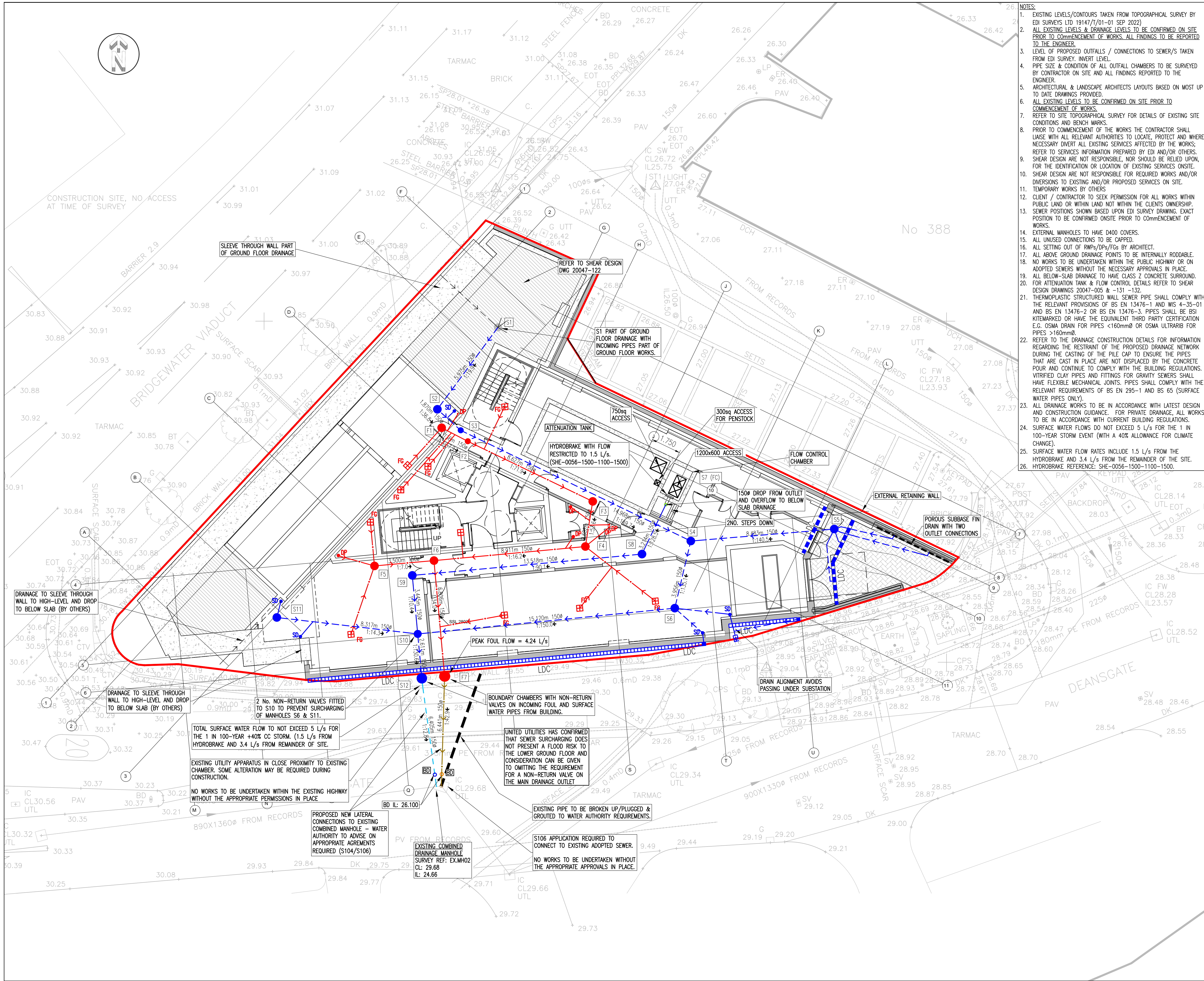




- NOTES:
- EXISTING LEVELS/CONTOURS TAKEN FROM TOPOGRAPHICAL SURVEY BY EDI SURVEYS LTD 19147/1/01-01 SEP 2022)
 - ALL EXISTING LEVELS & DRAINAGE LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS. ALL FINDINGS TO BE REPORTED TO THE ENGINEER.
 - LEVEL OF PROPOSED OUTFALLS / CONNECTIONS TO SEWER/S TAKEN FROM EDI SURVEY. INVERT LEVEL.
 - PIPE SIZE & CONDITION OF ALL OUTFALL CHAMBERS TO BE SURVEYED BY CONTRACTOR ON SITE AND ALL FINDINGS REPORTED TO THE ENGINEER.
 - ARCHITECTURAL & LANDSCAPE ARCHITECTS LAYOUTS BASED ON MOST UP TO DATE DRAWINGS PROVIDED.
 - ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS.
 - REFER TO SITE TOPOGRAPHICAL SURVEY FOR DETAILS OF EXISTING SITE CONDITIONS AND BENCH MARKS.
 - PRIOR TO COMMENCEMENT OF THE WORKS THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES TO LOCATE, PROTECT AND WHERE NECESSARY DIVERT ALL EXISTING SERVICES AFFECTED BY THE WORKS; REFER TO SERVICES INFORMATION PREPARED BY EDI AND/OR OTHERS.
 - SHEAR DESIGN ARE NOT RESPONSIBLE, NOR SHOULD BE RELIED UPON, FOR THE IDENTIFICATION OR LOCATION OF EXISTING SERVICES ONSITE.
 - SHEAR DESIGN ARE NOT RESPONSIBLE FOR REQUIRED WORKS AND/OR DIVERSIONS TO EXISTING AND/OR PROPOSED SERVICES ON SITE.
 - TEMPORARY WORKS BY OTHERS
 - CLIENT / CONTRACTOR TO SEEK PERMISSION FOR ALL WORKS WITHIN PUBLIC LAND OR WITHIN LAND NOT WITHIN THE CLIENTS OWNERSHIP.
 - SEWER POSITIONS SHOWN BASED UPON EDI SURVEY DRAWING. EXACT POSITION TO BE CONFIRMED ONSITE PRIOR TO COMMENCEMENT OF WORKS.
 - EXTERNAL MANHOLES TO HAVE D400 COVERS.
 - ALL UNUSED CONNECTIONS TO BE CAPPED.
 - ALL SETTING OUT OF RWP/DPs/FGs BY ARCHITECT.
 - ALL ABOVE GROUND DRAINAGE POINTS TO BE INTERNALLY RODDABLE. NO WORKS TO BE UNDERTAKEN WITHIN THE PUBLIC HIGHWAY OR ON ADOPTED SEWERS WITHOUT THE NECESSARY APPROVALS IN PLACE.
 - ALL BELOW-SLAB DRAINAGE TO HAVE CLASS Z CONCRETE SURROUND.
 - FOR ATTENUATION TANK & FLOW CONTROL DETAILS REFER TO SHEAR DESIGN DRAWINGS 20047-005 & -131 -132.
 - THERMOPLASTIC STRUCTURED WALL SEWER PIPE SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 13476-1 AND WIS 4-35-01 AND BS EN 13476-2 OR BS EN 13476-3. PIPES SHALL BE BSI KITEMARKED OR HAVE THE EQUIVALENT THIRD PARTY CERTIFICATION E.G. OSMA DRAIN FOR PIPES <160mmØ OR OSMA ULTRARIB FOR PIPES >160mmØ.
 - REFER TO THE DRAINAGE CONSTRUCTION DETAILS FOR INFORMATION REGARDING THE RESTRAINT OF THE PROPOSED DRAINAGE NETWORK DURING THE CASTING OF THE PILE CAP TO ENSURE THE CONCRETE THAT ARE CAST IN PLACE ARE NOT DISPLACED BY THE CONCRETE POUR AND CONTINUE TO COMPLY WITH THE BUILDING REGULATIONS. VITRIFIED CLAY PIPES AND FITTINGS FOR GRAVITY SEWERS SHALL HAVE FLEXIBLE MECHANICAL JOINTS. PIPES SHALL COMPLY WITH THE RELEVANT REQUIREMENTS OF BS EN 295-1 AND BS 65 (SURFACE WATER PIPES ONLY).
 - ALL DRAINAGE WORKS TO BE IN ACCORDANCE WITH LATEST DESIGN AND CONSTRUCTION GUIDANCE. FOR PRIVATE DRAINAGE, ALL WORKS TO BE IN ACCORDANCE WITH CURRENT BUILDING REGULATIONS.
 - SURFACE WATER FLOWS DO NOT EXCEED 5 L/s FOR THE 1 IN 100-YEAR STORM EVENT (WITH A 40% ALLOWANCE FOR CLIMATE CHANGE).
 - SURFACE WATER FLOW RATES INCLUDE 1.5 L/s FROM THE HYDROBRAKE AND 3.4 L/s FROM THE REMAINDER OF THE SITE.
 - HYDROBRAKE REFERENCE: SHE-0056-1500-1100-1500.

- NOTES
- GENERAL
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
 - ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.
 - DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
 - ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
 - THIS DRAWING IS COPYRIGHT © PROPERTY OF SHEAR DESIGN LIMITED.

KEY

- SITE BOUNDARY
- EXISTING SEWER TO BE FILLED IN OR REMOVED TO WATER AUTHORITY APPROVAL
- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED SURFACE WATER DRAINAGE
- PROPOSED LINEAR DRAINAGE CHANNEL WITH SUMP (ACO HEXDRAIN OSA - A15)
- PROPOSED THRESHOLD DRAIN
- PROPOSED RODDING EYE
- PROPOSED SURFACE WATER DRAINAGE DROP FROM WALL TO BELOW-SLAB
- PROPOSED SURFACE WATER LATERAL DRAIN
- PROPOSED FOUL WATER DRAINAGE
- PROPOSED FOUL GULLY AND CONNECTION
- PROPOSED FOUL DRAINAGE POINT
- PROPOSED FOUL WATER LATERAL DRAIN
- PERMEABLE BLOCK PAVING. MIN. 480mm THK WITH 80mm PAVIORS

PROPOSED SITE FLOW RATES

SURFACE WATER

- HIGH-LEVEL ROOF DRAINAGE DISCHARGING TO ATTENUATION TANK AT LOWER GROUND FLOOR LEVEL AND RESTRICTED VIA HYDROBRAKE; 1.5 L/s FOR THE 1 IN 100-YEAR +40% CLIMATE CHANGE CRITICAL STORM EVENT.
- ALL EXTERNAL AREAS THAT CANNOT DISCHARGE TO ATTENUATION TANK (GROUND FLOOR OR LOWER) ARE TO DISCHARGE FROM SITE AT A MAXIMUM FLOW RATE OF: 3.5 L/s FOR THE 1 IN 100-YEAR +40% CLIMATE CHANGE CRITICAL STORM EVENT.
- THEREFORE TOTAL PEAK FLOW RATE FOR THE 1 IN 100-YEAR +40% CLIMATE CHANGE CRITICAL STORM EVENT IS 5 L/s (VIA MANHOLE S12).

FOUL WATER

- PEAK FOUL FLOW (VIA MANHOLE F7): 4.24 L/s

C04	04.07.24	ADDED HYDROBRAKE AND OUTFLOW INFORMATION TO DRAWING ADDED GULLY IN WET RISER ROOM.	EL	DKK
C03	28.05.24	UPDATED CONSTRUCTION ISSUE - AMENDED POSITIONS OF MHs S3-S4 AND F2-F3 TO AVOID FOUNDATIONS.	EL	DKK
C02	23.05.24	UPDATED CONSTRUCTION ISSUE - MOVED MH F3 TO AVOID FOUNDATIONS	EL	DKK
C01	17.05.24	CONSTRUCTION ISSUE	EL	DKK
REV	DATE	DESCRIPTION	BY	CHK

CLIENT:	FUSION MANCHESTER DEVCO LTD
PROJECT:	STUDENT ACCOMMODATION DEANSgate SOUTH, MANCHESTER
TITLE:	DRAINAGE LAYOUT LOWER GROUND FLOOR

SHEARdesign
Consulting Civil and Structural Engineers

7 Ashtree Court - Woody Close - Cardiff Gate Business Park - Cardiff - CF23 8RW
Tel: 029 2054 7000 - Fax: 029 2054 7001 - www.shear-design.com - enquiries@shear-design.com

DRAWN:	TU	CHECKED:	SJM	DATE:	DECEMBER 2020	SCALE:	1:100 @ A1
SHEAR DESIGN REF:	20047	DRAWING NUMBER:	20047-121	REVISION:	C03	STATUS:	C