

CROSS-SECTION VIEW OF SEWER

WATER BEFORE ADVANCING WITH THE WORKS.

THE PIPE OF 750mm.

ALL DIMENSIONS ARE IN MILLIMETERS(mm) UNLESS NOTED OTHERWISE

WITH BS EN 622-1 AND BS EN 622-4, AND TO BE 18mm THICK.

CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 AND TO BE CLASS C16/20.

BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PE OR PVC PIPES

4 4 4 4 4

TYPE 'A'

TYPE 'C'

EXTERNAL DIAMETER OF PIPE

THE HAUNCHES AND SURROUNDS TO BE FORMED USING FORM WORK TO PROVIDE A ROUGH CAST FINISH

NOTES:

45° JUNCTION

TYPICAL SEWER/SERVICE PIPE CONNECTION STD-WW-04

CONCRETE PIPE BEDS AND HAUNCHES MAY BE REQUIRED TO ADDRESS MINIMUM COVER SITUATIONS, AND SHALL BE SUBJECT TO SUBMISSION AND ASSESSMENT BY IRISH

EXPANSION JOINTS IN THE CONCRETE SHALL BE PROVIDED AT ALL PIPE JOINTS TO ALLOW FOR PIPE FLEXIBILITY, COMPRESSIBLE FILLER BOARD TO BE IN ACCORDANCE

EXPANSION JOINT WITH COMPRESSIBLE FILLER

SPIGOT AND SOCKET JOINT

CONCRETE BED, HAUNCH AND SURROUND TO

WASTEWATER PIPES STD-WW-08

POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.

2. AS FAR AS PRACTICABLE, JUNCTIONS AND SERVICE CONNECTIONS SHALL BE BUILT IN FOR ALL PLANNED USERS WHEN THE SEWER IS BEING CONSTRUCTED. WHERE IT IS NECESSARY TO MAKE A POST-CONSTRUCTION CONNECTION THE DEVELOPER SHALL BRING THE SEWER TO THE INSPECTION CHAMBER, INSTALL THE INSPECTION CHAMBER AND SEAL THE UPSTREAM END WHERE THE CONNECTION IS BEING MADE TO A SEWER WITH A NOMINAL INTERNAL DIAMETER OF 300mm OR LESS, CONNECTION SHALL BE MADE USING 45° ANGLE JUNCTIONS A. IF THE DIAMETER OF THE CONNECTING PIPE IS GREATER THAN HALF THE DIAMETER OF THE SEWER, AN ACCESS MANHOLE SHALL BE CONSTRUCTED TO FORM THE CONNECTION POINT. OR B. IF THE DIAMETER OF THE CONNECTING PIPE IS LESS THAN OR EQUAL TO HALF THE DIAMETER OF THE SEWER, THEN THE CONNECTION SHALL BE MADE USING A PREFORMED SADDLE CONNECTIONS MADE WITH SADDLE FITTINGS SHALL BE MADE BY CUTTING AND SAFELY REMOVING A CORE FROM THE PIPE AND JOINTING THE SADDLE FITTING TO THE PIPE IN ACCORDANCE

DIRECTION OF ARROW A

VIEW IN DIRECTION OF ARROW A

SEE NOTE 7

CONCRETE PIPE BEDS AND HAUNCHES SHALL HAVE A MINIMUM THICKNESS OF 150mm WITH AN ABSOLUTE MINIMUM DEPTH OF COVER ABOVE THE EXTERNAL CROWN OF MANHOLE STEPS TO COMPLY WITH IS EN 13101,

TYPE 'B'

EXTERNAL DIAMETER

OF _IPIPE

<u>TYPE 'D'</u>

CONCRETE PIPE SURROUND

COMPRESSIBLE FILLER

GRASSED AREAS TOPSOIL TO MATCH EXISTING SELECTED BACKFILL REFER TO NOTE 4 FOR DETAILS MARKER TAPE REF TO NOTE 9 FOR < 80 RISING MAIN D<u>etails</u> 150 200 250 350 PIPE BEDDING REFER NOTE 5 FOR DETAILS 400 450 PIPE DIAMETER 'A' (mm) PIPE DIAMETER-'A < 100 150 - 450 MINIMUM TRENCH WIDTH-'B

BACKFILL REFER TO NOTE 3 FOR DETAILS MARKER TAPE REFER SEE NOTE 10 TO NOTE 9 FOR 500 DETAILS 600 750 750 750 PIPE BEDDING REFER TO NOTE 5 FOR DETAILS 900 DEPTH, OF, BEDDING C´ (mm) 100 _PIPE DIAMETER—*"A* 200 MINIMUM TRENCH WIDTH-'B'

CROSS SECTION IN ROADS

ROAD/FOOT PATH SURFACE

TRENCH BACKFILL AND BEDDING STD-WW-07

ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE. PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND BS 5911-PART 3

MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.

MIN. 600

MANHOLE COVER AND FRAME SHALL COMPLY TO

1 No. COURSE MIN.—

C50/60 MORTAR

TYPE D, CLASS 1, GALVANISED MILD STEEL &

PLASTIC ENCAPSULATED. STEPS ARE REQUIRED

IN MANHOLES UP TO A GROUND TO PIPE SOFFIT

DEPTH OF LESS THAN 3.0m. MANHOLE LADDERS

ARE REQUIRED FOR MANHOLES WHITH A DEPTH

IN EXCESS OF 3.0m & ARE TO COMPLY WITH IS

EN 14396 ELASTOMETRIC JOINT SEAL TO EN 681-

3 NO. COURSES MAX OF CLASS

B ENGINEERING BRICKS SET IN

1: 3 CEMENT:SAND MORTAR WITH

STEEL TROWEL FINISH AT A 1:30

SLOPE TOWARDS THE CHANNEL

600mm WIDE

450mm OR MORE

SELF CLEANING TOE HOLES TO BE PROVIDED WHERE CHANNEL EXCEEDS

STAINLESS STEEL CHAIN IN "DOWN"

POSITION SECURED TO RESTRAINING HOOK, WHEN CHAMBER IS OCCUPIED 1

WHERE THE PIPE DIAMETER IS

IS EN 124 AND BS 7903 (ALL CLASS D400

COVERS SHALL HAVE MIN. FRAME DEPTH

100-150mm) MIN OPE. 600x600mm

CROSS SECTION IN GRASSED AREAS

THICKER MANHOLE BASES REQUIRED FOR SEWERS IN EXCESS OF 3m DEEP WHERE THE SIZE IS GREATER THAN THE STANDARD MINIMUM SIZE. APPROVED PRE-CAST CONCRETE BASES MAY BE USED INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER REVIEW AND COMPLYING WITH BS 5911-PART 4 2002.

STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW. MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW. MANHOLE ROOFS SHALL CONSIST OF RE-INFORCED CONCRETE SLAB OF IN-SITU CONCRETE, C30/37, WITH A MINIMUM THICKNESS OF 225mm DESIGNED TO CARRY ALL LIVE AND DEAD LOADS, ALTERNATIVELY, APPROVED PRE-CAST CONCRETE ROOF SLABS MAY BE USED SUBJECT TO IRISH

WATER REVIEW AND COMPLIANCE WITH BS 5911 PART 4: 2002. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO APPROVAL FROM IRISH WATER. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVERS IN GREEN AREAS. 10. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION

11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 : 2013. 12. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.

13. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.

COVER TO BE SET

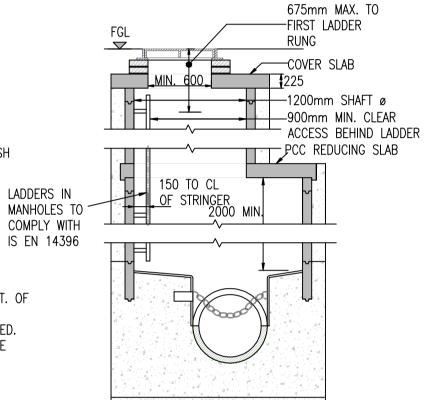
P.C RING DAMETER

14. EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.

SEE NOTES 12, 13 & 14

-675mm MAX TO FIRST STEP

15. IF DEPTH FROM GROUND TO PIPE SOFFIT IS GREATER THAN 6m DEEP, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED. 16. PROPRIETARY WATERTIGHT PCC MANHOLE RING SYSTEMS WITH A WALL THICKNESS > 125mm, & A WATER TIGHT JOINT SEALING SYSTEM, MAY BE USED WITHOUT CONCRETE SURROUND, SUBJECT TO THE GROUND WATER LEVEL AT THE MANHOLE BEING LOW, & SUBJECT TO REVIEW BY IRISH



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 WEBSITE 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.

9. PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT

ALONG THE TRENCH. ROCK SHALL BE EXCAVATED

SPECIFICATION FOR ROAD WORKS. THE GRANULAR

INSTALLED 350mm FROM THE SURFACE OF THE

ROAD. IN THE CASE OF NON METAL PIPE MATERIAL

THE MARKER TAPE SHOULD INCORPORATE A TRACE

WIRE WHICH IS LINKED TO FITTINGS AND TERMINATE

AT THE WASTE WATER PUMPING STATION AND THE

11. TRENCH WIDTH FOR PIPE SIZE <80mm MAY BE

CONSTRUCTION ACCESS REQUIREMENTS.

<500mm SUBJECT TO CONSIDERATION BEING

GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY,

MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL

TO A DEPTH OF 150mm BELOW THE ACTUAL

WITH CLAUSE 808 MATERIAL IN ACCORDANCE

WITH THE NATIONAL ROADS AUTHORITY

10. NON DEGRADABLE MARKER TAPE SHOULD BE

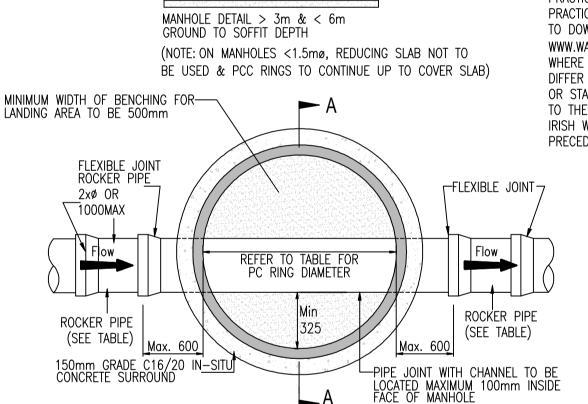
MATERIAL.

DISCHARGE MANHOLE.

DEPTH OF THE TRENCH WITH THE VOID FILLED

MANHOLE DETAIL > 3m & < 6m GROUND TO SOFFIT DEPTH

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO



<u>PLAN</u>									
MINIMUM MANH	OLE DIAMETERS	ROCKER PIPE LENGTH							
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)	DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	ROCKER PIPE LENGTH (mm)						
LESS THAN 375	1,200	150 TO 600	600						
375 TO 450	1,350	GREATER THAN 600 TO 750	1,000						
500 TO 750	1,500	GREATER THAN 750	1,250						

DISTANCE BETWEEN TOP OF PIPE & UNDERSIDE OF PRECAST SECTION TO BE MIN. 50mm TO MAX. 300mm FIRST RING SUNK INTO ∽ IN-SITU CONCRETE BASE ~REINFORCED CONCRETE BASE GRADE C30/37 INVERT SHOULD BE FORMED WITH CAST-INSITU CONCRETE C25/30 20mm AGGREGATE FINISHED WITH A 1:3 CEMENT SAND MORTAR

-PRECAST CONCRETE MANHOLE

-150mm GRADE C16/20 IN-SITU

-BOTTOM PRECAST SECTION TO

CONCRETE MINIMUM 75 mm

WITH IS EN 1917 : 2004

CONCRETE SURROUND

BE BUILT INTO BASE

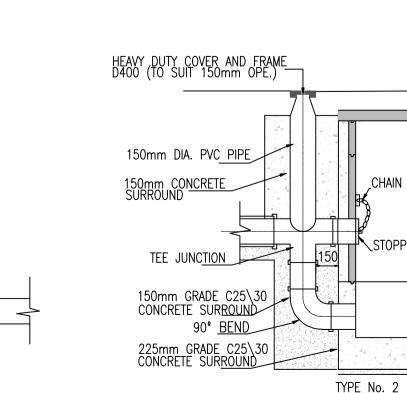
CONSTRUCTION JOINT

RINGS TO IS 420 IN CONJUNCTION

∼75mm GRADE C12/15 BLINDING CONCRETE SECTION A-A

PRE-CAST CONCRETE MANHOLE STD-WW-10

SCALE 1:25

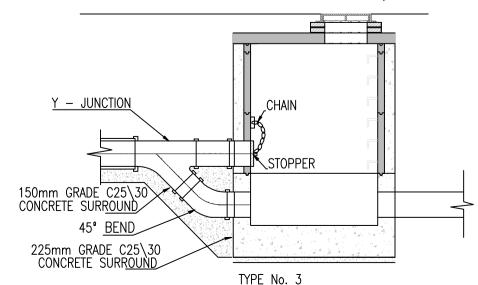


150mm - 450mm DIA. (INCL.) DROP GREATER THAN 900 AND LESS THAN 1700mm 500mm - 900mm DIA. (INCL.) DROP GREATER THAN 1300mm AND LESS THAN 2300mm

BACKDROP MANHOLES STD-WW-12

ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE. RODDING EYE CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 AND BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER. 3. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.

4. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206. MANHOLE DETAILS TO BE IN ACCORDANCE WITH STD-WW-09, 10 AND 11



150mm - 450mm DIA. (INCL.) DROP GREATER THAN 600mm AND LESS THAN 900m 500mm - 900mm DIA. (INCL.) DROP GREATER THAN 600mm AND LESS THAN 1300mm

1:1 0 10 20 30 40 50 60 70 80 90 100

SHOULD BE AS FOLLOWS: GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS — DEPTH NOT LESS THAN 0.5 M. (THIS WOULD NORMALLY RELATE TO DRAINS IN PRIVATE PROPERTY, SHALLOW PIPES OF THIS NATURE ARE UNDESIRABLE AND SHOULD BE INSTALLED IN ACCORDANCE

This drawing should not be scaled. Dimensions to be verified on site

Any discrepancies should be referred to the Engineer prior to work being put in hand.

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THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL

. THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE

TO THE CROWN OF GRAVITY PIPES WITHOUT PROTECTION

DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.

OTHER RELEVANT ARCHITECTURAL AND ENGINEERING

. DRIVEWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.75 M.

WITH THE CURRENT BUILDING REGULATIONS).

DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9 M.

. DEPTHS OF SEWERS IN GATED ESTATES SHALL BE SIMILAR TO THAT OUTLINED ABOVE.

AGRICULTURAL LAND AND PUBLIC OPEN SPACE — DEPTH NOT LESS THAN 0.9 M.

OTHER HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.2 M.

4. CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS.

. SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO THE APPROVAL OF IRISH WATER.

. PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE IS EN 13242 CONCRETE BED HAUNCH & SURROUND WHERE REQUIRED SHALL BE TO STD-WW-08

IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 808 MATERIA IN ACCORDANCE WITH THE THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL. WRAPPED IN GEO-TEXTILE WRAPPING. ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE THE DEPT OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.

8. IN GREEN FIELD AREAS, TYPE B BACKFILL (SELECTED EXCAVATED MATERIAL) WILL BE ALLOWED ABOVE THE SIDE HAUNCH GRANULAR MATERIAL IN THE CASE OF RIGID PIPES A GRANULAR SURROUND OF A MINIMUM DEPTH OF 150mm ABOVE THE CROWN OF THE PIPE IS REQUIRED FOR FLEXIBLE PIPES, AND TYPE B MATERIAL MAY BE USED AS BACKFILL ABOVE THIS. ALL RISING MAINS IN GREENFIELD AREAS SHALL HAVE A MINIMUM COVER OF 300mm OF GRANULAR MATERIAL ABOVE THE EXTERNAL CROWN OF THE PIPE.

Rev	Date	Description	Ву	Chk		
Amendments						
Project						

CHERRY ORCHARD POINT

TYPICAL PUBLIC FOUL DRAINAGE CONSTRUCTION DETAILS

LAND DEVELOPMENT AGENCY



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PLANNING						
PJD	Approved	IW	Waterman R			

22-010 OCT 2023 1:25 Project - Originator - Volume - Level - Type - Role - Number

COP-WMC-PH1-00-DR-C-P231

HEAVY DUTY COVER AND FRAME D400 (TO SUIT 150mm OPE.) 150mm DIA. PVC PIPE 150mm CONCRETE SURROUND CHAIN STOPPER Y - JUNCTION 45° BEND 90° BEND

> TYPE No. 1 150mm – 450mm DIA. (INCL.) DROP GREATER THAN 1700mm 500mm - 900mm DIA. (INCL.) DROP GREATER THAN 2300mm

SCALE 1:25