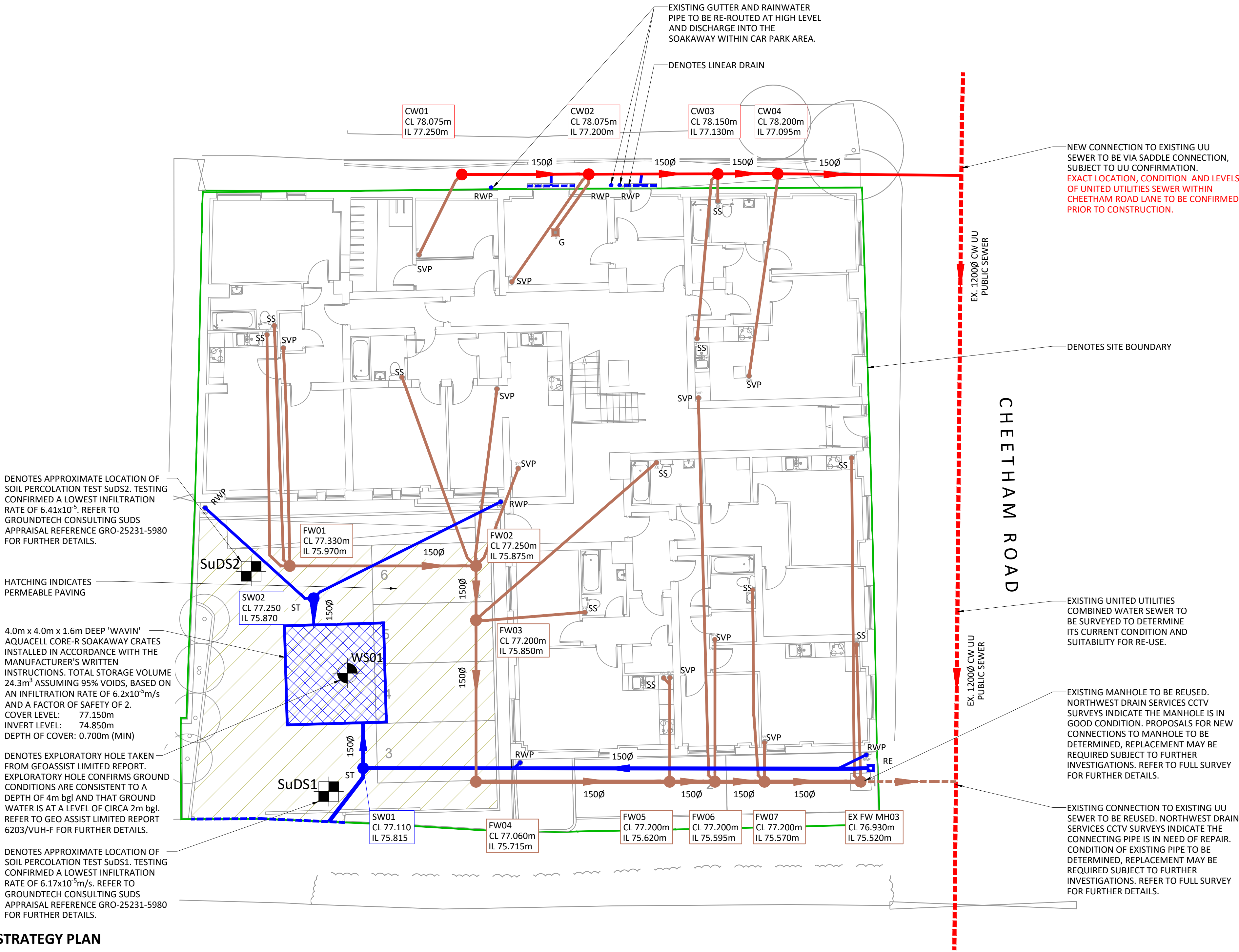
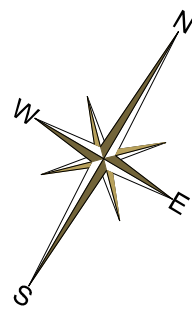




DRAINAGE STRATEGY PLAN
SCALE 1:100

DRAINAGE NOTES

- THIS DRAWING IS PRELIMINARY AND IS SUBJECT TO CHANGE DEPENDING ON FURTHER DEVELOPMENT OF THE G.A., SITE LAYOUT, RWP AND POP-UP LAYOUT.
- EXISTING SEWER LOCATIONS AND LEVELS TO BE CONFIRMED BY CONTRACTOR ON SITE, PRIOR TO WORK COMMENCING.
- ANY PART OF THE EXISTING DRAINAGE SYSTEM TO BE RETAINED AS PART OF THE NEW SCHEME SHALL BE CLEANED AND INSPECTED. ANY STRUCTURAL DEFECTS SHALL BE REPAIRED USING APPROPRIATE AND APPROVED MEANS.
- ALL REDUNDANT EXISTING DRAINAGE TO BE GRUBBED UP OR GROUTED, ANY EXISTING LIVE DRAINAGE SHOULD BE REPORTED TO THE ENGINEER AND RECONNECTED..
- PRIVATE DRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH BUILDING REGULATIONS.
- ALL PRIVATE DRAINAGE WITHIN THE SITE TO COMPLY WITH THE REQUIREMENTS OF BS EN 752 AND BUILDING REGULATIONS PART H.
- NO CONNECTION TO BE MADE TO THE PUBLIC SEWER UNTIL APPROVAL HAS BEEN RECEIVED FROM THE RELEVANT AUTHORITY
- ALL MANHOLE LEVELS ARE INDICATIVE ONLY.
- ALL MANHOLE AND PIPE POSITIONS ARE APPROXIMATE AND MAY BE UPDATED FOLLOWING FURTHER DISCUSSIONS WITH THE RELEVANT AUTHORITIES.
- ALL INSPECTION CHAMBER SIZES ARE 450Ø UNLESS INDICATED OTHERWISE.
- UNLESS INDICATED OTHERWISE ALL PIPES TO BE LAID SOFFIT TO SOFFIT.
- WHERE PROPOSED DRAINS ARE IN PROXIMITY TO PROPOSED FOUNDATIONS, THE FOUNDATIONS SHALL BE TAKEN DEEPER TO BELOW THE DRAINS OR THE DRAIN SHOULD BE PROTECTED WITH A FULL CONCRETE SURROUND.
- PROPOSED PIPEWORK WITH LESS THAN THE FOLLOWING DEPTHS TO SOFFIT REQUIRES A CONCRETE SURROUND:
 - 1.2m IN ROADS
 - 0.75m UNDER PRIVATE DRIVES
 - 0.6m UNDER FOOTPATHS AND UNDER BUILDINGS.
- SETTING OUT OF RAINWATER PIPES, WASTEWATER CONNECTIONS AND POPUP POSITIONS OF ABOVE GROUND DRAINAGE BY OTHERS.
- CHANNEL DRAIN AND GULLY LOCATIONS AND NUMBERS SUBJECT TO CHANGE.
- ALL CHANNEL DRAINAGE TO HAVE SILT BUCKETS ON OUTLETS.
- ALL PRIVATE SURFACE WATER PIPES TO BE MIN 100mmØ LAID AT A MAX 1:80 GRADIENT U.N.O.
- ALL UNDERSLAB FOUL PIPES TO BE 100mmØ LAID AT A MAX 1:40 GRADIENT U.N.O. OTHER FOUL PIPES TO BE 100mmØ LAID AT A MAX 1:80 GRADIENT U.N.O.
- AT LEAST ONE SOIL PIPE AT THE HEAD OF EACH FOUL RUN SHALL VENT TO THE ATMOSPHERE.
- PROPOSED DRAINAGE IS SUBJECT TO CONFIRMATION (BY CONTRACTOR) OF LEVELS OF EXISTING DRAINAGE AT PROPOSED CONNECTION POINTS.
- DISCHARGE RATE INTO WATERCOURSE SUBJECT TO AGREEMENT WITH UNITED UTILITIES AND LOCAL AUTHORITY.
- CONTRACTOR TO ARRANGE ALL SEWERS AND DRAINS TO BE FLUSHED OUT BEFORE FINAL CCTV SURVEY IS CARRIED OUT ON COMPLETION OF WORKS.
- CONTRACTOR TO APPLY FOR SEWER PERMITS AND ROAD OPENING PERMITS AS NECESSARY FROM THE APPROPRIATE AUTHORITIES, PRIOR TO COMMENCING WORKS.
- THE CONTRACTOR SHALL ALLOW FOR ALL TRAFFIC MANAGEMENT IN CONNECTION WITH ROAD AND SEWER WORKS.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY WORKS AND CONSTRUCTION PROCEDURE

SURFACE WATER DRAINAGE

CONSIDERATION HAS BEEN GIVEN TO THE HIERARCHY OF DRAINAGE OPTIONS FOR THE SITE AS FOLLOWS:

- DISCHARGE INTO GROUND - IT IS PROPOSED TO DISCHARGE SURFACE WATER RUNOFF WITHIN GEOCELLULAR SOAKAWAY CRATES LOCATED BENEATH THE CAR PARKING AREA. SOIL PERCOLATION TESTS CONFIRMED A MINIMUM INFILTRATION RATE OF 6.17x10⁻⁵ m/s AND EXPLORATORY HOLES CONFIRMED GROUND CONDITIONS WERE CONSISTENT TO A DEPTH OF 4m bgl, WITH GROUND WATER ENCOUNTERED AT APPROXIMATELY 3.0m bgl.
- DISCHARGE TO SURFACE WATER BODY - THERE ARE NO SURFACE WATER BODIES CONSIDERED TO BE WITHIN CLOSE PROXIMITY TO THE SITE.
- DISCHARGE TO SURFACE WATER SEWER, HIGHWAY DRAIN OR OTHER DRAINAGE SYSTEM - THERE ARE NO SURFACE WATER SEWERS CONSIDERED TO BE WITHIN CLOSE PROXIMITY TO THE SITE.
- DISCHARGE TO COMBINED WATER SEWER - HIGHER OPTIONS AVAILABLE.

SUMMARY

IT IS PROPOSED TO DISCHARGE SURFACE WATER VIA INFILTRATION. A TOTAL OF 24.3m³ OF STORAGE IS REQUIRED BASED ON AN INFILTRATION RATE OF 6.2x10⁻⁵m/s AND A FACTOR OF SAFETY OF 2.

SUDS TO ENCOMPASS:

- PERMEABLE SURFACING
- GEOCELLULAR SOAKAWAY CRATES.

FOUL WATER DRAINAGE

FOUL WATER GENERATED BY THE DEVELOPMENT WILL DISCHARGE INTO THE EXISTING COMBINED UNITED UTILITIES SEWER LOCATED WITHIN CHEETHAM ROAD. AN EXISTING CONNECTION EXISTS TO THE SOUTH OF THE DEVELOPMENT, FURTHER INVESTIGATIONS ARE REQUIRED TO DETERMINE THE SUITABILITY FOR REUSE. A NEW SADDLE CONNECTION IS PROPOSED TO DISCHARGE OF THE FOUL WATER TO THE NORTH OF THE DEVELOPMENT, SUBJECT TO AGREEMENT WITH UNITED UTILITIES AND ROCHDALE BOROUGH COUNCIL.

ALL EXTERNAL HARD LANDSCAPED AREAS TO BE PERMEABLE SURFACING OR FALL TO ADJACENT SOFT LANDSCAPED AREAS.

REFER TO ARCHITECT'S DRAWING FOR LOCATION & SETTING OUT OF ALL FOUL & SURFACE WATER POP-UPS

THE PRIVATE DRAINAGE IS SUBJECT TO LLFA APPROVAL THEREFORE DO NOT COMMENCE WORKS UNTIL APPROVED.

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GENERAL NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ASSOCIATED DRAWINGS. ANY DISCREPANCY TO BE RAISED PRIOR TO CONSTRUCTION. ANY CONSTRUCTION WORKS WHICH COMMENCE BEFORE THESE DRAWINGS ARE APPROVED ARE AT THE RISK OF THE BUILDING CONTRACTOR.
- ALL DIMENSIONS ARE IN MILLIMETERS (mm). DO NOT SCALE FROM THIS DRAWING, WORK TO STATED DIMENSIONS ONLY.
- BUILDING CONTRACTOR TO ENSURE ALL WORKS COMPLY WITH THE CURRENT EDITION OF THE BUILDING REGULATIONS. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH APPROVED DOCUMENT REGULATION 7.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, ERECTION AND REMOVAL OF ALL TEMPORARY WORKS AND SHALL PROVIDE ALL TEMPORARY BRACING AS NECESSARY TO MAINTAIN STRUCTURAL STABILITY DURING CONSTRUCTION.
- IF THE CONTRACTOR CONSIDERS THAT THEY DO NOT HAVE SUFFICIENT INFORMATION TO SAFELY COMPLETE THE WORKS DETAILED ON THIS DRAWING, THEY SHOULD CONTACT THE ENGINEER.

CDM DESIGNER'S RISK ASSESSMENT

BRENNANCONSULT ASSUME THAT THE CONTRACTOR IS COMPETENT IN MATTERS OF HEALTH & SAFETY AND IS AWARE OF ALL THE NORMAL RISKS ASSOCIATED WITH CONSTRUCTION OF THE TYPE SHOWN ON THIS DRAWING. REMAINING UNUSUAL RISKS ARE:-

CONSTRUCTION

	CHK'D.
1. POSSIBILITY OF UNCHARTED BURIED SERVICES, CONTRACTOR TO SURVEY AND SCAN FOR LOCATION OF ANY POSSIBLE BURIED SERVICES IN ADVANCE OF ANY FOUNDATION WORKS BEING UNDERTAKEN.	CB

MAINTENANCE / CLEANING

NO UNUSUAL RISKS	CB
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DECOMMISSIONING / DEMOLITION

NO UNUSUAL RISKS	CB
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DRAINAGE LEGEND

SITE BOUNDARY	EX. CW DRAINAGE
NEW SW DRAINAGE	EX. FW DRAINAGE
NEW CW DRAINAGE	NEW FW DRAINAGE

ALL MANHOLES TO BE CONCRETE ENCASED 450 ØPPIC'S UNO.

ST SW MH IMMEDIATELY PRIOR TO GEOCELLULAR SOAKAWAY CRATES TO BE FITTED WITH SILT TRAP

P04	UPDATED DRAINAGE STRATEGY	MM	21.01.26	LM
P03	FURNITURE REMOVED FROM SITE PLAN	MM	21.10.25	LM
P02	MINOR AMENDMENTS	MM	21.10.25	LM
P01	PRELIMINARY ISSUE	JKS	13.10.25	LM
REV	REVISION DESCRIPTION	BY	DATE	CHECKED

BrennanConsult
Civil & Structural Consulting Engineers
www.brennanconsult.com
info@brennanconsult.com
0161 428 2880
Stockport | London

UNICORN HOUSE, CHEETHAM STREET, MIDDLETON, M24 4DG

RESIDENTIAL DEVELOPMENT
DRAINAGE STRATEGY PLAN

Status
PRELIMINARY

Project No.	Originator	Zone	Level	Type	Role	Drawing No.	Revision
2982	BCL	00	XX	DR	D	0100	P04

Scale	Size	Drawn	Date	Checked	Passed
1:100	A1	JKS	OCT 25	LM	CB