

FOUL WATER MANHOLE SCHEDULE

Manhole Reference	Cover Level	Depth to Soft	Manhole Size	Manhole Type	Cover Grade	Pipes Out				Pipes In		Remarks
						Invert Level	Pipe Size	Invert Level	Pipe Size	Invert Level	Pipe Size	
FWMH01	115.000 m	1000 mm	600 mm	3	D400	113.800 m	150 mm	113.800 m	150 mm			PPIC
FWMH02	115.000 m	1150 mm	600 mm	3	D400	113.700 m	150 mm	113.700 m	150 mm			PPIC
FWMH03	114.900 m	4360 mm	1200 mm	1	D400	110.900 m	150 mm	113.125 m	150 mm			BACKDROPS
FWMH04	111.300 m	1650 mm	600 mm	3	D400	110.100 m	150 mm	110.100 m	150 mm			PPIC
FWMH05	111.400 m	1350 mm	1200 mm	2	D400	109.900 m	150 mm	109.900 m	150 mm			PPIC
FWMH06	111.350 m	4655 mm	1200 mm	1	D400	106.655 m	150 mm	106.655 m	150 mm			BACKDROPS
FWMH07	111.400 m	1145 mm	600 mm	3	D400	110.105 m	150 mm	110.105 m	150 mm			PPIC
FWMH08	111.400 m	1270 mm	600 mm	3	D400	109.980 m	150 mm	109.980 m	150 mm			PPIC
FWMH09	111.350 m	1455 mm	600 mm	3	D400	109.745 m	150 mm	109.745 m	150 mm			PPIC
FWMH10	111.400 m	2080 mm	1200 mm	2	D400	109.170 m	150 mm	109.170 m	150 mm			PPIC
FWMH11	111.300 m	2285 mm	1200 mm	2	D400	108.855 m	150 mm	108.855 m	150 mm			PPIC
FWMH12	104.300 m	2804 mm	1200 mm	2	D400	101.346 m	150 mm	101.346 m	150 mm			BACKDROPS
FWMH13	111.400 m	1110 mm	600 mm	3	D400	110.140 m	150 mm	110.140 m	150 mm			PPIC
FWMH14	102.300 m	2480 mm	1200 mm	2	D400	99.670 m	150 mm	99.670 m	150 mm			BACKDROPS
FWMH15	115.000 m	4600 mm	1200 mm	1	D400	110.200 m	150 mm	110.200 m	150 mm			BACKDROPS
FWMH16	111.300 m	2265 mm	1200 mm	2	D400	108.855 m	150 mm	108.855 m	150 mm			PPIC
FWMH17	108.700 m	3745 mm	1200 mm	2	D400	104.855 m	150 mm	104.855 m	150 mm			BACKDROPS
FWMH18	105.725 m	2375 mm	1200 mm	2	D400	103.200 m	150 mm	103.200 m	150 mm			BACKDROPS
EXG. FWMH	100.655 m	1149 mm	EXG.	EXG.	EXG.	99.356 m	150 mm	99.356 m	150 mm			EXG INFO FROM R80

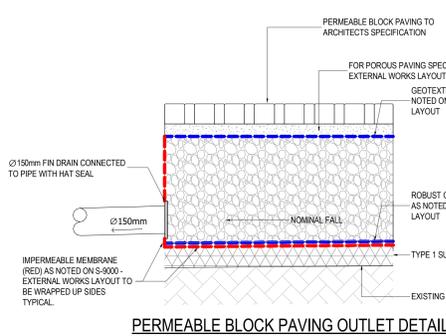
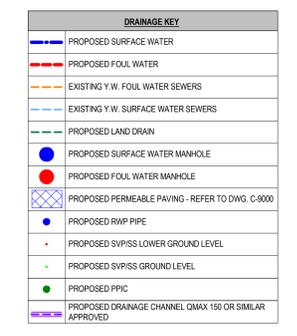
SURFACE WATER MANHOLE SCHEDULE

Manhole Reference	Cover Level	Depth to Soft	Manhole Size	Manhole Type	Cover Grade	Pipes Out		Pipes In		Remarks
						Invert Level	Pipe Size	Invert Level	Pipe Size	
SWM02	115.400 m	975 mm	1200 mm	2	D400	114.200 m	225 mm	114.200 m	225 mm	
SWM03	115.000 m	975 mm	1200 mm	2	D400	113.800 m	225 mm	113.800 m	225 mm	
SWM04	116.400 m	975 mm	1200 mm	2	D400	115.200 m	225 mm	115.200 m	225 mm	
SWM05	115.500 m	975 mm	1200 mm	2	D400	114.300 m	225 mm	114.075 m	225 mm	
SWM06	114.980 m	1055 mm	1200 mm	2	D400	113.700 m	225 mm	113.700 m	225 mm	
SWM07	115.000 m	4975 mm	1200 mm	1	D400	110.125 m	300 mm	110.200 m	225 mm	
SWM08	111.380 m	975 mm	1200 mm	2	D400	110.025 m	300 mm	110.025 m	300 mm	
SWM09	111.350 m	1100 mm	1200 mm	2	D400	109.950 m	300 mm	109.950 m	300 mm	
SWM10	111.400 m	1350 mm	1200 mm	2	D400	109.750 m	300 mm	109.750 m	300 mm	
SWM11	111.380 m	1425 mm	1200 mm	2	D400	109.655 m	300 mm	109.655 m	300 mm	
SWM12	115.200 m	1050 mm	1200 mm	2	D400	114.000 m	150 mm	114.000 m	150 mm	
SWM13	115.000 m	975 mm	1200 mm	2	D400	113.800 m	225 mm	113.875 m	150 mm	
SWM14	115.100 m	4375 mm	1200 mm	1	D400	110.500 m	225 mm	110.500 m	225 mm	BACKDROPS
SWM15	111.400 m	975 mm	1200 mm	2	D400	110.200 m	225 mm	110.200 m	225 mm	
SWM16	111.400 m	1075 mm	1200 mm	2	D400	110.100 m	225 mm	110.100 m	225 mm	
SWM17	111.350 m	4470 mm	1200 mm	1	D400	106.655 m	225 mm	106.655 m	225 mm	
SWM18	108.700 m	1870 mm	1200 mm	2	D400	106.530 m	300 mm	106.530 m	300 mm	
SWM19	104.000 m	1730 mm	1200 mm	2	D400	101.970 m	300 mm	101.970 m	300 mm	
SWM20	101.400 m	1915 mm	1200 mm	2	D400	99.335 m	150 mm	99.185 m	300 mm	
EXG. SWMH	100.745 m	1358 mm	EXG.	EXG.	EXG.	99.088 m	EXG. 225 mm	99.088 m	300 mm	EXG. 225 mm

NOTE - EXTERNAL LEVELS TO BE REVIEWED BY ARCHITECTS TO ENSURE NOMINAL FALL AWAY FROM BUILDING, PARTICULARLY AT LEVEL ENTRY LOCATIONS. ARCHITECTS TO PROVIDE LOCATIONS WHERE THIS IS NOT ACHIEVABLE AND WHERE SLOT DRAINS ARE REQUIRED LOCAL TO DOOR OPENINGS, IF ANY.

NOTE - ANY DRAIN RUNS THAT PASS UNDER PROPOSED RETAINING WALL FOOTINGS TO BE ENCASED IN CONCRETE, MINIMUM 1M EITHER SIDE OF FOUNDATION. REFER TO DETAIL PIPE DETAIL UNDER SLAB/FOUNDATION ON DRAWING D-5203

NOTE - ALL INTERNAL PIPES TO BE MIN. 150 UNO AND BE RODABLE. BACKDROPS INTO MANHOLES AS REQUIRED.



DESIGNER RISK INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

CONSTRUCTION:

MAINTENANCE/CLEANING:

DECOMMISSIONING/DEMOLITION:

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

- ### DRAINAGE NOTES
- ALL DRAINAGE MATERIALS & SPECIFICATIONS TO BE IN ACCORDANCE WITH SEWERAGE SECTOR GUIDANCE APPENDIX C DESIGN AND CONSTRUCTION GUIDANCE.
 - REFER TO MAIN CONSULTING ENGINEERS DRAWING NO'S C-2021 & C-2022 FOR ALL STANDARD DRAINAGE DETAILS.
 - THE LOCATION, SIZE AND DEPTH OF ALL EXISTING DRAINAGE SEWERS AND SERVICES SHALL BE ESTABLISHED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS ON SITE. ANY DISCREPANCIES FROM THE INFORMATION INDICATED ON THESE DRAWINGS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 - ALL PIPES SHALL BE Laid WITH SOFTS LEVEL AND ALL MANHOLE INSPECTION CHAMBER LEVELS SHOWN ARE FOR THE OUT GOING PIPE. UNLESS OTHERWISE INDICATED ON THE DRAWING.
 - ALL VITRIFIED CLAY PIPES AND FITTINGS TO BE IN ACCORDANCE WITH BS EN285 & BS 65.
 - ALL CIRCULAR CONCRETE PIPES IN TRENCHES AND FITTINGS TO BE IN ACCORDANCE WITH BS EN1916 & BS 5911 AND BE STRENGTH CLASS 120.
 - ALL STRUCTURED WALL PLASTIC PIPES AND FITTINGS TO BE IN ACCORDANCE WITH WIS 4-35-01. MAXIMUM LENGTH OF PIPE FOR LAYING IS 3m.
 - PIPES AND FITTINGS ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
 - ALL CONNECTIONS TO GULLIES & DRAINAGE CHANNELS TO BE 150mm DIAMETER UNLESS NOTED OTHERWISE.
 - ALL CONNECTIONS FROM DRAINAGE CHANNELS TO BE TRAPPED AND RODABLE.
 - WHERE THE COVER TO PIPES IS LESS THAN 1200mm IN TRAFFICKED AREAS & 900mm IN OTHER AREAS, THEN CONCRETE PROTECTION IS TO BE PROVIDED. NB UNTIL FINAL SURFACE IS CONSTRUCTED HEAVY TRAFFIC NOT TO BE ALLOWED OVER PIPE TRENCHES WITHOUT SPECIFIC PROTECTION MEASURES IN PLACE.
 - SOFT SPOTS IN THE BOTTOM OF TRENCHES SHALL BE REMOVED AND BACKFILLED WITH TYPE 1 SUB-MATERIAL. PIPE BEDDING MATERIAL OR LEAN MIX CONCRETE.
 - ALL CONCRETE WORK TO BE IN ACCORDANCE WITH MJM CONSULTING ENGINEERS SPEC SECTION E.
 - RELEVANT CONCRETE MIX DESIGN.
- | CONCRETE ELEMENT | DESIGN CLASS | SPEC. CLASS No. |
|------------------|--------------|-----------------|
| PIPE SURROUND | DC-2 | 130B |
| M/S SURROUND | DC-2 | 130B |
17. IF A SIPHONIC ROOF DRAINAGE SYSTEM IS PROPOSED THE SIPHONIC PIPEWORK IS TO BE CONTINUED BELOW GROUND TO THE FIRST EXTERNAL MANHOLE WHICH IS TO BE KEPT TO BREAK THE SIPHONIC ACTION.
 18. ALL DRAINAGE COVERS IN PEDESTRIAN AREAS ARE TO BE FITTED WITH HEEL SAFE LIDS.
 19. ALL PETROL INTERCEPTORS ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND FITTED WITH ALARMS AND VENTS TO LOCATIONS AS AGREED WITH THE CLIENT.
 20. IF A FLOOR OR SUSPENDED SLAB IS PROPOSED ALL INTERNAL DRAINAGE IS TO BE SUSPENDED FROM THE SLAB WITH ROCKER PIPES USED AT THE EDGES OF THE BUILDING.
 21. ALL DOMESTIC FOUL DRAINAGE MUST BE KEPT SEPARATE FROM CONDENSATE DRAINAGE UNTIL OUTSIDE THE BUILDING WITH STEPS TAKEN TO TRAP ANY ODORS.
 22. ALL FOUL RUNS MUST BE VENTED IN ACCORDANCE WITH BUILDING REGULATIONS. VENT LOCATIONS TO BE PROVIDED BY THE ABOVE GROUND DRAINAGE DESIGNER.
 23. REGARDSLESS OF MANHOLE POSITIONS SHOWN ON THIS DRAWING, THE ACCESS LIDS ARE TO BE POSITIONED AWAY FROM MAIN WALK LINES AND BE SQUARE TO KERBS AND OTHER SURFACE FEATURES SUCH AS YARD ASL JOINTS.
 24. ALL TEMPORARY DRAINAGE IS THE RESPONSIBILITY OF THE CONTRACTOR.
 25. THE CONTRACTOR SHALL PROVIDE LAND DRAINAGE AS NECESSARY TO PREVENT RUNOFF FROM LANDSCAPED AREAS WASHING SILT ONTO HANDSTANDINGS AND THIRD PARTY LAND.
 26. THE CONTRACTOR IS RESPONSIBLE FOR SEWER CONNECTION APPROVALS UNLESS NOTED OTHERWISE.
 27. ALL MANHOLE LIDS TO BE PAINTED BLACK IMMEDIATELY PRIOR TO PRACTICAL COMPLETION.
 28. JUST PRIOR TO PRACTICAL COMPLETION OF THE PROJECT THE CONTRACTOR SHALL CLEAN ALL DRAIN RUNS BY JETTING AND REMOVING ALL DEBRIS FROM SITE. NO DEBRIS SHALL BE PERMITTED TO ENTER THE PUBLIC SEWER AND/OR WATERPOURSE SYSTEM. ONCE THE DRAINAGE SYSTEM HAS BEEN FULLY CLEANED OUT A CCTV SURVEY OF THE COMPLETE PIPE NETWORK (INCLUDING ATTENTION TANKS AND CARRIER CHANNELS) SHALL BE CARRIED OUT WITH A COPY BEING SENT TO THE ENGINEER. VISUAL INSPECTIONS (THROUGH CCTV SURVEY) SHALL BE CARRIED OUT BY A QUALIFIED AND APPROVED CONTRACTOR, AND IN ACCORDANCE WITH THE 'ISA/FRA MODEL CONTRACT DOCUMENT FOR SEWER CONDITION INSPECTIONS'. THE AS BUILT INVERT AND COVER LEVELS SHALL BE RECORDED BY THE CONTRACTOR AND PASSED TO THE ENGINEER FOR REVIEW.
 29. ALL SEWERS AND DRAINS ARE TO BE TESTED IN ACCORDANCE WITH SEWERAGE SECTOR GUIDANCE APPENDIX C, SECTION E7.

NO	DATE	DESCRIPTION	BY	CHKD
001	20.11.24	INTERNAL FW DRAINAGE REARRANGED TO AVOID CLASH WITH COLUMN & DRAIN POINT OMITTED AS CLOUSED. LAYOUT UPDATED IN LINE WITH LATEST ARCHITECTS DRAWING. SINK STORE GULLY RELOCATED TO SUIT.	HCG	ADP
002	07.11.24	INTERNAL FW DRAINAGE AMENDED TO AVOID CLASH WITH FLOWERS RELOCATED TO SUIT. LAYOUT UPDATED TO SHOW MEMBRANE.	HCG	ADP
003	22.08.24	WHERE THE COVER TO PIPES IS LESS THAN 1200mm IN TRAFFICKED AREAS & 900mm IN OTHER AREAS, THEN CONCRETE PROTECTION IS TO BE PROVIDED. NB UNTIL FINAL SURFACE IS CONSTRUCTED HEAVY TRAFFIC NOT TO BE ALLOWED OVER PIPE TRENCHES WITHOUT SPECIFIC PROTECTION MEASURES IN PLACE.	HCG	ADP
004	16.08.24	UPDATED AS CLOUSED IN LINE WITH ROBERTSON'S COMMENTS.	HCG	ADP
005	01.08.24	FWMH10 UPDATED ON SCHEDULE TO BE 1200 DIA. DRAINAGE MANHOLE AMENDED TO SUIT REVISED COMMENTS.	HCG	ADP
006	23.07.24	FWMH10 DIAMETER AMENDED ON SCHEDULE FROM 1200 TO 1500 DIA. AS CLOUSED. LAYOUT UPDATED TO SHOW MEMBRANE.	HCG	ADP
007	20.08.24	DRAINAGE CHANNEL RELOCATED TO SUIT AMENDED IN LAYOUT AS CLOUSED.	HCG	ADP
008	12.08.24	FWMH14 AMENDED ON SCHEDULE & BACKDROPS INDICATED ON PLAN. ALL AS CLOUSED.	HCG	ADP
009	16.09.24	EXG. M/S RELOCATED TO SUIT SITE COORDINATES & RUNS ADJUSTED TO SUIT. DRAINAGE MANHOLE AMENDED TO SUIT REVISED COMMENTS. LAYOUT UPDATED TO SHOW MEMBRANE. LAYOUT UPDATED TO SHOW MEMBRANE.	HCG	DK
010	29.07.24	FWMH12 DIAMETER AMENDED ON SCHEDULE FROM 1200 TO 1500 DIA. AS CLOUSED. LAYOUT UPDATED TO SHOW MEMBRANE.	HCG	DK
011	29.07.24	FWMH12 DIAMETER AMENDED ON SCHEDULE FROM 1200 TO 1500 DIA. AS CLOUSED. LAYOUT UPDATED TO SHOW MEMBRANE.	HCG	DK
012	16.01.24	UPDATED IN LINE WITH CONTRACTORS COMMENTS. CANOPY & FAT ROOF RWPS ADDED. GRADIENTS ADDED & SCHEDULE UPDATED AS REQUIRED. ALL AS CLOUSED.	HCG	DK
013	16.01.24	UPDATED AS REQUIRED TO SUIT ARCHITECTS LATEST LAYOUT & CONTRACTORS COMMENTS. MANHOLE RELOCATED AS REQUIRED TO SUIT AND TO COORDINATE WITH LANDSCAPING CONSTRUCTION ISSUE.	HCG	DK
014	29.08.23	ISSUE & INFORMATION.	TW	ADP
015	31.01.23	FIRST ISSUE.	HE	ADP

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Project: **PROPOSED EXTRA CARE DEVELOPMENT, KENMORE DRIVE, CLECKHATON.**

Client: **ROBERTSON CONSTRUCTION**

Drawing Title: **OVERALL SITE DRAINAGE LAYOUT**

HEAPD APD

MHC Ref: **7512** Scale: **As indicated** Sheet No: **AO**

Revision Status: **C16** Suitability Status: **A** Date: **JAN 23**

Suitability Description: **ISSUED FOR CONSTRUCTION**

Drawing Reference: **CLK - MJM - XX - XX - DR - D - 5201**

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