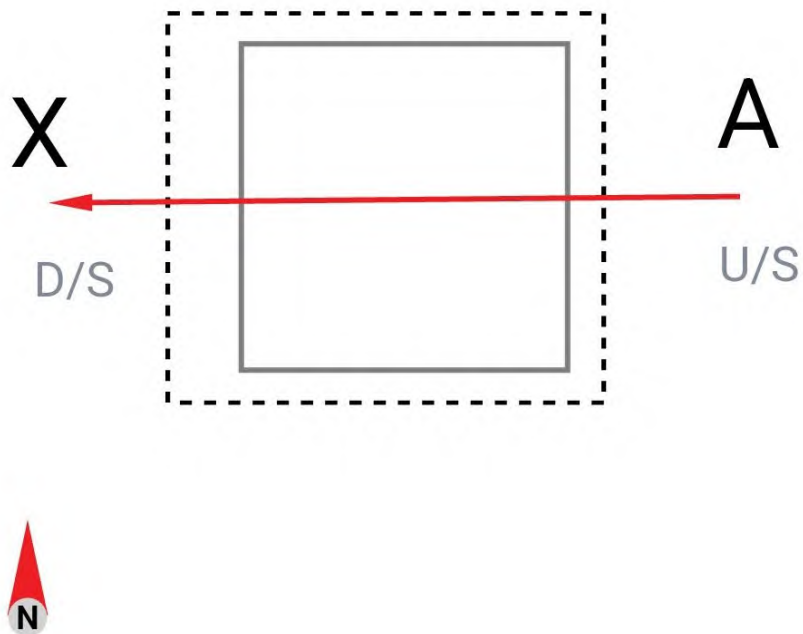
Outgoing Pipes

X	1.66	125.28	Circular	225	x	Vitrified Clay	D/S
Y					x		
Z					x		

Notes

Debris on benching

Chamber Sketch



Photograph



FOUL DRAINAGE

CONTAMINATED SURFACE

SURFACE DRAINAGE

CONFINED DRAINAGE

PUMPING MAIN

Foul Assumed Run

Surface Assumed Run

Foul Taken from Records

Surface Taken from Records

Abandoned Run

Trade Effluent

Survey Boundary

AR	ASSUMED ROUTE	MH	MANHOLE
BO	BACKDROP	MW	MONITORING WELL
BP	BORHOLE	RE	ROODING EYE
CH	COVER LEVEL	RW	RAIN WATER PIPE
CI	CATCHPI	S/A	SOKAKAWA
G	DEPTH	SV	SEWER VALVE
GP	DOWN PIPE	SW	SOIL WATER
EOT	END OF TRACE	TE	TRAFFIC EYE
ER	EARTHING ROD	TR	TAKEN FROM CITY
GL	GULL	UTCTV	UNABLE TO RECORD
HC	HEAD OF RUN	U	UNABLE TO FIND
I	INSPECTION CHAMBER	U/L	UNABLE TO LIFT
K	INVERT LEVEL	U/S	UNABLE TO SURVEY
LS	SURFACE WATER SEWER	V	VENT PIPE
CWS	CONTAMINATED SURFACE WATER SEWER	V/R	VAPOUR RECOVERY
CS	CLEAN WATER SEWER	WL	WATER LEVEL
CWS	COMBINED WATER SEWER		

Drawing Number
TS24-386-1-Rev A

Scale	1:500@A0	Sheet	1 of 3
Drawn by	Checked by	Date of Survey	
JS	MH	JULY 2024	

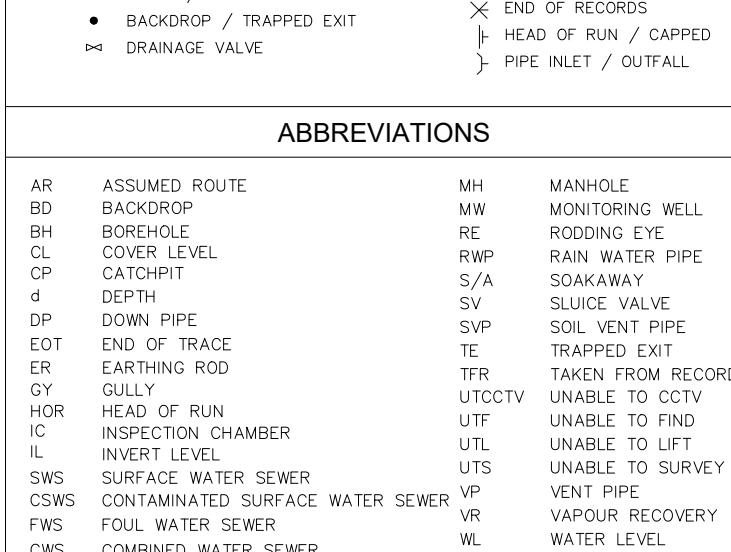
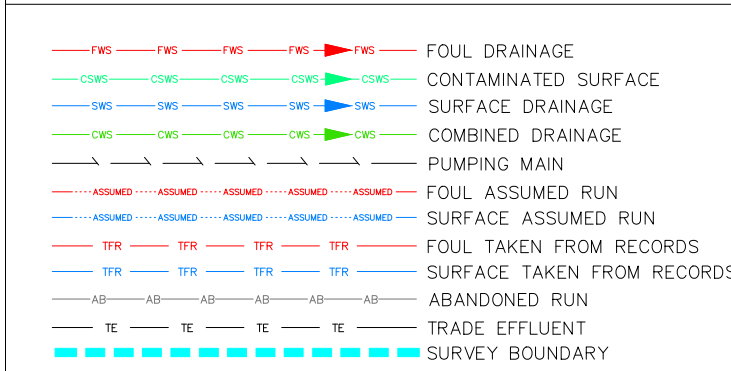
 **TERRAIN
SURVEYS**

Tel: 01438 841300
www.terrainsurveys.co.uk
enquiries@terrainsurveys.co.uk





This survey is related to OSGB36(15) coordinate system by GPS 'rapid static' methods. No scale factor has been applied to the survey information. All horizontal distances taken from this drawing are ground distances.



Client
BWB CONSULTING (BIRMINGHAM)

Project
**STAKEHILL INDUSTRIAL ESTATE
MIDDLETON**

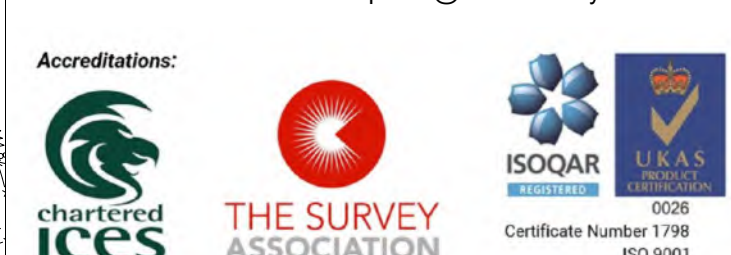
Title
DRAINAGE INVESTIGATION

Drawing Number
TS24-386-1-Rev A

Revision	Description	Rev. By	Date
A	Additional Manhole references & invert levels added.	JJS	29/07/20

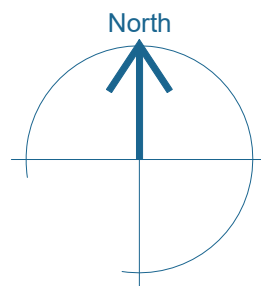
Scale	1:500@A0	Sheet	2	of	3
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Score	1.00	2.00	3.00
Drawn by	Checked by	Date of Survey	
JS	MH	JULY 2024	

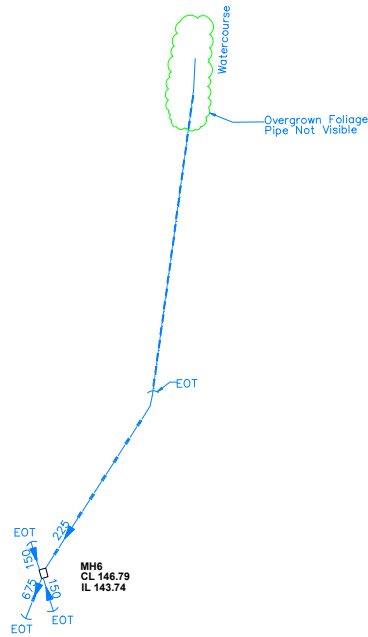




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This survey is related to OSGB36(15) coordinate system by
GPS 'rapid static' methods. No scale factor has been
applied to the survey information. All horizontal distances
taken from this drawing are ground distances.



UTILITY KEY

- FOUL DRAINAGE
 - CONTAMINATED SURFACE DRAINAGE
 - SURFACE DRAINAGE
 - COMBINED DRAINAGE
 - FOUL ASSUMED RUN
 - SURFACE ASSUMED RUN
 - FOUL TAKEN FROM RECORDS
 - SURFACE TAKEN FROM RECORDS
 - ABANDONED RUN
 - TRADE EFFLUENT
 - SURVEY BOUNDARY
- CABLE / PIPE ROSE
● BACKDROP / TRAPPED EXIT
⊞ DRAINAGE VALVE
- ⊞ END OF TRASE
X END OF RECORDS
⊞ HEAD OF RUN / CAPED
⊞ PIPE INLET / OUTFALL

ABBREVIATIONS

- | | | | |
|-----|----------------------------------|--------|--------------------|
| AR | ASSUMED ROUTE | MR | MANHOLE |
| BD | BACKDROP | MR | MONITORING WELL |
| BN | BORING | RE | ROCKING EYE |
| CL | COVER LEVEL | RWP | RAIN WATER PIPE |
| CP | CATCHPI | S/A | SOAKAWAY |
| D | DEPTH | SV | SUCK VALVE |
| DP | DOWN PIPE | SV | SOIL VENT PIPE |
| EOT | END OF TRACE | TE | TRAPPED EXT |
| ET | EXTENDING ROD | TR | TAKEN FROM RECORD |
| GV | GULLY | UTECTV | UNABLE TO CITY |
| HR | HEAD OF RUN | UTL | UNABLE TO FIND |
| IC | INSPECTION CHAMBER | UTL | UNABLE TO LIFT |
| I | INVERT LEVEL | UTS | UNABLE TO SURVEY |
| OWS | CONTAMINATED SURFACE WATER SEWER | VP | VENT PIPE |
| FS | FULL WATER SEWER | VR | VENT PIPE RECOVERY |
| CWS | COMBINED WATER SEWER | WL | WATER LEVEL |

Client

BWB CONSULTING (BIRMINGHAM)

Project

**STAKEHILL INDUSTRIAL ESTATE
MIDDLETON**

Title

DRAINAGE INVESTIGATION

Drawing Number

TS24-386-1-Rev A

Revision	Description	Rev. By	Date
A	Additional Manhole references & invert levels added.	JJS	29/07/24

Scale 1:500@A0

Sheet 3 of 3

Drawn by	Checked by	Date of Survey
JS	MH	JULY 2024



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0013001



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Appendix 5: United Utilities Sewer Records and Pre-Development Enquiry

BWB Consulting Limited**35
Station Street,
Nottingham, Nottinghamshire
NG2 3DQ****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: 233493
Our Ref: UUPS-ORD-554361
Date: 12/03/2024****Dear Sirs****Location: 134 STAKEHILL LANE, MIDDLETON, MANCHESTER, M24 2RY**

I acknowledge with thanks your request dated 06/03/2024 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,



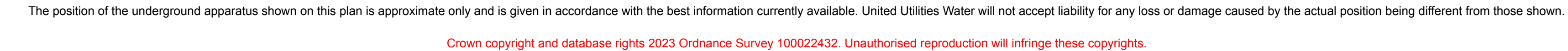
Karen McCormack
Property Searches Manager

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.



The diagram illustrates the flow of water from various sources into a combined sewer system. The sources are categorized into four main groups: Abandoned, Foul, Surface Water, and Combined. The flow paths are as follows:

- Abandoned:** Includes Public Sewer, Private Sewer, Section 104, Rising Main, Sludge Main, and Overflow.
- Foul:** Includes Public Sewer, Private Sewer, Section 104, Rising Main, Sludge Main, and Overflow.
- Surface Water:** Includes Public Sewer, Private Sewer, Section 104, Rising Main, Sludge Main, and Overflow.
- Combined:** Includes Public Sewer, Private Sewer, Section 104, Rising Main, Sludge Main, and Overflow.

The flow paths are indicated by arrows pointing from the sources into the combined sewer system.

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	Vw Treatment Works
Flow Meter	Vw Pumping Station
Hatch Box	Septic Tank
Oil Interceptor	Control Kiosk
Summit	
Drop Shaft	
Orifice Plate	

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

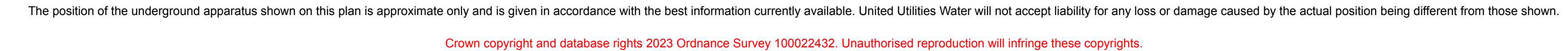
AC	Asbestos Cement
BR	Brick
PE	Polyethylene
RP	Reinforced Plastic Matrix
CO	Concrete
CSB	Concrete Segment Bolted
CSU	Concrete Segment Unbolted
CC	Concrete Box Culverted
PSC	Plastic / Steel Composite
GRC	Glass Reinforced Plastic
DI	Ductile Iron
PVC	Polyvinyl Chloride
CI	Cast Iron
SI	Spun Iron
ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

134 STAKEHILL LANE,
MIDDLETON,
MANCHESTER,
M24 2RY

Printed by: Property Searches

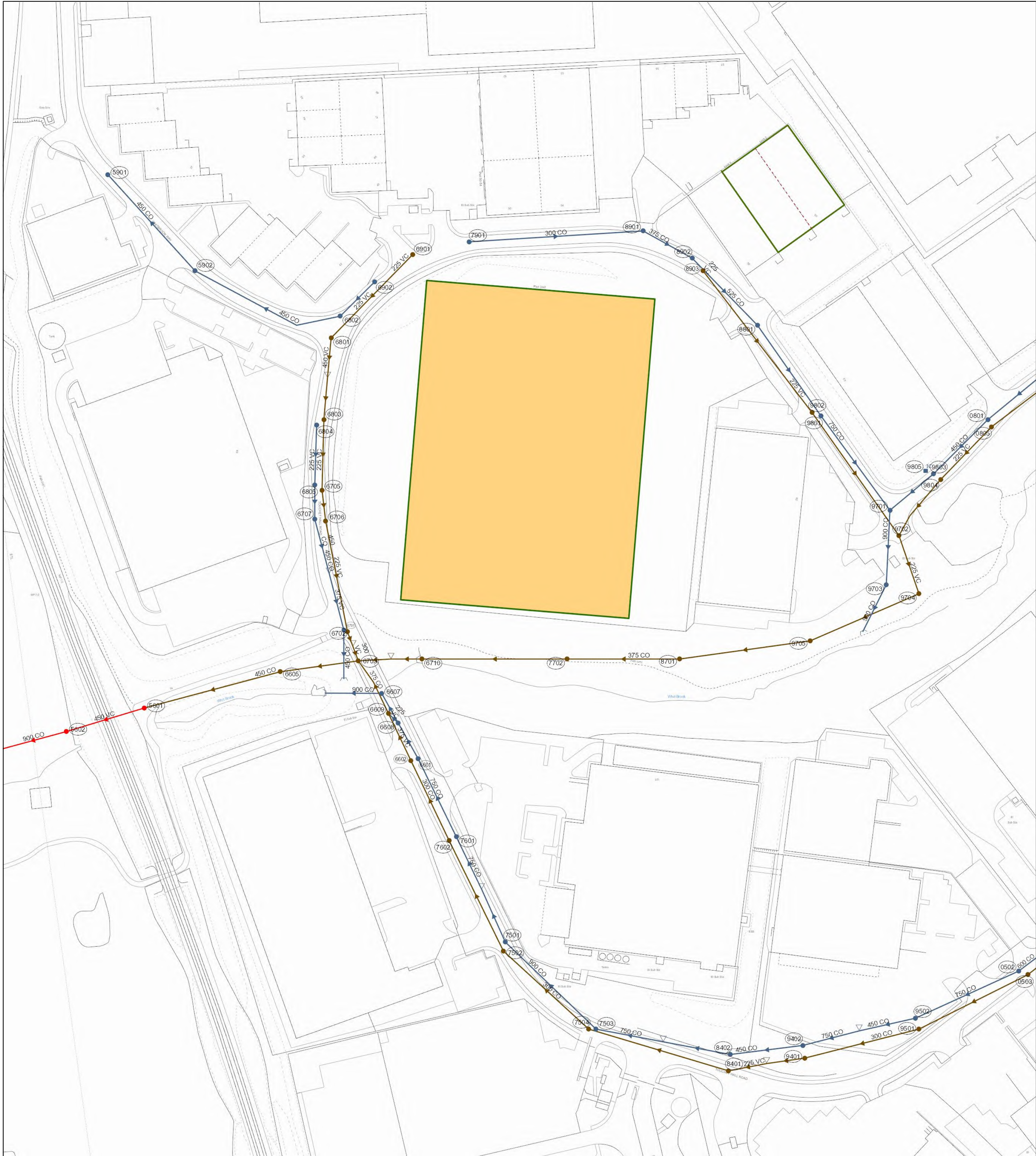


United Utilities
Water for the North West



**SEWER
RECORDS**

 **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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Reho	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
8901	125.31	SW	122.86	375			CO	30.88669	1 in 37
8901	125.31	SW	122.86	375			CO	30.88669	1 in 37
9705		FO	0	375			CO	72.69112	
7602	120.57	FO	0	300			CO	48.75449	
6609	121.25	FO	0	375			CO	33.52008	
7503	122.69	SW	117.63	800			CO	69.31089	1 in 188
7901	126.23	SW	123.8	300			CO	96.18732	1 in 112
7901	126.23	SW	123.8	300			CO	96.18732	1 in 112
6703	121.59	FO	112.33	450			CO	43.41659	1 in 189
8803		FO	0	225			VC	38.51282	
8901	122.86	SW	0	750			CO	64.40497	
9502		SW	0	450			CO	31.7805	
9502		SW	0	450			CO	31.7805	
0503	127.97	FO	124.09	300			CO	67.08204	
0503	127.97	FO	124.09	300			CO	67.08204	
9501		FO	0	300			CO	65	
9501		FO	0	300			CO	65	
8902	124.51	SW	121.92	525			VC	51.62364	1 in 45
9702	122.02	FO	119.1	225			VC	33.83785	1 in 97
8402	124.33	SW	0	450			CO	37.69634	
8401	124.23	FO	118.8	300			CO	80.36168	1 in 126
9902	125.57	SW	123.52	450			CO	71.50524	
6901	126.25	FO	123.45	225			VC	64.3506	
7702		FO	0	375			CO	80	
7502	121.44	FO	118.75	300			CO	67.87794	
6605	118.75	FO	112.09	450			CO	77.62087	
6702	121.75	FO	117.14	225			VC	8.544003	1 in 6
6607		SW	0	900			CO	31.31429	
6701		FO	0	375			CO	62	
7501	121.39	SW	117.27	900			CO	31.7805	
8601		CO	0	450			VC	44.52215	
6804	125.07	SW	122.84	225			VC	33.01515	
6608	121.21	SW	116.03	225			VC	7.572614	1 in 36
6602	121.42	FO	0	375			VC	28.60968	
0801	124.86	SW	121.04	450			CO	42.42641	1 in 70
0801	124.86	SW	121.04	450			CO	42.42641	1 in 70
6801	125.8	FO	123.5	450			VC	22.09072	
9803	122.8	SW	120.42	450			CO	31.241	1 in 98
6707	123.2	SW	120.45	450			CO	31.241	1 in 98
5602	114.18	CO	110.93	900			CO	38.32754	1 in 47
9402	126.91	SW	123.06	450			CO	40.31129	
0805	124.72	FO	121.22	225			VC	40.31129	1 in 41
0905	124.72	FO	121.22	225			VC	40.31129	1 in 41
6710		FO	0	375			CO	17	
6802	125.75	SW	123.32	450			CO	88.04482	
7601	120.51	SW	0	750			CO	47.85394	
8904	122.72	FO	119.69	225			VC	38.77877	1 in 71
9804	122.72	FO	119.69	225			VC	38.77877	1 in 71
8903	124.45	FO	120.97	225			VC	88.40752	
0501	128.74	SW	126.08	600			CO	91.40022	1 in 68
8801	123.36	SW	120.59	750			CO	61.03378	
6601	121.37	SW	0	900			CO	22.58359	
0502	127.99	SW	124.6	750			CO	62.64982	
0502	127.99	SW	124.6	750			CO	62.64982	
6902	126.18	SW	123.98	450			CO	26.87006	1 in 41
9401	127.16	FO	122.23	300			CO	21.2132	1 in 13
6805		SW	0	225			VC	19	
0803	126.83	SW	123.23	450			CO	44.94543	
7504	122.65	FO	117.08	300			CO	63.70243	1 in 205
9704	122.61	FO	118.55	375			CO	65.39113	
9704	122.61	FO	118.55	375			CO	65.39113	
9602	122.89	FO	119.99	225			VC	83.23461	1 in 98
0804	127.02	FO	0	225			VC	67.80118	
6705	123.38	FO	120.33	225			VC	17.1124	1 in 74
9701	122.12	SW	119.75	900			CO	41.94875	1 in 203
6706	123.16	FO	119.07	225			VC	62.18912	1 in 22
6608	121.21	SW	0	900			CO	18.74808	
6701	121.72	SW	116.99	450			CO	27	1 in 7
9703	123.14	SW	119.61	900			CO	29.56888	1 in 303

Reho	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
8901	125.31	SW	122.86	375			CO	30.88669	1 in 37
8901	125.31	SW	122.86	375			CO	30.88669	1 in 37
9705		FO	0	375			CO	72.69112	
7602	120.57	FO	0	300			CO	48.75449	
6609	121.25	FO	0	375			CO	33.52008	
7503	122.69	SW	117.63	800			CO	69.31089	1 in 188
7901	126.23	SW	123.8	300			CO	96.18732	1 in 112
7901	126.23	SW	123.8	300			CO	96.18732	1 in 112
6703	121.59	FO	112.33	450			CO	43.41659	1 in 189
8803		FO	0	225			VC	38.51282	
8901	122.86	SW	0	750			CO	64.40497	
9502		SW	0	450			CO	31.7805	
9502		SW	0	450			CO	31.7805	
0503	127.97	FO	124.09	300			CO	67.08204	
0503	127.97	FO	124.09	300			CO	67.08204	
9501		FO	0	300			CO	65	
9501		FO	0	300			CO	65	
8902	124.51	SW	121.92	525			VC	51.62364	1 in 45
9702	122.02	FO	119.1	225			VC	33.83785	1 in 97
8402	124.33	SW	0	450			CO	37.69634	
8401	124.23	FO	118.8	300			CO	80.36168	1 in 126
9902	125.57	SW	123.52	450			CO	71.50524	
6901	126.25	FO	123.45	225			VC	64.3506	
7702		FO	0	375			CO	80	
7502	121.44	FO	118.75	300			CO	67.87794	
6605	118.75	FO	112.09	450			CO	77.62087	
6702	121.75	FO	117.14	225			VC	8.544003	1 in 6
6607		SW	0	900			CO	31.31429	
6701		FO	0	375			CO	62	
7501	121.39	SW	117.27	900			CO	31.7805	
8601		CO	0	450			VC	44.52215	
6804	125.07	SW	122.84	225			VC	33.01515	
6608	121.21	SW	116.03	225			VC	7.572614	1 in 36
6602	121.42	FO	0	375			VC	28.60968	
0801	124.86	SW	121.04	450			CO	42.42641	1 in 70
0801	124.86	SW	121.04	450			CO	42.42641	1 in 70
6801	125.8	FO	123.5	450			VC	22.09072	
9803	122.8	SW	120.42	450			CO	31.241	1 in 98
6707	123.2	SW	120.45	450			CO	31.241	1 in 98
5602	114.18	CO	110.93	900			CO	38.32754	1 in 47
9402	126.91	SW	123.06	450			CO	40.31129	
0805	124.72	FO	121.22	225			VC	40.31129	1 in 41
0905	124.72	FO	121.22	225			VC	40.31129	1 in 41
6710		FO	0	375			CO	17	
6802	125.75	SW	123.32	450			CO	88.04482	
7601	120.51	SW	0	750			CO	47.85394	
8904	122.72	FO	119.69	225			VC	38.77877	1 in 71
9804	122.72	FO	119.69	225			VC	38.77877	1 in 71
8903	124.45	FO	120.97	225			VC	88.40752	
0501	128.74	SW	126.08	600			CO	91.40022	1 in 68
8801	123.36	SW	120.59	750			CO	61.03378	
6601	121.37	SW	0	900			CO	22.58359	
0502	127.99	SW	124.6	750			CO	62.64982	
0502	127.99	SW	124.6	750			CO	62.64982	
6902	126.18	SW	123.98	450			CO	26.87006	1 in 41
9401	127.16	FO	122.23	300			CO	21.2132	1 in 13
6805		SW	0	225			VC	19	
0803	126.83	SW	123.23	450			CO	44.94543	
7504	122.65	FO	117.08	300			CO	63.70243	1 in 205
9704	122.61	FO	118.55	375			CO	65.39113	
9704	122.61	FO	118.55	375			CO	65.39113	
9602	122.89	FO	119.99	225			VC	83.23461	1 in 98
0804	127.02	FO	0	225			VC	67.80118	
6705	123.38	FO	120.33	225			VC	17.1124	1 in 74
9701	122.12	SW	119.75	900			CO	41.94875	1 in 203
6706	123.16	FO	119.07	225			VC	62.18912	1 in 22
6608	121.21	SW	0	900			CO	18.74808	
6701	121.72	SW	116.99	450			CO	27	1 in 7
9703	123.14	SW	119.61	900			CO	29.56888	1 in 303

LEGEND

Abandoned

Foul

Surface Water

Combined

Public Sewer

Section 104

Rising Main

Sludge Main

Overflow

Water Course

Highway Drain

All point assets follow the standard colour convention:

red - combined

blue - surface water

brown - foul

purple - overflow

Manhole

Head of System

Extent of Survey

Rodding Eye

Inlet

Discharge Point

Vortex

Penstock

Valve

Washout Chamber

Valve

Air Valve

Non Return Valve

Soakaway

Gully

Cascade

Flow Meter

Hatch Box

Oil Interceptor

Summit

Drop Shaft

Orifice Plate

Side Entry Manhole

Outfall

Screen Chamber

Inspection Chamber

Bifurcation Chamber

Lamp Hole

T Junction / Saddle

Catchpit

Valve Chamber

Vent Column

Vortex Chamber

Penstock Chamber

Network Storage Tank

Sewer Overflow

Ww Treatment Works

Flow Pumping Station

Septic Tank

Control Kiosk

Change of Characteristic

MANHOLE FUNCTION

FO Foul

SW Surface Water

CO Combined

OV Overflow

SEWER SHAPE

CI Circular

EG Egg

OV Oval

FT Flat Top

RE Rectangular

SQ Square

TR Trapezoidal

AR Arch

BA Barrel

HO HorseShoe

UN Unspecified

SEWER MATERIAL

AC Asbestos Cement

BR Brick

PE Polyethylene

RP Reinforced Plastic Matrix

CO Concrete

CSB Concrete Segment Bolted

CSU Concrete Segment Unbolted

CC Concrete Box Culvert

PSC Plastic / Steel Composite

GRC Glass Reinforced Plastic

DI Ductile Iron

PVC Polyvinyl Chloride

CI Cast Iron

SI Spun Iron

ST Steel

VC Vitrified Clay

PP Polypropylene

PF Pitch Fibre

MAC Masonry, Coursed

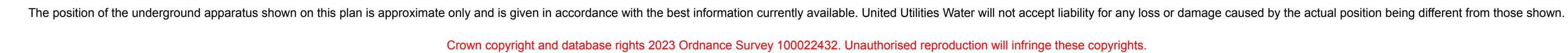
MAR Masonry, Random

U Unspecified

Address or Site Reference:

134 STAKEHILL LANE,
MIDDLETON,
MANCHESTER,
M24 2RY

OS sheet SD8807NE



The diagram illustrates the flow of water from various sources into the Public Sewer system. The sources are Abandoned, Foul, Surface Water, and Combined. The flow paths are indicated by arrows and labels: Public Sewer, Private Sewer, Section 104, Rising Main, Sludge Main, Overflow, Water Course, and Highway Drain.

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

SW Surface Water
CO Combined
OV Overflow

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

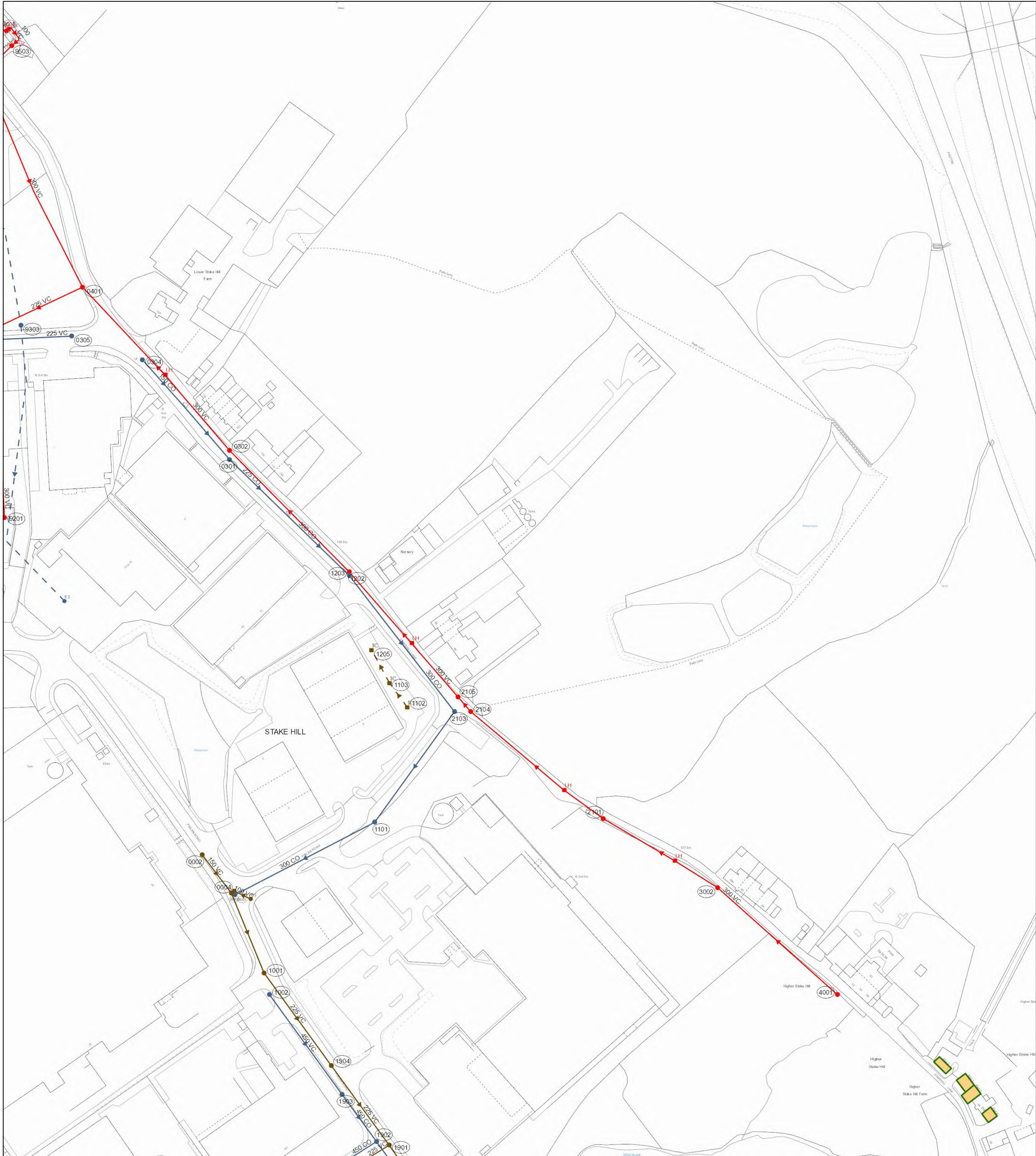
AC	Asbestos Cement
BR	Brick
PE	Polyethylene
RP	Reinforced Plastic Matrix
CO	Concrete
CSB	Concrete Segment Bolted
CSU	Concrete Segment Unbolted
CC	Concrete Box Culverted
PSC	Plastic / Steel Composite
GRC	Glass Reinforced Plastic
DI	Ductile Iron
PVC	Polyvinyl Chloride
CI	Cast Iron
SI	Spun Iron
ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

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MIDDLETON,
MANCHESTER,
M24 2RY

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**SEWER
RECORDS**

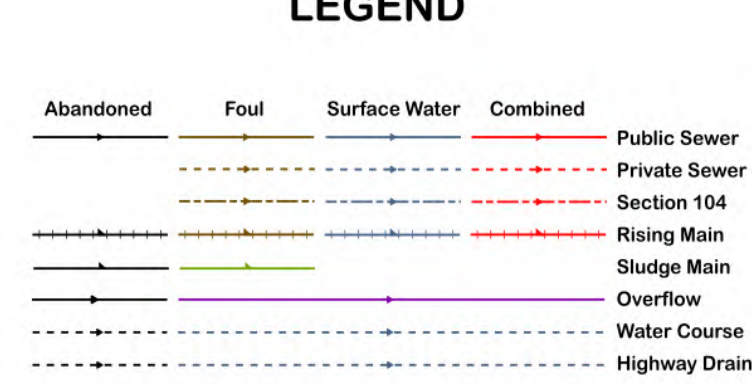
 **United
Utilities**
Water for the North West



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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Reho	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
1203	136.82	SW	133.98	300		CO	94.81033	1 in 193	
1901	131.42	FO	124.3	225		VC	87.86296	1 in 56	
1901	131.42	FO	124.3	225		VC	87.86296	1 in 56	
0301		SW	0	225		CO	45.98738		
2801		FO	0	225		VC	52.43091		
0002	130.67	FO	128.13	150		VC	26.40582	1 in 139	
1904	130.15	FO	126.85	225		VC	54.40588	1 in 22	
1904	130.15	FO	126.85	225		VC	54.40588	1 in 22	
1001	129.69	FO	125.31	225		VC	63.00793		
1001	129.69	FO	125.31	225		VC	63.00793		
2103	136.13	SW	133.49	300		CO	75.21303	1 in 40	
3002		CO	0	300		VC	73.57887		
2104	136.27	CO	0	300		VC	10.83015		
2101		CO	0	300		VC	93.91126		
4001		CO	0	300		VC	88.52963		
4001		CO	0	300		VC	88.52963		
0401	136.9	CO	0	225		VC	54.12947		
0401	136.9	CO	0	225		VC	54.12947		
9301	134.12	CO	131.38	300		VC	104.1729		
1101	133.54	SW	131.59	300		CO	86.76681	1 in 29	
1002		SW	0	450		VC	68.00735		
1002		SW	0	450		VC	68.00735		
1202	136.82	CO	0	300		VC	94.04786		
0003	130.4	FO	125.85	225		VC	47.53646	1 in 93	
2105	136.25	CO	0	300		VC	91.4386		
1902	131.35	SW	127.16	450		CO	85.44004	1 in 31	
1902	131.35	SW	127.16	450		CO	85.44004	1 in 31	
0304		SW	0	150		CO	36.12478		
2802	131.99	SW	126.83	450		CO	53.05843	1 in 91	
9303		SW	0			UN	165.797		
9303		SW	0			UN	165.797		
0302	137.24	CO	0	300		VC	121.1124		
9201	132.78	CO	0	300		VC	114.2147		
9201	132.78	CO	0	300		VC	114.2147		
1903	130.42	SW	127.22	450		CO	32.20248		
1903	130.42	SW	127.22	450		CO	32.20248		
0305		SW	0	225		VC	175.1828		
0305		SW	0	225		VC	175.1828		
0004		FO	0	100		VC	1.965284		
9501	141.9	CO	0	300		VC	129.8658		
9501	141.9	CO	0	300		VC	129.8658		
9503		CO	0	150		VC	21.25076		
9503		CO	0	150		VC	21.25076		
9503		CO	0	150		VC	21.25076		
9503		CO	0	150		VC	21.25076		



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

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

MANHOLE FUNCTION

FO Foul
SW Surface Water
CO Combined
OV Overflow

SEWER SHAPE

CI Circular TR Trapezoidal
EG Egg AR Arch
OV Oval BA Barrel
FT Flat Top HO HorseShoe
RE Rectangular UN Unspecified
SQ Square

SEWER MATERIAL

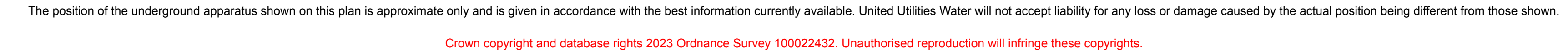
AC Asbestos Cement
BR Brick
PE Polyethylene
RP Reinforced Plastic Matrix
CO Concrete
CSB Concrete Segment Bolted
CSU Concrete Segment Unbolted
CC Concrete Box Culverted
PSC Plastic / Steel Composite
GRC Glass Reinforced Plastic
DI Ductile Iron
PVC Polyvinyl Chloride
CI Cast Iron
SI Spun Iron
ST Steel
VC Vitrified Clay
PP Polypropylene
PF Pitch Fibre
MAC Masonry, Coursed
MAR Masonry, Random
U Unspecified

Address or Site Reference:

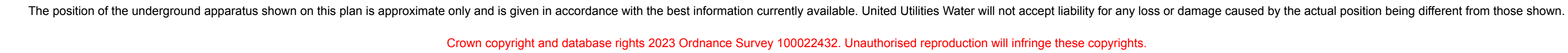
134 STAKEHILL LANE,
MIDDLETON,
MANCHESTER,
M24 2RY

OS sheet SD8908SW
Number:
Scale: 1:1250 **Date:** 12/03/2024
Nodes: 45
Sheet: 5 of 9

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



Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad	Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Gra
-------	-------	------	--------	--------	--------	-------	------	--------	------	-------	-------	------	--------	--------	--------	-------	------	--------	-----

LEGEND

All point assets follow the standard colour convention:

red	- combined	blue	- surface water
brown	- foul	purple	- overflow

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

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

AC	Asbestos Cement
BR	Brick
PE	Polyethylene
RP	Reinforced Plastic Matrix
CO	Concrete
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CSU	Concrete Segment Unbolted
CC	Concrete Box Culverted
PSC	Plastic / Steel Composite
GRC	Glass Reinforced Plastic
DI	Ductile Iron
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CI	Cast Iron
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ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

Address or Site Reference:

134 STAKEHILL LANE,
MIDDLETON,
MANCHESTER,
M24 2RY

OS sheet SD8908NE
Number:
Scale: 1:1250 Date: 12/03/2024
Nodes: 0
Sheet: 7 of 9

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SEWER RECORDS



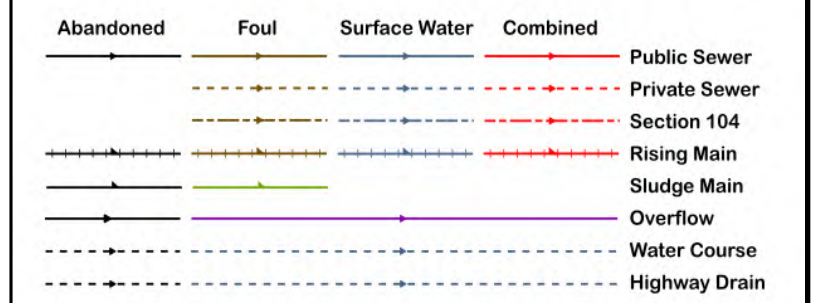
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Refno	Cover	Func	Invert	Size	Size	Y	Shape	Length	Grad
4502		CO		100			VC	8.948773	
4503		CO		100			VC	8.948773	
4401	128.53	CO	128.57	300			VC	85.28775	
4402	128.53	CO	128.57	300			VC	85.28775	1 in 284
4401	131.22	CO	131.22	300			VC	17.92309	
5501	130.67	CO	133.37	300			VC	137.3645	
5501		CO		100			VC	14.26865	
5501		CO		100			VC	14.26865	
5501		CO		100			VC	196.8071	
4602	128.78	CO	128.93	300			VC	178.2812	1 in 90
5502		CO		150			VC	29.01724	
5502		CO		150			VC	132.0161	
4803		CO		150			VC	12.84299	
5502		CO		150			VC	12.83876	
5502		CO		150			VC	12.83876	
5502		SW		150			VC	6.911953	
5602		CO		150			VC	19.90283	
4801	133.03	CO	129.83	300			VC	85.50466	1 in 48
5501	133.32	CO	130.79	225			VC	28.07134	
5501	133.32	CO	127.53	225			VC	82.50754	1 in 144
5501	134.83	CO	131.53	300			VC	77.23341	
5808		CO		150			VC	23.34107	
5801		CO		150			VC	180.7074	
4811		CO		150			VC	1.639082	
9501	141.9	CO		300			VC	128.8658	
9501	141.9	CO		300			VC	128.8658	
9503		CO		150			VC	21.25076	
9503		CO		150			VC	21.25076	
9503		CO		150			VC	21.25076	
4706		CO		150			VC	12.12072	

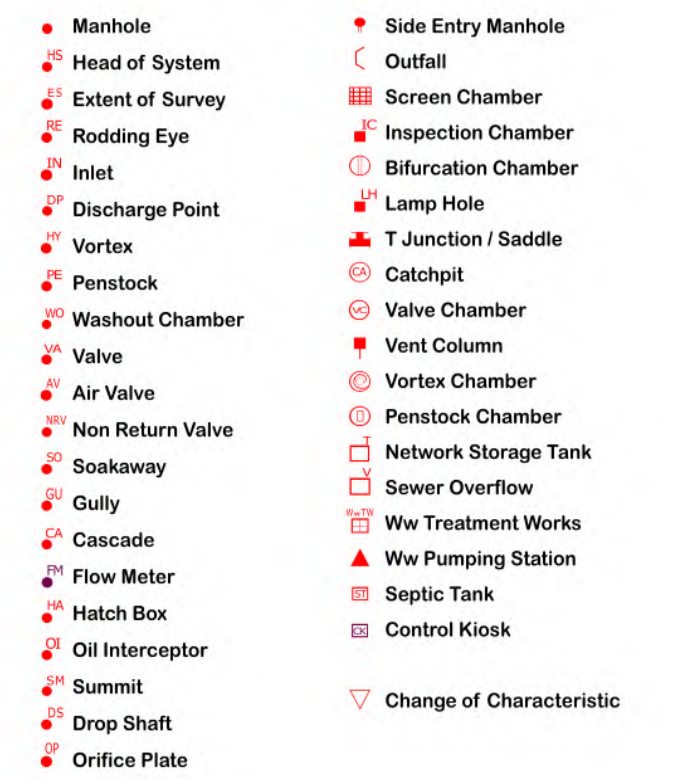
[illegible]

LEGEND



All point assets follow the standard colour convention:

red	- combined	blue	- surface water
brown	- foul	purple	- overflow



MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

AC	Asbestos Cement
BR	Brick
PE	Polyethylene
RP	Reinforced Plastic Matrix
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CI	Cast Iron
SI	Spun Iron
ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

Address or Site Reference:

134 STAKEHILL LANE,
MIDDLETON,
MANCHESTER,
M24 2RY

OS sheet	SD8808NE
Number:	
Scale: 1:1250	Date: 12/03/2024
Nodes: 32	
Sheet: 8 of 9	

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SEWER RECORDS





United Utilities
Water for the North West

United Utilities Grasmere House, 2nd Floor
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP

17 January 2025

Dear Lucy,

Pre-Development Enquiry for 314 dwellings and 4 industrial units at Stakehill, Middleton,
Manchester, M24 2RU (Grid ref: 389313, 408399)
UU ref: 06849959

We have assessed your application based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your strategy will need review by other authorities as part of the planning process. We advise conducting necessary site investigations to confirm viability of your proposals.

Asset Protection

According to our public sewer records, there are public sewers located within your site boundary. This requires an easement of 6m for each sewer. If you cannot achieve the required clearance, you may wish to consider diverting and or abandoning the public sewer.

[Please see comment 3 of the attached guidance sheet and Working near our pipes - United Utilities](#)

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 300mm diameter combined sewer crossing your proposed development.

Surface Water

Follow the National Planning Policy Guidance drainage hierarchy and Provide evidence for discounting higher options before considering public sewer discharge. Consult the Lead Local Flood Authority regarding surface water concerns.

[Please see comment 4 within the guidance sheet](#)

Infiltration

[Please see comment 4 within the guidance sheet](#)

Waterbody

If an evidence-based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you contact the Lead Local Flood Authority and/or Environment Agency to discuss a point of discharge to the culverted watercourse located in the site boundary of the proposed site.

We would encourage you to engage with any third-party landowner and riparian owner to agree access and discharge rights to the water body if this is not in your ownership.

The culverted watercourse that crosses the site is not a United Utilities asset and contact should be made with the Riparian owner who is responsible for the watercourse.

Public Sewer

United Utilities will consider a connection to the 300mm diameter public surface water located southwest of the proposed site at a pass forward flow to be agreed by the Lead Local Flood Authority. United Utilities requests that any agreed rate does not exceed 5 l/s for any storm event.

Please find attached our guidance sheet for more information.

Many thanks and kind regards,

Josephine

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Visit: <http://unitedutilities.thewowawards.co.uk/nominate>



Josephine Wong
Wastewater Developer Engineer

Developer Services & Metering

Customer Services

Tel: 01925 429089

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