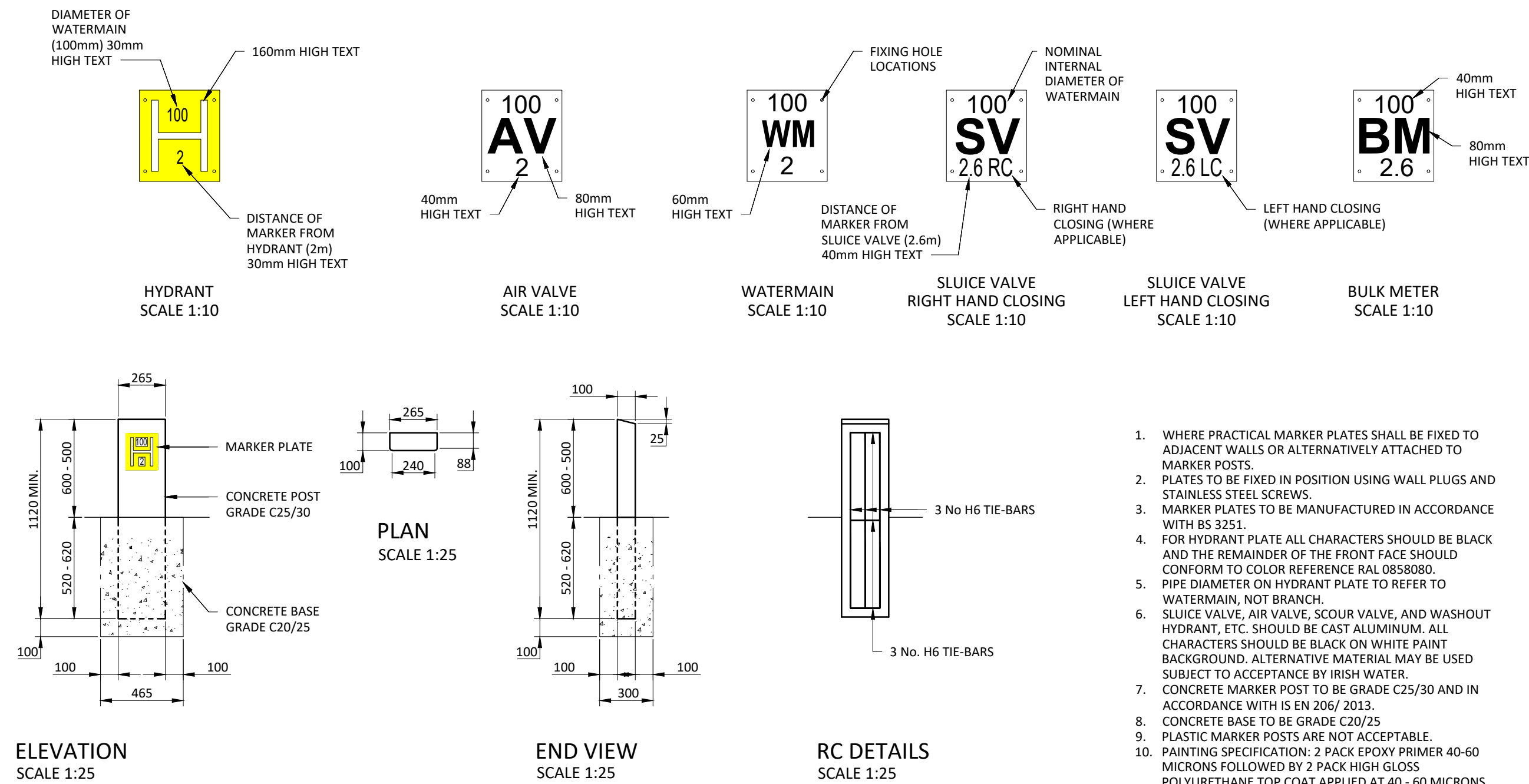


1. ALL DIMENSIONS IN MILLIMETERS (MM) UNLESS NOTED OTHERWISE.
2. CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED IN ACCORDANCE WITH THE FOLLOWING:
3. TRENCH DIMENSIONS REFER TO TRENCH BEDDING AND BACKFILL DETAILS.
4. THRUST BLOCKS SHALL BEAR ON UNDISTURBED SOIL. IF FOR ANY REASON THEY CANNOT THEN THE DEVELOPER SHALL NOTIFY IRISH WATER IMMEDIATELY WITH A PROPOSED ALTERNATIVE.
5. THRUST BLOCK REINFORCEMENT REQUIRES SPECIFIC DESIGN
6. FOR TEST PRESSURES GREATER THAN 18 BAR, THRUST BLOCK DESIGN IS TO BE SUBMITTED TO IRISH WATER FOR REVIEW.
7. THRUST BLOCKS ARE DESIGNED TO WITHSTAND AVERAGE BEARING PRESSURE OF 100kN/m² (TYPICAL FOR SOFT CLAY). FOR OTHER CONDITIONS, ACTUAL DIMENSIONS MAY BE ALTERED ON INSTRUCTION FROM IRISH WATER.
8. CONCRETE THRUST BLOCKS SHALL BE MADE C20/25.
9. CONCRETE FILLER SHALL BE COMPATIBLE WITH THE PIPE 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 MANSIONS <450mm IN DIAMETER IS 13mm.
10. CONCRETE THRUST BLOCKS SHALL BE EPOXY ETHYLENE PIPE TO COMPLY WITH MANUFACTURERS SPECIFICATIONS.
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 EN S206.



<12 BAR TEST PRESSURE										
NOM. DIA. (mm)	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
100	600	330	160	80	200	350	390	700	600	400
150	950	510	260	130	225	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	950
400	2550	1400	700	350	500	1180	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



1. WHERE PRACTICAL MARKER PLATES SHALL BE FIXED TO ADJACENT WALLS OR ALTERNATIVELY ATTACHED TO MARKER POSTS.
2. PLATES TO BE FIXED IN POSITION USING WALL PLUGS AND STAINLESS STEEL SCREWS.
3. MARKER PLATES TO BE MANUFACTURED IN ACCORDANCE WITH BS 231.
4. FOR HYDRANT PLATE ALL CHARACTERS SHOULD BE BLACK AND THE REMAINDER OF THE FRONT FACE SHOULD CONFORM TO COLOR REFERENCE RAL 08580/00.
5. PIPE DIAMETER ON MARKER PLATE TO REFER TO WATERMAIN, NOT BRANCH.
6. SUEZ VALVE, AIR VALVE, SCOUR VALVE, AND WASHOUT VALVE, ETC. SHOULD BE IDENTIFIED BY COLOR.
7. ALL CHARACTERS SHOULD BE BLACK ON WHITE PANT BACKGROUND. ALTERNATIVE MATERIAL MAY BE USED SUBJECT TO ACCEPTANCE BY IRISH WATER.
8. CONCRETE BASE TO BE C20/25 GRADE C25/30 IN ACCORDANCE WITH EN ISO 6607.
9. PLASTIC MARKER POSTS ARE NOT ACCEPTABLE.
10. PAINTING SPECIFICATION TO BE 2 PACK EPOXY/UM PRIMER 40-60 MICRONS FOLLOWED BY 2 PACK HIGH GLOSS POLYURETHANE TOP COAT APPLIED AT - 40 - 60 MICRONS.
11. REFERENCES TO PIPE DIAMETERS ON MARKER PLATES REFER TO THE EXTERNAL DIAMETER OF THE PIPE, NOT THE PIPE REGARDLESS OF THE MATERIAL OF THE PIPE.

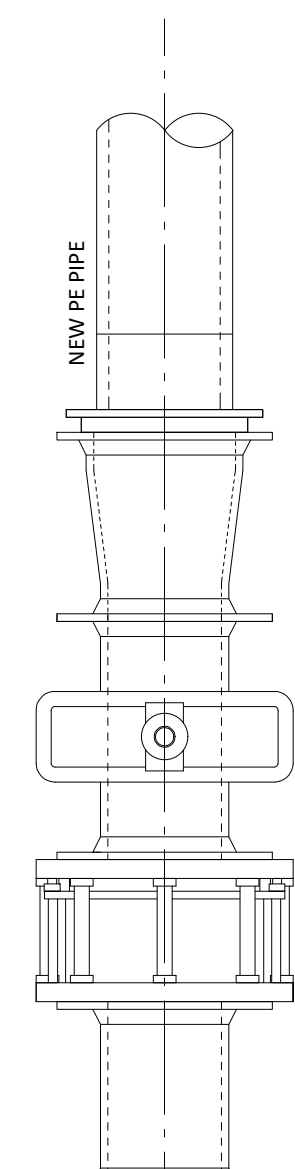
MARKER POSTS/ PLATES TO IRISH WATER DOCUMENT No. IW-CDS-5020-01. DRAWING No. STD-W-27 REV 3

WATERMAIN THRUST AND SUPPORT BLOCKS TO IRISH WATER
DOCUMENT No. IW-CDS-5020-01. DRAWING No. STD-W-28 REV 1

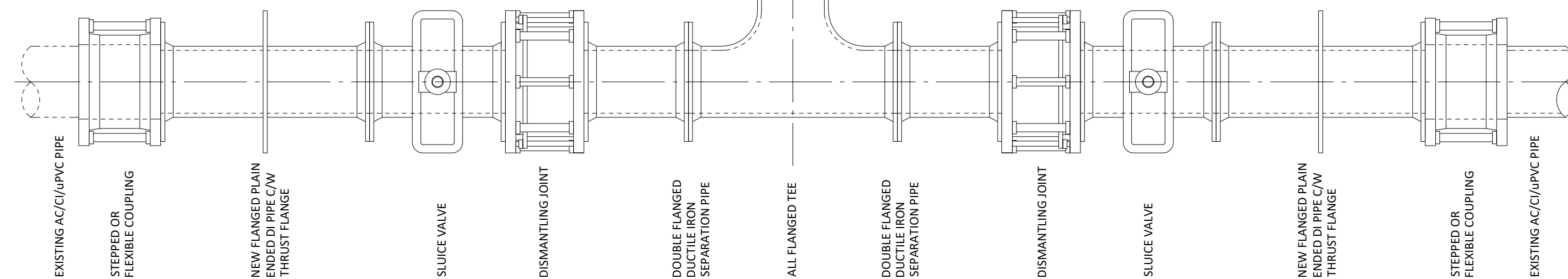
6. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
THE MINIMUM DEPTH OF COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL BOTTOM OF THE PIPE SHALL BE 900mm WHERE THE PIPE IS TO BE LOCATED IN HOUSING ESTATE ROADS. GREATER DEPTHS OF COVER AND/OR PIPE STRENGTH AND/OR A HIGHER CLASS OF BEDDING MATERIAL MAY BE REQUIRED WHERE HIGH TRAFFIC LOADING IS ANTICIPATED. THE DESIRABLE COVER FOR A WATERMAIN SHOULD BE 1200mm, WHERE APPROPRIATE, AND SHOULD NOT BE LESS THAN 750mm.
7. CLAUSE 804/808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE TO WATER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 10% OF THE PAVED SURFACE. THE EXISTING CLAUSE 804/808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. CLAUSE 808 IS TO BE USED WITHIN 500mm OF CEMENT BOUND MATERIALS, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS. OTHERWISE CLAUSE 804MAY BE USED FOR REMAINING TRENCH LENGTHS. THE EXISTING CLAUSE 804B(1) AND CLAUSE 804B(2) OF THE PIPE TRENCH WILL ONLY BE ALLOWED BY IRISH WATER WHERE THE READS AUTHORITY IN WHOSE FUNCTIONAL AREA THE DEVELOPMENT IS LOCATED, PROVIDES WRITTEN APPROVAL TO THE DEVELOPER TO USE SUCH ALTERNATIVE MATERIAL.
8. SELECTED EXCAVATED MATERIAL SUBJECT TO BE USED IN AREAS ABOVE GRANULAR PIPE BEDDING MATERIAL SUBJECT TO REVIEW BY IRISH WATER.
9. PIPE BEDDING SHALL COMPLY WITH BS-4082 AND IGN-4801(1) GRANULAR MATERIAL SHALL BE 14mm To 5mm (d_{10}/d_{20}) GRADED AGGREGATE OR 10mm (d_{10}/d_{20}) SINGLE SIZE IN REGRESS TO 10mm.
10. IN CERTAIN SITUATIONS (CBB-S) THE MATERIAL SHOULD BE EXCAVATED OUT AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804/808 MATERIAL SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING. HOWEVER, IN SOME CASES, SOFT PIPE BEDDING MAY BE REQUIRED. SUCH ARRANGEMENTS SHALL BE SUBJECT TO APPROVED BY IRISH WATER BEFORE ADVANCING, WITH THE WORK DRAWS SHALL BE SUBMITTED ON STOCKS OF ROCKS, OR ANY OTHER MATERIALS MAY POINT LOCAL AUTHORITY / TRENCH / ROCKS TO BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 804/808 MATERIAL IN ACCORDANCE WITH NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL NOT BE AHEAD THIS VOID BACKFILL MATERIAL.
11. SHOULD THE MINIMUM COVER NOT BE ACHIEVABLE, CONCRETE GRADE C/30 SHALL BE USED AS BACKFILL MATERIAL.
12. MARKER TAPE TO BE 400mm wide BLUE POLYETHYLENE MATERIAL IN ACCORDANCE WITH EN 12385. PUBLIC PIPE LINES HAVE VARIOUS TYPES OF INCORPORATED OR ENFORCED IDENTIFYING MARKERS. SERVICE PIPES SHALL HAVE 200mm wide YELLOW TAPE. MARKER TAPE TO BE LAID AT TOP OF PIPE BEDDING LAYER.
13. TRENCH WIDTHS FOR SPIRS <80mm MAY BE <500mm, SUBJECT TO CONSIDERATION BEING MADE BY THE TENDROR. TRENCH WIDTHS FOR ALL OTHER TYPES OF SERVICES TO BE 600mm.
14. NEW ROAD CONSTRUCTION AND SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
15. EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MAINTENANCE OF RURAL ROADS" ISSUED BY THE ROAD AUTHORITY FOR TOURISM AND SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.

PRESSURE	OUTSIDE DIA.	INTERNAL DIA.
10 BAR	125mm	102.2mm
10 BAR	180mm	147.2mm

NOTE THAT ALL CONNECTIONS TO EXISTING MAINS TO BE MADE UNDER DIRECTION OF IRISH WATER



- GENERAL NOTES
1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS NOTED OTHERWISE.
1. ALL BENDS, TIES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AT PER STRUT BLOCK AS PER DRAWING NO. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/ RIGS IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. THE IDENTITY OF THE PIPE LINING MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE. A PORTION OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURED PURPOSES.
4. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
5. EXISTING CHAMBER & WATER MAINS ARE TO PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO WRITTEN APPROVAL. DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIALS AND REFERENCES ARE AS FOLLOWS:
 - AC - ASBESTOS CEMENT
 - DI - DUCTILE IRON
 - CI - CAST IRON
 - PE - POLYETHYLENE
 - uPVC - UNPLASTICISED POLYVINYL CHLORIDE
 - ST - STEEL
 - OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICAL AC, DI, CI, uPVC & ST)
7. VALVE CHAMBER TO BE PROVIDED IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST BLOCK FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. DOUBLE FUSION SEPARATION JOINTS, UP TO 5m IN LENGTH, MAY BE REQUIRED TO ALLOW SEPARATION OF DISTANCE BETWEEN VALVE CHAMBERS.
10. A HIGH LEVEL OF HEALTH AND SAFETY PROCEDURES IS REQUIRED WHEN WORKING ON AC MAINS, AND THE OPERATION OF DISMANTLING / REMOVAL OF AC PIPES AND JOINTS
11. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW FOR THE NETWORK TO BE MAINTAINED ENSURING THAT NO MORE THAN 40 PERCENTS LOSE WATER FROM A BURST ON THE SYSTEM AT ANY ONE TIME.
12. UNEQUAL TEES MAY BE USED INSTEAD OF CONCENTRIC TAPERS (WHERE APPLICABLE)



NEW PE PIPE TO EXISTING uPVC PIPE
SCALE 1:10

NEW PE PIPE TO NEW CI PIPE CONNECTION DETAIL TO IRISH WATER
DOCUMENT No. IW-CDS-5020-01. DRAWING No. STD-W-05 REV 3

P04	S4	15.07.2026	Issued for Planning.	P.C.	N.N.	P.C.
P03	S4	07.07.2026	Issued for Planning.	P.C.	N.N.	P.C.
P02	S4	10.11.2025	Issued for Pre-Planning.	P.C.	N.N.	P.C.
P01	S4	01.10.2025	Issued for Planning.	P.C.	N.N.	P.C.
Issue	Suitability	Date	Description	Designed	Drawn	Approved
Project Conley Lands LRD, Leixlip			Drawing Title Watermain details. Sheet 3 of 5			
Client Leixlip and Newbridge SPV Limited			Originator. CHC	Area. -00	Level. -GR	Type. Role. Number. -DR -C -00332
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TRENCH BACKFILL / BEDDING & REDUCED COVER PROTECTION SLAB DETAIL. TO
IRISH WATER DOCUMENT No. IW-CDS-5020-01. DRAWING No. STD-W-13 REV 2