

MANHOLE SCHEDULE

REF.	SW01	SW02	SW03	SW04	SW05	SW06	SW07	SW08	SW09	SW10	SW11	SW12	SW13	SW14	SW15
COVER LEVEL	58.820	58.820	58.820	58.820	57.800	57.800	58.480	58.160	57.810	58.380	58.350	58.350	-	-	58.820
OUTLET INVERT LEVEL	55.985	55.950	54.820	54.385	56.100	55.980	55.950	56.825	55.410	57.315	54.708	54.735	-	-	54.300
OUTLET PIPE DIA (mm)	225	225	600	600	150	150	150	150	225	150	600	150	-	-	225
CHAMBER DEPTH (mm)	1205	1205	1880	4155	1400	1540	2500	1335	1900	1065	4242	1655	-	-	2780
CHAMBER DIA (mm)	1200	1200	1800	1800	1200	1200	1200	1200	1200	1200	1800	1800	-	-	1200
MANHOLE TYPE	E	E	R	A	E	B	B	E	E	E	A	B	-	-	B
COVER TYPE	C20	C20	C20	D40	D40	D40	D40	D40	C20	C20	D40	D40	-	-	D40
SETTING-OUT	E 18056.788 N 387125.188	E 18056.819 N 387144.213	E 18056.826 N 387157.796	E 18056.864 N 387159.268	E 18056.911 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	-	-	E 18056.912 N 387159.893

MANHOLE SCHEDULE

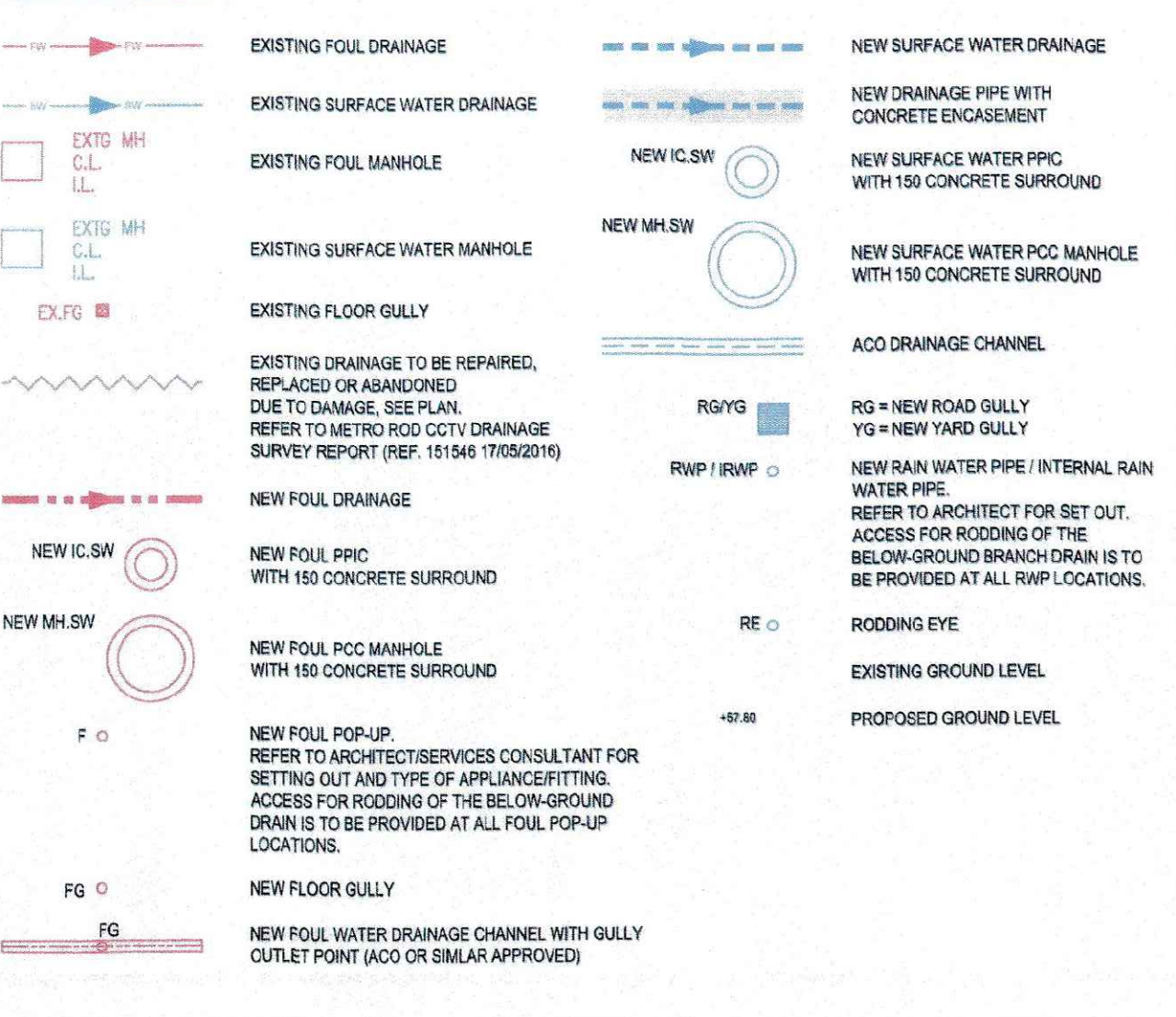
REF.	FW01	FW02	FW03	FW04	FW05	FW06	FW07	FW08	FW09	FW10	FW11	FW12	FW13	FW14	FW15	FW16
COVER LEVEL	58.820	58.780	58.780	58.800	58.800	58.800	58.800	58.800	58.800	58.800	58.800	-	58.810	57.800	-	-
OUTLET INVERT LEVEL	56.200	56.110	56.110	56.100	56.080	56.080	56.080	56.080	56.080	56.080	56.080	-	56.080	57.400	-	-
OUTLET PIPE DIA (mm)	100	100	100	100	100	100	100	100	100	100	100	-	100	100	-	-
CHAMBER DEPTH (mm)	300	670	1885	1885	1885	1885	1885	1885	1885	1885	1885	-	2185	403	-	-
CHAMBER DIA (mm)	600	450	600	1200	450	300	1200	745	1120	1360	1400	-	1200	400	-	-
MANHOLE TYPE	MAC	PPIC	PPIC	E	PPIC	MAC	E	PPIC	PPIC	PPIC	PPIC	-	PPIC	PPIC	-	-
COVER TYPE	C20	C20	C20	C20	C20	C20	C20	C20	C20	C20	C20	-	C20	C20	-	-
SETTING-OUT	E 18056.788 N 387125.188	E 18056.819 N 387144.213	E 18056.826 N 387157.796	E 18056.864 N 387159.268	E 18056.911 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	E 18056.912 N 387159.893	-	E 18056.912 N 387159.893	E 18056.912 N 387159.893	-	-

FOR TYPICAL CONSTRUCTION DETAILS TO MANHOLES REFER TO DRAWING NO. 16008-RZ-XX-DR-C-004
MANHOLE COVER TYPES, LEVELS AND DEPTHS TO BE CONFIRMED FOLLOWING RECEIPT OF LANDSCAPE ARCHITECTS EXTERNAL WORKS GENERAL ARRANGEMENT DRAWING SET. FINAL MANHOLE SITE LEVELS AT THE MANHOLE COVER LOCATIONS

GENERAL NOTES:

PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR IS TO CONFORM WITH THE LANDSCAPE ARCHITECT'S FINAL EXTERNAL WORKS GENERAL ARRANGEMENT, AND ALL DETAIL SETTING OUT IN RELATION TO THIS, IT SHOULD BE NOTED THAT THE LANDSCAPE ARCHITECT WILL REQUIRE SPECIFIC PORTIONS OF ITEMS OF SURFACE DRAINAGE APPARATUS (GULLIES AND CHAMBER DRAINAGE) AND MANHOLE COVERS, TO BE DETAILED COORDINATE WITH THE EXTERNAL FINISHES AND SURFACE LEVELS DESIGN. WHERE THE PARTICULAR COORDINATION IS REQUIRED THE DETAILED SETTING OUT IS TO BE LOCATED ON THE LANDSCAPE ARCHITECT'S EXTERNAL WORKS DESIGN DRAWINGS

DRAINAGE KEY:



DRAINAGE NOTES:

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
- NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING SHALL BE ALLOWED UNLESS PRIOR WRITTEN CONSENT HAS BEEN OBTAINED.
- FOR TYPICAL DRAINAGE DETAILS REFER TO DRAWING 16008-RZ-XX-DR-C-004.
- ALL WORK TO COMPLY WITH THE RELEVANT CLAUSES OF BS EN 1836: THE BUILDING DRAINAGE, THE SEWERS FOR ADDITIONAL CURRENT EDITION & PART 1 OF THE BUILDING REGULATIONS.
- PRIOR TO COMMENCEMENT OF THE WORKS THE CONTRACTOR SHALL:
 - CONFIRM THE LOCATION AND LEVEL OF THE PROPOSED DRAINAGE OUTFALLS AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
 - CARRY OUT AN INTERNAL SURVEY OF THE DRAINAGE CHAMBERS AND PROVIDE DETAILED DIMENSIONED SKETCHES OF EACH FOR THE ENGINEER'S CONSIDERATION.
- ALL PIPES SITUATED INTO THE MANHOLE INVERTS SHALL BE INSTALLED WITH SPIGOTS LEVEL UNLESS SHOWN OTHERWISE.
- CONNECTORS TO FUL AND SURFACE WATER TERMINAL FITTINGS SHALL BE IN 100mm NOMINAL BORE UNL.D.
- ALL MANHOLES AND CONNECTIONS PASSING THROUGH WALLS TO BE FITTED WITH FLOOR PIPES.
- WHERE PREPARED THROUGH WALLS, REINFORCED CONCRETE LINTELS TO BE PROVIDED ABOVE PIPE TO FULL WIDTH OF WALL PROVIDING MIN. 50mm CLEARANCE ALL ROUND. MIN. BEARING UNITS TO BE 150mm. SEAL WITH RUBBER LIP AND SEAL TO THE SIDE AND INSULATED WITH COMPRESSION SEALANT.
- COVER UNLESS SHOWN APPROXIMATELY AND SHALL BE ADJUSTED ON SITE BY THE CONTRACTOR TO SUIT THE FINAL LEVELS. THE CONTRACTOR SHALL PROVIDE WRITTEN CONFIRMATION OF THE FINISHED COVER AND INVERT LEVELS OF ALL MANHOLES.
- THE CONTRACTOR SHALL CONTROL, ACCURATELY, THE USE AND LAY OF PIPE LAYERS BY USE OF AN OPTICAL LAYER.
- THE CONTRACTOR SHALL PROTECT THE PERMANENT FROM TEMPORARY CONSTRUCTION LOADS WHICH MAY BE IN EXCESS OF THE SERVICE LOADS.
- PIPEWORK AND PIPE FITTINGS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS EXCEPT WHERE NOTED OTHERWISE:
 - CLAYWARE PIPE AND FITTINGS TO BS EN 285.
 - NEWCASTLE SUPERFLO, ON BEDDING CLASS AS STATED ON THE DETAILS DRAWING.
 - CONCRETE PIPE AND FITTINGS TO BS EN 12050.
 - PLASTIC PIPE AND FITTINGS:
 - POLYPIPE RODDING 100, 160mm DIA.
 - POLYPIPE POLYSEWER 150, 200mm DIA. TO BS EN 14018.
 - POLYPIPE POLYSEWER 150, 200mm DIA. TO BS EN 14018.
 - PIPE WATER:
 - POLYPIPE POLYSEWER 150, 200mm DIA. TO BS EN 14018.
 - POLYPIPE POLYSEWER 150, 200mm DIA. TO BS EN 14018.
- PIPEWORK WITH LESS THAN 100mm COVERS FROM FINISHED LEVEL, IN AREAS OF VERTICAL LOADING, SHALL BE PROTECTED WITH A 150mm GEND CONCRETE SURROUND. FLEXIBLE JOINTS SHALL BE MAINTAINED AT EACH PIPE JOINT BY THE USE OF COMPRESSIVE SHEET OUT TO FIT THE PIPE PROFILES.
- TRENCHES IN AREAS REQUIRING VERTICAL LOADING SHALL BE BACKFILLED WITH 100mm GRANULAR FILL.
- TRENCHES WITHIN 100mm OF FINISHED WALLS AND/OR LEVELS OF FOOTING SHOULD BE FILLED WITH CONCRETE AT LEAST TO THE LEVEL OF THE UNDERBASE OF THE FOUNDATION. WHERE THE DISTANCE IS MORE THAN 100mm FROM THE WALL, THE CONCRETE FILL SHOULD BE TO A LEVEL BELOW THE UNDERBASE OF THE FOUNDATION EQUAL TO THE DISTANCE FROM THE WALL TO THE REVERSE OF THE TRENCH LESS 100mm.
- SOFT SPOTS IN THE TRENCH FORMATION SHALL BE REMOVED AND REPLACED WITH GRANULAR BEDDING UNLESS INSTRUCTED OTHERWISE.
- UNLESS NOTED OTHERWISE MANHOLE COVERS, PPC COVERS, CHANNEL GRATES AND ROAD GRATES SHALL BE DUCTILE IRON TO BS EN 24 BLACK COATED AS FOLLOWS:
 - MANHOLE COVERS: CLASS D400.
 - ROAD GRATES: CLASS D150.
 - CHANNEL GRATES: CLASS D150.
- REFER TO LANDSCAPE ARCHITECTS FOR EXTERNAL MANHOLE COVERS TO BE RECESSED TO RECEIVE FINISHES.
- MANHOLE COVERS TO BE DOOR BEHALDERS (KIDNEY DOWN) LOCAL COVERS AND SHALL HAVE A HATCH TO INDICATE FOUL OR STORM WATER.
- THE CONTRACTOR SHALL REGULATE EXISTING COVERS AND FRAMES TO THE PROPOSED LEVELS INDICATED.
- TWO SETS OF MANHOLE UTILITY VENTS SHALL BE HANDED OVER TO THE CLIENT ON COMPLETION OF THE WORKS.
- LATERAL CONNECTIONS BETWEEN MANHOLE RUNS SHALL BE FORMED BY USING PURPOSE MADE JUNCTION FITTINGS. BEND FITTINGS SHALL BE PROVIDED WHERE APPROPRIATE TO DIRECT THE FLOW INTO MAIN RUNS.
- THE CONTRACTOR SHALL SERVE ALL STATUTORY NOTICES AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY AND STATUTORY INSTRUMENTS FOR WORKS IN EXISTING PUBLIC HIGHWAYS AND SERVICES.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LIAISE WITH THE HIGHWAY AND SEWERAGE AUTHORITIES FOR APPROVALS, INTERNAL INSPECTION, BACKFILLING AND FINAL INSPECTIONS OF THEIR WORK.
- THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL EXISTING STATUTORY UNDERGROUNDS APPARATUS AND SERVICE CONNECTIONS AHEAD OF AND DURING THE WORKS BY TALKING FIRST TO DRAINAGE ENGINEERING.
- AT THE CONCLUSION OF THE WORKS THE CONTRACTOR SHALL PROVIDE A MARKED UP DRAWING TO RECORD ANY AS BUILT VARIATIONS NOT SHOWN ON THE DRAWINGS.

ITEM	DESCRIPTION	QTY	UNIT	PRICE
P10	PAUL CONSTRUCTION WORK	1.00	£	15.00
P11	PAUL CONSTRUCTION WORK	1.00	£	15.00
P12	PAUL CONSTRUCTION WORK	1.00	£	15.00
P13	PAUL CONSTRUCTION WORK	1.00	£	15.00
P14	PAUL CONSTRUCTION WORK	1.00	£	15.00
P15	PAUL CONSTRUCTION WORK	1.00	£	15.00
P16	PAUL CONSTRUCTION WORK	1.00	£	15.00
P17	PAUL CONSTRUCTION WORK	1.00	£	15.00
P18	PAUL CONSTRUCTION WORK	1.00	£	15.00
P19	PAUL CONSTRUCTION WORK	1.00	£	15.00
P20	PAUL CONSTRUCTION WORK	1.00	£	15.00
P21	PAUL CONSTRUCTION WORK	1.00	£	15.00
P22	PAUL CONSTRUCTION WORK	1.00	£	15.00
P23	PAUL CONSTRUCTION WORK	1.00	£	15.00
P24	PAUL CONSTRUCTION WORK	1.00	£	15.00
P25	PAUL CONSTRUCTION WORK	1.00	£	15.00
P26	PAUL CONSTRUCTION WORK	1.00	£	15.00
P27	PAUL CONSTRUCTION WORK	1.00	£	15.00
P28	PAUL CONSTRUCTION WORK	1.00	£	15.00
P29	PAUL CONSTRUCTION WORK	1.00	£	15.00
P30	PAUL CONSTRUCTION WORK	1.00	£	15.00
P31	PAUL CONSTRUCTION WORK	1.00	£	15.00
P32	PAUL CONSTRUCTION WORK	1.00	£	15.00
P33	PAUL CONSTRUCTION WORK	1.00	£	15.00
P34	PAUL CONSTRUCTION WORK	1.00	£	15.00
P35	PAUL CONSTRUCTION WORK	1.00	£	15.00
P36	PAUL CONSTRUCTION WORK	1.00	£	15.00
P37	PAUL CONSTRUCTION WORK	1.00	£	15.00
P38	PAUL CONSTRUCTION WORK	1.00	£	15.00
P39	PAUL CONSTRUCTION WORK	1.00	£	15.00
P40	PAUL CONSTRUCTION WORK	1.00	£	15.00
P41	PAUL CONSTRUCTION WORK	1.00	£	15.00
P42	PAUL CONSTRUCTION WORK	1.00	£	15.00
P43	PAUL CONSTRUCTION WORK	1.00	£	15.00
P44	PAUL CONSTRUCTION WORK	1.00	£	15.00
P45	PAUL CONSTRUCTION WORK	1.00	£	15.00
P46	PAUL CONSTRUCTION WORK	1.00	£	15.00
P47	PAUL CONSTRUCTION WORK	1.00	£	15.00
P48	PAUL CONSTRUCTION WORK	1.00	£	15.00
P49	PAUL CONSTRUCTION WORK	1.00	£	15.00
P50	PAUL CONSTRUCTION WORK	1.00	£	15.00

FOUL WATER DRAINAGE TO THE NEW SCHOOL SCIENCE BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH SECTION H1, (2) OF THE BUILDING REGULATIONS 2010 APPROVED DOCUMENT H, DRAINAGE AND WASTE DISPOSAL, 2015 EDITION.

- (2) In this Part 'foul water' means waste water which comprises or includes:
- waste from a sanitary convenience, bidet, or appliance used for washing receptacles for foul waste; or
 - water which has been used for food preparation, cooking or washing.

SECTION 111 OF THE WATER INDUSTRY ACT 1991, AS AMENDED, PROHIBITS THE DISPOSAL OF CHEMICALS TO THE PUBLIC SEWER.

CHEMICAL WASTE ORIGINATING FROM THE NEW SCHOOL SCIENCE BUILDING TO THEREFORE BE DISPOSED OF BY OTHER SUITABLE METHOD IN ACCORDANCE WITH CURRENT LEGISLATION AND LOCAL AUTHORITY WASTE DISPOSAL COLLECTION PROCEDURES.

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Drawing Title: Proposed Drainage Layout

Scale: 1:250

Original Size: A3

Revision: 4

Stage: 4

Date of Issue: 27.06.18

Author: NWF

Checker: AJ

Approved: MD

Sheet: S4

Project: 16008-RZ-XX-DR-C-003

Revision: P15