



HORIZONTAL THRUST AREA (m²)

HORIZONTAL THRUST ON TRENCH WALLS (m ²) (REFER NOTES "T1 & T2")	SOIL CLASS (REFER NOTE "T3 & T4")		
	STIFF CLAY, MEDIUM-DENSE CLEAN SAND	VERY STIFF CLAY, DENSE SAND/GRAVEL, DECOMPOSED ROCK	HARD CLAY, SOUND ROCK
PBH kPa	50	100	200
≤ DN150	MIN	MIN	MIN
DN200	0.85	MIN	MIN
DN225	1.06	MIN	MIN
DN250	1.29	0.65	MIN
DN300	1.87	0.94	MIN
>300	DESIGNER TO SPECIFY		

"MIN" DENOTES MINIMUM OF 300mm INTO CLEAN FACES IS ACCEPTABLE

DRAINAGE PIPE TABLE

DICL THRUST CONNECTOR (NOM DIA.)	DIMENSIONS			
	"A"	"B"	"C"	"D"
≤ DN225	DN40	100mm (min)	100mm (min)	150mm (min)
DN225 > 300	DN80	100mm (min)	100mm (min)	150mm (min)
> DN300	DESIGNER TO SPECIFY			

"(min)" DENOTES MINIMUM ACCEPTABLE DIMENSION

GENERAL NOTES:

- G1. ALL BOLTS, NUTS AND WASHERS TO BE SS316.
- G2. DICL PIPE WITH PUDDLE FLANGE MAY BE SUBSTITUTED WITH APPROVED THRUST CONNECTOR.
- G3. ALL WORK TO BE IN ACCORDANCE WITH WSAA AND SHOALHAVEN WATER STANDARDS.

THRUSTING NOTES:

- T1. THRUST CALCULATIONS ARE FOR DESIGN PRESSURES OF <1000 kPa ONLY
- T2. THE THRUST AREA OF THRUST BLOCK IS TO BE CAST AGAINST CLEAN FACE OF UNDISTURBED NATURAL SOIL.
- T3. SOIL CLASSIFICATIONS USED IN THIS DRAWING ARE EXPLAINED IN WSAA WAT-1200
- T4. DO NOT USE THESE THRUST CALCULATIONS IN:
 - VERY SOFT, SOFT OF FIRM CLAY.
 - LOOSE CLEAN SAND.
 - UNCOMPACTED FILL OF REFUSE.
- T5. A GEOTECHNICAL ASSESSMENT AND INDIVIDUAL DESIGN IS REQUIRED FOR THESE SOILS.
- T6. FOR DIAMETERS > DN300 AN INDIVIDUAL DESIGN IS REQUIRED.

DRAINAGE NOTES:

- D1. DRAINAGE PIPE TO BE PROVIDED AT EACH SIDE OF THE TRENCH BASE THROUGH INLINE THRUST BLOCK FOR DRAINAGE OF WATER.
- D2. WRAP UPSTREAM END OF DRAINAGE PIPES WITH FILTER MEMBRANE TO PREVENT GRAVEL FROM ENTERING PIPES.
- D3. SURROUND ALL ENDS OF DRAINAGE PIPES WITH 10mm GRAVEL.
- D4. WRAP 10mm GRAVEL WITH FILTER MEMBRANE TO PREVENT MIGRATION OF FINES.

CONSTRUCTION ISSUE

CONSULTANT DETAILS:				NOT TO SCALE				SURVEYED: NA		DATE: 22-08-13	COMPANY: SW	TITLE: SHOALHAVEN WATER AND WASTEWATER STANDARD DRAWING DETAIL HDPE TO PVC, AC or STEEL MAIN TYPICAL THRUST CONNECTOR ARRANGEMENT SKETCH		
A DRAINAGE CONDUITS AND THRUST DETAILS ADDED RD 02-03-22				SIZE: A3 SCALE FACTOR: N.T.S.		CO-ORDINATE SYSTEM: MGA Zone 56 HEIGHT DATUM: AHD		DESIGNED: IW		DATE: 24-02-22	COMPANY: SW			
								DRAWN: RD		DATE: 02-03-22	COMPANY: SW			
REVISION DETAILS No. 1 2 3 DWN DATE				SIZE: A3 SCALE FACTOR: N.T.S.		CO-ORDINATE SYSTEM: MGA Zone 56 HEIGHT DATUM: AHD		CHECKED: DB		DATE: 03-03-22	COMPANY: SW			
								APPROVED: IW		DATE: 03-03-22	COMPANY: SW			