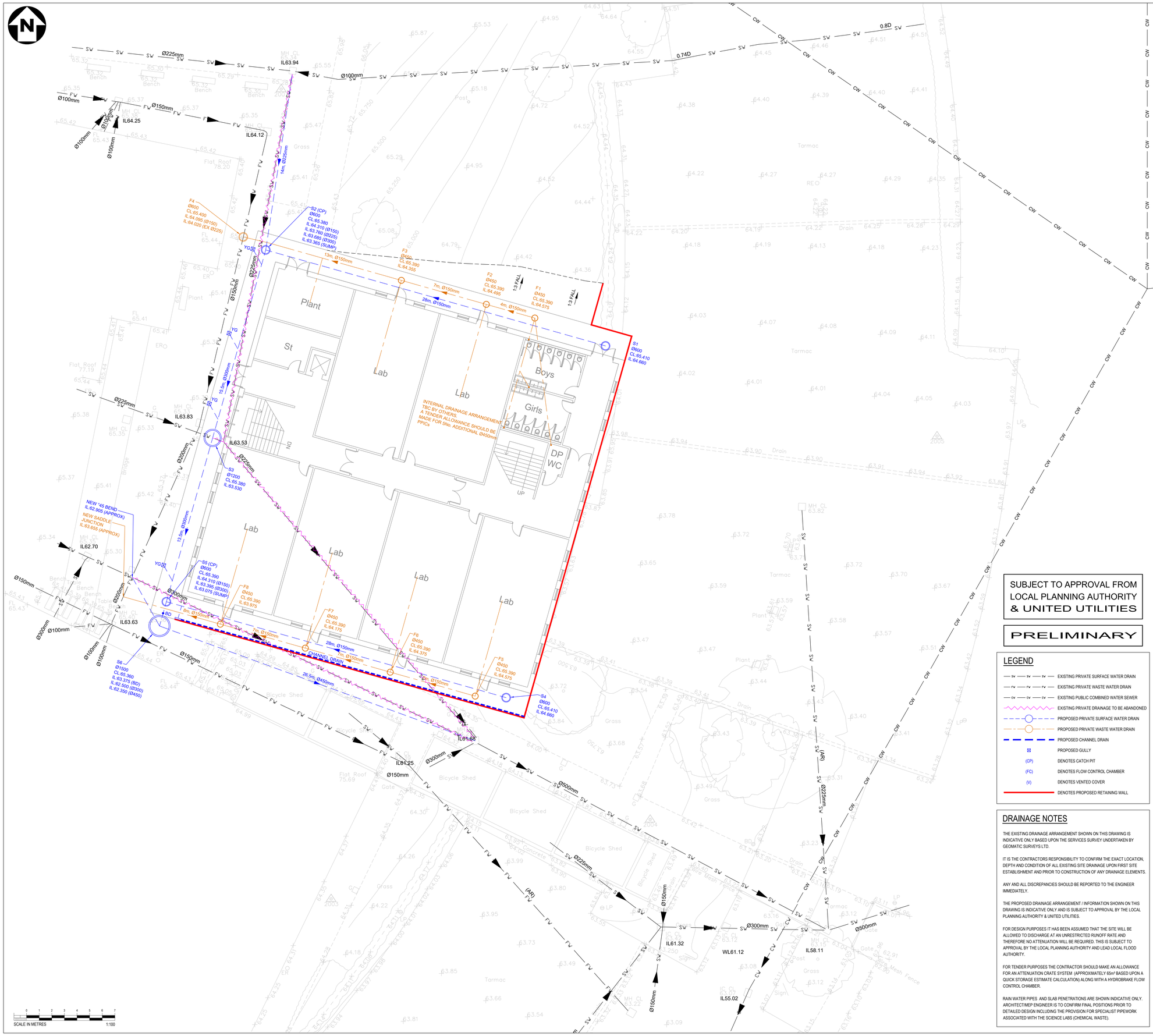

SUBJECT TO APPROVAL FROM LOCAL PLANNING AUTHORITY & UNITED UTILITIES

PRELIMINARY

LEGEND

- EXISTING PRIVATE SURFACE WATER DRAIN
- EXISTING PRIVATE WASTE WATER DRAIN
- EXISTING PUBLIC COMBINED WATER SEWER
- EXISTING PRIVATE DRAINAGE TO BE ABANDONED
- PROPOSED PRIVATE SURFACE WATER DRAIN
- PROPOSED PRIVATE WASTE WATER DRAIN
- PROPOSED CHANNEL DRAIN
- PROPOSED GULLY
- (CP) DENOTES CATCH PIT
- (FC) DENOTES FLOW CONTROL CHAMBER
- (V) DENOTES VENTED COVER
- DENOTES PROPOSED RETAINING WALL

DRAINAGE NOTES

THE EXISTING DRAINAGE ARRANGEMENT SHOWN ON THIS DRAWING IS INDICATIVE ONLY BASED UPON THE SERVICES SURVEY UNDERTAKEN BY GEOMATIC SURVEYS LTD.

IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM THE EXACT LOCATION, DEPTH AND CONDITION OF ALL EXISTING SITE DRAINAGE UPON FIRST SITE ESTABLISHMENT AND PRIOR TO CONSTRUCTION OF ANY DRAINAGE ELEMENTS.

ANY AND ALL DISCREPANCIES SHOULD BE REPORTED TO THE ENGINEER IMMEDIATELY.

THE PROPOSED DRAINAGE ARRANGEMENT / INFORMATION SHOWN ON THIS DRAWING IS INDICATIVE ONLY AND IS SUBJECT TO APPROVAL BY THE LOCAL PLANNING AUTHORITY & UNITED UTILITIES.

FOR DESIGN PURPOSES IT HAS BEEN ASSUMED THAT THE SITE WILL BE ALLOWED TO DISCHARGE AT AN UNRESTRICTED RUNOFF RATE AND THEREFORE NO ATTENUATION WILL BE REQUIRED. THIS IS SUBJECT TO APPROVAL BY THE LOCAL PLANNING AUTHORITY AND LEAD LOCAL FLOOD AUTHORITY.

FOR TENDER PURPOSES THE CONTRACTOR SHOULD MAKE AN ALLOWANCE FOR AN ATTENUATION CRATE SYSTEM (APPROXIMATELY 65m³ BASED UPON A QUICK STORAGE ESTIMATE CALCULATION) ALONG WITH A HYDROBRAKE FLOW CONTROL CHAMBER.

RAIN WATER PIPES AND SLAB PENETRATIONS ARE SHOWN INDICATIVE ONLY. ARCHITECT/MEP ENGINEER IS TO CONFIRM FINAL POSITIONS PRIOR TO DETAILED DESIGN INCLUDING THE PROVISION FOR SPECIALIST PIPEWORK ASSOCIATED WITH THE SCIENCE LABS (CHEMICAL WASTE).

SURFACE WATER DRAINAGE STRATEGY

REFERENCE SHOULD BE MADE TO WML FLOOD RISK ASSESSMENT; 11258-WML-00-XX-RP-C-0001, NOVEMBER 2023.

THE PROPOSED DEVELOPMENT IS UNDERSTOOD TO COMPRISE A NEW TWO STOREY SCIENCE BUILDING SITUATED WITHIN THE EXISTING ACADEMY GROUNDS.

THE PROPOSED DEVELOPMENT IS TO BE DRAINED VIA SEPARATE FOUL AND SURFACE WATER DRAINAGE SYSTEMS.

THE SURFACE WATER DRAINAGE PROPOSALS HAVE BEEN DESIGNED IN ACCORDANCE WITH BS EN 752 AND THE BUILDING REGULATIONS APPROVED DOCUMENT H (2010), WHICH INDICATES THE FOLLOWING HIERARCHY FOR THE DISPOSAL OF SURFACE WATER DRAINAGE FROM DEVELOPMENT SITES:-

1. DISCHARGE VIA INFILTRATION;
2. DISCHARGE TO WATERCOURSE;
3. DISCHARGE TO SEWER.

THESE OPTIONS ARE DISCUSSED IN FURTHER DETAIL BELOW.

SURFACE WATER DISCHARGE VIA INFILTRATION

THE WML PHASE 2 GEO-ENVIRONMENTAL REPORT, OCTOBER 2023 INDICATES THAT GROUND CONDITIONS AT THE SITE COMPRISE MIXED GRANULAR AND COHESIVE GROUND, UNDERLAIN BY GENERALLY COHESIVE GLACIAL DEPOSITS AT DEPTHS DOWN TO 3.5mbgl, WHICH ARE NOT CONDUCIVE TO THE USE OF CONCENTRATED INFILTRATION TECHNIQUES.

IN ADDITION TO THE ABOVE, CHEMICAL ANALYSIS OF LEACHATE FROM SAMPLES OF THE MADE GROUND INDICATED ELEVATED LEVELS OF CERTAIN METAL AND PAH CONTAMINANTS.

GIVEN THE ABOVE IT IS CONSIDERED THAT THE USE OF SOAKAWAYS AND OTHER INFILTRATION TECHNIQUES ARE NOT SUITABLE FOR THIS DEVELOPMENT.

SURFACE WATER DISCHARGE VIA WATERCOURSE

IT IS UNDERSTOOD THAT THE NEAREST WATERCOUSE IS MOSTON BROOK LOCATED APPROXIMATELY 120m EAST OF THE PROPOSED DEVELOPMENT.

A SERVICES SURVEY UNDERTAKEN BY GEOMATIC SURVEYS LTD, AUGUST 2023 HAS CONFIRMED THE PRESENCE OF MULTIPLE EXISTING PRIVATE FOUL & SURFACE WATER DRAINS SERVING THE EXISTING SITE IN SOME CAPACITY.

THE ABOVE SURVEY INDICATES THAT THE EXISTING SITE SURFACE WATER IS COLLECTED VIA TRADITIONAL RAINWATER PIPES, GULLIES AND CHANNELS PRIOR TO TRANSPORTED THROUGH A NETWORK OF PRIVATE DRAINS WHICH CONVERGE AT A POINT LOCATED WITHIN THE EXISTING CAR PARK. FROM HERE IT APPEARS TO DISCHARGE TO THE EAST IN THE GENERAL DIRECTION OF MOSTON BROOK.

FOR THE PURPOSE OF DESIGN, IT IS ASSUMED THAT THE EXISTING DRAINS DO DISCHARGE TO THE EXISTING BROOK, HOWEVER THIS IS TO BE CONFIRMED VIA A CCTV SURVEY PRIOR TO CONSTRUCTION.

SURFACE WATER DISCHARGE VIA PUBLIC SEWER

GIVEN THAT DISPOSAL OF SURFACE WATER VIA A CONNECTION TO THE ADJACENT WATERCOURSE APPEARS TO BE FEASIBLE, A CONNECTION TO THE PUBLIC SEWER NETWORK WON'T BE REQUIRED AT THIS TIME.

A REVIEW OF THE UNITED UTILITIES (UU) SEWER RECORDS INDICATE THE PRESENCE OF A COMBINED SEWER LOCATED WITHIN THE ADJACENT CAR PARK DIRECTLY TO THE EAST OF THE PROPOSED BUILDING.

SURFACE WATER DRAINAGE PROPOSALS

GIVEN THE ABOVE, THE PROPOSALS OUTLINED ON THIS DRAWING INTEND TO DISPOSE OF ALL SURFACE WATER RUNOFF FROM THE NEW DEVELOPMENT VIA AN EXISTING CONNECTION TO MOSTON BROOK.

AS NOTED ABOVE, A SERVICES SURVEY UNDERTAKEN BY GEOMATIC SURVEYS LTD, AUGUST 2023 HAS CONFIRMED THE PRESENCE OF MULTIPLE EXISTING PRIVATE FOUL & SURFACE WATER DRAINS SERVING THE EXISTING SITE IN SOME CAPACITY.

THE SURVEY INDICATES THAT THE EXISTING SITE SURFACE WATER IS COLLECTED VIA TRADITIONAL RAINWATER PIPES, GULLIES AND CHANNELS PRIOR TO TRANSPORTED THOUGH A NETWORK OF PRIVATE DRAINS WHICH CONVERGE AT A POINT LOCATED WITHIN THE EXISTING CAR PARK. FROM HERE IT APPEARS TO DISCHARGE TO THE EAST IN THE GENERAL DIRECTION OF MOSTON BROOK.

IT IS RECOMMENDED THAT A CCTV SURVEY IS UNDERTAKEN TO CONFIRM THE LOCATION, DEPTH, SIZE AND CONDITION OF ALL DRAINAGE INFRASTRUCTURE SHOWN ON THE SERVICES SURVEY INCLUDING THE POSSIBLE CONNECTION TO MOSTON BROOK.

IT IS ALSO NOTED THAT 2No. EXISTING PRIVATE SURFACE WATER DRAINS CURRENTLY PASS THROUGH THE PROPOSED BUILDING FOOTPRINT AND WILL THEREFORE REQUIRE DIVERTING AS PART OF THE DRAINAGE PROPOSALS FOR THIS DEVELOPMENT.

THE NEW SCIENCE BUILDING IS TO BE LOCATED ON AN EXISTING AREA OF MIXED HARDSTANDING/PAVING AND BANKED SOFT LANDSCAPING FALLING TOWARDS AND EXISTING CAR PARK TO THE EAST.

THE PROPOSED DEVELOPMENT IS UNDERSTOOD TO INCREASE THE IMPERMEABLE AREA IN THIS LOCATION BY APPROXIMATELY 595m².

A SURFACE WATER RUNOFF CALCULATION BASED UPON 50mm/Hr SUGGESTS AN INCREASE IN SURFACE WATER RUNOFF BEING DISCHARGED TO MOSTON BROOK OF CIRCA 8 l/s AS A RESULT OF THE INCREASED IMPERMEABLE AREA.

GIVEN THE LIMITED INCREASE IN SURFACE WATER RUNOFF COMBINED WITH THE LIMITED SPACE & COMPLEX LEVELS TO INCORPORATE AN ATTENUATION SYSTEM, IT IS PROPOSED TO ALLOW SURFACE WATER RUNOFF TO DISCHARGE VIA THE EXISTING PRIVATE DRAINAGE INFRASTRUCTURE AT AN UNRESTRICTED RATE, SUBJECT TO APPROVAL BY THE LOCAL PLANNING AUTHORITY AND LEAD LOCAL FLOOD AUTHORITY.

IT IS PROPOSED TO COLLECT ROOF WATER VIA TRADITIONAL RAINWATER PIPES AND DISCHARGE TO THE PUBLIC SEWER VIA A CONNECTION TO THE EXISTING PRIVATE DRAINAGE INFRASTRUCTURE WITHIN THE VICINITY OF THE NEW BUILDING.

FOUL WATER DRAINAGE STRATEGY

THE FOUL WATER DRAINAGE PROPOSALS HAVE BEEN DESIGNED IN ACCORDANCE WITH BS EN 752 AND THE BUILDING REGULATIONS APPROVED DOCUMENT H (2010).

IT IS PROPOSED TO CAPTURE WASTE WATER USING TRADITIONAL SPs & SVPs WHICH WILL BE CONNECTED INTO THE ADJACENT EXISTING SITE FOUL WATER DRAINAGE SYSTEM BEFORE ULTIMATELY DISCHARGING TO THE UU PUBLIC COMBINED SEWER NETWORK.

MAINTENANCE STRATEGY

IT IS UNDERSTOOD THAT THE NEW DRAINAGE NETWORK WILL BE PRIVATELY OWNED AND MAINTAINED BY THE CLIENT OR AN APPOINTED MAINTENANCE COMPANY ON THEIR BEHALF AND WILL NOT BE OFFERED UP FOR ADOPTION BY UNITED UTILITIES.

THE PROPOSED DRAINAGE SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH THE CURRENT STANDARDS AND GUIDELINES TO ACHIEVE A MINIMUM SELF-CLEANSING VELOCITY, HOWEVER EXCESSIVE DEBRIS IN THE SYSTEM COULD STILL RESULT IN LOSS OF PERFORMANCE.

THE PROPOSED DRAINAGE DESIGN WILL CONSISTS OF TRADITIONAL MANHOLES, PIPES AND CHANNELS.

IT IS PROPOSED TO CHECK THE UNDERGROUND DRAINAGE SYSTEM AND LIFT MANHOLE/INSPECTION CHAMBER COVERS TO ENSURE THAT THE PIPEWORK ASSOCIATED WITH EACH CHAMBER IS OPERATING CORRECTLY TWICE YEARLY AND ENSURE DRAINAGE CHANNELS ARE FREE FROM DEBRIS.

ANY PROBLEMS ENCOUNTERED SHOULD BE INVESTIGATED BY CCTV SURVEY IF REQUIRED AND ANY REMEDIAL WORKS NECESSARY CARRIED OUT IN A TIMELY MANNER.

IT IS RECOMMENDED THAT THE BIANNUAL INSPECTIONS TAKE PLACE IN SPRING AND AUTUMN WHERE THERE IS ADDITIONAL RISK OF BLOCKAGE FROM DEBRIS ASSOCIATED WITH FALLEN LEAVES ETC.

GENERAL NOTES

DO NOT SCALE FROM THIS DRAWING WORK TO FIGURED DIMENSIONS ONLY.

NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS ALLOWED WITHOUT PRIOR PERMISSION IN WRITING.

ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.

THE CONTRACTOR SHALL INCORPORATE ALL THE REQUIREMENTS OF THE PRE-TENDER STAGE HEALTH AND SAFETY PLAN.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH WML DRAINAGE DETAIL DRAWINGS FOR DETAILS OF MATERIALS AND WORKMANSHIP REFER TO THE SPECIFICATION.

THE CONTRACTOR IS RESPONSIBLE FOR CHECKING INVERT LEVELS AND POSITIONS OF ALL EXISTING DRAINS, SEWERS, INSPECTION CHAMBERS AND MANHOLES SHOWN ON THIS DRAWING IMMEDIATELY ON SITE ESTABLISHMENT. ANY DISCREPANCIES MUST BE REPORTED TO WML CONSULTING IMMEDIATELY.

WHERE THE NEW SITE DRAINAGE CONNECTS IN TO EXISTING MANHOLES IN CARRIAGEWAYS AND/OR EXISTING ADOPTED SEWERS, THE CONTRACTOR IS RESPONSIBLE FOR ALL LIAISON WITH THE RELEVANT STATUTORY UNDERTAKER AND LOCAL AUTHORITY WITH REGARD TO ROAD CLOSURES, TRAFFIC MANAGEMENT, PERMITS TO WORK, SUBMISSION OF CONTRACTORS METHOD STATEMENTS AND RISK ASSESSMENTS AND OTHER DOCUMENTATION AND CORRESPONDENCE ASSOCIATED WITH THE SITE STAGE (PART 2) ELEMENT OF THE WORKS.

ROCKER PIPES TO BE PROVIDED AT ALL CONCRETE CASED INTERFACES.

PROVIDE ADEQUATE PROTECTION TO MAINTAIN MINIMUM COVER TO DRAINS DURING THE CONSTRUCTION PERIOD.

COVER LEVELS ON THIS DRAWING ARE APPROXIMATE AND INDICATIVE ONLY ARCHITECT TO CONFIRM COVER LEVELS TO ALL MANHOLES AND GULLIES PRIOR TO CONSTRUCTION.

THE LAYOUT OF DRAINAGE ON THIS DRAWING IS INDICATIVE ONLY ARCHITECT TO CONFIRM EXACT LOCATION OF MANHOLES AND GULLIES.

U.N.O SURFACE WATER DRAINAGE PIPES OVER Ø100mm TO BE TWIN WALLED STRUCTURED PLASTIC APPROVED BY THE ENGINEER.

U.N.O FOUL WATER DRAINAGE PIPES TO BE SUPERSLEVE VITRIFIED CLAY PIPES OR SIMILAR.

ALL COVERS AND RODDING ACCESS POINTS TO BE SEALED AND SCREWED TIGHT.

ALL INTERNAL MANHOLE COVERS TO BE DOUBLE SEALED, LOCKABLE AND RECESSED TO ACCEPT FLOOR FINISHES WHERE APPLICABLE.

SETTING OUT OF ALL INTERNAL GULLY/PLUMBING CONNECTIONS TO BE CO-ORDINATED BETWEEN THE SERVICE ENGINEERS AND THE ARCHITECT.

ALL INTERNAL GULLIES, PLUMBING CONNECTIONS, SOIL STACKS, SVPS AND ALL OTHER CONNECTIONS OF FOUL AND SURFACE WATER DRAINS TO BELOW GROUND TO BE FITTED WITH ACCESSIBLE RODDING POINTS ABOVE SLAB LEVEL.

ALL SURFACE WATER CONNECTIONS TO BE 100mm DIAMETER AT MINIMUM FALLS OF 1:80 UNLESS NOTED OTHERWISE.

ALL FOUL WATER CONNECTIONS TO BE 100mm DIAMETER AT MINIMUM FALLS OF 1:40 UNLESS NOTED OTHERWISE.

ALL CONNECTIONS TO BE MADE IN ACCORDANCE WITH STANDARD DETAIL DRAWINGS.

ALL PIPEWORK TO BE INSTALLED WITH SOFFITS LEVEL (E.G. AT CHANGES IN PIPE SIZE) U.N.O.

FOR DETAILS OF GREASE TRAP/MACERATOR REQUIREMENTS ASSOCIATED WITH KITCHENS REFER TO SERVICE ENGINEER.

ON COMPLETION OF DRAINAGE WORKS, THE NEW DRAINAGE SYSTEM IS TO BE THOROUGHLY CLEANED AND A CCTV SURVEY CARRIED OUT TO CONFIRM NO CONSTRUCTION DEBRIS OR BLOCKAGES REMAIN.

CONNECTIONS TO CARRIER DRAINS ARE TO BE 'Y' JUNCTIONS.

ALL PRIVATE DRAINAGE IS TO COMPLY WITH BS EN 752 AND BUILDING REGS. PART H.

PIPE GRADIENTS ARE INDICATIVE MINIMUMS.

SURFACE CHANNEL DRAINS TO BE ACO QMAX OR SIMILAR.

MANHOLES:

ALL PROPOSED NEW MANHOLES TO BE PRECAST RING MANHOLES TYPE B UNLESS NOTED OTHERWISE. INTERNAL DIAMETERS OF MANHOLES TO BE 1050mm WHERE DEPTH TO PIPE SOFFIT IS LESS THAN 1.5m, AND 1200mm Ø ELSEWHERE UNLESS NOTED OTHERWISE. IC - DENOTES POLYPROPYLENE INSPECTION CHAMBER BY 'HEPWORTH' OR SIMILAR APPROVED INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

MANHOLE COVERS:

CARRIAGEWAYS GENERAL - EN124 CLASS D400
CARRIAGEWAYS WITHIN 0.5m OF KERB - EN124 CLASS C250
SLOW MOVING HGV [38t] - EN 124 CLASS B125 SLOW MOVING
GLV [10t] - EN 124 CLASS B125 SLOW MOVING PRIVATE CARS - EN124 CLASS B125.

INTERNAL - JONES OF OSWESTRY - SUPRASTEEL DOUBLE SEALED WITH NEOPRENE GASKET AND COVER GREASE OR SIMILAR APPROVED.

REFER TO ARCHITECTS DRAWINGS FOR DETAILS OF ANY MANHOLE COVERS WHICH REQUIRE INSET PANELS.

Rev.	Amendment	Date	By	Chkd
P01	FIRST ISSUE.	21.03.24	DB	NB

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MANCHESTER COMMUNICATION ACADEMY, SCIENCE BLOCK

ARCH/CLIENT
LANCASTER MALONEY MARTIN LTD.

Title
PROPOSED DRAINAGE GA

WML Job No.	Drawn	Checked	Date	Scale
11258	DB	JH	MARCH 24	1:100 @ A0

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11258	WML	SC	XX	DR	C	1001	P01