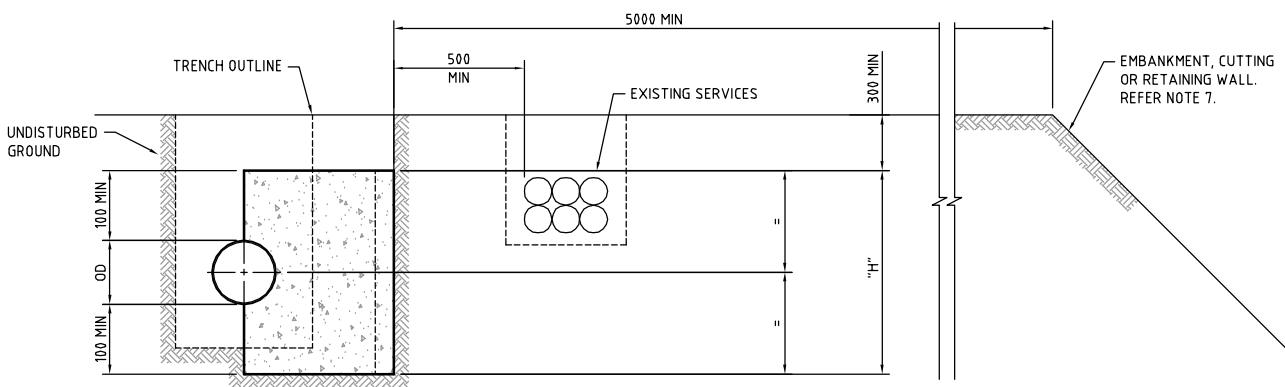


HORIZONTAL BEND THRUST BLOCK TYPE 1

PLAN

SCALE 1:20



HORIZONTAL BEND THRUST BLOCK TYPE 1

ELEVATION

SCALE 1:20

## NOTES:

1. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. THRUST BLOCKS DESIGNED TO WITHSTAND A DESIGN PRESSURE OF 120m AND A TEST PRESSURE OF 150m HEAD OF WATER.
3. REFER TO DTC/1111 FOR TYPE 2 THRUST BLOCKS FOR HORIZONTAL BENDS..
4. THE ALLOWABLE HORIZONTAL BEARING PRESSURE (AHBP) OF UNDISTURBED NATURAL SOIL TO BE DETERMINED BY A SUITABLY EXPERIENCED GEOTECHNICAL ENGINEER PRIOR TO CASTING THRUST BLOCKS.
5. CAST THE THRUST AREA OF ALL THRUST BLOCKS AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL.
6. DO NOT USE THRUST BLOCKS SPECIFIED IN THIS DRAWING IN SOILS WHERE AHBP<50kPa.
7. DO NOT USE THRUST BLOCKS SPECIFIED IN THIS DRAWING. WITHIN 5m OF AN EMBANKMENT, CUTTING OR RETAINING WALL.
8. ALL DI FITTINGS AND PIPES TO BE WRAPPED IN POLYETHYLENE SLEEVING. TAPE 700 LONG PE SLEEVING TO END OF DICL PIPE TO BE ENCASED 150 FROM THE SOCKET FACE TO OVERLAP PE SLEEVED DICL PIPE. WHEN CONNECTING TO PVC PIPE (WITHOUT PE SLEEVE) TAPE 700 LONG PE SLEEVE TO PVC PIPE. POLYETHYLENE SLEEVING TO PS-320\_SW.
9. CONCRETE SHALL BE CLASS N25 TO PS-357\_SW. SLUMP SHALL BE IN THE RANGE 80mm - 120mm. MAXIMUM NOMINAL AGGREGATE SIZE SHALL BE 20mm.
10. DO NOT APPLY ANY THRUST LOAD FOR AT LEAST 14 DAYS AFTER POURING THRUST BLOCKS.
11. THRUST BLOCK DESIGNS SHOWN ON THIS DRAWING ARE NOT SUITABLE FOR USE IN AGGRESSIVE OR CONTAMINATED SOILS.

THRUST BLOCK AREAS & DIMENSIONS FOR 11.25° HORIZONTAL BENDS - TYPE 1 (m<sup>2</sup>)

DN	OD	DESIGN PRESSURE HEAD	TEST PRESSURE HEAD	THRUST T	SOIL AHBP	REQUIRED BEARING AREA	W	H	L
(mm)	(mm)	(m)	(m)	(kN)	(kPa)	(m <sup>2</sup> )	(mm)	(mm)	(mm)
100	122	120	150	3.4	50	0.067	250	350	500
150	177	120	150	7.1	50	0.142	300	400	600
200	232	120	150	12.2	50	0.244	300	450	700
250	286	120	150	18.5	50	0.370	300	500	800
300	345	120	150	26.9	50	0.539	400	600	1000

THRUST BLOCK AREAS & DIMENSIONS FOR 22.5° HORIZONTAL BENDS - TYPE 1 (m<sup>2</sup>)

DN	OD	DESIGN PRESSURE HEAD	TEST PRESSURE HEAD	THRUST T	SOIL AHBP	REQUIRED BEARING AREA	W	H	L
(mm)	(mm)	(m)	(m)	(kN)	(kPa)	(m <sup>2</sup> )	(mm)	(mm)	(mm)
100	122	120	150	6.7	50	0.134	250	350	500
150	177	120	150	14.1	50	0.282	350	450	700
200	232	120	150	24.3	50	0.485	450	500	1000
250	286	120	150	36.9	50	0.737	450	750	1000
300	345	120	150	53.6	50	1.073	500	900	1200

THRUST BLOCK AREAS & DIMENSIONS FOR 45° HORIZONTAL BENDS - TYPE 1 (m<sup>2</sup>)

DN	OD	DESIGN PRESSURE HEAD	TEST PRESSURE HEAD	THRUST T	SOIL AHBP	REQUIRED BEARING AREA	W	H	L
(mm)	(mm)	(m)	(m)	(kN)	(kPa)	(m <sup>2</sup> )	(mm)	(mm)	(mm)
100	122	120	150	13.2	50	0.263	300	450	650
150	177	120	150	27.7	50	0.554	400	600	950
150	177	120	150	27.7	100	0.277	300	400	700
200	232	120	150	47.6	50	0.952	500	800	1200
200	232	120	150	47.6	100	0.476	400	500	1000
250	286	120	150	72.3	50	1.446	600	1000	1500
250	286	120	150	72.3	100	0.723	400	700	1100
300	345	120	150	105.2	50	2.104	REFER TO TYPE 2		
300	345	120	150	105.2	100	1.052	450	850	1250

THRUST BLOCK AREAS & DIMENSIONS FOR 90° HORIZONTAL BENDS - TYPE 1 (m<sup>2</sup>)

DN	OD	DESIGN PRESSURE HEAD	TEST PRESSURE HEAD	THRUST T	SOIL AHBP	REQUIRED BEARING AREA	W	H	L
(mm)	(mm)	(m)	(m)	(kN)	(kPa)	(m <sup>2</sup> )	(mm)	(mm)	(mm)
100	122	120	150	24.3	50	0.486	400	600	900
100	122	120	150	24.3	100	0.243	300	400	650
150	177	120	150	51.2	50	1.023	550	800	1300
150	177	120	150	51.2	100	0.512	350	600	900
200	232	120	150	87.9	50	1.758	REFER TO TYPE 2		
200	232	120	150	87.9	100	0.879	450	700	1300
200	232	120	150	87.9	200	0.440	250	500	900
250	286	120	150	133.6	50	2.672	REFER TO TYPE 2		
250	286	120	150	133.6	100	1.336	REFER TO TYPE 2		
250	286	120	150	133.6	200	0.668	300	650	1100
300	345	120	150	194.4	50	3.888	REFER TO TYPE 2		
300	345	120	150	194.4	100	1.944	REFER TO TYPE 2		
300	345	120	150	194.4	200	0.972	350	750	1300

**Sydney**  
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APPROVED

PETER GILLMAN  
MANAGER E & ES

ENGINEERING &amp; ENVIRONMENTAL SERVICES

A

ORIGINAL ISSUE

PJG

31/01/12

LETTER

DETAILS OF ISSUE / AMENDMENT

APP'D

DATE

DEEMED TO COMPLY DRAWINGS

**THRUST BLOCK DETAILS**  
**DICL AND PVC WATER MAINS ≤ DN300**  
**HORIZONTAL BENDS TYPE 1****DTC****1110**

ISSUE

DATE

**A****31/01/12**