

**NOTES:**

- FOUL DRAINAGE PIPEWORK SHALL BE UPVC BY WAVIN OR SIMILAR APPROVED, MANUFACTURED TO IS EN 1401 2009/2012, APPLICATION CODE 'UD' WITH STIFFNESS CLASS OF 8KN/M<sup>2</sup>. ALL FOUL DRAINAGE PIPEWORK SHALL BE THE SIZES AND LAID TO THE GRADIENTS SHOWN ON LAYOUT PLAN AND LONGITUDINAL SECTIONS.
- WHERE MH ARE LOCATED IN GRASS AREAS THEY WILL BE SURROUNDED BY A 200mm CONCRETE PLINTH.
- ALL SEWERS & OR ATTENUATION TANKS WILL HAVE A MINIMUM CLEARANCE OF 3M FROM ANY PROPOSED DEVELOPMENT STRUCTURE. THIS LAYOUT IS ALSO INTENDED TO COMPLY WITH IRISH WATERS TYPICAL SERVICE LAYOUT SEPARATION DISTANCES AS PER DETAIL STD-WW-05.
- THE EXTERNAL FACE OF ALL PROPOSED MANHOLES WILL BE A MIN. 0.5m FROM ANY KERB LINE AND THE EXTERNAL FACE OF ANY SEWER WILL A MIN. OF 1.0m FROM ANY KERB LINE
- EACH DWELLING WILL HAVE THEIR OWN INSPECTION CHAMBER AND CONNECTION TO THE MAIN SEWER LINE AND SHOULD BE CONSTRUCTED IN ACCORDANCE WITH IRISH WATERS STANDARD DETAILS STD-WW-02 & STD-WW-03
- FOUL SEWER PIPE SIZE (DIAMETER) AND GRADIENT IS INDICATED AND IN ALL CASES IS INTENDED TO COMPLY WITH SECTION 2.4.3 & 2.4.4 OF THE WASTEWATER CODE OF PRACTICE

**NOTES:**

EXACT INVERT LEVELS OF EXISTING SEWERS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION OF NEW FOUL SEWERS.

THE PROPOSED FOUL SEWERS ARE A MAXIMUM DIAMETER OF 150mm LAD AT THE GRADIENTS SHOWN WHICH ARE IN ACCORDANCE WITH IRISH WATER GUIDELINES. THE DESIGN OF THE FOUL SEWERS IS BASED ON A ROUNDNESS COEFFICIENT OF 1.5mm.

THE PROPOSED FOUL DRAINAGE SYSTEM FOR THE NEW DEVELOPMENT WILL DISCHARGE INTO THE PROPOSED FOUL SEWER PUMPING LOCATION AS SHOWN ON LAYOUT PLAN FROM WHERE IT WILL BE PUMPED TO THE PUBLIC MAINS. THE INVERT LEVEL OF THE CONNECTION POINTS TO BE CONFIRMED.

ALL COVER LEVELS ARE INDICATIVE AND THE FINAL COVER LEVELS TO MATCH FINISHED ROAD LEVELS.

ALL LEVELS OF PIPES TO BE CHECKED AND VERIFIED PRIOR TO WORK COMMENCING ON SITE.

THE LAYOUT OF THE BRANCH DRAINS FROM THE INDIVIDUAL SITES ARE AS SHOWN ON THE DWELLINGS LAYOUT PLAN. ANY CHANGES ARE TO BE AGREED PRIOR TO CONSTRUCTION. THE DISTANCE FROM THE FINAL ACCESS JUNCTION ON EACH INDIVIDUAL SITE TO THE CONNECTION TO THE MAIN DRAIN TO BE A MAXIMUM OF 12m.

THE CONNECTION OF THE BRANCH DRAINS TO MAIN DRAINS SHOULD BE MADE AT A MANHOLE WHERE POSSIBLE OR BY USING AN OVERHEAD TYPE SADDLE. SADDLES SHOULD NOT BE USED ON PIPES OF 150mm DIAMETER, NOR TO CONNECT PIPES OF THE SAME DIAMETER.

ALL PIPES SHOULD HAVE FLEXIBLE JOINTS FORMED BY A METHOD RECOMMENDED BY THE PIPE MANUFACTURER. ELASTOMERIC SEALING RINGS, COMPLYING WITH THE REQUIREMENTS OF BS 2494, TYPE D, SHOULD BE USED.

MANHOLE COVERS AND FRAMES TO COMPLY WITH THE REQUIREMENTS OF IS EN 124:

- CLASS LOCATION
- ROADWAYS, HARD SHOULDERS, VEHICULAR ACCESSES
- B 125 FOOTWAYS, GRASS VERGES
- A 15 AREAS INACCESSIBLE TO MOTOR VEHICLES

ALL BRANCH CONNECTIONS FROM ACCESS JUNCTIONS (AJS) TO BE 100mm Ø UPVC PIPES AT A GRADIENT OF 1 in 60.

LOCATION AND INVERT LEVELS OF EXISTING (OR PROPOSED) MANHOLES OR OUTFALL POINTS TO BE VERIFIED PRIOR TO COMMENCEMENT OF PROPOSED DRAINAGE NETWORK.

THE TYPE OF PIPE AND FITTINGS TO BE USED TO BE UPVC (IN ACCORDANCE WITH THE REQUIREMENTS OF IS EN 1401 UNLESS OTHERWISE STATED BY ENGINEER).

TRENCH WIDTH AT THE LEVEL OF THE TOP OF THE PIPE SHALL GENERALLY BE AS NARROW AS SAFE WORKING CONDITIONS WOULD ALLOW, WITH A MINIMUM WIDTH OF 300mm PLUS THE EXTERNAL DIAMETER OF THE PIPE BARREL.

DRAINS SHALL BE ACCESSIBLE FOR MAINTENANCE AND REPAIR AND SHALL BE CONSTRUCTED ON PUBLIC PROPERTY. ACCESS SHALL GENERALLY BE PROVIDED BY MEANS OF A MANHOLE BUT, SUBJECT TO APPROVAL, A PROPRIETARY ACCESS JUNCTION MAY BE USED IN LIEU OF A MANHOLE ON A DRAIN WHERE THE DEPTH TO INVERT IS LESS THAN 600mm.

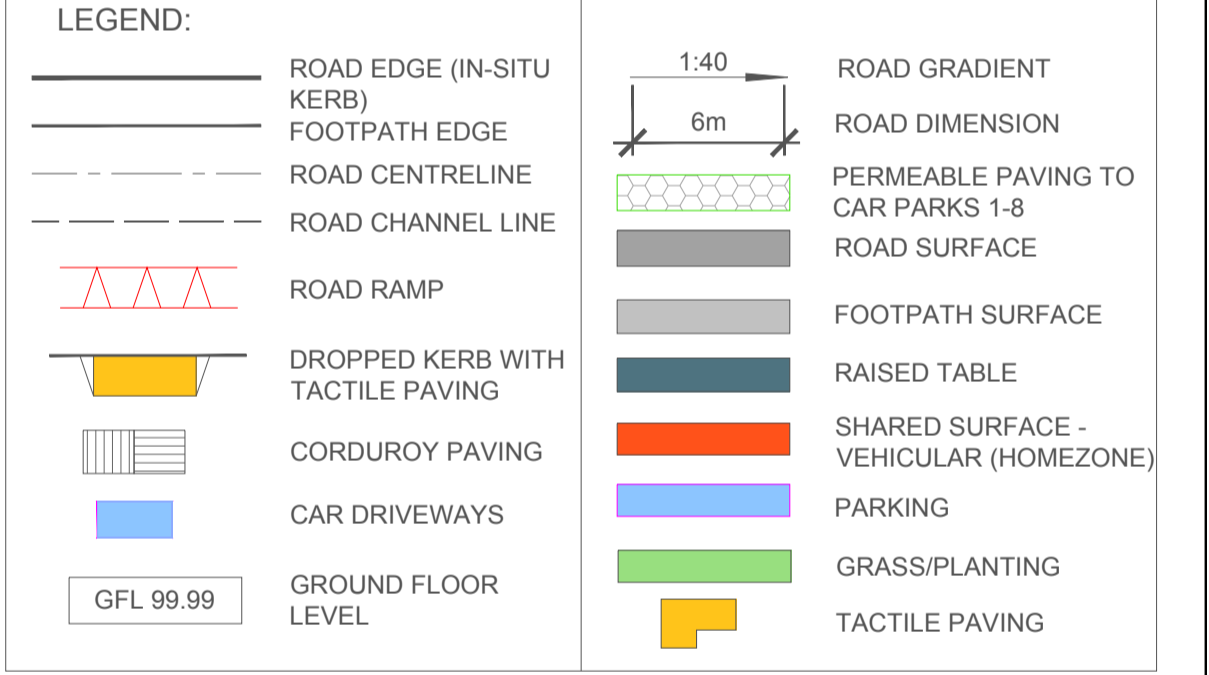
FLEXIBLE PIPES SHOULD BE LAID WITH A MINIMUM COVER OF 1.2m IN ROADS AND DRIVEWAYS, 0.9m IN OPEN SPACES AND FOOTPATHS NOT ADJACENT TO ROADWAYS AND 0.6m IN GARDENS. WHERE IT IS NOT POSSIBLE TO ACHIEVE THESE MINIMUM COVERS, ADDITIONAL MEASURES SHOULD BE TAKEN IN ORDER TO PROTECT THE PIPEWORK. DETAILS SHOULD BE AGREED WITH THE ENGINEER PRIOR TO CONSTRUCTING THE PIPELINE.

ALL WORKS WILL BE CARRIED OUT IN CONJUNCTION WITH IRISH WATER CODE OF PRACTICE FOR WASTEWATER INFRASTRUCTURE AND IRISH WATER STANDARD DETAILS FOR WASTEWATER.

FOUL DRAINAGE DETAILS TO COMPLY WITH IRISH WATERS STANDARD DETAILS: IW-CDS-5030-01



MANHOLE NO.	DIAMETER	TYPE	COVER LEVEL	INVERT LEVEL	DEPTH TO SOFFIT	EASTING	NORTHING	MANHOLE NO.	DIAMETER	TYPE	COVER LEVEL	INVERT LEVEL	DEPTH TO SOFFIT	EASTING	NORTHING
FHM1	150	Typ E	22.975	21.753	1.272	70997.814	80405.538	FHM36	150	Typ B	14.323	12.286	1.887	70750.583	80423.496
FHM2	150	Typ E	21.223	20.000	1.083	70917.124	80413.561	FHM37	150	Typ B	13.147	11.095	1.962	70710.712	80424.307
FHM3	150	Typ E	20.975	19.615	1.115	70958.267	80412.408	FHM38	150	Typ A	11.827	9.652	1.243	70750.196	80426.951
FHM4	150	Typ E	21.223	19.878	1.195	70997.840	80415.315	FHM39	150	Typ E	19.45	9.25	1.05	70794.330	80429.854
FHM5	150	Typ E	20.968	19.556	1.159	70958.278	80414.308	FHM40	150	Typ E	17.925	16.00	1.202	70958.588	80432.520
FHM6	150	Typ E	20.524	19.03	1.342	70958.228	80417.522	FHM41	150	Typ E	17.925	16.00	1.202	70958.588	80432.520
FHM7	150	Typ E	20.274	18.65	1.199	70952.278	80418.249	FHM42	150	Typ E	16.275	15.00	1.123	70958.588	80432.520
FHM8	150	Typ E	19.822	17.381	1.218	70958.267	80415.315	FHM43	150	Typ E	15.642	14.25	1.232	70957.524	80432.520
FHM9	150	Typ E	21.828	20.295	1.191	70747.847	80420.271	FHM44	150	Typ B	13.841	14.10	1.507	70851.062	80437.221
FHM10	150	Typ E	21.123	19.853	1.199	70757.124	80419.444	FHM45	150	Typ E	13.794	12.427	1.082	70957.584	80441.582
FHM11	150	Typ E	21.008	19.40	1.158	70767.251	80416.365	FHM46	150	Typ A	10.971	12.19	3.177	70697.870	80437.214
FHM12	150	Typ E	19.868	17.101	1.418	70958.267	80415.315	FHM47	150	Typ E	13.841	14.10	1.507	70851.062	80437.221
FHM13	150	Typ E	18.721	15.371	1.125	70958.500	80413.783	FHM48	150	Typ E	17.300	15.95	1.273	70958.430	80438.915
FHM14	150	Typ E	15.615	14.288	1.104	70958.682	80417.368	FHM49	150	Typ A	16.698	11.75	1.187	70958.295	80438.915
FHM15	150	Typ E	13.927	12.381	1.117	70958.267	80415.315	FHM50	150	Typ E	13.841	14.10	1.507	70851.062	80437.221
FHM16	150	Typ E	17.888	16.15	0.988	70958.176	80420.432	FHM51	150	Typ B	13.846	11.335	2.281	70958.537	80439.135
FHM17	150	Typ E	13.369	16.18	1.117	70958.267	80415.315	FHM52	150	Typ A	15.641	11.17	1.209	70957.171	80437.217
FHM18	150	Typ E	20.228	15.99	4.078	70958.200	80419.190	FHM53	150	Typ B	13.488	10.804	2.298	70814.533	80438.436
FHM19	150	Typ E	19.828	15.63	3.687	70958.267	80415.315	FHM54	150	Typ B	13.846	9.844	1.446	70958.783	80441.582
FHM20	150	Typ E	19.903	15.50	3.995	70958.267	80415.315	FHM55	150	Typ B	13.846	9.844	1.446	70958.783	80441.582
FHM21	150	Typ E	18.295	17.00	1.145	70958.146	80423.399	FHM56	150	Typ B	11.499	6.30	2.011	70815.140	80448.873
FHM22	150	Typ E	19.802	16.20	3.167	70958.192	80420.432	FHM57	150	Typ A	12.191	9.00	1.631	70951.147	80438.915
FHM23	150	Typ E	19.903	15.50	3.995	70958.267	80415.315	FHM58	150	Typ B	11.263	8.67	2.382	70958.355	80448.873
FHM24	150	Typ E	18.710	17.489	1.091	70874.055	80416.462	FHM59	150	Typ B	9.938	8.71	1.078	70960.445	80448.873
FHM25	150	Typ E	17.464	14.76	1.678	70957.124	80419.444	FHM60	150	Typ B	11.033	8.48	1.951	70958.355	80448.873
FHM26	150	Typ E	15.514	14.00	1.193	70958.528	80413.139	FHM61	150	Typ B	10.964	8.00	1.859	70957.319	80448.873
FHM27	150	Typ E	14.854	13.602	1.092	70958.528	80421.101	FHM62	150	Typ B	10.964	8.00	1.859	70957.319	80448.873
FHM28	150	Typ E	13.872	12.827	0.719	70958.241	80426.135	FHM63	150	Typ B	9.190	7.38	1.605	70958.547	80438.915
FHM29	150	Typ E	14.408	12.127	1.653	70958.876	80425.583	FHM64	150	Typ B	9.270	7.031	2.044	70958.079	80437.222
FHM30	150	Typ E	13.933	11.986	1.719	70958.824	80420.589	FHM65	150	Typ B	8.570	6.418	2.529	70958.324	80437.215
FHM31	150	Typ E	15.203	13.882	1.191	70958.828	80419.351	FHM66	150	Typ B	8.570	6.418	2.529	70958.324	80437.215
FHM32	150	Typ E	14.723	13.381	1.191	70958.448	80425.603	FHM67	150	Typ B	8.570	6.418	2.529	70958.324	80437.215
FHM33	150	Typ E	15.009	13.15	1.602	70958.456	80416.595	FHM68	150	Typ B	8.570	6.418	2.529	70958.324	80437.215
FHM34	150	Typ E	12.208	10.743	1.240	70958.279	80426.200	FHM69	150	Typ B	8.570	6.418	2.529	70958.324	80437.215
FHM35	150	Typ E	11.781	7.50	4.189	70758.845	80424.589	FHM70	150	Typ B	8.570	6.418	2.529	70958.324	80437.215
FHM36	150	Typ E	11.818	7.402	4.093	70761.193	80421.225	FHM71	150	Typ A	7.148	5.33	1.342	70961.445	80438.915
FHM37	150	Typ A	8.773	5.24	2.241	70961.589	80437.214	FHM72	150	Typ A	8.773	5.24	2.241	70961.589	80437.214
FHM38	150	Typ A	7.723	5.21	1.288	70961.414	80437.473	FHM73	150	Typ A	7.723	5.21	1.288	70961.414	80437.473



REV. NO.	DESCRIPTION	DATE	INITIALS
B	Issued for Planning	May 2019	T. Finn
A	Issued to Irish Water for Statement of Acceptance	26th April 2019	T. Finn

**finn**  
DESIGN PARTNERSHIP  
Blakestown, Ardee, Co. Louth, Ireland  
t 041 6857200 f 041 6857201 e info@finn.ie www.finn.ie

DRAWING NO: **122B** REV. NO:

TITLE: **Foul Drainage Layout Zone 2**

PROJECT: Residential Development @ Haggardstown, Blackrock, Co Louth

CLIENT: Kingsbridge Consultancy Ltd  
1st Floor, Block 1, Quayside Business Park, Mill Street, Dundalk, Co. Louth.

SCALE: 1:500 @ A1 DRAWN: PC

DATE: November 2018 CHECKED:

STATUS: **Planning Permission**

JOB NO: **1703**

NOTES:  
1. Copyright Reserved 2003 ©  
2. This is a site plan drawing.  
3. The contractor is responsible for checking all levels and dimensions on site and shall refer all discrepancies to the Architect.  
4. Where appropriate, for details of c.s. structure or mechanical and electrical details, see Engineers drawings.  
5. Emergency services shall be notified in accordance with the requirements of the Fire Act 2002.  
6. All dimensions are in metres unless otherwise stated.  
7. The contractor shall be responsible for the construction of structures, finishes and services.

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