Plot H, Charles St, Manchester

Shooters Brook Diversion Review

25415-ROS-XX-XX-R-C-0150

October 2025

Plot H, Charles St, Manchester

Shooters Brook Diversion Review

REPORT ISSUE TABLE

Purpose of Issue	Status	Revision	Date	Prepared By	Checked By
FIRST ISSUE	S2	P01	15/10/25	JT	AW
SECOND ISSUE	S2	P02	22/10/25	JT	AW

This drainage statement has been prepared by Roscoe to aid in the planning application for Plot H, Charles St, Manchester.

Site Context.

The existing site is located in Manchester city centre and forms the north-western corner of the former UMIST campus. The site can be identified by nearest postcode M1 7AR and can be further located by national grid reference 38444, 39757. The site is bound by Charles Street to the South, Manchester South Junction and Altrincham Railway viaduct and Granby Row to the North, Sackville Street to the East and Princess Street to the West. The site also lies within the sister strategic regeneration area aligned to Plot H. The railway viaduct adjacent supports rail lines that connect Manchester Piccadilly Station with the other major stations within the city; Oxford Road, Deansgate and Victoria via the Ordsall Chord.

The existing site consists of a multistorey car park, a coffee house and a bar. All three are to be demolished as part of the enabling works on the project.

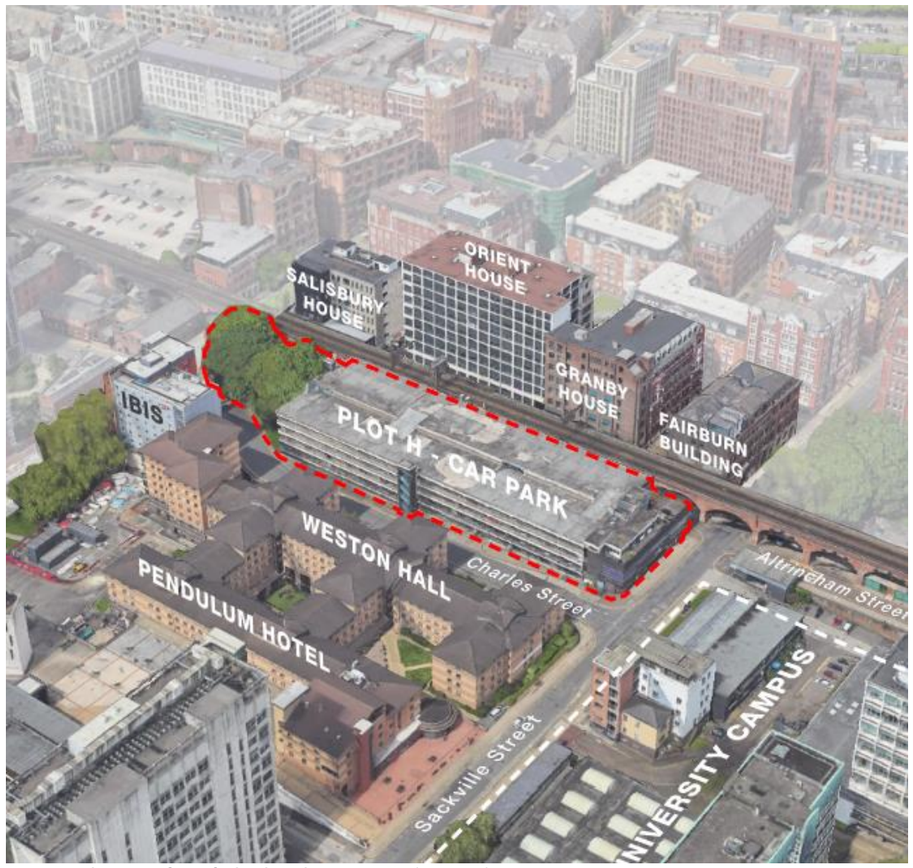


Figure **Error! No text of specified style in document.**: Site location plan

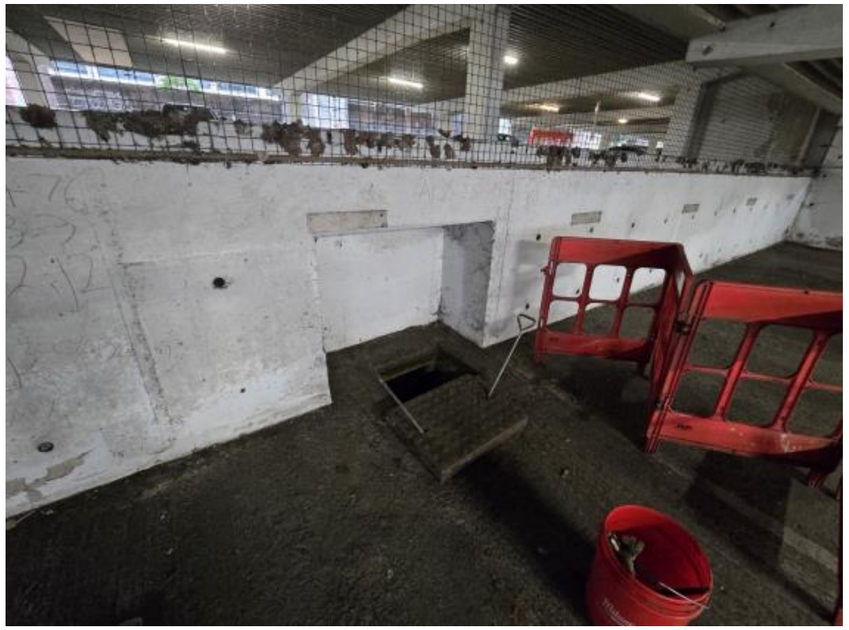
United Utilities public sewer mapping, appendix 1, identified a privately owned 900 diameter concrete sewer crossing the development. Entering the site in the north-east corner on Sackville St, travelling diagonally through the site and exiting in the south-west of the development within Charles St. Subsequent correspondence with the LLFA has identified the existing private sewer as a culverted section of Shooters Brook, which ultimately discharges into the River Medlock.



Figure 1.2: Shooters Brook as identified on UU sewer mapping records

The section of Shooters Brook that crosses the development previously sat beneath the existing coffee house and multi-story car park, with two manholes located within the ground flood of the existing car park to account for a minor directional change within the sewer.





Two CCTV surveys have been carried out on the sewer, starting at the manhole within Sackville St and ending at connection to the River Medlock. The sewer has been noted within CCTV report, appendix 2, to be in good condition, with only minor maintenance works, in the form of jetting, required on sections that contain loose debris. For the purpose of the CCTV report, references MH5, MH7, MH8 & MH9 constitute the Shooters Brook watercourse. Any other MH references identified are the previous private car park drainage or United Utilities public foul drainage on Sackville St.

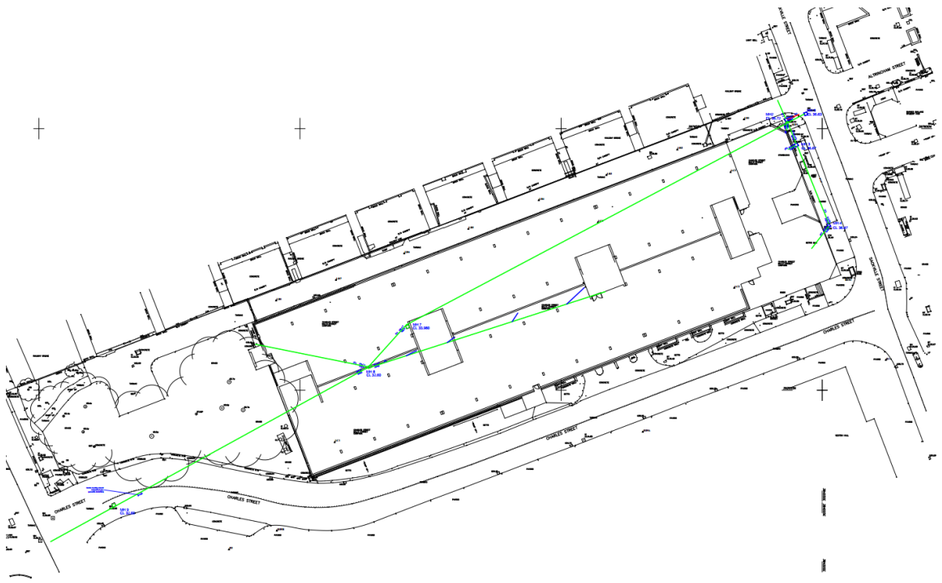


Figure 1.3: CCTV survey showing Shooters Brook crossing the existing car park and car park connections into the brook.

The proposed development footprint is reduced from the existing car park and commercial properties but does require to extend over a portion of Shooters Brook, in the north-east zone of the site. The existing manholes that sat within the multistorey car park are now exposed and easily accessible, along with a large section of Shooters Brook that previously sat underneath the car park.

Figure 1.4: Proposed development, shown at ground flood level

As to ensure adherence to the LLFA preference on build-over applications, the possibility to divert the section of Shooters Brook that would be impacted has been explored thoroughly, with each options viability reviewed.

Proposed Shooters Brook Diversion – Option 1.

The proposal to divert Shooters Brook to the North is shown within Appendix 3.

This diversion route would position Shooters Brook between the Altrincham Street railway viaduct and the new build, within a space of 8m. The foundation solution extends further then the outer edge of the ground flood layout, this reduces the space between the Altrincham Street railway viaduct and the new build to 5m.

It is not possible to position the sewer at an appropriate distance from both the Altrincham Street railway viaduct and the proposed development in order to allow for a 5m clear easement either side, with a centralised sewer providing 2m space to both obstructions. Whilst the sewer is deemed private during the point it enters the site boundary, legal advice provided to the client is that the sewer is classified as an 'ordinary watercourse', as such Riparian Rights apply. Due to the riparian ownership rights of the watercourse, it is the responsibility of the landowner to ensure that statutory requirements are met for the sewer. We do, however, understand that riparian ownership is often overseen by the risk management authorities, including the local Council, which is why we are seeking clarification as to what requirements there are.

The Altrincham Street railway viaduct also maintains several easements, with an electrical easement, Network Rail exclusion zone and Network Rail Covenant present. The Network Rail exclusion zone extends 2.75m beyond the edge of the viaduct, with a 2.25m electrical easement running parallel with it. This, without considering the Network Rail Covenant, utilises the entirety of the 5m space between the viaduct and the new build foundations. The Network Rail Covenant extends further then the two easements, also utilising the entire 5m space at the closest point to the new build and widening to 12.5m at its maximum within the red line boundary.

Legal advice provided to the client is that the sewer is classified as an 'ordinary watercourse', as such Riparian Rights apply. This means that the ownership and responsibility sit with the landowner but all

The starting depth of the diversion is 6.16m, for the manhole located within Sackville St, and is within 4m of the viaduct. The drainage diversion will need to run at a depth of circa 4-5m along a parallel line of the viaduct, until it can divert south into the existing sewer manhole located within the site. This parallel run will be, at closest, 2m offset from the viaduct to maintain a consistent distance from both the viaduct and building foundations. Whilst the level, and form, of the foundations to this viaduct are unknown, even a conservative assessment would position them above the level of the diverted pipe, thus resulting in the viaduct being undermined and the pipe being in the zone of influence of the foundations. From a structural design perspective, ignoring any legal matters, the only way of facilitating the diversion of the watercourse here would be to underpin the existing viaduct. Due to the size of the piers, this could not be undertaken in a simple manner and would result in the closure of the viaduct for a significant period of time whilst new foundations were installed. As the viaduct supports rail lines that connect Manchester Piccadilly Station with the other major stations within the city; Oxford Road, Deansgate and Victoria via the Ordsall Chord, any closure for a significant time would result in large scale disruption for both residents and those travelling to work in Manchester.

Proposed Shooters Brook Diversion – Option 2.

The proposal to divert Shooters Brook to the South is shown within Appendix 4.

As the proposed development extends to within 4m of the highway boundary, the diversion will not be able to be ran within the private land ownership and is such proposed to be diverted through Sackville St and Charles St.

As the sewer diversion would now be placed within highway land, consultation with the Highway Authority would be required. This is due to the ongoing maintenance and liability of the sewer transferring from the private landowner to the Highway Authority. Additionally, the impact on highway safety and infrastructure would need to be assessed as part of this approval.

Prior to any consultation with the Highway Authority, a review of feasibility of the diversion has been undertaken. This includes a hydraulic assessment of sewer gradients, cost analysis and traffic management risks.

For the hydraulic assessment, it is understood that the existing sewer runs a length of 150m through the development. This is measured from the CCTV survey works and the distance is from the initial manhole within Sackville St, through the two manholes within the development boundary and out to the manhole within Charles St. The existing watercourse has a starting invert level across these manholes of 30.47m AOD. The existing watercourse has an end invert level across these manholes of 27.79m AOD. This provides a fall of 2.68m or an average gradient of 1:56 across the entire length. The diversion would increase the total length by approximately 50m, to a length of 200m. Maintaining the same start and end invert levels at the point of connection for the diversion, the average gradient is changed to 1:75 across the entire length. For a sewer of this size, both of these gradients achieve the standard requirements for self-cleansing velocity, with a full-bore velocity of 4.44m/s for the existing sewer and 3.75m/s for the proposed diversion. However, the CCTV surveys carried out did identify debris build up within the sewer, indicating that actual flows are struggling to clear the debris at current rates.

The CCTV survey and accompanying video footage showed the sewer to be in good condition, with no irregularities at pipe joins or localised sags identified that would allow solids to pond and settle. There is a concern then that low flow periods could be causing the issue, with a slackened gradient exacerbating the issue in future. The private landowner is able to implement a maintenance strategy of flushing as part of the wider FRA & DS to be submitted, which will ensure that there is no build-up of debris over time if the sewer is left in its current position, but there is no expectation that the Highways Authority will do so if ownership of the asset is taken with the diversion route.

The proposed diversion route will take the sewer 40m south from the start position in Sackville St, near the viaduct, and then 160m through Charles St to west. The starting depth of the diversion is 6.16m, for the manhole located within Sackville St, with the final depth of the diversion at 4.81m, for the manhole located within Charles St and near the junction to Princess St. The starting manhole is currently located 4m offset from the Altrincham Steet railway viaduct, 8m offset from the adjacent buildings on the opposing side of Sackville St. As discussed in option 1, the depth of the starting manhole and therefore excavation for the diversion works, would likely undermine the existing viaduct in that location. From a structural design perspective, ignoring any legal matters, the only way of facilitating the diversion of the watercourse here would be to underpin the existing viaduct. Due to the size of the piers, this could not be undertaken in a simple manner and would result in the closure of the viaduct for a significant period of time whilst new foundations were installed. As the viaduct supports rail lines that connect Manchester Piccadilly Station with the other major stations within the city; Oxford Road, Deansgate and Victoria via the Ordsall Chord, any closure for a significant time would result in large scale disruption for both residents and those travelling to work in Manchester.

The diversion will also require extensive works within Sackville St, at a depth of 5-6m below ground level and Charles St, at a depth of 4-6m below ground level. With the final connection point being in close proximity to Princess St and 4.81m deep. For the works to be carried out at these depths, Sackville St, Charles St and a section of Princess St will need to be closed for prolonged periods. Sackville St and Princess St are two or the

major routes into / out of the south of Manchester City Centre, with Princess St being the primary access point for ambulances out of the City Centre to Manchester Royal Infirmary. In addition to the large-scale disruption for residents, those travelling to work and emergency services, the deep drainage excavations also risk undermining existing building foundations for those adjacent to the site on Sackville St and Charles St. Whilst the level and form of the foundations for these buildings are unknown, even a conservative assessment would position them above the level of the diverted pipe, creating similar issues and risks to those assessed with the viaduct.

Proposed Build-over Solution.

The proposal for the build-over and foundational design is shown within Appendix 5.

The foundation solution for the scheme utilises piled foundations that transfer all loads into the bedrock at a depth far below the level of the culvert. Where superstructure columns are in the vicinity of the culvert, bridging foundations will be used to span over the sewer and transfer loads into piles and then to the bedrock at depth. Image 1.5 below provides a 3D visual representation of the proposed foundations.

The proposal is viewed as a benefit on the existing situation for Shooters Brook from a maintenance, access and environmental perspective.

For maintenance, as shown in the site context, the sewer was entirely located underneath the existing multistorey car park and coffee house, with two manholes located beneath the ground floor of the existing car park. This not only restricted any access to the sewer if significant maintenance or repair work was required, but as shown previously the positioning of the manholes made access difficult. The proposed design removes any construction over the sewer by approximately 70%, with voids in the foundation solution that allows for access to the remaining sewer being built over if major repair work is required in future. In addition, the two manholes that are situated within the development, which provide maintenance access to the sewer, are now easily accessible. As part of the overall maintenance strategy for the project, it is also proposed that a plan is implemented to reduce the risk of low flow debris build-up, via means of regular wash down at a rate and frequency agreed with the LLFA.

The CCTV survey had identified that the existing multistorey car park discharges surface water directly into a culverted watercourse beneath the site without any form of attenuation or treatment. This free discharge arrangement posed a significant risk to water quality, particularly due to the potential for hydrocarbons, from vehicle drips, spills, and exhaust residues, and de-icing salts, used during winter maintenance, to be conveyed directly into the watercourse. The absence of any interceptors or water quality treatment measures means there is no control over first flush contaminants or long-term pollutant loading. Furthermore, the direct connection to the culvert eliminates opportunities for natural attenuation, infiltration, or pollutant settlement that would otherwise reduce environmental impact. The proposed design will remove any discharge to the watercourse via trafficked areas whilst also introducing a significant increase in soft landscaping features that allow for natural infiltration.

There will also be a significant reduction in surface water runoff for the development, from the previous free discharge rate of 42l/s, calculated of the modified rational method, to a greenfield runoff rate of 3l/s, based on the Qbar for the development boundary. This constitutes a 93% betterment on the existing flow for the development, with large storm events attenuation in a proposed crate system for up to the 100yr + 40% climate change storm events.

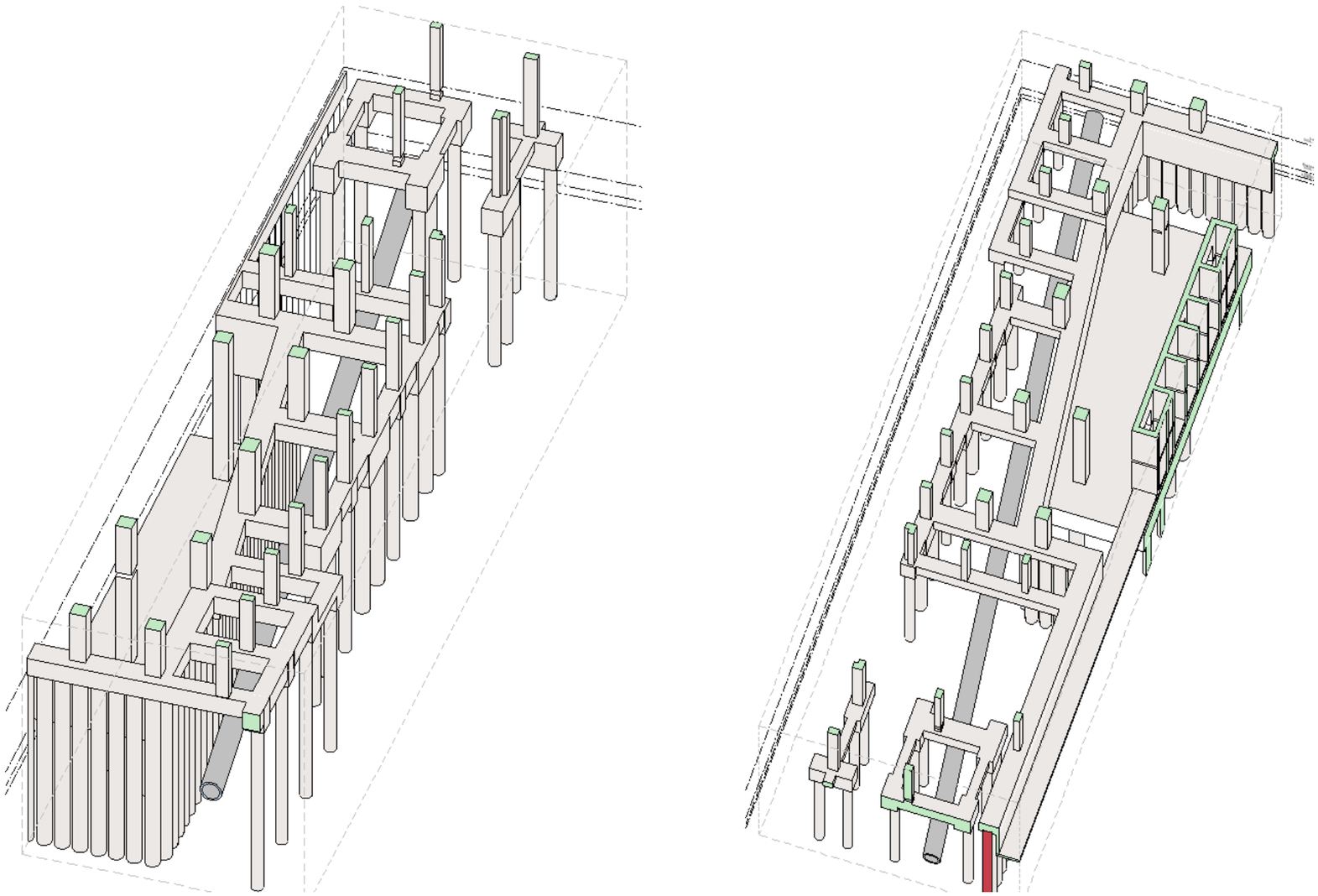


Figure 1.5: 3D view of proposed foundation arrangement

APPENDIX 1: UNITED UTILITIES SEWER MAPPING

Water for the North West

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

Jonathon Taylor

Quayside House
Furnival Road,
Sheffield,
S4 7YA

FAO:

Your Ref: Former Charles St MSCP
Our Ref: UUPS-ORD-641696
Date: 03/04/2025

Dear Sirs

Location: FLAT 4 GRANBY HOUSE GRANBY ROW, MANCHESTER, M1 7AR

I acknowledge with thanks your request dated 27/03/2025 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,

[redacted]

Karen McCormack
Property Searches Manager

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

Water for the North West

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)".

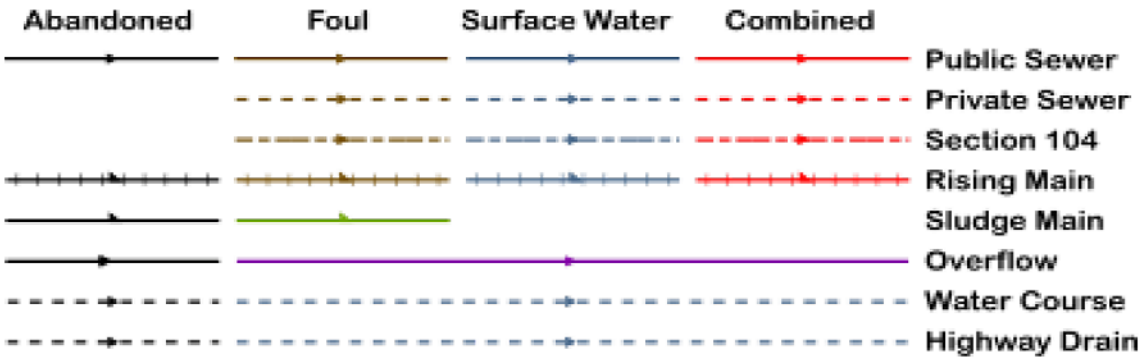
TERMS AND CONDITIONS:

- 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.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park,
Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP

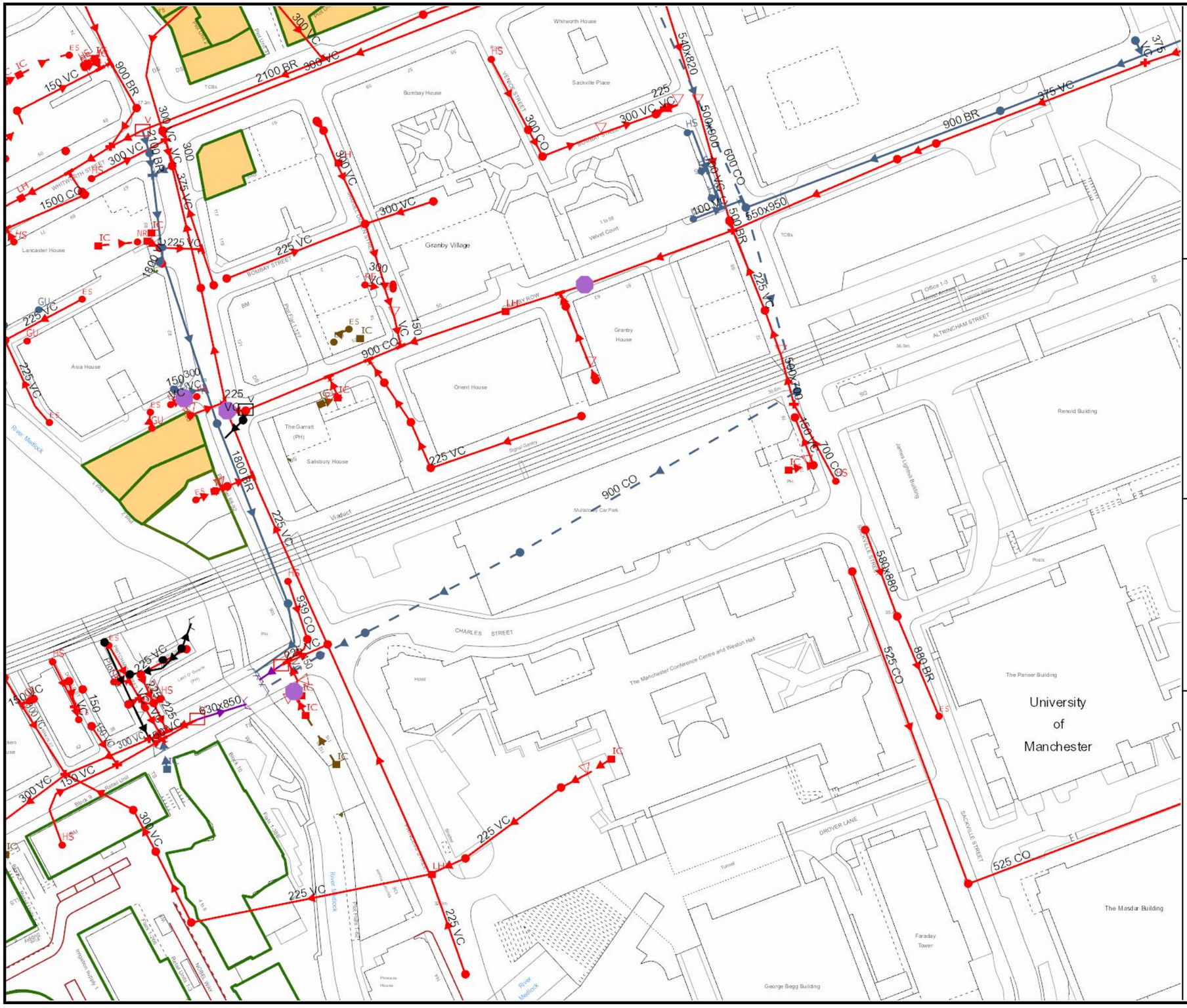
United Utilities
Water for the North West

Wastewater Symbology



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

- Manhole
- HS Head of System
- ES Extent of Survey
- RE Rodding Eye
- IN Inlet
- DP Discharge Point
- HY Vortex
- PE Penstock
- WO Washout Chamber
- VA Valve
- AV Air Valve
- NRV Non Return Valve
- SO Soakaway
- GU Gully
- CA Cascade
- FM Flow Meter
- HA Hatch Box
- OI Oil Interceptor
- SM Summit
- DS Drop Shaft
- OP Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- IC Inspection Chamber
- Bifurcation Chamber
- LH Lamp Hole
- T Junction / Saddle
- CA Catchpit
- VC Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- T Network Storage Tank
- V Sewer Overflow
- WwTW Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- CK Control Kiosk
- DNM Network Monitoring Point
- Change of Characteristic



United Utilities

Water for the North West

SEWER RECORDS

Address or Site Reference

FLAT 4 GRANBY HOUSE
GRANBY ROW,
MANCHESTER,
M1 7AR

Scale: 1:1250
Date: 03/04/2025

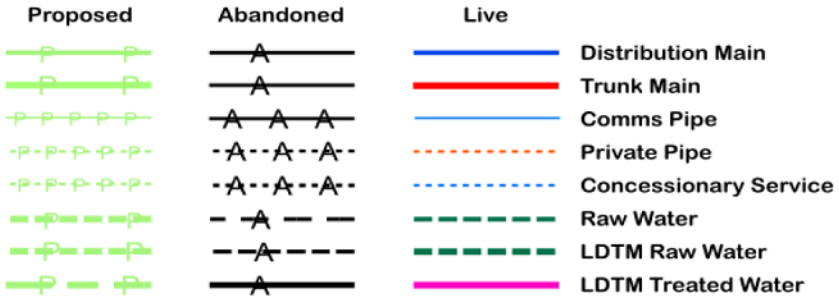
Printed by: Property Searches

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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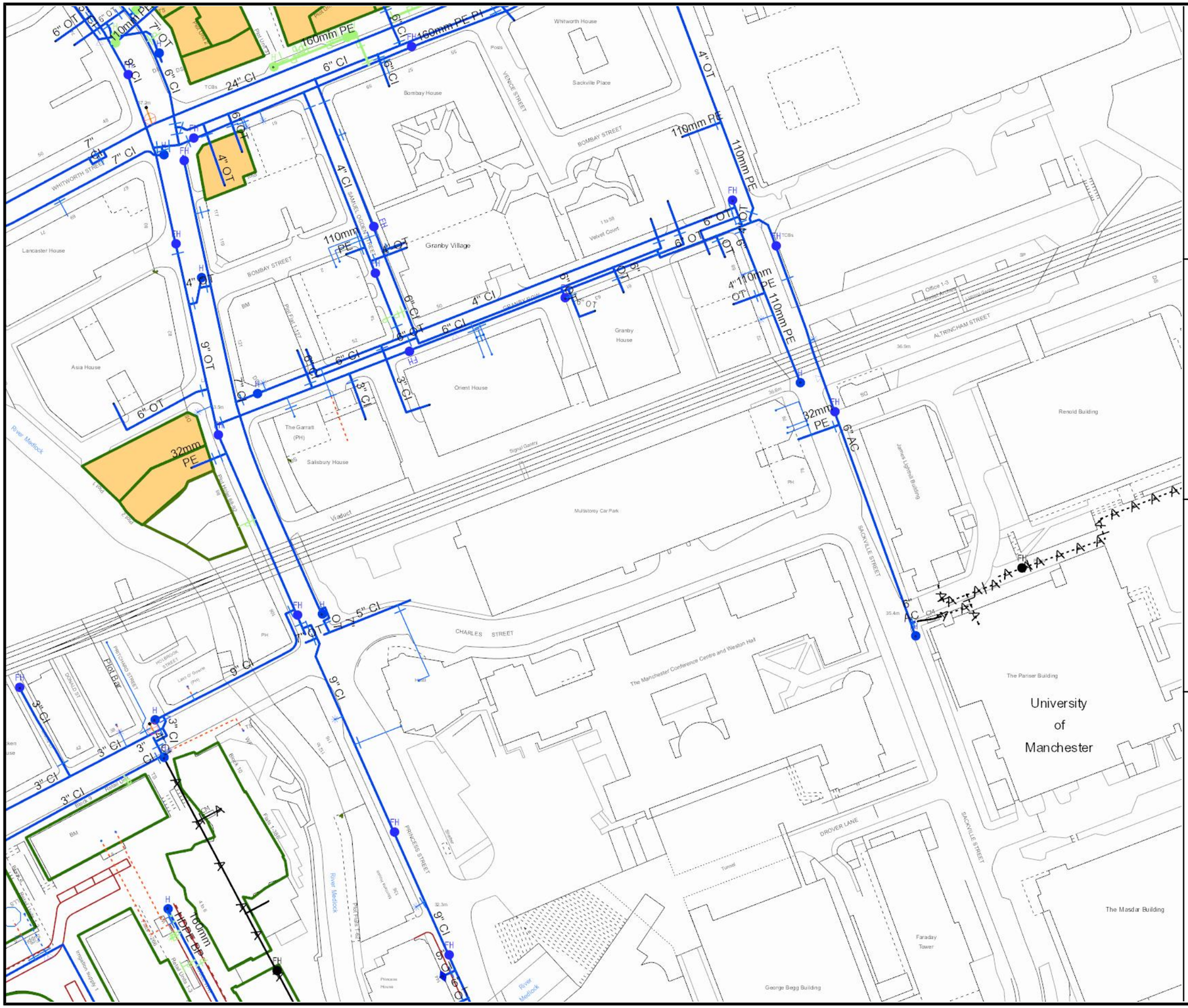
United Utilities
Water for the North West

Clean Water Symbology





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



WATER MAIN RECORDS

Address or Site Reference

FLAT 4 GRANBY HOUSE
GRANBY ROW,
MANCHESTER,
M1 7AR

Scale: 1:1250
Date: 03/04/2025

Printed by: Property Searches

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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APPENDIX 2: CCTV SURVEY REPORT

Charles Street, Manchester M1 3BB

CCTV Survey Review and Remedial Requirements

Ref: 25415-ROS-00-XX-T-C-0550 (P01)

Based on - Charles Street_Manchester_Drainage CCTV Survey (02/09/2025)

Ambler Group Surveys.

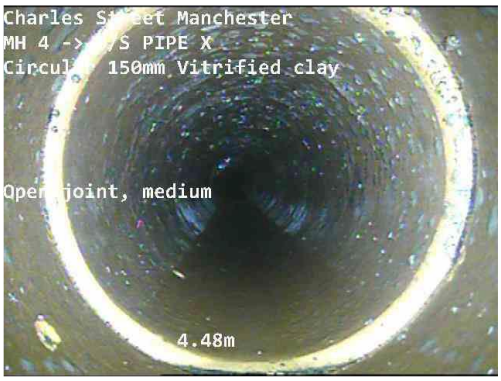
Colour coding as an indicator of severity.

Green – Remedial work not required.

Orange – Remedial work recommended.

Red – Remedial work required.

Charles Street_Manchester_Drainage CCTV Survey (02/09/2025)

Section	Drainage Run Existing Site Run (Surface / Foul)	CCTV Comments	Photos	Comments	Severity
1	MH4 > MH3 (Surface) (length: 15.47m)	1. Crack, circumferential from 12 o'clock to 12 o'clock at 0.49m. 2. Open joint, medium at 4.48m. 3. Joint displaced, medium at 8.92m. 4. Joint displaced, large at 10.10m. 5. Crack, circumferential at joint from 6 o'clock to 8 o'clock at 13.16m. 6. Joint displaced, large at 14.62m.	1.  2.  	**Patch Repairs**: Use epoxy or resin injection to seal small cracks and prevent further deterioration. **Lining Solutions**: Cured-in-place pipe (CIPP) lining or spray lining can reinforce the pipe internally without excavation.	

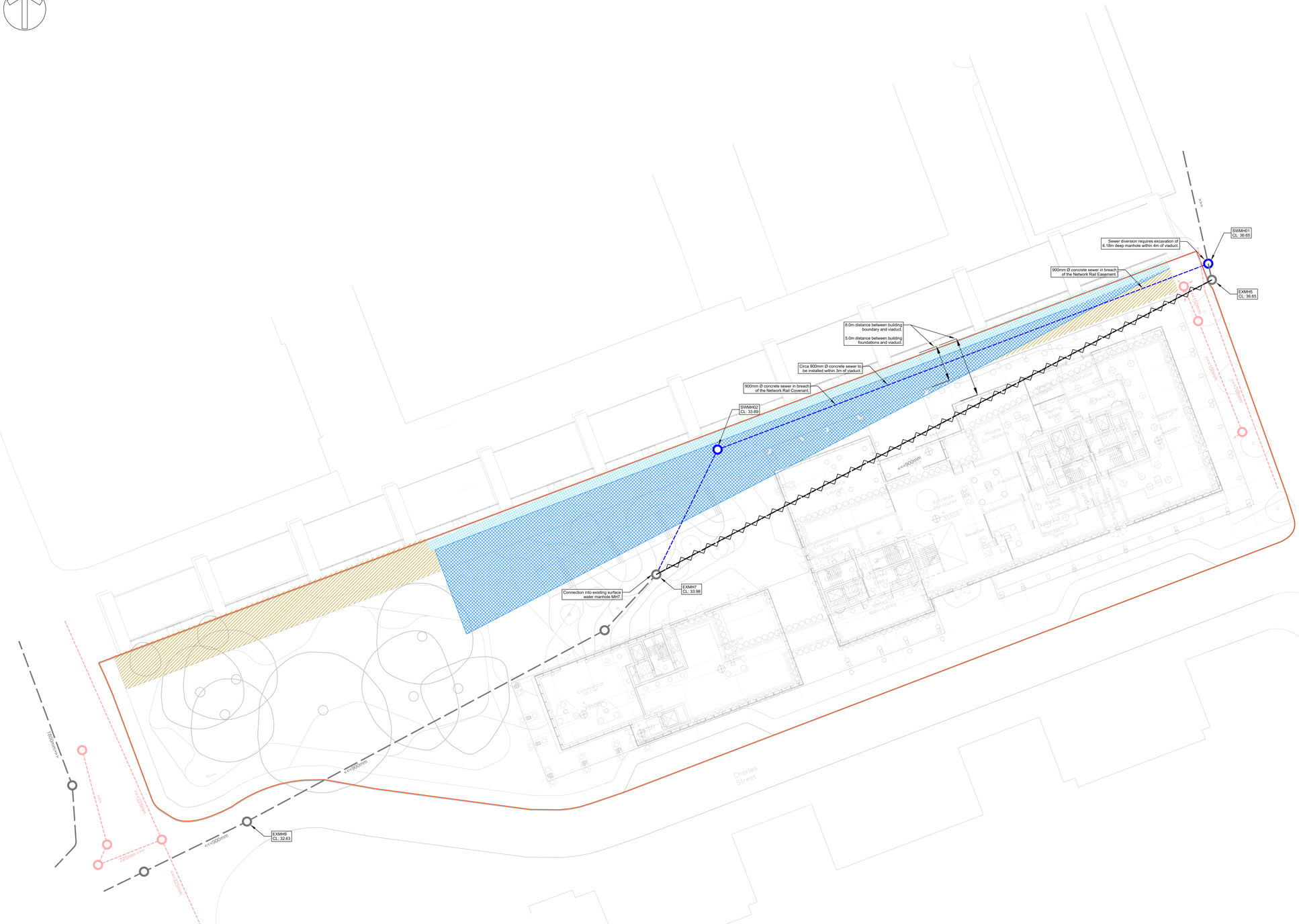
		Other comments. Settled deposits, fine, 5% cross-sectional area loss, start at 8.46m, finish at 10.11m.	3.  4.  5.  6.  		
2	MH3 > MH2 (Surface) (length: 3.69m)	1. Joint displaced, large at 0.20m. 2. Joint displaced, medium at 0.37m.	1.	**Patch Repairs**: Use epoxy or resin injection to seal small cracks and prevent	

		3. Fractures, multiple at joint from 12 o'clock to 12 o'clock at 1.68m. 4. Fractures, multiple at joint from 12 o'clock to 12 o'clock at 1.91m. 5. Joint displaced, medium at 3.47m. 6. Crack, circumferential from 8 o'clock to 11 o'clock at 3.54m.	 2.  3.  4.  5.	further deterioration. **Lining Solutions**: Cured-in-place pipe (CIPP) lining or spray lining can reinforce the pipe internally without excavation.	

			 6. 		
3	MH2 > MH5 (Surface) (length: 75.4m)	1. Joint displaced, medium at 3.01m. 2. Joint displaced, medium at 4.76m.	1.  2. 	**Lining Solutions**: Cured-in-place pipe (CIPP) lining or spray lining can reinforce the pipe internally without excavation.	
4	MH5 > MH7 (length: 75.4m)		See 25415-ROS-00-XX-T-C-0551.docx. Earlier survey detected no defects.	No remedial action required.	
5	MH7 > MH8 (Surface)	No defects detected.		No remedial action required.	

	(length: 8.82m)				
6	MH8 > MH9 (Surface) (length: 51.07m)	1. Settled deposits, coarse, 15% cross-sectional area loss, start at 2.13m. 2. Settled deposits, coarse, 25% cross-sectional area loss (BRICK) at 6.18m. 3. Settled deposits, coarse, 10% cross-sectional area loss at 7.01m. 4. Settled deposits, coarse, 20% cross-sectional area loss (STONE & BRICK) at 35.86m. 5.Settled deposits, coarse, 10% cross-sectional area loss, finish at 43.40m. 6. Settled deposits, fine, 5% cross-sectional area loss, start at 43.41m. 7. Settled deposits, fine, 5% cross-sectional area loss, finish at 51.06m.		**High-Pressure Water Jetting:** Flushing out loose material. If the cleaning process does not resolve the issue, further remedial work may be required.	
7	MH9 > Outfall (length: 75.4m)	No defects detected.		No remedial action required.	

APPENDIX 3: PROPOSED SHOOTERS BROOK DIVERSION – OPTION 1



DO NOT SCALE

General:

1. Do not scale from the drawings. All dimensions must be checked / verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant Architects, Engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. The drawing is for information purposes only. Drainage design subject to change throughout detailed design.

Key

- Proposed drainage diversion
- Existing pipe to be abandoned
- Existing Sewer Drainage
- Existing Surface Water Drainage
- Network Rail Covenant
- Network Rail Exclusion Zone
- Electricity Easement
- Site Boundary

Important CDM / H&S note

The Designers would draw the readers attention to the key residual health and safety risks that have not been eliminated from the designs shown on this drawing by the design process. These key residual risks are identified below;

- Existing Drainage and Service Infrastructure not to be compromised.
- Care to be taken around deep excavations. Plant to be kept at safe distance.
- Moving plant. Care to be taken around site.
- Care to be taken in vicinity of existing high voltage below and above ground electric cables. REFER TO UTILITIES SURVEYS FOR DETAILS.
- Care to be taken when working in the vicinity of existing and proposed watercourses and existing ponds.

Any construction personnel including operatives intending to construct the designs shown on this drawing should ensure that they have been regularly and thoroughly briefed by the principal Contractor on all health and safety matters and have had sight of:

1 - The full Designers and Contractors risk assessments and risk registers.
2 - The developed construction health and safety plan.
3 - The Contractors construction method statements.

Hazards that are obvious to a competent Contractor are not shown, as are every day and low risk hazards.

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	14.10.25	KT	FOR INFORMATION	JT	AW

DRAWING STATUS: FOR INFORMATION

Roscoe
CIVIL & STRUCTURAL ENGINEERS
INSPIRING BUILT ENVIRONMENTS

CLIENT: RG GROUP

ARCHITECT: HODDER + PARTNERS

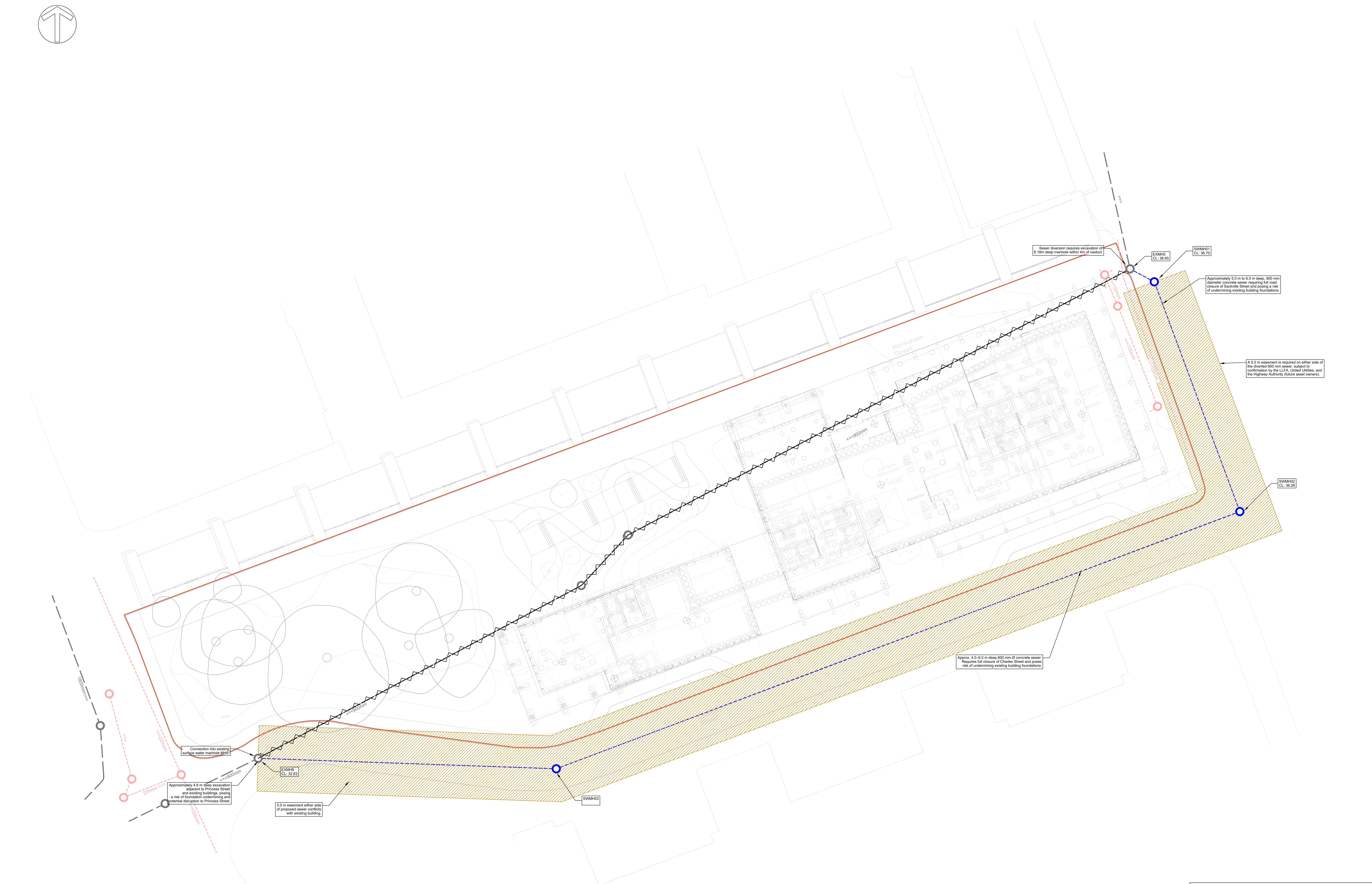
PROJECT: CHARLES STREET MANCHESTER

TITLE: BELOW GROUND DRAINAGE DIVERSION (OPTION 1)

SCALE @ A0	CHECKED:		APPROVED:
1:200	JT		AW
PROJECT NUMBER: 25415	DESIGNED: AY	DRAWN: AY	DATE: OCT 2025

DRAWING No: 25415-ROS-00-00-DR-C-09010 REV: P01

APPENDIX 4: PROPOSED SHOOTERS BROOK DIVERSION – OPTION 2



DO NOT SCALE

General:

1. Do not scale from the drawings. All dimensions must be checked / verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant Architects, Engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. The drawing is for information purposes only. Drainage design subject to change throughout detailed design.

Key

- Proposed drainage diversion
- Existing pipe to be abandoned
- Existing Sewer Drainage
- Existing Surface Water Drainage
- Site Boundary
- Electricity Easement

Important CDM / H&S note

The Designers would draw the readers attention to the key residual health and safety risks that have not been eliminated from the designs shown on this drawing by the design process. These key residual risks are identified below:

- Existing Drainage and Service Infrastructure not to be compromised.
- Care to be taken around deep excavations. Plant to be kept at safe distance.
- Moving plant. Care to be taken around site.
- Care to be taken in vicinity of existing high voltage below and above ground electric cables. REFER TO UTILITIES SURVEYS FOR DETAILS.
- Care to be taken when working in the vicinity of existing and proposed watercourses and existing ponds.

Any construction personnel including operatives intending to construct the designs shown on this drawing should ensure that they have been regularly and thoroughly briefed by the principal Contractor on all health and safety matters and have had sight of:

1 - The full Designers and Contractors risk assessments and risk registers.
2 - The developed construction health and safety plan.
3 - The Contractors construction method statements.

Hazards that are obvious to a competent Contractor are not shown, as are every day and low risk hazards.

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	14.10.25	KT	FOR INFORMATION	JT	AW

DRAWING STATUS: FOR INFORMATION

Roscoe
CIVIL & STRUCTURAL ENGINEERS
INSPIRING BUILT ENVIRONMENTS

CLIENT: RG GROUP

ARCHITECT: HODDER + PARTNERS

PROJECT: CHARLES STREET MANCHESTER

TITLE: BELOW GROUND DRAINAGE DIVERSION (OPTION 2)

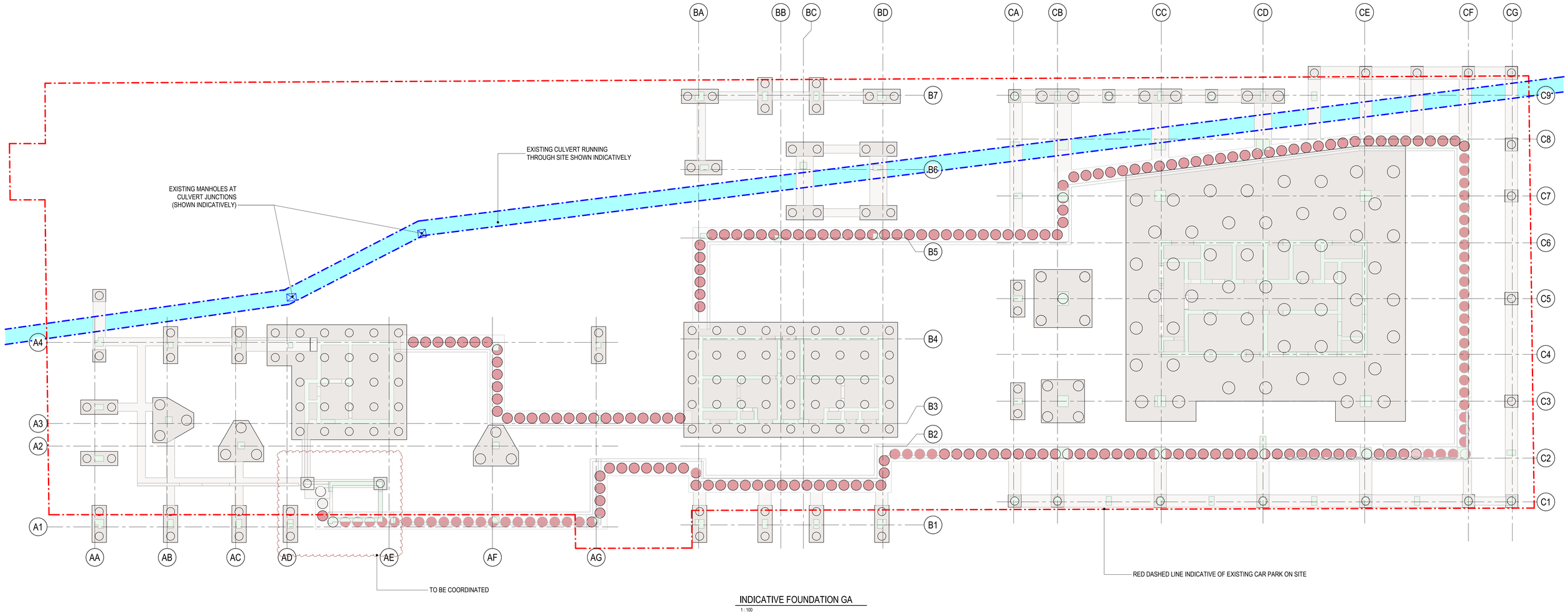
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1:200	JT		AW
PROJECT NUMBER:	DESIGNED:	DRAWN:	DATE:
25415	AY	AY	OCT 2025

DRAWING No: 25415-ROS-00-00-DR-C-09011

REV: P01

APPENDIX 5: PROPOSED BUILDOVER DESIGN

DO NOT SCALE



INDICATIVE FOUNDATION GA

1 : 100

REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: WIP

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INSPIRING BUILT ENVIRONMENTS

CLIENT: RG GROUP

ARCHITECT: HODDER + PARTNERS

PROJECT: PLOT H

TITLE: INDICATIVE FOUNDATION GA

SCALE @ A0	CHECKED:		APPROVED:
1:100	AW		
PROJECT NUMBER:	DESIGNED:	DRAWN:	DATE:
25415		CR	OCTOBER 2025

DRAWING No: SK-004 REV: REVA