

Proposed New Pumping Station with 121.80m3 offline Storage Tanks (12 hr storage provided in tank and wet well) Refer to Dwg 1703-Eng-120 for details of proposed sump.

Pumping station complies with section 5.4 and 5.5 of the waste water code of practice by means of access for large vehicles and being sited a minimum of 15m from property boundary.

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 LAID AT THE GRADIENTS SHOWN WHICH ARE IN ACCORDANCE WITH IRISH WATER GUIDELINES. THE DESIGN OF THE FOUL SEWERS IS BASED ON A ROUGHNESS COEFFICIENT OF 1.3mm.

THE PROPOSED FOUL DRAINAGE SYSTEM FOR THE NEW DEVELOPMENT WILL DISCHARGE INTO THE PROPOSED FOUL SEWER PUMPING LOCATION AS SHOWN ON THE LAYOUT 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 ROADWAY 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 2m.

THE CONNECTION OF THE BRANCH DRAINS TO MAIN DRAINS SHOULD BE MADE AT A MANHOLE WHERE POSSIBLE OR BY USING AN OBLIQUE TYPE SADDLE. SADDLES SHOULD NOT BE USED ON PIPES OF 100mm 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 2484, TYPE D SHOULD BE USED.

MANHOLE COVERS AND FRAMES TO COMPLY WITH THE REQUIREMENTS OF IS EN 1241:

| CLASS | LOCATION |
|-------|--|
| D 400 | ROADWAYS, MARCHBOLLERS, 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 1:80.

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

THE TYPE OF PIPE AND FITTINGS TO BE USED TO BE UPVC IN ACCORDANCE WITH THE REQUIREMENTS OF IS 424 UNLESS OTHERWISE STATED BY ENGINEER.

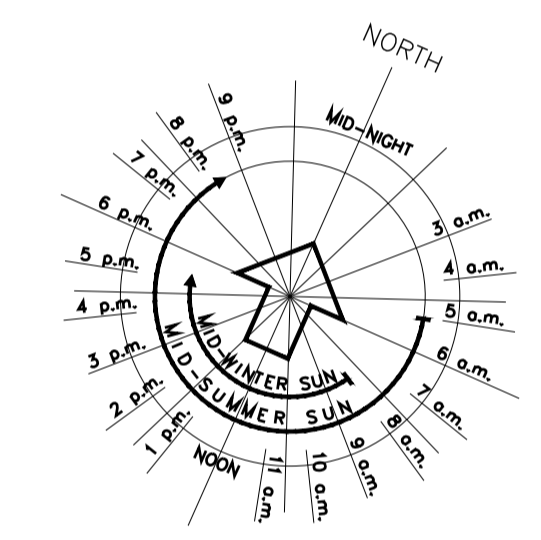
TRENCH WIDTH AT THE LEVEL OF THE TOP OF THE PIPE SHOULD GENERALLY BE AS NARROW AS SAFE WORKING CONDITIONS WOULD ALLOW, WITH A MINIMUM WIDTH OF 300mm PLUS THE EXTERNAL DIAMETER OF THE PIPE BARREL.

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, 0.6m 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 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



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

01 Foul Drainage Layout-Zone 1
121 SCALE 1:500

| MH No. | DIAMETER (mm) | MANHOLE TYPE | COVER LEVEL (m) | INVERT LEVEL (m) | DEPTH TO SOFFIT (m) | EASTING (m) | NORTHING (m) |
|--------|---------------|--------------|-----------------|------------------|---------------------|-------------|--------------|
| FAM01 | 1000 | Type E | 22.975 | 21.750 | 1.072 | 70667.814 | 604050.506 |
| FAM02 | 1000 | Type E | 21.223 | 20.000 | 1.083 | 70667.814 | 604113.951 |
| FAM03 | 1000 | Type E | 20.973 | 19.665 | 1.123 | 70663.287 | 604122.428 |
| FAM04 | 1000 | Type E | 21.223 | 19.678 | 1.195 | 70667.809 | 604131.315 |
| FAM05 | 1000 | Type B | 20.969 | 19.256 | 1.139 | 70679.507 | 604143.190 |
| FAM06 | 1000 | Type E | 20.524 | 19.030 | 1.342 | 70664.229 | 604170.522 |
| FAM07 | 1000 | Type E | 20.274 | 18.800 | 1.199 | 70662.979 | 604181.249 |
| FAM08 | 1000 | Type E | 19.922 | 17.381 | 1.316 | 70674.594 | 604173.372 |
| FAM09 | 1000 | Type E | 21.620 | 20.295 | 1.181 | 70674.907 | 604202.071 |
| FAM10 | 1000 | Type E | 21.152 | 19.803 | 1.199 | 70671.832 | 604119.029 |
| FAM11 | 1000 | Type E | 21.008 | 19.400 | 1.158 | 70672.201 | 604109.769 |
| FAM12 | 1000 | Type E | 19.869 | 17.501 | 1.418 | 70678.406 | 604181.927 |
| FAM13 | 1000 | Type E | 18.721 | 16.371 | 1.125 | 70668.501 | 604193.783 |
| FAM14 | 1000 | Type E | 19.675 | 14.286 | 1.084 | 70669.803 | 604177.389 |
| FAM15 | 1000 | Type E | 19.127 | 17.800 | 1.177 | 70665.001 | 604158.243 |
| FAM16 | 1000 | Type D | 17.888 | 16.550 | 0.988 | 70663.176 | 604206.432 |
| FAM17 | 1000 | Type A | 19.369 | 16.400 | 1.177 | 70664.606 | 604192.744 |
| FAM18 | 1000 | Type A | 20.228 | 15.990 | 4.076 | 70663.200 | 604199.190 |
| FAM19 | 1000 | Type E | 19.629 | 15.600 | 3.995 | 70661.256 | 604205.979 |
| FAM20 | 1000 | Type E | 19.295 | 17.000 | 1.145 | 70651.146 | 604233.389 |
| FAM21 | 1000 | Type A | 19.602 | 16.200 | 3.167 | 706615.962 | 604205.432 |
| FAM22 | 1000 | Type A | 19.869 | 15.500 | 3.995 | 70661.256 | 604205.979 |
| FAM23 | 1000 | Type E | 18.710 | 17.469 | 1.091 | 70671.005 | 604190.482 |
| FAM24 | 1000 | Type E | 19.629 | 15.600 | 3.995 | 70661.256 | 604205.979 |
| FAM25 | 1000 | Type E | 19.154 | 14.000 | 1.193 | 70661.508 | 604243.139 |
| FAM26 | 1000 | Type E | 14.854 | 13.622 | 1.062 | 70664.505 | 604201.314 |
| FAM27 | 1000 | Type E | 19.872 | 12.862 | 1.720 | 706670.011 | 604208.183 |
| FAM28 | 1000 | Type B | 14.400 | 12.127 | 1.063 | 706629.815 | 604205.563 |
| FAM29 | 1000 | Type E | 19.910 | 11.980 | 1.719 | 706643.914 | 604210.939 |
| FAM30 | 1000 | Type E | 19.203 | 13.862 | 1.191 | 70664.623 | 604190.951 |
| FAM31 | 1000 | Type E | 14.722 | 13.361 | 1.191 | 706672.469 | 604202.000 |
| FAM32 | 1000 | Type E | 19.009 | 14.910 | 1.692 | 70665.466 | 604210.025 |
| FAM33 | 1000 | Type E | 12.208 | 10.743 | 1.240 | 706619.279 | 604208.930 |
| FAM34 | 1000 | Type E | 17.767 | 7.300 | 4.189 | 70665.845 | 604214.939 |
| FAM35 | 1000 | Type A | 11.616 | 7.402 | 4.063 | 70651.193 | 604241.225 |
| FAM36 | 1000 | Type B | 14.523 | 12.286 | 1.167 | 707020.363 | 604203.496 |
| FAM37 | 1000 | Type B | 13.147 | 11.095 | 1.092 | 707010.112 | 604205.902 |
| FAM38 | 1000 | Type A | 11.827 | 7.982 | 1.803 | 707024.166 | 604209.093 |
| FAM39 | 1000 | Type E | 12.445 | 8.230 | 1.102 | 707008.300 | 604205.694 |
| FAM40 | 1000 | Type A | 10.172 | 6.882 | 1.210 | 706979.844 | 604325.473 |
| FAM41 | 1000 | Type E | 17.382 | 16.000 | 1.222 | 70664.907 | 604191.796 |
| FAM42 | 1000 | Type E | 18.273 | 15.500 | 1.123 | 70669.868 | 604205.220 |
| FAM43 | 1000 | Type E | 19.842 | 14.260 | 1.233 | 70667.524 | 604402.299 |
| FAM44 | 1000 | Type E | 19.841 | 14.100 | 1.607 | 70667.190 | 604391.211 |
| FAM45 | 1000 | Type E | 13.724 | 12.427 | 1.082 | 70679.934 | 604415.882 |
| FAM46 | 1000 | Type A | 18.001 | 12.100 | 3.177 | 70667.810 | 604397.314 |
| FAM47 | 1000 | Type E | 18.009 | 16.300 | 1.199 | 70664.684 | 604301.408 |
| FAM48 | 1000 | Type E | 17.380 | 15.990 | 1.273 | 70668.432 | 604318.811 |
| FAM49 | 1000 | Type A | 18.009 | 11.715 | 1.187 | 70665.206 | 604330.672 |
| FAM50 | 1000 | Type E | 12.932 | 11.570 | 1.212 | 70667.609 | 604424.671 |
| FAM51 | 1000 | Type E | 13.846 | 11.330 | 2.261 | 70669.537 | 604391.535 |
| FAM52 | 1000 | Type E | 19.800 | 16.300 | 1.199 | 70664.684 | 604301.408 |
| FAM53 | 1000 | Type B | 13.486 | 10.604 | 2.596 | 706724.533 | 604384.438 |
| FAM54 | 1000 | Type E | 13.840 | 9.844 | 1.040 | 70679.762 | 604443.004 |
| FAM55 | 1000 | Type E | 11.489 | 9.300 | 2.031 | 70675.145 | 604416.973 |
| FAM56 | 1000 | Type A | 13.191 | 9.030 | 1.031 | 70663.141 | 604388.018 |
| FAM57 | 1000 | Type E | 11.953 | 8.607 | 2.982 | 70669.862 | 604391.372 |
| FAM58 | 1000 | Type E | 9.938 | 8.711 | 1.076 | 70680.445 | 604485.163 |
| FAM59 | 1000 | Type E | 10.153 | 8.400 | 1.951 | 70680.305 | 604463.348 |
| FAM60 | 1000 | Type E | 10.084 | 8.000 | 1.839 | 70672.319 | 604436.265 |
| FAM61 | 1000 | Type E | 9.034 | 8.686 | 1.198 | 70614.701 | 604462.738 |
| FAM62 | 1000 | Type A | 10.363 | 7.862 | 1.704 | 70657.562 | 604416.662 |
| FAM63 | 1000 | Type B | 9.190 | 7.736 | 1.605 | 70675.547 | 604398.481 |
| FAM64 | 1000 | Type E | 8.270 | 7.031 | 1.014 | 706623.079 | 604373.223 |
| FAM65 | 1000 | Type E | 9.570 | 6.416 | 2.529 | 70651.324 | 604357.275 |
| FAM66 | 1000 | Type E | 7.686 | 6.800 | 0.746 | 70651.786 | 604389.093 |
| FAM67 | 1000 | Type E | 6.654 | 6.446 | 0.448 | 70651.925 | 604390.288 |
| FAM68 | 1000 | Type A | 8.863 | 6.200 | 3.442 | 70665.864 | 604474.254 |
| FAM69 | 1000 | Type A | 8.175 | 6.011 | 3.012 | 70663.705 | 604453.944 |
| FAM70 | 1000 | Type B | 8.589 | 5.772 | 2.611 | 70663.916 | 604438.390 |
| FAM71 | 1000 | Type E | 8.749 | 5.533 | 3.262 | 70661.642 | 604386.217 |
| FAM72 | 1000 | Type A | 8.773 | 5.344 | 2.951 | 70666.869 | 604371.484 |
| FAM73 | 1000 | Type A | 8.723 | 5.211 | 3.288 | 70663.414 | 604377.473 |

DRAINAGE LEGEND:

- FOUL DRAINAGE PIPELINE
- FOUL WATER MAN-HOLE
- FOUL WATER MAN-HOLE WITH CONCRETE SURROUND
- FOUL WATER INSPECTION CHAMBER
- FOUL SEWER PIPE DIAMETER & FALL
- 1500 1/100
- STORM DRAINAGE PIPELINE
- SURFACE WATER MANHOLE
- SURFACE WATER MANHOLE WITH CONCRETE SURROUND
- 2250 1/100
- STORM DRAIN PIPE DIAMETER & FALL
- SURFACE WATER ROAD GULLY

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/m². ALL FOUL DRAINAGE PIPEWORK SHALL BE 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

LEGEND:

- ROAD EDGE (IN-SITU KERB)
- FOOTPATH EDGE
- ROAD CENTRELINE
- ROAD CHANNEL LINE
- ROAD RAMP
- DROPPED KERB WITH TACTILE PAVING
- CORDUROY PAVING
- CAR DRIVEWAYS
- GROUND FLOOR LEVEL
- GFL 99.99
- ROAD GRADIENT
- ROAD DIMENSION
- PERMEABLE PAVING TO CAR PARKS 1-8
- ROAD SURFACE
- FOOTPATH SURFACE
- RAISED TABLE
- SHARED SURFACE - VEHICULAR (HOMEZONE)
- PARKING
- GRASS/PLANTING
- TACTILE PAVING

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DRAWING NO: **121 B** REV. NO: _____

121 B

TITLE: **Foul Drainage Layout Zone 1**

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 2018 ©
2. Work is for the purposes of the project only. Do not scale drawings.
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 r.c. structure or mechanical and electrical details, see Engineers drawings.
5. Property lines shall be fixed in accordance with measurements returned.
6. Sites of importance shall be checked with measurements.
7. The contractor shall be responsible for the coordination of structure, finishes and services.

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