



- DRAINAGE GENERAL:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING OUT ALL DRAINAGE INFRASTRUCTURE TO ENSURE NO CLASHES OCCUR WITH SERVICE DUCTS, CHAMBERS ETC.
 - CARE SHOULD BE TAKEN BY THE CONTRACTOR WHEN HANDLING PIPES, PARTICULARLY WHEN UNLOADING AND STACKING, SO AS TO AVOID DAMAGING THEM.
 - ALL PIPE SEALS AND GASKETS SHOULD BE STORED INDOORS AWAY FROM DIRECT SUNLIGHT.
 - ALL SEWERS TO BE THERMOPLASTIC STRUCTURED WALL SEWER PIPE AND SHALL COMPLY WITH THE RELEVANT PROVISIONS OF WIS 4-35-01. (I.E. POLYSEWER BY POLYPIPE CIVILS OR EQUIVALENT APPROVED)
 - EXCAVATION SHOULD NOT BE CARRIED OUT TOO FAR IN ADVANCE OF PIPE INSTALLATION. ALL RELEVANT HEALTH & SAFETY REQUIREMENTS IN RESPECT OF EXCAVATION SHOULD BE OBSERVED BY THE CONTRACTOR DURING EXCAVATION WORKS.
 - MINIMUM COVER TO PIPES:
 - 1200mm ROADWAYS
 - 900mm OPEN SPACES & FOOTPATHS NOT ADJACENT TO ROADS
 - 600mm GARDENS
 - THE CONTRACTOR SHOULD PLAN HIS WORK FOR CHAMBERS AND MANHOLES SO AS TO MINIMISE AS MUCH AS POSSIBLE WORKING REQUIRED IN CONFINED SPACES.
 - JOINT LUBRICANTS FOR SLIDING JOINTS SHALL HAVE NO DELETERIOUS EFFECT ON EITHER THE JOINT RINGS OR PIPES AND SHALL BE UNAFFECTED BY SEWAGE.
 - ALL ABANDONED SEWER PIPES TO BE FILLED WITH C12/15 CONCRETE. ABANDONED MANHOLES TO BE BROKEN OUT IF POSSIBLE. OTHERWISE THEY SHOULD BE FILLED WITH C12/15 CONCRETE.
 - THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE RELEVANT SERVICE PROVIDERS IN ADVANCE OF ANY PLANNED EXCAVATION WORKS TO VERIFY THE LOCATION, DEPTH AND NATURE OF ANY UNDERGROUND SERVICES.
 - ROCKER PIPES:**
 - ROCKER PIPES SHOULD BE PROVIDED AT ALL LOCATIONS WHERE:
 - A PIPE ENTERS OR LEAVES A MANHOLE, PUMPING STATION OR OTHER RIGID STRUCTURE.
 - A PIPE ENTERS OR LEAVES A CONCRETE ENCASUREMENT.
 - ANY LOCATION AS DIRECTED BY THE ENGINEER.
 - ROCKER PIPE JOINT TO BE LOCATED NO MORE THAN 150mm FROM THE OUTSIDE FACE OF THE STRUCTURE TO WHICH THE PIPEWORK IS SERVING. THE EFFECTIVE LENGTH OF THE ROCKER PIPE SHOULD BE:
 - PIPE DIAMETER 150mm TO 600mm: 0.60m
 - PIPE DIAMETER 600mm TO 750mm: 1.00m
 - PIPE DIAMETER GREATER THAN 750mm: 1.25m
 - ALL ROCKER PIPES ARE TO BE FORMED BY CUTTING AND TRIMMING A LENGTH OF SPIGOT & SOCKET PIPE TO FORM A SPIGOT AT THE CUT END, THEREBY FORMING SPIGOT & SOCKET JOINTS AT BOTH ENDS OF THE ROCKER PIPE.
 - PIPEWORK AND BENCHING TO A SINGLE MANHOLE CHAMBER SHOULD BE COMPLETED AND THE ENGINEER INVITED TO INSPECT SAME BEFORE ALL REMAINING CHAMBERS ARE COMPLETED.
 - ONLY PROPRIETARY CONNECTION PIECES TO BE USED FOR MAKING CONNECTIONS TO SEWERS.
 - WHEN INSTALLING FLEXIBLE PIPES (SINGLE/TWIN WALLED PVC OR SIMILAR) PARTICULAR CARE SHOULD BE TAKEN BY THE CONTRACTOR TO ENSURE THE PIPES ARE WELL BEDDED AND SURROUNDED IN GOOD QUALITY GRANULAR MATERIAL IN ACCORDANCE WITH THE SPECIFICATION.

- THE CONTRACTOR MUST TAKE GREAT CARE WHEN COMPACTING MATERIAL OVER DRAINAGE PIPES SO AS NOT TO DISLodge THEM FROM THEIR CORRECT LINE AND LEVEL.
- TYPE E BEDDING TO BE USED WHERE MINIMUM COVER OR GREATER IS PROVIDED TO FLEXIBLE PIPES.
- FOR PIPES IN ROADWAYS WHERE COVER IS LESS THAN 1200mm BUT GREATER THAN 800mm TYPE G BEDDING TO BE USED.
- FOR PIPES IN ROADWAYS WHERE COVER IS LESS THAN 800mm TYPE X BEDDING TO BE USED.
- FOR PIPES IN OPEN SPACES, FOOTPATHS NOT ADJACENT TO ROADS AND GARDENS WHERE MINIMUM COVER OR GREATER IS NOT ACHIEVED, TYPE G BEDDING TO BE USED.
- ALL MANHOLES TO BE CONSTRUCTED WITH PRECAST CONCRETE RINGS IN ACCORDANCE WITH RELEVANT ENGINEERS DETAILS DRAWING.
- PROPRIETARY CONNECTIONS TO BE USED THROUGHOUT.
- ALL JOINTS TO BE WATERTIGHT TO CL 504 SUB CLAUSE 3 OF THE NRA SPECIFICATION FOR ROADWORKS.
- MANHOLES WITHIN PAVING TO BE D400 AND RECESSED TO RECEIVE PAVIORS.
- MANHOLES IN TARMACADAM/GRASED AREAS TO BE NON ROCK D400 LOCKABLE MANHOLES.
- TRENCHES IN EXISTING SURFACES TO BE SAW CUT.
- IF CONSTRUCTING MANHOLE CHAMBERS USING PRECAST CONCRETE RINGS, THE CONTRACTOR SHOULD ENSURE THAT THE JOINTS IN THE PRECAST CONCRETE RINGS ARE STAGGERED WITH THE JOINTS IN THE CONCRETE SURROUND TO REDUCE THE POSSIBILITY OF GROUND WATER INGRESS.
- WHERE A CONNECTION IS REQUIRED TO AN EXISTING PUBLIC SEWER SYSTEM, THE CONTRACTOR MUST MAKE A FORMAL APPLICATION TO THE LOCAL AUTHORITY TO DO SO.
- A DETAILED METHOD STATEMENT MUST BE SUBMITTED TO THE LOCAL AUTHORITY FOR APPROVAL AT LEAST FOUR WEEKS IN ADVANCE OF THE PLANNED CONSTRUCTION WORKS.
- WHERE NEW DRAINAGE INFRASTRUCTURE IS TO CROSS AN EXISTING ROAD, THE CONTRACTOR IS REQUIRED TO:
 - CONTACT THE RELEVANT AUTHORITIES WELL IN ADVANCE OF THE PLANNED WORKS.
 - MAKE AN APPLICATION AND PAY FOR A ROAD OPENING LICENCE IF APPLICABLE.
 - MAKE GOOD THE EXISTING ROAD TO THE SATISFACTION OF THE ENGINEER & THE RELEVANT AUTHORITIES ON COMPLETION OF THE WORKS.
- THE CONTRACTOR IS ADVISED TO COMPLETE AIR TESTING ON A DAILY BASIS DURING THE COURSE OF THE WORKS TO ENSURE ISOLATION OF ANY FAILED TESTS.
- THE COMPLETE DRAINAGE WORKS SHOULD BE PROTECTED, WHERE NECESSARY, FROM LOADS IMPOSED BY CONSTRUCTION PLANT DURING CONSTRUCTION.
- ON COMPLETION OF THE WORKS, THE CONTRACTOR MUST ENSURE ALL INTERNAL SURFACES OF THE NEW SEWERS ARE THOROUGHLY CLEANED TO REMOVE ALL DELETERIOUS MATERIAL. THIS MATERIAL MUST BE PREVENTED FROM ENTERING THE PUBLIC SEWER SYSTEM.
- A CCTV SURVEY OF THE COMPLETED UNDERGROUND DRAINAGE NETWORK SHOULD BE CARRIED OUT BY THE CONTRACTOR ON COMPLETION OF THE WORKS. IT IS RECOMMENDED THAT THIS EXERCISE IS COMPLETED BEFORE FINAL SURFACE COURSES AND FINISHES ARE APPLIED IN CASE ANY REMEDIAL WORKS ARE REQUIRED TO THE DRAINAGE.

DRAINAGE LEGEND

- PROPOSED FOUL SEWER & MANHOLE: F1-0, F1-001
- PROPOSED SURFACE WATER & MANHOLE: S1-0, S1-001
- PROPOSED SOAKAWAY: [Symbol]
- PROPOSED PETROL INTERCEPTOR: [Symbol]
- PROPOSED BUILDING: [Symbol]
- EXISTING COMBINED SEWER & MANHOLE: EX CS
- PROPOSED SITE BOUNDARY: [Symbol]
- EXISTING FOUL - SURVEYED: [Symbol]

PN	USMH Name	Length (m)	Fall (m)	Slope (1:X)	USCL (m)	USIL (m)	DSLIL (m)	Dia (mm)
F1.000	F1-0	20.850	0.347	60.1	38.000	37.311	36.964	150
F1.001	F1-1	31.004	0.207	149.8	38.000	36.964	36.757	225
F1.002	F1-2	3.429	0.023	149.1	39.200	36.757	36.734	225
F1.003	F1-3	14.057	0.094	149.5	38.400	36.734	36.640	225
F20.000	F20-0	11.673	0.292	40.0	10.900	9.950	9.658	150
F20.001	F20-1	19.670	0.492	40.0	10.900	9.658	9.166	150
F20.002	F20-2	12.602	0.316	39.9	10.900	9.166	8.850	150
F20.003	F20-3	4.898	0.106	46.2	10.900	8.850	8.744	150
F21.000	F21-0	20.838	0.451	46.2	11.000	10.050	9.599	150
F21.001	F21-1	19.125	0.855	22.4	11.000	9.599	8.744	150
F20.004	F20-4	4.825	0.126	38.3	10.900	8.744	8.618	225
F20.005	F20-5	14.594	0.365	40.0	10.420	8.618	8.253	225
F20.006	F20-6	9.999	0.250	40.0	10.340	8.253	8.003	225
F20.007	F20-7	28.102	0.852	33.0	9.660	8.003	7.151	225

PN	USMH Name	Length (m)	Fall (m)	Slope (1:X)	USCL (m)	USIL (m)	DSLIL (m)	Dia (mm)
S1.001	S1-0	41.895	0.698	60.0	37.500	36.000	35.302	225
S20.000	S20-0	18.688	0.311	60.0	10.900	9.875	9.564	225
S20.001	S20-1	12.842	0.214	60.0	10.900	9.564	9.350	225
S20.002	S20-2	5.197	0.087	60.0	10.900	9.350	9.263	225
S20.003	S20-3	10.652	0.178	60.0	10.900	9.263	9.085	225
S21.000	S21-0	24.461	0.163	150.0	11.000	9.975	9.812	225
S21.001	S21-1	8.545	0.037	230.9	11.000	9.812	9.775	225
S20.004	S20-4	3.846	0.064	60.0	10.900	9.085	9.021	225

IRISH WATER WASTEWATER DETAILS

Drawing No.	Drawing Title
STD-WW-01	Waste water service connection responsibility
STD-WW-02	Typical layout for sewer within new developments
STD-WW-03	Drain B service connection pipework
STD-WW-04	Typical sewer / service pipe connection
STD-WW-05	Typical service layout indicating separation distances
STD-WW-06	Restrictions on trees/shrubs planting adjacent to sewers
STD-WW-07	Trench backfill & bedding
STD-WW-08	Concrete bed, manhole & surround to wastewater pipes
STD-WW-09	Blockwork manhole (1450mm dia.)
STD-WW-10	Pre-cast concrete manhole
STD-WW-11	In-situ concrete manhole
STD-WW-12	Backdrop manhole
STD-WW-13	Private side inspection chamber
STD-WW-14	Thrust blocks for rising mains
STD-WW-15	Scour valve chamber (foal rising main +200mm dia.)
STD-WW-16	Sluice valve details for rising mains ductile iron (D.I.) pipe (+200mm dia.) (sheet 1 of 2)
STD-WW-17	Sluice valve details for rising mains polyethylene (P.E.) pipe (+200mm dia.) (sheet 2 of 2)
STD-WW-18	Air valve chamber (foal rising main +200mm dia.)
STD-WW-19	Duct chamber
STD-WW-20	Emergency overflow structure
STD-WW-21	Typical ditch/stream crossing for gravity main (sheet 1 of 2)
STD-WW-22	Typical ditch/stream crossing for rising main (sheet 2 of 2)
STD-WW-23	Typical bridge crossing for rising main (sheet 1 of 2)
STD-WW-24	Typical bridge crossing for rising main (sheet 2 of 2)
STD-WW-25	Security gate & fencing
STD-WW-26	Indicative pumping station layout
STD-WW-27	Flow meter chamber (foal rising main +200mm dia.)
STD-WW-28	Indicative submersible pumping station
STD-WW-28A	Indicative pre-cast concrete submersible pumping station
STD-WW-29	Rising main discharge manhole
STD-WW-30	Block type 1 pumping station B wet block (sheet 1 of 2)
STD-WW-31	Block type 2 + 3 pumping station B wet block (sheet 2 of 2)
STD-WW-32	Handstanding area pumping station (permeable & impermeable)
STD-WW-33	Lamp bollard & lamp standard
STD-WW-34	Vent stack

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PL1	LAYOUT REVISED	COS	2020-06-19
PL2	LAYOUT REVISED	COS	2020-06-24
PL3	LAYOUT REVISED	MOC	2023-03-08

Client: HG CONSTRUCTION

Job: REDEMPTION ROAD, BLACKPOOL, CORK
 Title: PROPOSED DRAINAGE LAYOUT

Stage: PLANNING
 Scale @ A1: 1:250
 Technician Check: ALAN CASHMAN
 Engineer Check: ALAN CASHMAN
 Approved: CIAN MURPHY
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