HEALTH & SAFETY: THE WORKS SHALL BE CARRIED OUT BY SPECIALIST COMPETENT AND EXPERIENCED CONTRACTORS. ALL OPERATIVES SHALL HAVE RECEIVED FULL AND APPROPRIATE TRAINING WITH APPROPRIATE QUALIFICATIONS FOR THE OPERATIONS THEY ARE REQUIRED TO UNDERTAKE. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT HEALTH & SAFETY REGULATIONS.

DRAINAGE NOTES

ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR ACTION PRIOR TO CONSTRUCTION.

ALL DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY AND IN CONJUNCTION WITH ALL RELEVANT BRITISH STANDARDS, CODES OF PRACTICE AND 'SEWERS FOR ADOPTION' 7TH EDITION AND ADDENDUMS AS APPROPRIATE.

ALL DRAINAGE SHALL COMPLY WITH THE TYPICAL DRAINAGE CONSTRUCTION DETAILS AND THE REQUIREMENTS OF BS EN 752.

ACCESS COVERS AND FRAMES SHALL COMPLY WITH THE LOADINGS SPECIFIED AND TO BS EN 124 AND KITEMARKED OR IF RECESSED COVERS ARE SPECIFIED THEN IN ACCORDANCE WITH FACTA ASSOCIATION EQUIVALENT.

ALL INTERNAL COVERS TO BE DOUBLE SEALED RECESSED COVERS TO ACCEPT PROPOSED FLOOR FINISHES.

THE PROPOSED BUILDING OUTLINES SHOWN ON THIS DRAWING ARE FOR INFORMATION ONLY. REFER TO ARCHITECTS PLANS FOR SETTING OUT INFORMATION AND DETAILS.

FOR SETTING OUT DIMENSIONS OF SS'S, SVP'S, RWP'S, FLOOR GULLY & OTHER DRAINAGE 'POP UP' LOCATIONS, REFER TO ARCHITECTS OR MECHANICAL & ELECTRICAL ENGINEERS DRAWINGS. LOCATION OF EXTERNAL CHANNEL DRAINS AND GULLY LOCATIONS / REQUIREMENTS TO BE CONFIRMED BY ARCHITECT.

ALL DRAINAGE PIPEWORK SHOWN SHALL BE 100MM DIAMETER FOR FOUL AND 150MM FOR SURFACE WATER UNLESS NOTED OTHERWISE.

ALL DRAINAGE PIPEWORK SHALL BE LAID SOFFIT TO SOFFIT UNLESS NOTED OTHERWISE.

ALL UNDERSLAB DRAINAGE SHALL BE LAID AT GRADIENTS OF 1:80 MIN. FOR FOUL PIPEWORK AND 1:100 MIN. FOR SURFACE WATER UNLESS NOTED OTHERWISE. ALL UNDERSLAB DRAINAGE SHALL BE CLEAR OF FOUNDATIONS UNLESS SHOWN OTHERWISE.

ALL BENDS IN PIPEWORK TO BE AS LARGE A RADIUS AS POSSIBLE (EXCLUDING CONNECTIONS TO CHAMBERS) TO ENSURE FREE FLOW. SHORT RADIUS BENDS TO BE AGREED WITH DRAINAGE ENGINEER.

ALL SURFACE WATER DROP DOWN POSITIONS SHALL HAVE A BEND SET AT INVERT LEVEL NO GREATER THAN 1.3M BELOW FINISH FLOOR LEVEL.

AT LEAST ONE SOIL PIPE AT THE HEAD OF EACH FOUL RUN SHALL BE VENTED TO THE ATMOSPHERE. ALL SVPS, SSS AND RWP DOWNPIPES SHALL BE ACCESSIBLE AT GROUND LEVEL FOR RODDING PURPOSES.

COVER LEVELS SHOWN ON THIS DRAWING ARE APPROXIMATE AND SHALL BE ADJUSTED TO SUIT LEVELS ON SITE BY CONTRACTOR. COVERS SHALL BE ORIENTATED TO SUIT PAVEMENT FINISHES WHERE APPROPRIATE.

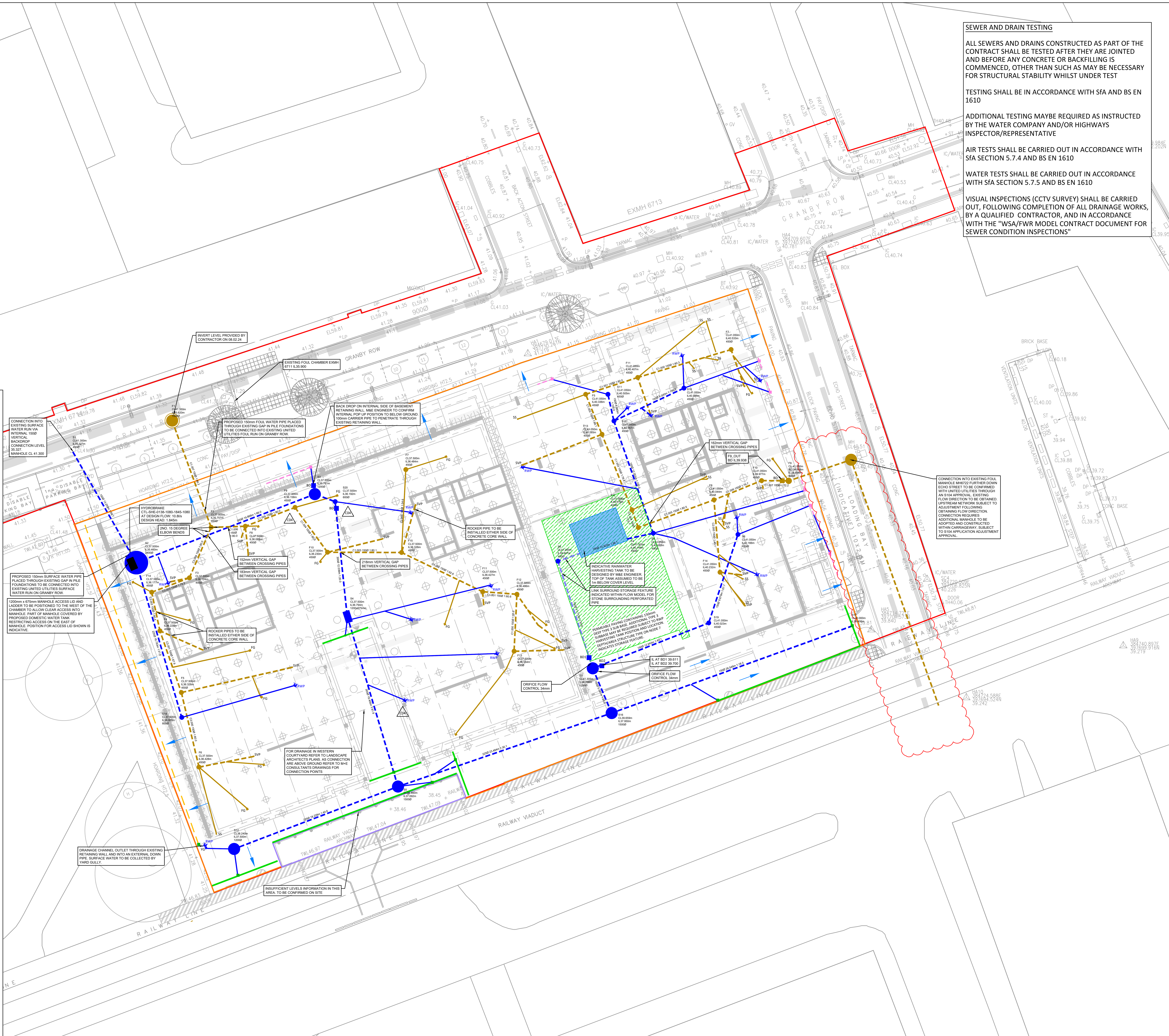
ALL COVER LEVELS ARE TO BE CONFIRMED BY THE ARCHITECT

CONCRETE ENCASEMENT OF THE PIPEWORK SHALL BE REQUIRED WHERE VERTICAL CLEARANCE BETWEEN TWO PIPES CROSSING IS LESS THAN 300MM.

WHERE NEW DRAINAGE IS SITUATED WITHIN 5 METRES OF NEW OR EXISTING TREES THE PIPEWORK SHALL BE ENCASED IN CONCRETE TO REDUCE THE RISK OF ROOT INGRESS.

ALL DRAINAGE CONNECTING TO THE PUBLIC SEWER NETWORK SHALL NOT COMMENCE UNTIL RECEIPT OF THE APPROVAL FROM THE DRAINAGE AUTHORITY AND SHALL COMPLY WITH REQUIREMENTS USING VITRIFIED CLAY PIPEWORK TO BS EN 295 WITH PLAIN SLEEVED OR SOCKETED FLEXIBLE JOINTS SUBJECT TO APPROVAL.

FILE LOCATION PATH: P:\PROJECTS HOT\2925 PROJECT ECHO\004 BIM\CIVILS\DRAWINGS\63073-CCE-ZZ-ZZ-DR-C-52001.DWG



SEWER AND DRAIN TESTING

ALL SEWERS AND DRAINS CONSTRUCTED AS PART OF THE CONTRACT SHALL BE TESTED AFTER THEY ARE JOINTED AND BEFORE ANY CONCRETE OR BACKFILLING IS COMMENCED, OTHER THAN SUCH AS MAY BE NECESSARY FOR STRUCTURAL STABILITY WHILST UNDER TEST

TESTING SHALL BE IN ACCORDANCE WITH SfA AND BS EN 1610

ADDITIONAL TESTING MAYBE REQUIRED AS INSTRUCTED BY THE WATER COMPANY AND/OR HIGHWAYS INSPECTOR/REPRESENTATIVE

AIR TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH SfA SECTION 5.7.4 AND BS EN 1610

WATER TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH SfA SECTION 5.7.5 AND BS EN 1610

VISUAL INSPECTIONS (CCTV SURVEY) SHALL BE CARRIED OUT, FOLLOWING COMPLETION OF ALL DRAINAGE WORKS, BY A QUALIFIED CONTRACTOR, AND IN ACCORDANCE WITH THE "WSA/FWR MODEL CONTRACT DOCUMENT FOR SEWER CONDITION INSPECTIONS"

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED

KEY

- DEVELOPMENT BOUNDARY
- NETWORK RAIL OWNERSHIP BOUNDARY
- LAND OWNERSHIP BOUNDARY
- RWP — RAIN WATER PIPE
- DC — DRAINAGE CONNECTION
- FG — FLOOR GULLY
- SS — STUB STACK
- SVP — SOIL VENT PIPE
- YG — YARD GULLY
- PROPOSED FOUL WATER MANHOLE/INSPECTION CHAMBER
- PROPOSED FOUL WATER BRANCH PIPE, 100mmØ UNLESS STATED OTHERWISE
- PROPOSED FOUL WATER PIPE, 150mmØ UNLESS STATED OTHERWISE
- PROPOSED SURFACE WATER PIPE, 150mmØ UNLESS STATED OTHERWISE
- PROPOSED SURFACE WATER BRANCH PIPE, 100mmØ UNLESS STATED OTHERWISE
- PROPOSED SURFACE WATER INSPECTION CHAMBER
- EXISTING COMBINED DRAINAGE TO BE RETAINED
- ACO OUTLET SUMP UNIT
- ACO MULTIDRAIN PPD - M100PPD 0.0J
- PERMEABLE PAVING WITH TYPE 3 SUB BASE PROVIDING ATTENUATION
- BD — FOUL WATER BACKDROP
- BD — SURFACE WATER BACKDROP
- RAINWATER HARVESTING TANK DESIGNED BY OTHERS
- ACO MULTIDRAIN PPD - M100PPD 0.0J - WITH 1% SLOPE
- THRESHOLD DRAINS
- THRESHOLD OUTLET SUMP UNIT
- OVERLAND FLOW ROUTE
- PERFORATED PIPE

DATE	REV	DESCRIPTION	DRAWN	CHKD
07.03.24	C04	AMENDED FOLLOWING B+K COMMENTS	TC	CK
09.02.24	C03	AMMENDED POP UP LOCATIONS	BW	TC
05.01.24	C02	AMENDED TO B&K COMMENTS	BW	TC
08.12.23	C01	ISSUED FOR CONSTRUCTION	BW	TC
25.09.23	P04	ISSUED FOR INFORMATION	TC	CK
05.09.23	P03	THRESHOLD DRAINS AND DRAINAGE UPDATED	BW	CK
01.09.23	P02	DRAINAGE LAYOUT UPDATED	BW	TC
09.08.23	P01	ISSUED FOR STAGE 3	BW	CK

Civic Engineers

MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS 1 Saw Mill Street, Water Lane, Leeds, LS11 5WE. Tel: 0113 2025 130
GLASGOW 35 Virginia Street, Glasgow, G1 1TN. Tel: 0141 370 1829
www.civicengineers.com

NOTE
POP UP LOCATIONS TAKEN FROM M&E AND ARCHITECT CONSTRUCTION ISSUE DRAWINGS.

NOTE
BELOW GROUND DRAINAGE NETWORK IS SUBJECT TO CHANGE ON RECEIPT OF ADDITIONAL SURVEY INFORMATION I.E. GPR SURVEY AND FURTHER CCTV SURVEY

PROJECT
ECHO STREET

TITLE
DRAINAGE LAYOUT

DRAWING STATUS				STATUS CODE
CONSTRUCTION				-
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED
2925	1:200	AUG'23	BW	CK
DRAWING No.				REV
63073-CCE-ZZ-ZZ-DR-C-52001				C04