DETAIL SHOWN ARE TAKEN FROM
WATER INFRASTRUCTURE
STANDARD DETAILS
CONNECTIONS AND DEVELOPER SERVICES
DESIGN AND CONSTRUCTION REQUIREMENTS FOR SELF-LAY DEVELOPMENTS
JULY 2020 (REVISION 4)
DOCUMENT IW-CDS-5020-01

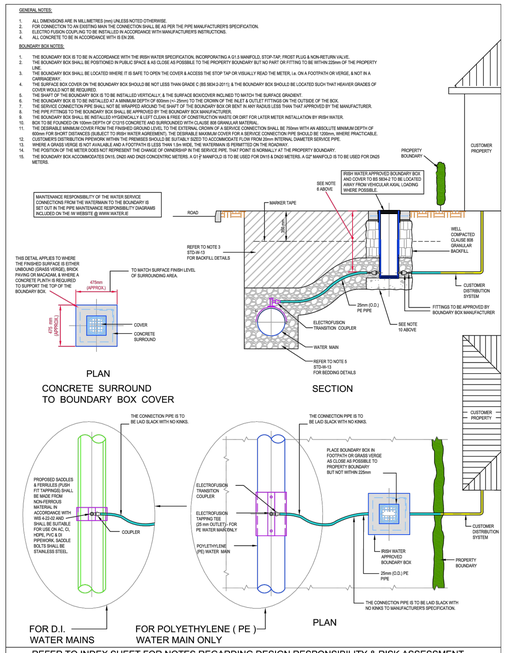
THESE STANDARD DETAILS SHOW THE ACCEPTABLE TYPICAL DETAILS AND OUTLINE THE MINIMUM STANDARDS THAT ARE REQUIRED BY IRISH WATER FOR THE PROVISION OF WATER PIPES AND RELATED INFRASTRUCTURE WHICH ARE TO BE CONNECTED TO THE IRISH WATER NETWORK. THEY SHALL BE USED IN CONJUNCTION WITH THE ASSOCIATED DESIGN RISK ASSESSMENTS THAT HAVE BEEN DEVELOPED WHICH IDENTIFY THE RISKS THAT DESIGNERS SHALL TAKE INTO ACCOUNT IN THE DETAILED DESIGN OF THE WATER PIPES AND RELATED INFRASTRUCTURE TO BE CONNECTED TO THE IRISH WATER NETWORK. THE PIPES AND RELATED INFRASTRUCTURE TO BE PUT IN PLACE WITHIN DEVELOPMENTS SHALL COMPLY FULLY WITH THESE STANDARD DETAILS. ULTIMATE RESPONSIBILITY (INCLUDING, BUT NOT LIMITED TO, ANY LOSSES, COSTS, DEMANDS, DAMAGES, ACTIONS, EXPENSES, NEGLIGENCE AND CLAIMS) FOR THE DETAILED DESIGN, CONSTRUCTION AND PROVISION OF SUCH PIPES AND RELATED INFRASTRUCTURE SHALL REST ENTIRELY WITH THE DEVELOPER, HIS/HER DESIGNER(S), CONTRACTOR(S) OR OTHER CONNECTED PARTY. IRISH WATER ASSUMES NO RESPONSIBILITY FOR AND GIVES NO GUARANTEES, UNDERTAKINGS OR WARRANTIES IN RELATION TO THE PIPES AND RELATED INFRASTRUCTURE TO BE PROVIDED IN ACCORDANCE WITH THESE STANDARD DETAILS.
NO PART OF THE STANDARD DETAILS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE PRIOR WRITTEN PERMISSION OF IRISH WATER AS COPYRIGHT HOLDER, EXCEPT AS AGREED FOR USE.
THESE STANDARD DETAILS SHALL BE USED IN CONJUNCTION WITH CURRENT IRISH WATER CODE OF PRACTICE IW-CDS-5020-03, WHICH WILL TAKE PRECEDENCE OVER THE STANDARD DETAILS.
THESE STANDARD DETAILS MAY ALSO BE USED FOR THE INSTALLATION OF WATER INFRASTRUCTURE FOR ASSET DELIVERY WORKS & CAPITAL PROJECT WORKS PROGRAMMES AT THE DISCRETION OF IRISH WATER.

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. FOR CONNECTION TO AN EXISTING MAIN THE CONNECTION SHALL BE AS PER THE PIPE MANUFACTURER'S SPECIFICATION.
3. ELECTRO FUSION COUPLING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. ALL CONCRETE TO BE IN ACCORDANCE WITH BS EN 206.

BOUNDARY BOX NOTES:

1. THE BOUNDARY BOX IS TO BE IN ACCORDANCE WITH THE IRISH WATER SPECIFICATION, INCORPORATING A D1.0 MANIFOLD, STOP TAP, FROST PLUG & NON-RETURN VALVE.
2. THE BOUNDARY BOX SHALL BE POSITIONED IN PUBLIC SPACE & AS CLOSE AS POSSIBLE TO THE PROPERTY BOUNDARY BUT NOT PART OR FITTING TO BE WITHIN 225mm OF THE PROPERTY LINE.
3. THE BOUNDARY BOX SHALL BE LOCATED WHERE IT IS SAFE TO OPEN THE COVER & ACCESS THE STOP TAP OR VISUALLY READ THE METER, i.e. ON A FOOTPATH OR VERGE, & NOT IN A CARRIAGEWAY.
4. THE BOUNDARY BOX COVER ON THE BOUNDARY BOX SHOULD BE NOT LESS THAN GRADE C (BS 5834-2:2011) & THE BOUNDARY BOX SHOULD BE LOCATED SUCH THAT HEAVIER GRADES OF COVER WOULD NOT BE REQUIRED.
5. THE SHAFT OF THE BOUNDARY BOX IS TO BE INSTALLED VERTICALLY, & THE SURFACE BOXCOVER INCLINED TO MATCH THE SURFACE GRADIENT.
6. THE BOUNDARY BOX IS TO BE INSTALLED AT A MINIMUM DEPTH OF 900mm (+/- 25mm) TO THE CROWN OF THE INLET & OUTLET FITTINGS ON THE OUTSIDE OF THE BOX.
7. THE BRIM OF THE BOUNDARY BOX SHALL NOT BE MORE THAN 25mm ABOVE THE FINISHED SURFACE OF THE TWO BOUNDARY BOX OR BENT IN ANY RADIUS LESS THAN THAT APPROVED BY THE MANUFACTURER.
8. ONLY FITTINGS APPROVED BY THE MANUFACTURER TO BE APPROVED FOR USE IN THE BOUNDARY BOX.
9. THE BOUNDARY BOX SHALL BE INSTALLED HYGIENically & LEFT CLEAN & FREE OF CONSTRUCTION WASTE OR DIRT FOR LATER METER INSTALLATION BY IRISH WATER.
10. BOX TO BE FOUNDED ON 100mm DEPTH OF C12/15 CONCRETE AND SURROUNDED WITH CLASS 804 GRANULAR MATERIAL.
11. WHERE A BOUNDARY BOX IS INSTALLED IN A GRASS VERGE, THE DISTANCE FROM THE FINISHED GROUND LEVEL TO THE CROWN SHALL BE 750mm WITH AN ABSOLUTE MINIMUM DEPTH OF 900mm FOR SHORT DISTANCES (SUBJECT TO IRISH WATER AGREEMENT). THE DESIRABLE MAXIMUM COVER FOR A SERVICE CONNECTION PIPE SHOULD BE 1200mm. WHERE PRACTICABLE.
12. CUSTOMER'S DISTRIBUTION PIPEWORK WITHIN THE PREMISES SHOULD BE SUITABLY SIZED TO ACCOMMODATE FLOW FROM 20mm INTERNAL DIAMETER SERVICE PIPE.
13. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.5m WIDE, THE INTERMAIN IS PERMITTED ON THE ROADWAY.
14. THE POSITION OF THE METER DOES NOT REPRESENT THE CHANGE OF OWNERSHIP IN THE SERVICE PIPE. THAT POINT IS NORMALLY AT THE PROPERTY BOUNDARY.
15. THE BOUNDARY BOX ACCOMMODATES DN15, DN20 AND DN25 CONCENTRIC METERS. A D 2" MANIFOLD IS TO BE USED FOR DN15 & DN20 METERS. A 52" MANIFOLD IS TO BE USED FOR DN25 METERS.



REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

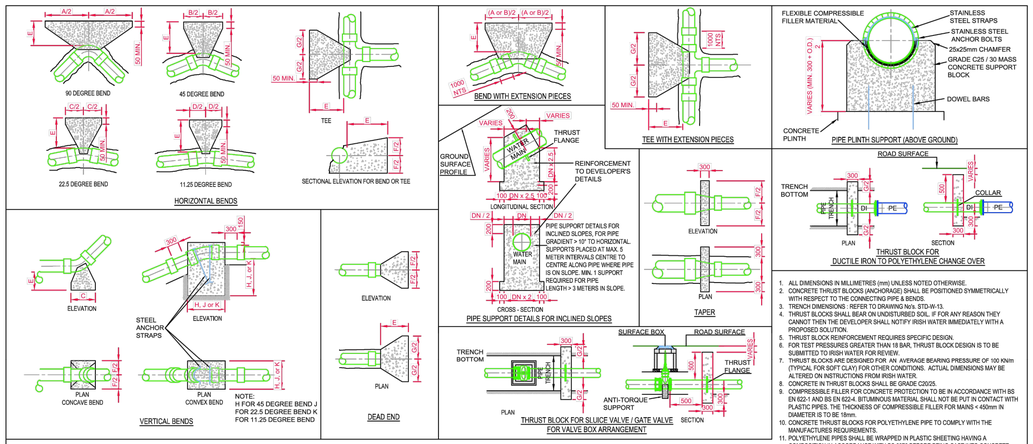
No.	Date	Drn	Chk	Description	App
4	07/20	RH	TOC	Service connection ownership revised, notes added	MOD
3	11/17	JMC	TOC	Updated & added notes	MOD
2	08/16	JMC	TOC	Revised D.I. service tapping detail	MOD
1	04/16	JMC	TOC	Added dimensions & notes	MOD
0	09/15	JMC	TOC	Initial issue	SL

UISCE EIREANN : IRISH WATER

STANDARD DETAILS - WATER

TITLE: CUSTOMER CONNECTION AND BOUNDARY BOX (25mm OD PIPE)

SCALE: NOT TO SCALE | DATE: SEPT. 2015 | DRAWING No. STD-W- 03 | REV 4



1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED SYMMETRICALLY WITH RESPECT TO THE CONNECTING PIPE & BENDS.
3. TRENCH DIMENSIONS. REFER TO DRAWING No. STD-W-13.
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 SOLUTION.
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 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.
8. CONCRETE IN THRUST BLOCKS SHALL BE GRADE C20/25.
9. 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 MANUFACTURERS 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.

< 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	900
400	2550	1400	700	350	500	1050	1800	1700	1250	1000
450	3000	1630	830	420	680	1100	2130	1800	1450	1150
500	3590	1950	990	500	800	1200	2540	1950	1650	1250
600	4100	2200	1120	570	850	1400	2880	2100	1700	1300

12 BAR TO 15 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS A	B	C	D	E	F	G	H	J	K
100	700	380	190	100	200	350	510	750	600	400
150	1135	620	320	160	225	450	780	950	750	600
200	1400	750	380	190	300	650	980	1150	950	700
250	1730	940	480	240	320	800	1210	1350	1050	850
300	2090	1130	580	300	380	950	1480	1500	1200	950
350	2600	1410	720	360	500	1050	1840	1700	1350	1050
400	2990	1610	820	420	750	1200	2110	1850	1500	1150
450	3400	1840	940	470	900	1300	2330	2000	1600	1250
500	4090	2210	1130	570	1000	1400	2890	2200	1750	1350
600	5010*	2710*	1380	700	1000	1500	3550*	2350	1900	1500

15 BAR TO 18 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS A	B	C	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	1550	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	1300	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

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

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
1	11/17	JMC	TOC	Anti-torque support note & thrust flange added & notes updated	MOD
0	09/15	JMC	TOC	Initial Issue	SL

UISCE EIREANN : IRISH WATER

STANDARD DETAILS - WATER

TITLE: WATER MAIN THRUST AND SUPPORT BLOCKS

SCALE: NOT TO SCALE | DATE: SEPT. 2015 | DRAWING No. STD-W-28 | REV 1

1 Water Standard Details

REVISION	DATE	BY	DETAILS
01	05/22	EK	Issued for Planning

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Drawn By: EK | Approved By: -- | Date: May '22 | Issued for: Planning | Scale: as indicated | Rev. 01

OSL Engineering Services ltd
Unit 3B East gate Drive, Little Island, Cork.
Tel: +353 (0)21 4297672
e-mail: info@osl.ie

Project 21059 – Dwg Type P – Number 503

Title: Water Details Sheet 2 of 2
Waterrock Development
Midleton, Co. Cork for Havenfalls Ltd.