

< 12 BAR TEST PRESSURE

| NOM. DIA. | DIMENSIONS | | | | | | | | | |
|--------------|------------|------|------|-----|-------------|--------------|------|------|------|------|
| (mm) | Α | В | С | D | E | F | G | Н | J | K |
| 100 | 600 | 330 | 160 | 80 | 200 | 350 | 390 | 700 | 600 | 400 |
| 150 | 950 | 510 | 260 | 130 | 22 5 | 450 | 660 | 900 | 750 | 600 |
| 200 | 1150 | 600 | 310 | 160 | 300 | 650 | 790 | 1050 | 900 | 700 |
| 250 | 1350 | 750 | 380 | 200 | 300 | 800 | 970 | 1200 | 1000 | 750 |
| 300 | 1580 | 850 | 450 | 220 | 320 | 950 | 1110 | 1300 | 1100 | 850 |
| 350 | 2100 | 1150 | 570 | 290 | 450 | 1000 | 1450 | 1550 | 1200 | 900 |
| 400 | 2550 | 1400 | 700 | 350 | 50 0 | 10 50 | 1800 | 1700 | 1250 | 1000 |
| 450 | 3000 | 1630 | 830 | 420 | 680 | 1100 | 2130 | 1800 | 1450 | 1150 |
| 500 | 3590 | 1950 | 990 | 500 | 800 | 1200 | 2540 | 1950 | 1600 | 1250 |
| 600 | 4100 | 2200 | 1120 | 570 | 850 | 1400 | 2880 | 2100 | 1700 | 1300 |

12 BAR TO 15 BAR TEST PRESSURE

| | | | | | | | • | | | |
|------------|---|--|---|--|--|--|---|---|---|--|
| DIMENSIONS | | | | | | | | | | |
| Α | В | С | D | E | F | G | Н | J | K | |
| 700 | 380 | 190 | 100 | 200 | 350 | 510 | 750 | 600 | 400 | |
| 1135 | 620 | 320 | 160 | 225 | 450 | 760 | 950 | 750 | 600 | |
| 1400 | 750 | 380 | 190 | 300 | 650 | 980 | 1150 | 950 | 700 | |
| 1730 | 940 | 480 | 240 | 320 | 800 | 1210 | 1350 | 1050 | 850 | |
| 2090 | 1130 | 580 | 300 | 380 | 950 | 1480 | 1500 | 1200 | 950 | |
| 2600 | 1410 | 720 | 360 | 500 | 1050 | 1840 | 1700 | 1350 | 1050 | |
| 2980 | 1610 | 820 | 420 | 750 | 1200 | 2110 | 1850 | 1500 | 1150 | |
| 3400 | 1840 | 940 | 470 | 900 | 1300 | 2330 | 2000 | 1600 | 1250 | |
| 4090 | 2210 | 1130 | 570 | 1000 | 1400 | 2890 | 2200 | 1750 | 1350 | |
| 5010* | 2710* | 1380 | 700 | 1000 | 1500 | 3550* | 2350 | 1900 | 1500 | |
| | 700 1135 1400 1730 2090 2600 2980 3400 4090 | 700 380 1135 620 1400 750 1730 940 2090 1130 2600 1410 2980 1610 3400 1840 4090 2210 | A B C 700 380 190 1135 620 320 1400 750 380 1730 940 480 2090 1130 580 2600 1410 720 2980 1610 820 3400 1840 940 4090 2210 1130 | A B C D 700 380 190 100 1135 620 320 160 1400 750 380 190 1730 940 480 240 2090 1130 580 300 2600 1410 720 360 2980 1610 820 420 3400 1840 940 470 4090 2210 1130 570 | A B C D E 700 380 190 100 200 1135 620 320 160 225 1400 750 380 190 300 1730 940 480 240 320 2090 1130 580 300 380 2600 1410 720 360 500 2980 1610 820 420 750 3400 1840 940 470 900 4090 2210 1130 570 1000 | A B C D E F 700 380 190 100 200 350 1135 620 320 160 225 450 1400 750 380 190 300 650 1730 940 480 240 320 800 2090 1130 580 300 380 950 2600 1410 720 360 500 1050 2980 1610 820 420 750 1200 3400 1840 940 470 900 1300 4090 2210 1130 570 1000 1400 | DIMENSIONS A B C D E F G 700 380 190 100 200 350 510 1135 620 320 160 225 450 760 1400 750 380 190 300 650 980 1730 940 480 240 320 800 1210 2090 1130 580 300 380 950 1480 2600 1410 720 360 500 1050 1840 2980 1610 820 420 750 1200 2110 3400 1840 940 470 900 1300 2330 4090 2210 1130 570 1000 1400 2890 | A B C D E F G H 700 380 190 100 200 350 510 750 1135 620 320 160 225 450 760 950 1400 750 380 190 300 650 980 1150 1730 940 480 240 320 800 1210 1350 2090 1130 580 300 380 950 1480 1500 2600 1410 720 360 500 1050 1840 1700 2980 1610 820 420 750 1200 2110 1850 3400 1840 940 470 900 1300 2330 2000 4090 2210 1130 570 1000 1400 2890 2200 | DIMENSIONS A B C D E F G H J 700 380 190 100 200 350 510 750 600 1135 620 320 160 225 450 760 950 750 1400 750 380 190 300 650 980 1150 950 1730 940 480 240 320 800 1210 1350 1050 2090 1130 580 300 380 950 1480 1500 1200 2600 1410 720 360 500 1050 1840 1700 1350 2980 1610 820 420 750 1200 2110 1850 1500 3400 1840 940 470 900 1300 2330 2000 1600 4090 2210 1130 570 | |

TABLE OF DIMENSIONS FOR STEEPLY

| INCLINED PIPELINES | | | | | | |
|------------------------|---------|--|--|--|--|--|
| GRADIENT | SPACING | | | | | |
| 1 IN 2 & STEEPER | 5.5m | | | | | |
| BELOW 1 IN 2 TO 1 IN 4 | 11.0m | | | | | |
| 1 IN 4 TO 1 IN 5 | 16.6m | | | | | |
| 1 IN 5 TO 1 IN 6 | 22.0m | | | | | |

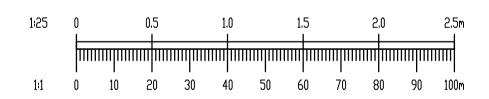
15 BAR TO 18 BAR TEST PRESSURE

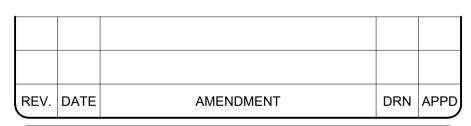
| NOM. DIA. (mm) | DIMENSIONS | | | | | | | | | | |
|----------------------|------------|-------|------|------|------|------|-------|------|------|------|--|
| | Α | В | С | D | E | F | G | H | J | K | |
| 100 | 750 | 400 | 205 | 100 | 220 | 400 | 530 | 800 | 650 | 400 | |
| 150 | 1250 | 700 | 350 | 180 | 250 | 500 | 890 | 1000 | 850 | 650 | |
| 200 | 1650 | 890 | 450 | 230 | 320 | 700 | 1170 | 1250 | 1000 | 800 | |
| 250 | 1960 | 1060 | 540 | 270 | 350 | 900 | 1370 | 1450 | 1150 | 900 | |
| 300 | 2300 | 1200 | 640 | 320 | 500 | 1100 | 1630 | 1650 | 1300 | 1050 | |
| 350 | 2930 | 1580 | 830 | 410 | 750 | 1200 | 2070 | 1850 | 1500 | 1150 | |
| 400 | 3510 | 1900 | 970 | 190* | 1000 | 1300 | 2490 | 2000 | 1600 | 1250 | |
| 450 | 3810 | 2270 | 1160 | 580 | 1000 | 1350 | 2970 | 2150 | 1700 | 1350 | |
| 500 | 4340* | 2380 | 1210 | 610 | 1000 | 1400 | 3700 | 2250 | 1750 | 1400 | |
| 600 | 6370* | 3450* | 1760 | 890 | 1000 | 1500 | 4500* | 2400 | 2050 | 1650 | |

- 1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED SYMMETRICALLY WITH RESPECT TO THE CONNECTING PIPE & BENDS.
- TRENCH DIMENSIONS : DRAWING No's. STD-W-13.
- THRUST BLOCKS SHALL BEAR ON UNDISTURBED SOIL. IF FOR ANY REASON THEY CANNOT THEN THE DEVELOPER SHALL. NOTIFY IRISH WATER IMMEDIATELY WITH A PROPOSED SOLUTION.
- THRUST BLOCK REINFORCEMENT REQUIRE SPECIFIC DESIGN.
- FOR TEST PRESSURES GREATER THAN 18 BAR, THRUST BLOCK DESIGN IS TO BE SUBMITTED TO IRISH WATER FOR APPROVAL. THRUST BLOCKS ARE DESIGNED FOR AN AVERAGE BEARING PRESSURE OF 100 KN/m (TYPICAL FOR SOFT CLAY) FOR OTHER
- CONDITIONS. ACTUAL DIMENSIONS MAY BE ALTERED ON INSTRUCTIONS FROM IRISH WATER.
- CONCRETE IN THRUST BLOCKS SHALL BE GRADE C20/25.
- COMPRESSIBLE FILLER FOR CONCRETE PROTECTION TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4. BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PLASTIC PIPES. THE THICKNESS OF COMPRESSIBLE FILLER FOR MAINS < 450mm IN DIAMETER IS TO BE 18mm.
- 10. CONCRETE THRUST BLOCKS FOR POLYETHYLENE PIPE TO COMPLY WITH THE MANUFACTURES REQUIREMENTS.
- 11. POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE
- BEING CAST INTO CONCRETE. 12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

NOTES:

- 1. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
- 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
- 3. WATERMAINS SHALL BE LAID IN ACCORDANCE WITH THE LOCAL AUTHORITY /IRISH WATER SPECIFICATION FOR THE LAYING OF NEW WATERMAINS AND BYLAWS WHICH OVER-RIDE THESE NOTES. THE CONSTRUCTION OF THE WATERMAIN SHALL BE IN ACCORDANCE WITH THE BEST CURRENT PRACTICE AND THE LATEST EDITIONS OF THE RELEVANT STANDARDS AND CODES OF PRACTICE.
- 4. WATERMAINS SHALL NOT BE LAID UNDER WALLS OR AREAS DESIGNATED FOR TREES/SHRUBS/FLOWERS.
- 5. PIPES SHALL BE HDPE (BLUE PIPE) UNLESS NOTED OTHERWISE BY AGREEMENT WITH THE LOCAL AUTHORITY. DUCTILE IRON PIPES SHALL BE USED UNDER ROADS OF CLASSIFICATION "DISTRICT DISTRIBUTOR" UPWARDS UNLESS NOTED OTHERWISE.
- 6. PIPES SHALL CONFORM TO THE UK WATER INDUSTRY SPECIFICATION OR EQUIVALENT E.U. SPECIFICATION.
- 7. DUCTILE IRON (DI) PIPES SHALL CONFORM TO IS EN 545 AND SHALL HAVE MINIMUM C40 PRESSURE RATING, DUCTILE IRON FITTINGS SHALL HAVE 16 BAR RATING AT LEAST DI PIPEWORK SHALL BE COATED INTERNALLY WITH A BLAST FURNACE CEMENT LINING WHICH COMPRISES WITH THE REQUIREMENTS OF BS 6920. EXTERNAL PROTECTION SHALL INCLUDE AN ALLOY OF ZINC AND ALUMINUM WITH A MINIMUM 15% ALUMINUM WITH OR WITHOUT OTHER MATERIALS HAVING A MASS OF 400g/m² COMPETE WITH A FINISHING LAYER OF BLUE FUSION BONDED EPOXY IN ACCORDANCE WITH IS EN 14901.
- 8. WATERMAINS SHALL BE LAID UNDER FOOTPATHS PREFERABLY OR GRASS MARGINS WHERE APPROVED. NO PIPE, CONDUIT, CABLE OR OTHER SERVICE SHALL BE LAID LONGITUDINALLY OVER THE LINE OF A WATERMAIN. NO CABINET POLES, JUNCTION BOXES OR CHAMBERS SHALL BE CONSTRUCTED OVER A WATERMAIN.
- 9. THE MINIMUM COVER TO A WATERMAIN SHALL BE 750mm, THE MAXIMUM COVER SHALL BE 900mm UNLESS NOTED OTHERWISE.
- 11. CONNECTIONS TO THE MAINS WHICH ARE THE PROPERTY OF THE IRISH WATER CAN BE MADE BY THE IRISH WATER ONLY. NO OTHER PERSON MAY INTERFERE IN ANY WAY WITH THESE MAINS. SUCH CONNECTIONS WILL BE MADE BY IRISH WATER AT THE EXPENSE OF THE PERSONS REQUIRING THEM. THE ESTIMATED COST OF SUCH CONNECTIONS MUST BE LODGED WITH IRISH WATER BEFORE THE WORK IS UNDERTAKEN.
- 12. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL WORKS ARE CONSTRUCTED IN ACCORDANCE WITH THE IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS. THE CODE OF PRACTICE AND STANDARD DETAILS ARE AVAILABLE TO DOWNLOAD FROM THE IRISH WATER WEB SITE AT WWW.WATER.IE/CONNECTIONS/DEVELOPER-SERVICES/ WHERE THE DETAILS CONTAINED ON THIS DRAWING DIFFER FROM THE IRISH WATER CODE OF PRACTICE OR STANDARD DETAILS THIS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY. IRISH WATER STANDARDS WILL TAKE PRECEDENCE





STATUS FOR PLANNING NOT FOR CONSTRUCTION



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CLIENT BALSCADDEN GP3 LTD. ARCHITECT PLUS ARCHITECTURE

PROJECT

BALSCADDEN DEVELOPMENT, HOWTH, CO. DUBLIN

TITLE

WATERMAIN CONSTRUCTION DETAILS SHEET 2 OF 4

| DRAWN PJD | DESIGNED SDN | APPROVED MD | DATE JULY '21 | |
|---------------------|--------------------------|----------------------|------------------|--|
| SCALE 1:25 @ A1 | JOB NO. 21–032 | DRG. NO. P032 | REVISION | |

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