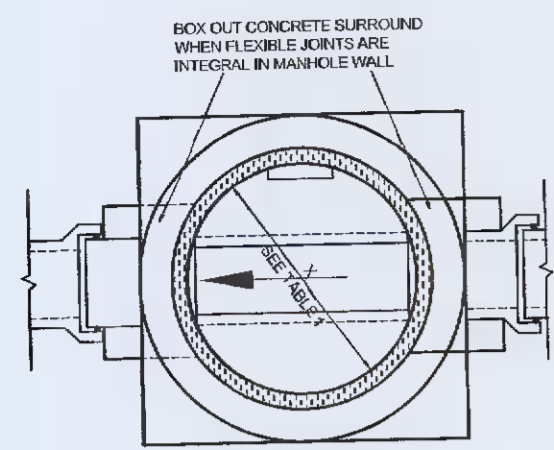


MANHOLE TYPE P1

DN 1500 - 9000
UP TO 45° BEND
DEPTH FROM COVER TO SOFFIT OF PIPE <1.5m

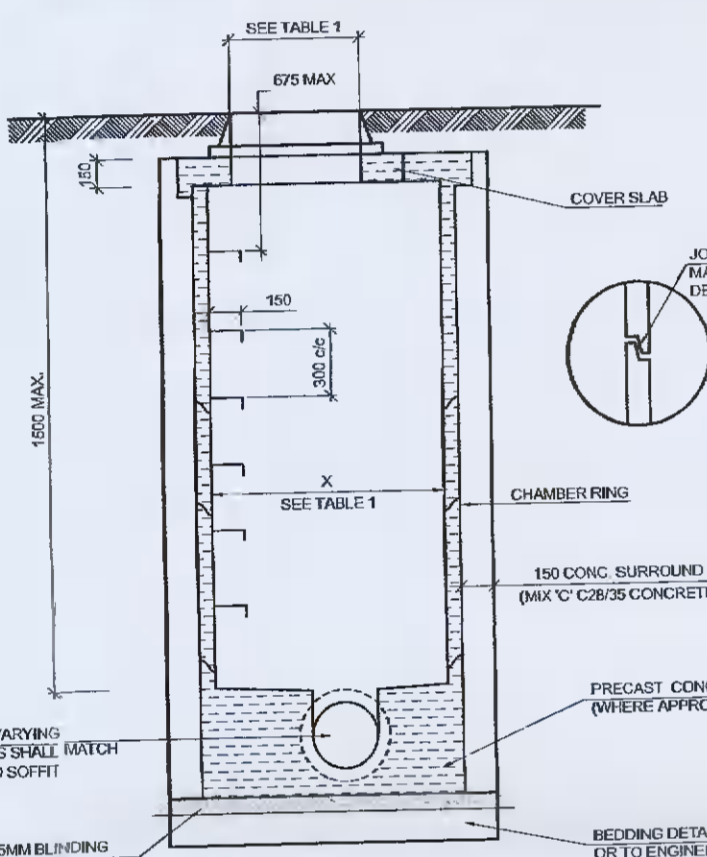


TYPICAL PLAN OF MANHOLE

DN OF LARGEST PIPE IN MANHOLE	MANHOLE DIAMETER X(m)	CLAR OPENING SIZE FOR COVER	CLEARANCE
≤ 150	1200	750x750 (NOTE 1)	NOTE 2
225	1200	1200x675	NOTE 2
300	1350	1200x675	NOTE 2
375-450	1350	1200x675	NOTE 2
500-700	1500	1200x675	NOTE 2
750-900	1800	1200x675	NOTE 2

TABLE 1

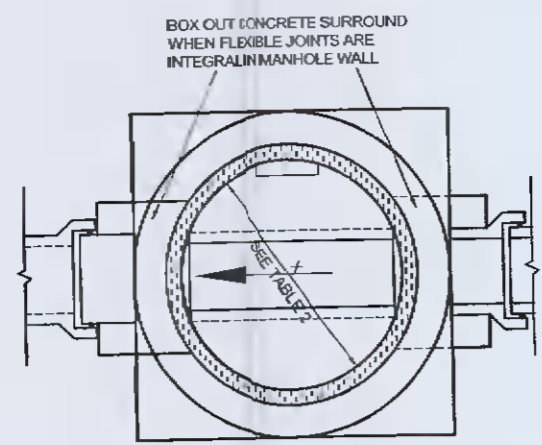
- NOTES:**
- MAY BE REDUCED TO 600x600 WHERE:
 - (a) THE CONFIGURATION OF THE MANHOLE CHAMBER PERMITS A SAFE SYSTEM OF WORK
 - (b) REQUIRED BY HIGHWAY LOADING CONSIDERATIONS SUBJECT TO A SAFE SYSTEM OF WORK SPECIFIED.
 - CIRCULAR OPENING NOT PERMITTED DUE TO WORKING SPACE NEEDED.
 - PIPES MAY BE POSITIONED OFF CENTRE BUT A MINIMUM WIDTH OF 225mm BENCHING MUST BE PROVIDED ON EACH SIDE OF THE PIPE.



TYPICAL SECTION THROUGH MANHOLE

MANHOLE TYPE P2

DN 1500 - 9000
UP TO 45° BEND
DEPTH FROM COVER TO SOFFIT OF PIPE >1.5m <6m

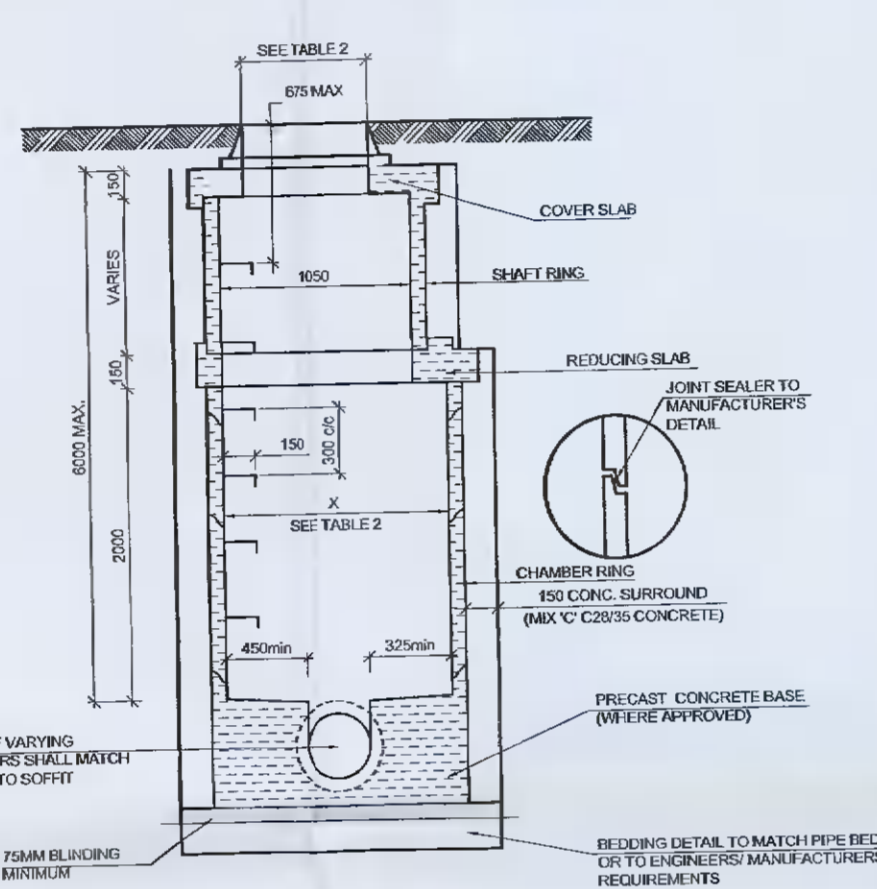


TYPICAL PLAN OF MANHOLE

DN OF LARGEST PIPE IN MANHOLE	MANHOLE DIAMETER X(m)	CLAR OPENING SIZE FOR COVER	CLEARANCE
≤ 150	1200	600x600	6000
225	1200	600x600	6000
300	1300	600x600	6000
375-450	1300	600x600	6000
500-700	1500	600x600	6000
750-900	1800	600x600	6000

TABLE 2

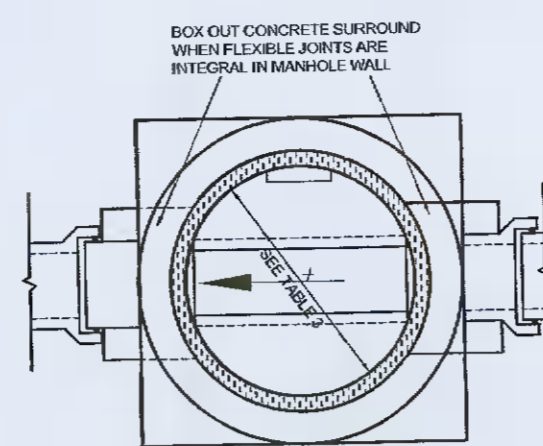
- NOTES:**
- WHERE THERE ARE MORE THAN TWO BRANCHES ENTERING THE MAIN LINE 'X' IS THE LARGER OF 'X' IN THE TABLE ABOVE OR 300mm FOR EACH (DN) OR (DN) ENTRY ON THE SIDE HAVING MOST BRANCHES PLUS AN ALLOWANCE AT THE DOWNSTREAM END FOR ANGLE OF ENTRY.
 - PIPES MAY BE POSITIONED OFF CENTRE BUT A MINIMUM WIDTH OF 225mm BENCHING MUST BE PROVIDED ON EACH SIDE OF THE PIPE.



TYPICAL SECTION THROUGH MANHOLE

MANHOLE TYPE P3

DN 1500 - 9000
0° TO 90° BEND
DEPTH FROM COVER TO SOFFIT OF PIPE <1.5m

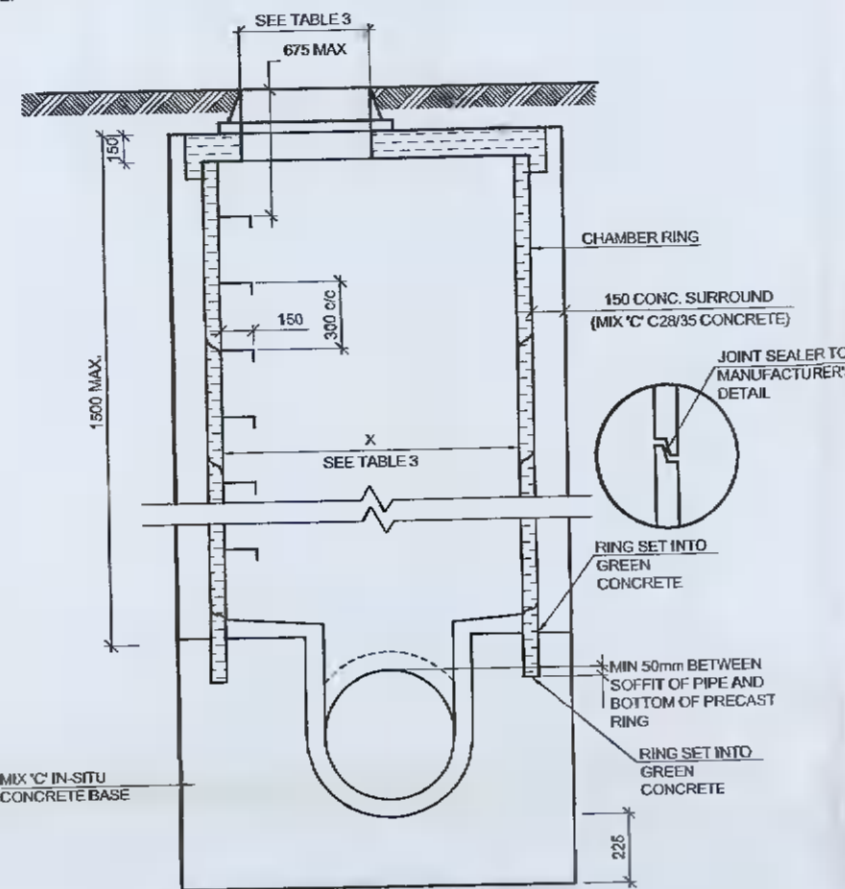


TYPICAL PLAN OF MANHOLE

DN OF LARGEST PIPE IN MANHOLE	MANHOLE DIAMETER X(m)	CLAR OPENING SIZE FOR COVER	CLEARANCE
≤ 150	1200	750x750 (NOTE 1)	NOTE 2
225	1300	1200x675	NOTE 2
300	1350	1200x675	NOTE 2
375-450	1350	1200x675	NOTE 2
500-700	1500	1200x675	NOTE 2
750-900	1800	1200x675	NOTE 2

TABLE 3

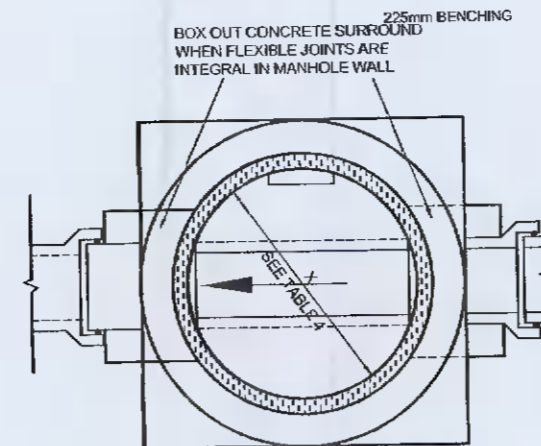
- NOTES:**
- MAY BE REDUCED TO 600x600 WHERE:
 - (a) THE CONFIGURATION OF THE MANHOLE CHAMBER PERMITS A SAFE SYSTEM OF WORK
 - (b) REQUIRED BY HIGHWAY LOADING CONSIDERATIONS SUBJECT TO A SAFE SYSTEM OF WORK SPECIFIED.
 - CIRCULAR OPENING NOT PERMITTED DUE TO WORKING SPACE NEEDED.
 - PIPES MAY BE POSITIONED OFF CENTRE BUT A MINIMUM WIDTH OF 225mm BENCHING MUST BE PROVIDED ON EACH SIDE OF THE PIPE.



TYPICAL SECTION THROUGH MANHOLE

MANHOLE TYPE P4

DN 1500 - 9000
0° TO 90° BEND
DEPTH FROM COVER TO SOFFIT OF PIPE >1.5m <6m

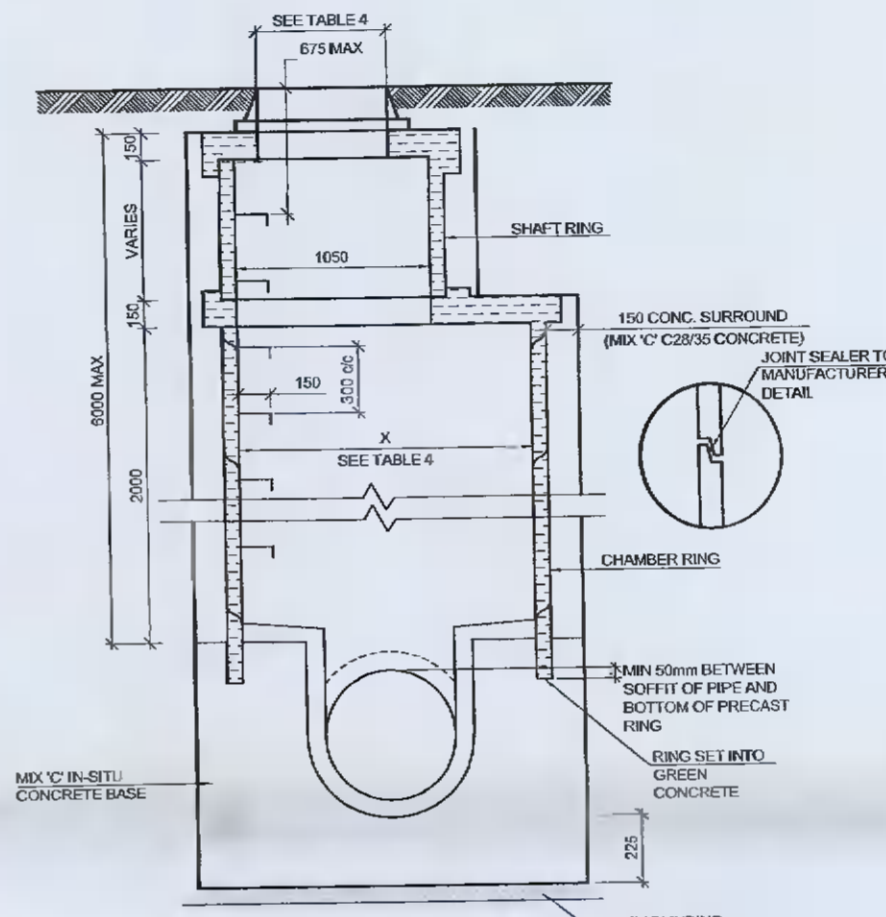


TYPICAL PLAN OF MANHOLE

DN OF LARGEST PIPE IN MANHOLE	MANHOLE DIAMETER X(m)	CLAR OPENING SIZE FOR COVER	CLEARANCE
≤ 150	1200	600x600	6000
225	1200	600x600	6000
300	1200	600x600	6000
375-450	1350	600x600	6000
500-700	1500	600x600	6000
750-900	1800	600x600	6000

TABLE 4

- NOTES:**
- WHERE THERE ARE MORE THAN TWO BRANCHES ENTERING THE MAIN LINE 'X' IS THE LARGER OF 'X' IN THE TABLE ABOVE OR 300mm FOR EACH (DN) OR (DN) ENTRY ON THE SIDE HAVING MOST BRANCHES PLUS AN ALLOWANCE AT THE DOWNSTREAM END FOR ANGLE OF ENTRY.
 - PIPES MAY BE POSITIONED OFF CENTRE BUT A MINIMUM WIDTH OF 225mm BENCHING MUST BE PROVIDED ON EACH SIDE OF THE PIPE.

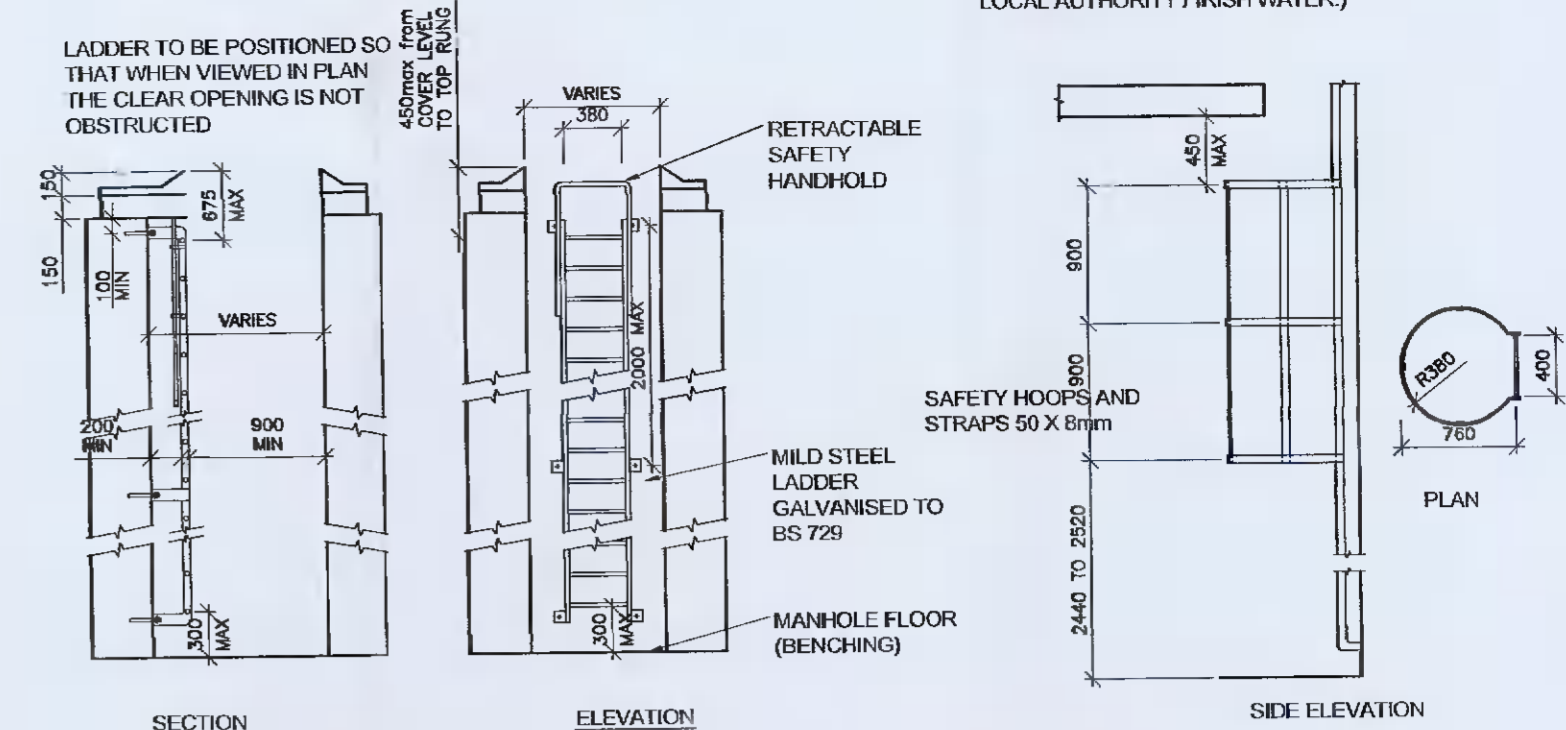


TYPICAL SECTION THROUGH MANHOLE

SAFETY ACCESS LADDER

(TO BE USED ON MANHOLES IN EXCESS OF 2.5m DEEP)

LADDER TO BE POSITIONED SO THAT WHEN VIEWED IN PLAN THE CLEAR OPENING IS NOT OBSTRUCTED

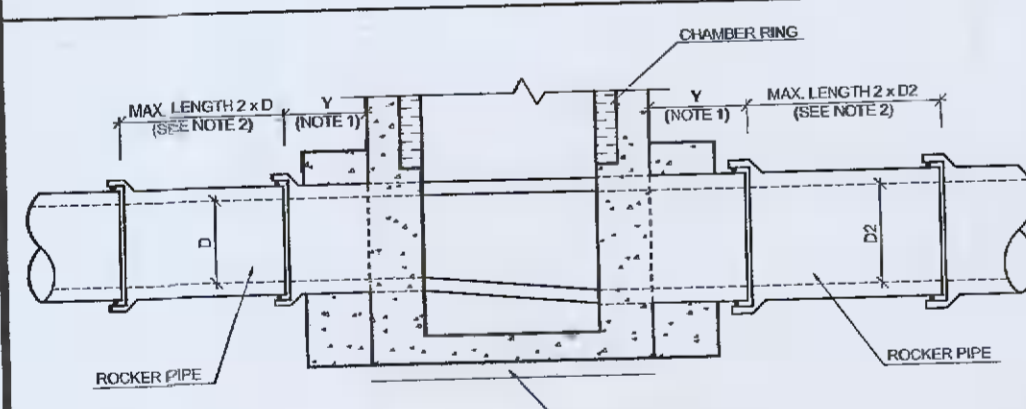


- STRINGERS SHALL BE NOT LESS THAN 65mm X 12mm SECTION
- STRINGERS SHALL BE ADEQUATELY SUPPORTED AT THE MANHOLE WALLS AT INTERVALS OF NOT MORE THAN 3 METRES. STRINGER SUPPORTS SHALL NOT BE BUILT INTO THE MANHOLE WALL BUT BOLTED TO BUILT IN CLEATS TO FACILITATE REMOVAL.
- RUNGS SHALL NOT BE LESS THAN 22mm DIAMETER AT 300mm MAX. CENTRES WITH 300mm MIN BETWEEN STRINGERS.
- WHERE LADDERS ARE USED A MINIMUM WIDTH OF BENCHING OF 400mm SHALL BE PROVIDED BETWEEN THE LADDER RUNGS AND THE CHAMBER TO PROVIDE A SAFE WORKING AREA.

NOTES:

- MANHOLE COVERS AND FRAMES SHALL HAVE 600mm MIN CLEAR OPENING AND SHALL COMPLY WITH CLAUSE 1.9.7 & SECTION 2 OF THE SPECIFICATION AND THE REQUIREMENTS SET OUT IN IRISH WATERS WASTEWATER INFRASTRUCTURE CODE OF PRACTICE AND STANDARD DETAILS.
- A THIRD PARTY TEST REPORT DETAILING COMPLIANCE WITH EN 124 SHALL BE PROVIDED BY THE CONTRACTOR FOR EACH MANHOLE COVER USED.
- STEP RUNGS AND ACCESS LADDERS SHALL COMPLY WITH THE DETAILS ON THIS DRAWING AND WITH CLAUSE 1.9.4 OF THE SPECIFICATION AND THE REQUIREMENTS SET OUT IN IRISH WATERS WASTEWATER INFRASTRUCTURE CODE OF PRACTICE AND STANDARD DETAILS.
- ALL MANHOLE COVERS SHALL BE LOCKABLE.
- WHERE DETAILED IN THE SPECIFICATION MANHOLE COVERS SHALL HAVE CUSTOMISED COVER MARKINGS DETAILING THE TYPE OF SEWERAGE SYSTEM AND COMPANY LOGO OR LOCAL AUTHORITY CREST.
- POLYETHYLENE FRAME INSERTS OR EQUAL AND APPROVED DEVICES SHALL BE INCORPORATED INTO THE COVER MANUFACTURE TO PREVENT 'TOCKING'.
- CHANNELS AND BENCHING TO COMPLY WITH CLAUSE 1.9.2 OF THE SPECIFICATION.
- THE COVER FRAME SHALL BE BEDDED ON A MINIMUM OF 1no. COURSE AND MAXIMUM OF 3no. COURSES OF CLASS B ENGINEERING BRICKS SET IN C50/60 MORTAR.
- MANHOLE STEPS TO COMPLY WITH IS EN 13101, TYPE D, CLASS 1, GALVANISED MILD STEEL AND PLASTIC ENCAPSULATED. STEPS ARE REQUIRED IN MANHOLES UP TO A DEPTH OF 2.5m.
- FOR MANHOLES DEEPER THAN 2.5m FIXED ACCESS LADDERS SHALL BE USED INSTEAD OF ACCESS RUNGS.
- CONCRETE IN BLINDING TO BE MIX 'A' (10N/mm²) TO A MINIMUM DEPTH OF 75mm.
- ACCESS LADDERS SHALL BE FITTED WITH SAFETY HOOPS WHERE NO ACCESS SHAFT IS PROVIDED OR ACCESS SHAFT DIMENSIONS EXCEED 1200mm X 800mm.
- 'DN' DENOTES PIPE DIAMETER.
- PRECAST CONCRETE MANHOLES SHALL COMPLY WITH CLAUSE 1.9.8 OF THE SPECIFICATION AND THE REQUIREMENTS SET OUT IN IRISH WATERS WASTEWATER INFRASTRUCTURE CODE OF PRACTICE AND STANDARD DETAILS.

THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE PIPEWORK AND MANHOLE SECTIONS OF THE SPECIFICATION AND IRISH WATERS WATER AND WASTEWATER CODES OF PRACTICE AND STANDARD DETAILS



TYPICAL PIPE CONNECTION DETAIL TO BASE

- NOTES:**
- 'Y' SHORT LENGTH OF PIPE PROJECTING NOT MORE THAN 450mm BEYOND THE EXTERNAL FACE OF THE MANHOLE. BUILT INTO THE MANHOLE WALLS AND SURROUNDED WITH 150mm THICK C50/60 LONG MIX 'C' CONCRETE.
 - EMBARKING 'Z' MAY BE VARIED SO AS NOT TO EXCEED 75mm FOR PIPES UP TO 4500 AND 100 FOR PIPES UP TO 7500.

C01	AP	ISSUED FOR PLANNING	18.11.2021
REV	SUIT	DESCRIPTION	DATE
DRAWING STATUS:			
ISSUED FOR PLANNING			
CHECKED BY:	RON	REVIEWED BY:	JM
APPROVED BY:	JM		
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PROJECT:	PROPOSED RESIDENTIAL DEVELOPMENT AT GORDON PARK		
CLIENT:	GREENWALK DEVELOPMENT LTD.		
DRAWING TITLE:	STANDARD MANHOLE DETAILS PRECAST CONCRETE MANHOLES		
SCALE:	N.T.S.		(A1)
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER	21003-TJOC-ZZ-ZZ-DR-C-0076	REV:	C01