



- GENERAL NOTES:**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
 - ALL ADOPTABLE DRAINAGE WORKS INCLUDING WORKS TO EXISTING PUBLIC SEWERS TO BE UNDERTAKEN IN ACCORDANCE WITH 'SEWERS FOR ADOPTION 7th EDITION' AND 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION' BS EN 752:2017 DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS AND THE BUILDING REGULATIONS APPROVED DOCUMENT 'H'.
 - ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION' BS EN 752:2017 DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS AND THE BUILDING REGULATIONS APPROVED DOCUMENT 'H'.
 - DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
 - DESIGN BASED ON TOPOGRAPHICAL SURVEY AND INFORMATION AVAILABLE AT THE TIME OF THE DESIGN.
 - OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.
 - ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
 - COVER LEVELS, GULLY POSITIONS, AND BUILDINGS LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/LANDSCAPE ARCHITECT. CONTRACTOR TO ALLOW FOR ADJUSTMENT TO SUIT AGREED POSITIONS AND FINISHED LEVELS, AND CONFIRM ALL COVER LEVELS ON SITE.
 - ALL BELOW SLAB DRAINAGE CONNECTIONS SHOWN TO THE PENETRATION POSITIONS ARE INDICATIVE ONLY. REFER TO DIMENSIONED LOCATIONS AND DIMENSIONS ON ARCHITECT'S GROUND FLOOR SETTING OUT PLANS.
 - ALL UNDERGROUND FOUL DRAINAGE SHOULD BE SUITABLY VENTED AT OR NEAR TO THE HEAD OF RUNS.
 - ALL ACCESS FITTINGS, STACKS, RWPS AND GULLIES TO BE ROADABLE. ALL TO HAVE LOW LEVEL RODDING ACCESS PLATES UNLESS AN ALTERNATIVE MEANS OF ACCESS IS AGREED. ACCESS POINT TO BE ABOVE ANY GROUND FLOOR CONNECTED APPLIANCE SPILL LEVEL.
 - LARGE ACCESS FITTING REQUIRED ABOVE GROUND WHERE GREATER THAN 12M UP TO 22M TO A JUNCTION. SMALL ACCESS FITTING REQUIRED UP TO 12M TO A JUNCTION.
 - ALL GULLY AND CHANNEL DRAIN OUTLETS AND TERMINATION POINTS TO BE TRAPPED AND ROADABLE. INTERNAL GULLIES AND CHANNEL DRAINS TO BE SPECIFIED BY OTHERS.
 - WHERE NO WC'S ARE CONNECTED UPSTREAM, UNDERSLAB FW DRAINAGE TO BE LAID AT 140 MIN. AFTER THE CONNECTION OF AT LEAST 10 WC. A MIN. FALL OF 1:80 APPLIES.
 - ALL CONNECTIONS FROM POP-UPS TO BE LAID AT A CONSTANT GRADIENT TO JUNCTION/INSPECTION CHAMBER/ MANHOLE UNLESS NOTED OTHERWISE. ANY ISSUES RELATING TO CLASHES WITH FOUNDATIONS ARE TO BE FORWARDED TO THE ENGINEER, ALLOWING SUFFICIENT TIME FOR AN ALTERNATIVE SOLUTION TO BE PROPOSED.
 - INVERT LEVELS AT MANHOLES/INSPECTION CHAMBERS TO BE USED TO SET OUT PIPEWORK. PIPE GRADIENTS ARE SHOWN INDICATIVELY ONLY.
 - ALL PIPE DIAMETERS GIVEN ARE NOMINAL INTERNAL PIPE.
 - ALL SEWERS, UNLESS AGREED OTHERWISE STATED, SHALL BE:
 - 100mm to 300mm DIA TO BE VITRIFIED CLAY.
 - 375mm DIA AND GREATER TO BE CLASS 120 CONCRETE PIPES.
 - AS AN ALTERNATIVE THE CONTRACTOR MAY USE AN APPROVED UNPLASTICISED POLYVINYL CHLORIDE (PVCU) WITH APPROVAL FROM THE ENGINEER.
 - SEWER PIPES TO BE LAID IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS.
 - THE FIRST PIPE OUT OF MANHOLES TO BE AS SHORT AS PRACTICABLE SO AS TO PROVIDE A FLEXIBLE JOINT AS CLOSE AS POSSIBLE TO THE OUTSIDE FACE OF THE CONCRETE SURROUND AND CONNECTED TO A LENGTH OF ROCKER PIPE.
 - ALL NEW CONNECTIONS INTO EXISTING MANHOLES (OR INTO EXISTING SEWERS) TO BE SOFFITS LEVEL UNLESS OTHERWISE NOTED.
 - WHERE DRAINAGE PIPES ARE LESS THAN 300mm BELOW THE UNDERSIDE OF THE GROUND FLOOR SLAB, CONCRETE ENCASEMENT IS REQUIRED (CLASS 2). COMPRESSIBLE JOINTS ARE TO BE PROVIDED AT EVERY PIPE JOINT WITHIN THE CONCRETE.
 - WHERE PIPES ARE MORE THAN 300mm BELOW THE UNDERSIDE OF THE SLAB, CLASS 5 BEDDING IS ACCEPTABLE.
 - SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED TO PROVE THAT SUCH PRECAUTIONS ARE NOT REQUIRED.
 - WHERE FOUL SEWERS RUN ABOVE SURFACE SEWERS, CONCRETE PROTECTION MAY BE REQUIRED AT CROSSEOVERS TO PREVENT ANY POTENTIAL CONTAMINATION.
 - ALL CONNECTIONS PASSING THROUGH BASES OR EDGE BEAMS TO BE IN SEALED SLEEVES. ALTERNATIVELY CONNECTIONS MAY BE CAST-IN WITH FLEXIBLE JOINTS NOT GREATER THAN 150MM FROM FACE OF CONCRETE.
 - ALL MANHOLE COVERS IN BLOCKSLAB AND EXTERNAL PAVING AREAS TO HAVE RECESSED COVERS OF THE APPROPRIATE GRADE TO ACCEPT ARCHITECT'S PAVING PROPOSAL.
 - UNLESS NOTED OTHERWISE IN THE MANHOLE SCHEDULE, ALL MANHOLE, GULLY AND CHANNEL COVERS (IRONWORK) SHOULD BE THE FOLLOWING SPECIFICATION:
 - B125 LOAD CLASS IN PEDESTRIAN AREAS.
 - D400 LOAD CLASS IN VEHICULAR AREAS.
 - ALL PROPRIETARY PRODUCTS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS, INSTRUCTIONS AND RECOMMENDATIONS.

- KEY:**
- EXISTING PUBLIC SURFACE WATER PIPE
 - EXISTING PUBLIC SURFACE WATER MANHOLES
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 - EXISTING PRIVATE SURFACE WATER MANHOLES
 - EXISTING PRIVATE FOUL WATER PIPE
 - EXISTING PRIVATE FOUL WATER MANHOLES
 - PROPOSED SURFACE WATER PIPE 100mmØ UNLESS STATED
 - EXISTING SURFACE WATER PIPES WITHIN THE NEW FOOTPRINT OR LESS THAN 600mm COVER ARE TO BE REMOVED. ALL OTHERS CAN BE CAPPED. MANHOLES AND GULLIES NEED TO BE REMOVED TO AT LEAST 600mm BELOW THE FINAL LEVEL AND BACKFILLED
 - PROPOSED SURFACE WATER INSPECTION CHAMBER/MANHOLE
 - PROPOSED RAINWATER DOWNPIPE
 - PROPOSED RODDING EYE
 - PROPOSED GULLY
 - ACO M100PPD 0100 CHANNEL DRAIN WITH C250 BRICKSLOT COVER WITH SUMP OUTLET DETAILS
 - PROPOSED FOUL WATER PIPE 100mmØ UNLESS STATED
 - PROPOSED FOUL WATER INSPECTION CHAMBER
 - PROPOSED SOIL VENT PIPE
 - PROPOSED STUB STACK
 - PROPOSED BACK INLET GULLY
 - EXISTING FOUL WATER PIPES WITHIN THE NEW FOOTPRINT OR LESS THAN 600mm COVER ARE TO BE REMOVED. ALL OTHERS CAN BE CAPPED. MANHOLES AND GULLIES NEED TO BE REMOVED TO AT LEAST 600mm BELOW THE FINAL LEVEL AND BACKFILLED
 - PROPOSED DIVERTED SURFACE WATER PIPE
 - PROPOSED SURFACE WATER INSPECTION CHAMBER
 - PROPOSED DIVERTED FOUL WATER PIPE
 - PROPOSED FOUL WATER INSPECTION CHAMBER
 - FOUNDATIONS

SURFACE WATER DRAINAGE STRATEGY

FOR FULL DETAIL AND CALCULATIONS REFER TO CCL REPORT 1/19957/REP/001.

THE SITE IS CURRENTLY OCCUPIED BY A SCHOOL PREMISES WHICH IS PROPOSED FOR ALTERATIONS. THESE INCLUDE:

- NEW CLASSROOM BLOCK
- EXTENSION TO ASSEMBLY HALL AND STORE
- CONSTRUCTION OF MULTI USE GAMES AREA (MUGA) AND PLAYGROUND
- ADDITION OF CYCLE PARKING

KEY POINTS OF THE DRAINAGE STRATEGY ARE AS FOLLOWS:

- THE EXISTING SITE HAS AN IMPERMEABLE POSITIVELY DRAINED AREA OF 5505m². THE IS MORE IMPERMEABLE AREA BUT THIS FIGURE REPRESENTS THAT WHICH IS UNAMBIGUOUSLY ENTERING THE EXISTING SITE DRAINAGE SYSTEM.
- THE PROPOSED SITE INCLUSIVE OF THE MUGA HAS A POSITIVELY DRAINED AREA 7167m²
- THE RUN OFF RATE LEAVING THE SITE IS PROPOSED TO BE CONTROLLED BY MEANS OF A HYDROBRAKE AND THE RESULTING COLLECTED RUNOFF STORED IN AN UNDERGROUND STORAGE TANK AND RELEASED AT A LIMITED RATE.
- THE PERMITTED RUN OFF RATE LEAVING THE SITE HAS BEEN CALCULATED AS 54 L/SEC BASED ON 140 L/SHA, ON THE CURRENTLY DRAINED AREA OF 5505m² AND A BETTERMENT OF 30%. THIS LIMIT IS APPLIED UP TO AND INCLUDING THE 100 YEAR + 40% CLIMATE CHANGE STORM CONDITION.
- 170m² OF ONSITE ATTENUATION STORAGE IS PROVIDED TO ACHIEVE THE REDUCTION IN OFF SITE FLOW.

Rev	Date	Description	By	Check	App.
C1	26.01.24	CONSTRUCTION ISSUE	AA	CD	CD
T5	08.02.22	UPDATED FOR PLANNING	CD	PF	PF
T4	21.06.17	TENDER ISSUE	ANC	PF	PF
T3	15.06.17	TENDER ISSUE	ANC	PF	PF
T2	01.03.17	TENDER ISSUE	ANC	PF	PF
T1	27.02.17	TENDER ISSUE	RB	PF	PF
P1	21.02.17	PRELIMINARY ISSUE	RB	PF	PF

Client: AHR BUILDING CONSULTANCY LTD

Project: BARLEY PRIMARY SCHOOL HILL TOP BARLEY NORTH YORKSHIRE

Office: MANCHESTER

Discipline: CIVILS

Title: PROPOSED BELOW GROUND DRAINAGE PLAN GENERAL ARRANGEMENT

Scale at A1: 1:200

Status: PRELIMINARY

MANHOLE / CHAMBER SCHEDULE								
REF	DESCRIPTION	INVERT LEVEL	COVER LEVEL	SILT TRAP	NOMINAL SIZE	COVER CLASS	CONCRETE SURROUND	COMMENTS
MHFD1	POLYPROPYLENE INSPECTION CHAMBER	3.850	4.730	-	450 Ø	A15	-	
MHFD2	POLYPROPYLENE INSPECTION CHAMBER	3.860	4.720	-	450 Ø	A15	-	REPLACING EXISTING MANHOLE BUT WITH PIPE LEVEL LOWERED. ALL CONNECTIONS TO BE REINSTATED.
MHSW2	POLYPROPYLENE INSPECTION CHAMBER	4.420	3.212	-	450 Ø	D400	YES	BUILT ON EXISTING LINE
MHSW3	POLYPROPYLENE INSPECTION CHAMBER	2.680	4.850	-	450 Ø	A15	-	BUILT ON EXISTING LINE
MHSW4	POLYPROPYLENE INSPECTION CHAMBER	3.601	4.760	-	450 Ø	A15	-	BUILT ON EXISTING LINE
MHF2	POLYPROPYLENE INSPECTION CHAMBER	4.000	4.850	-	450 Ø	A15	-	
MHF6	POLYPROPYLENE INSPECTION CHAMBER	4.100	4.700	-	300 Ø	A15	-	
MHSD1	PRECAST CONCRETE CHAMBER	2.574	4.680	-	1200 Ø	B125	YES	
MHSD2	PRECAST CONCRETE CHAMBER	2.378	4.238	-	2100 Ø	D400	YES	HYDROBRAKE - DESIGN HEAD = 1.09m DESIGN FLOW = 54l/s
MHSD3	PRECAST CONCRETE CHAMBER	2.489	3.820	-	1500 Ø	D400	YES	
MHSD4	POLYPROPYLENE INSPECTION CHAMBER	2.610	4.080	-	600 Ø	B125	YES	RECESSED CHAMBER LID TO BE USED WITH INFILL SURFACE TO MATCH MUGA FINISH
MHSW5	POLYPROPYLENE SILT TRAP CHAMBER	2.630	4.030	YES	600Ø-CP	D400	YES	RECESSED CHAMBER LID TO BE USED WITH INFILL SURFACE TO MATCH MUGA FINISH
MHSW6	POLYPROPYLENE SILT TRAP CHAMBER	2.600	3.700	YES	600Ø-CP	D400	YES	FITTED WITH NON RETURN MECHANISM.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION BOX

Construction Risks

- The contractor shall obtain the latest plans for all services prior to commencing works on site.
- All excavations shall be undertaken in accordance with best practice. Particularly in regard to tracing unrecorded services, excavation support and working adjacent to existing foundations.

Maintenance/cleaning risks

- Occasional maintenance and cleaning will be required for gullies and chambers. This should be undertaken by competent personnel.
- The interceptor will require regular cleaning out. An appropriate provider should be appointed to undertake this task and dispose of the waste responsibly.

Demolition/adaptation risks

- Any alterations should be under the advice of the competent drainage engineer.

In addition to the hazards / risks normally associated with the type of work detailed on this drawing - the contractor is to take note of the above & also the hazards identified in the risk assessment document. It is assumed that all works detailed on this drawing will be performed by a competent contractor working, where appropriate, to an approved method statement

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Originator	Job Number	Discipline	Building/Zone
CCL	1/19957	C	BAR

Type	Level	Drawing No.	Revision
GA	DRN	400400	C1

* ALL COVERS SHOULD BE SECURED TO PREVENT REMOVE BY THE PUPILS

