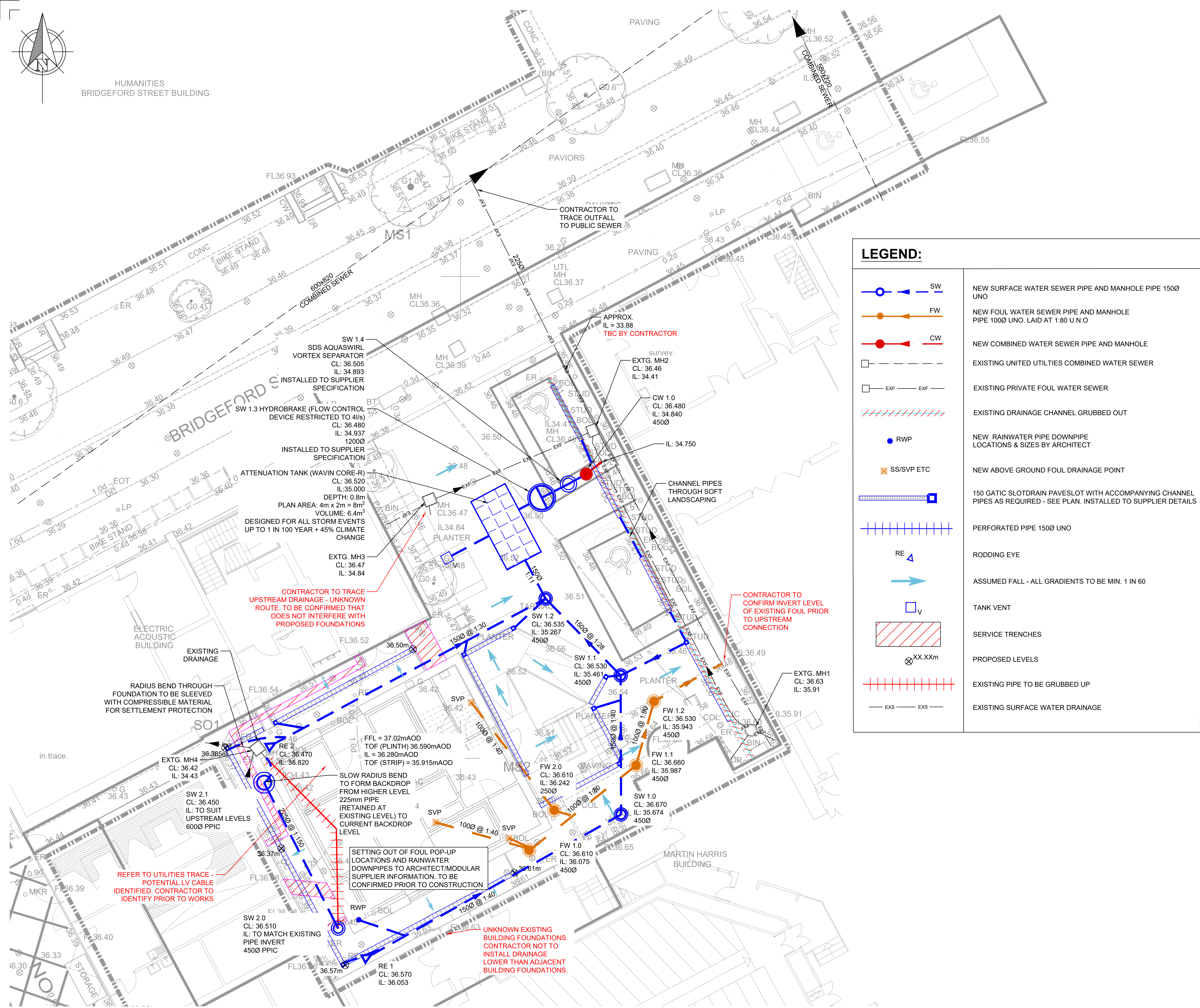




- NOTES:**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ENGINEER'S AND ARCHITECT'S DRAWINGS, DETAILS & SPECIFICATIONS.
 - THE EXTERNAL WORKS DESIGN IS BASED UPON JEFFERSON SHEARD ARCHITECTS' PLAN 2080-JSA-XX-00-DR-A-01000 REV P10 DATED 30/11/22. FOUL DRAINAGE AND RAIN WATER PIPE BELOW GROUND CONNECTION LOCATIONS BASED ON DWG RECEIVED ON 11/04/2022
 - TOPOGRAPHICAL SURVEY DRAWING 22C200/001 DATED APRIL 2022 BY SURVEY OPERATIONS HAS ALSO BEEN USED IN THE DESIGN.
 - REFER TO THE ARCHITECT FOR SETTING OUT OF ALL BUILDINGS & INTERNAL DOWN PIPES & RWP'S
 - REFER TO ARCHITECT'S INFORMATION FOR SETTING OUT OF ALL FOUL DRAINAGE POP UP LOCATIONS AND MODULAR SUPPLIER INFORMATION.
 - REFER TO SERVICE ENGINEERS DRAWINGS FOR ABOVE GROUND PLUMBING ROUTES FROM APPLIANCES TO STUB STACKS ETC.
 - ALL EXISTING DRAINAGE THAT IS TO BE ABANDONED TO BE 'PLUGGED' IN WITH MASS CONCRETE (150mm MIN) OR REMOVED ENTIRELY.
 - ANY EXISTING SERVICES TO BE LOCATED AND CLEARLY MARKED PRIOR TO EXCAVATIONS BY CONTRACTOR.
 - ALL LEVELS ARE TO BE CONFIRMED BY THE CONTRACTOR ON SITE PRIOR TO CONSTRUCTION.
 - IT IS ASSUMED THAT ALL SINK AND TOILET DRAINAGE POINTS WILL HAVE RODDING ACCESS AT THE APPLIANCE BASE.
 - CONTRACTOR TO AVOID UNDERMINING ANY EXISTING FOOTPATHS/ BUILDINGS DURING WORKS BY ALLOWING ADEQUATE PROTECTION ADJACENT TO THESE AREAS.
 - ALL RAINWATER DOWN PIPES TO HAVE RODDABLE ACCESS AT THE BASE OF THE VERTICAL SECTION.
 - ALL BELOW GROUND DRAINAGE PIPES WITH LESS THAN 900mm COVER TO SOFFIT LEVEL IN TRAFFICKED AREAS I.E. CAR PARK AND SERVICE YARD AREA TO HAVE CLASS Z BEDDING SURROUND. REFER TO THE MANHOLE SCHEDULE AND DETAIL SHEETS FOR FURTHER DETAILS.
 - ALL BELOW GROUND DRAINAGE WITHIN THE SITE BOUNDARY HAS BEEN DESIGNED TO BS EN 752:2008 AND BUILDING REGULATIONS - PART H:2015.

HEALTH SAFETY AND ENVIRONMENTAL RISKS BOX		
CONSTRUCTION RISKS	MAINTENANCE RISKS	DEMOLITION/ ADAPTATION RISKS
1. REFER TO EXISTING SERVICES DRAWING AND TO ARCHITECTS SERVICES DRAWINGS FOR DETAILS & LOCATION OF EXTG AND PROPOSED DRAINAGE & SERVICES. 2. EXISTING DRAINS TO EITHER BE REMOVED OR GRUBBED UP, AS SHOWN ON PLANS 3. CONSTRUCTING NEW CONNECTIONS DRAINAGE: POTENTIAL FOR HAZARDOUS GASES. PERMIT TO ENTER EXISTING MANHOLES SHOULD BE OBTAINED FROM UNITED UTILITIES BEFORE UNDERTAKING THE WORK. RELEVANT P.P.E SHOULD BE WORN AT ALL TIMES. IF ANY ASBESTOS CEMENT PIPES ARE FOUND, THEN SAFE SYSTEM OF WORK NEED TO BE PUT IN PLACE WITH ATTENTION DRAWN TO THE CONTROL ASBESTOS AT WORK (AMENDMENT) REGULATIONS 1992.	1. ATTENUATION TANKS, GULLIES, CHANNELS AND CHAMBERS REQUIRE THE STANDARD PERIODIC INSPECTION REGIME AND CLEANING ROUTINE TO ENSURE CONTINUED PERFORMANCE. 2. CONFINED SPACE ENTRY. 3. ALL MAINTENANCE MUST COMPLY WITH UNITED UTILITIES' REGULATIONS.	1. APPARATUS LOCATED IN LANDSCAPED AREAS HAS NOT BEEN DESIGNED TO SUPPORT HEAVY VEHICLE LOADING. 2. THE SURFACE WATER DRAINAGE APPARATUS HAS BEEN DESIGNED TO ACCOMMODATE THE DESIGNED CATCHMENT AREA. NO ADDITIONAL AREAS OF HANDSTANDING CAN BE CONNECTION INTO THE SYSTEM WITHOUT RISK OF LOCALIZED FLOODING ON SITE. 3. THE SURFACE WATER DRAINAGE HAS BEEN DESIGNED FOR THE DISCHARGE RATE OF 4l/s FOR EACH CATCHMENT AREA. ANY ADDITIONS TO THIS MUST BE CHECKED WITH UNITED UTILITIES BEFORE ANY CONNECTION IS MADE.
IN ADDITION TO THE HAZARDS & RISKS NORMALLY ASSOCIATED WITH THE TYPE OF WORK DETAILED ON THIS DRAWING, TAKE NOTE OF THE ABOVE. IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR, WORKING WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.		

DRAINAGE STRATEGY:

THE SURFACE WATER DRAINAGE STRATEGY IS TO COLLECT ALL SURFACE WATER RUN-OFF FROM THE PAVED AREAS ON SITE INTO A NUMBER OF CHANNEL DRAINS WHICH ARE POSITIONED AT LOW POINTS ON SITE, WITH ROOF RUN-OFF BEING COLLECTED VIA RAINWATER PIPES. THE RUN-OFF IS THEN TRANSFERRED TO AN ON-SITE ATTENUATION TANK VIA A NETWORK OF PIPES, WHICH IS FOLLOWED BY A FLOW CONTROL CHAMBER TO REGULATE THE DISCHARGE RATE TO 4l/s. THIS IS A 50% BETTERMENT OF THE EXISTING 1 IN 1 YEAR RUNOFF RATE. THIS WATER IS THEN RUN THROUGH A VORTEX SEPARATOR TO PROVIDE AN APPROPRIATE LEVEL OF WATER TREATMENT BEFORE IT IS DISCHARGED TO THE PUBLIC COMBINED SYSTEM PRESENT WITHIN BRIDGEFORD STREET.

FOR THE FOUL DISCHARGE ON SITE, THE WASTE WATER IS COLLECTED VIA SOIL VENT PIPES WITHIN THE BUILDING WHICH IS THEN TRANSFERRED INTO A NETWORK OF PIPES THAT CARRIES THE WATER TO THE DISCHARGE POINT WITHIN BRIDGEFORD STREET.

CONTRACTOR NOTE:					
EXISTING MANHOLE CHAMBERS TO BE REPLACED TO SUIT NEW LANDSCAPE DESIGN. COVER LEVELS MAY ALSO NEED ADJUSTMENT					
Rev	Date	Description	By	Check	App.
C6	24.07.23	OUTFALL INVERT ADDED AND DRAINAGE LAYOUT ALTERED	CN	JP	
C5	12.07.23	ACO CHANNEL ADDED	AC	CN	CH
C4	22.06.23	RWP POSITION OMITTED	CN	JP	GS
C3	07.06.23	TANK AND POP-UP POSITIONS UPDATED TO SUIT COMMENTS	CN	SS	GS
C2	12.05.23	CONSTRUCTION ISSUE	CH	GS	GS
C1	14.04.23	CONSTRUCTION ISSUE	CH	GS	GS

Client

UNIVERSITY OF MANCHESTER

Project

MARTIN HARRIS MUSIC BLOCK
UNIVERSITY OF MANCHESTER
BRIDGEFORD STREET, M15 6FH

Office

NORWICH 01603 305190

Discipline

CIVIL ENGINEERING

Title

DRAINAGE STRATEGY
GENERAL ARRANGEMENT

Scale @ A1

1:100

Status

CONSTRUCTION

CONSTRUCTION DRAWING

THIS DRAWING IS FOR CONSTRUCTION PURPOSES AND MUST NOT BE READ AS AS BUILT INFORMATION

SCALE 1:100m

Originator	Job Number	Discipline	Building/Zone
CCL	8/2756	C	MHM
Type	Level	Drawing No.	Revision
GA	DRN	4400	C6

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