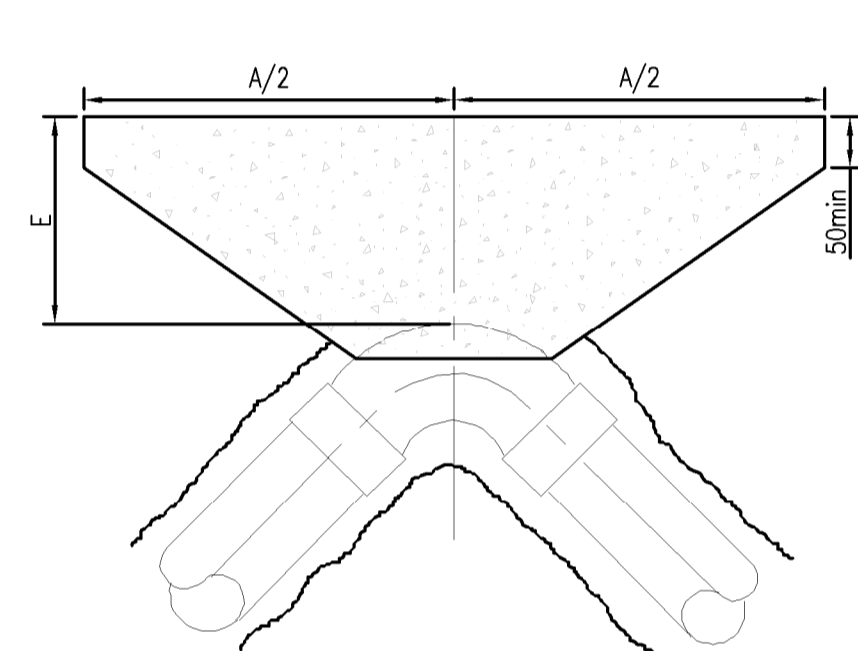
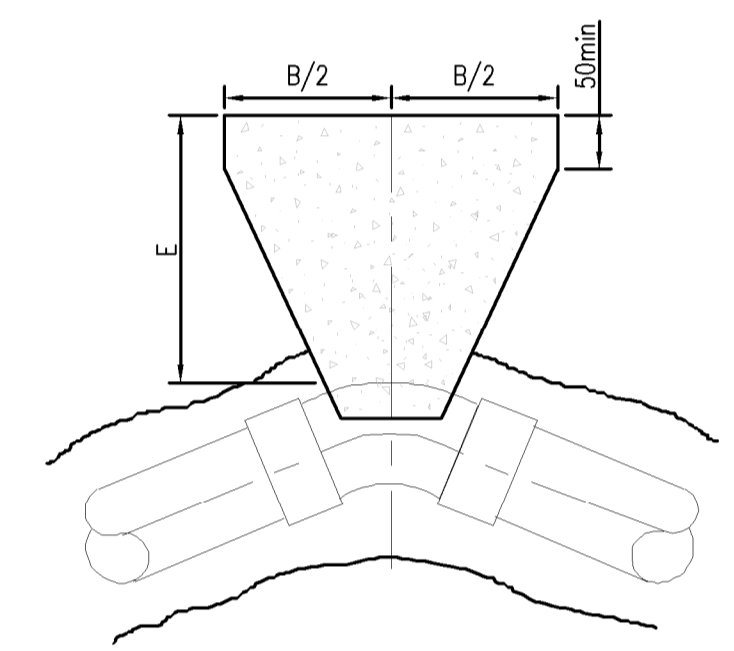


NOTES:

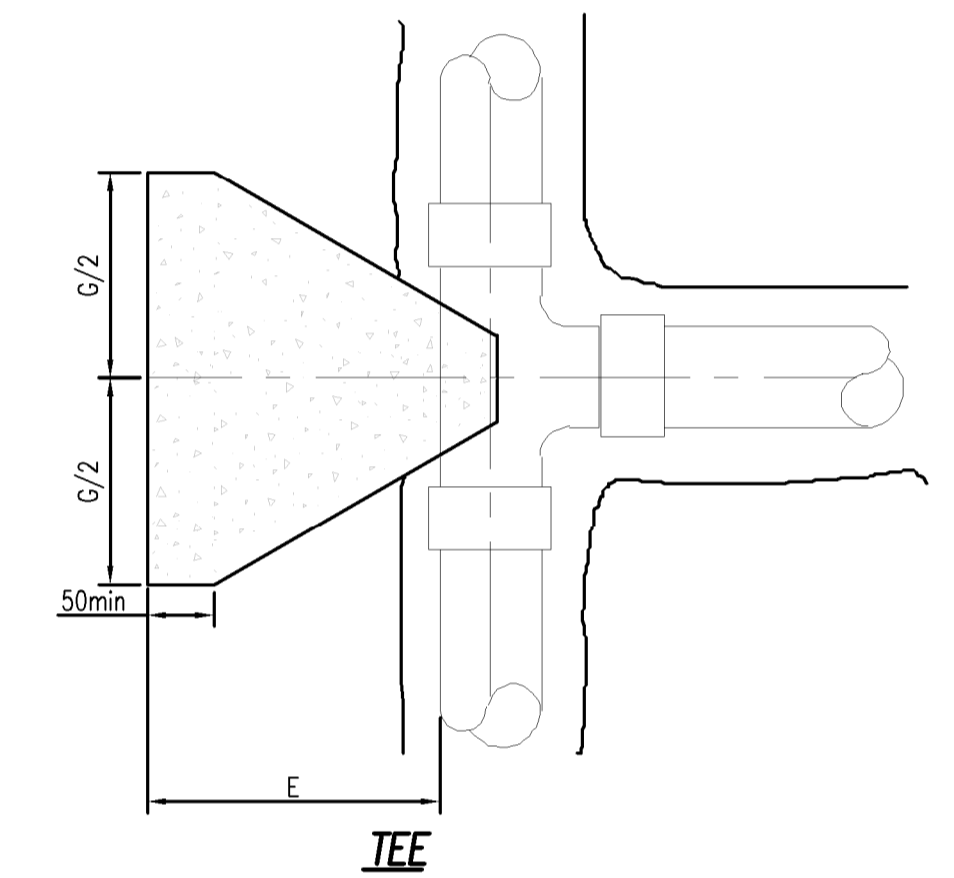
- DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
- WATERMANS SHALL BE LAID IN ACCORDANCE WITH THE LOCAL AUTHORITY / IRISH WATER SPECIFICATION FOR THE LAYING OF NEW WATERMANS AND BYLAWS WHICH OVER-RIDE 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.
- WATERMANS SHALL NOT BE LAID UNDER WALLS OR AREAS DESIGNATED FOR TREES/SHRUBS/FLOWERS.
- 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.
- PIPES SHALL CONFORM TO THE UK WATER INDUSTRY SPECIFICATION OR EQUIVALENT E.U. SPECIFICATION.
- DUCTILE IRON (DI) PIPES SHALL CONFORM TO IS EN 5454 AND SHALL HAVE A MINIMUM C40 PRESSURE RATING. DUCTILE IRON FITTINGS SHALL HAVE 16 BAR RATING AT LEAST. ALL DUCTILE IRON PIPEWORK SHALL BE COATED INTERNALLY WITH A BLAST FURNACE CEMENT LINING WHICH COMPLIES WITH THE REQUIREMENT OD BS6920. EXTERNAL PROTECTION SHALL INCLUDE AND ALLOY OF ZINC AND ALUMINIUM, WITH A MINIMUM 15% ALUMINIUM, WITH OR WITHOUT OTHER MATERIAL, HAVING A MASS OF 400G/M² COMPLETE WITH A FINISHING LAYER OF BLUE BONDED EPOXY IN ACCORDANCE WITH IS EN 14901.
- WATERMANS 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.
- THE MINIMUM COVER TO A WATERMAIN SHALL BE 750mm, THE MAXIMUM COVER SHALL BE 900mm UNLESS NOTED OTHERWISE.
- 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.
- 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.



90 DEGREE BEND



45 DEGREE BEND



TEE

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

< 12 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS			
	A	B	E	G
100	600	330	200	390
150	950	510	225	660
200	1150	600	300	790
250	1350	750	300	970
300	1580	850	320	1110
350	2100	1150	450	1450
400	2550	1400	500	1800
450	3000	1630	680	2130
500	3590	1950	800	2540
600	4100	2200	850	2880

12 BAR TO 15 BAR TEST PRESSURE

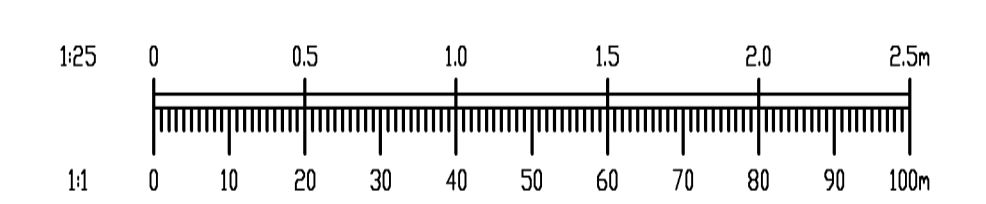
NOM. DIA. (mm)	DIMENSIONS			
	A	B	E	G
100	700	380	200	510
150	1135	620	225	760
200	1400	750	300	980
250	1730	940	320	1210
300	2090	1130	380	1480
350	2600	1410	500	1840
400	2980	1610	750	2110
450	3400	1840	900	2330
500	4080	2210	1000	2880
600	5010*	2710*	1000	3550*

15 BAR TO 18 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS			
	A	B	E	G
100	750	400	220	530
150	1250	700	250	890
200	1650	890	320	1170
250	1960	1060	350	1370
300	2300	1200	500	1630
350	2930	1580	750	2070
400	3510	1900	1000	2490
450	3810	2270	1000	2970
500	4340*	2380	1000	3700
600	6370*	3450*	1000	4500*

WATERMAIN TRUST AND SUPPORT BLOCKS

- 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.
- CONCRETE THRUST BLOCKS FOR POLYETHYLENE PIPE TO COMPLY WITH THE MANUFACTURES REQUIREMENTS.
- POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.



A	23/10/20	SUBMITTED FOR FINAL SHD SUBMISSION	NS	MD
REV.	DATE	AMENDMENT	DRN	APPD

STATUS **FOR PLANNING NOT FOR CONSTRUCTION**

Waterman Moylan
Engineering Consultants
BLOCK 5, EASTPOINT BUSINESS PARK, ALFIE BYRNE ROAD,
DUBLIN D03 K7W7 IRELAND.
Tel: (01) 664 8900 Fax: (01) 661 3618
Email: info@waterman-moylan.ie www.waterman-moylan.ie

CLIENT	CASTLETHORN CONSTRUCTION UC & CASTLETHORN DEVELOPMENTS KELLYSTOWN UC
ARCHITECT	O'MAHONY PIKE
PROJECT	KELLYSTOWN PHASE 1
TITLE	WATERMAIN CONSTRUCTION DETAILS SHEET 3 OF 3

DRAWN	DESIGNED	APPROVED	DATE
NS	RW	MD	FEB 2020
SCALE	JOB NO	DRG. NO.	REVISION
1:25 @ A1	15-038	P137	A