

- SEE MANHOLE COVE	ĒR			AND FRAME - SEE MAN COVER NOTE	HOLE	
	1 TO 2 COURSES OF SOLID	1 TO 2 COURSES OF SOLID ENGINEERING BRICKS CI B TO I.S. 91:1983 SET IN 1:3				
	ENGINEERING BRICKS CI B TO I.S. 91:1983 SET II (CEMENT AND MORTAR) 600mm SQUARE OPE IN ROOF SLAB	(CEMENT AND MORTAR) $$		550		600mm SQUAF SLAB FOR MANHOLI SEE NOTES BENCHING FIN CEMENT MOR TROWEL FINIS TOWARDS CH
	FOR MANHOLE CONSTRUCTION SEE NOTES	RELIEVING ARCH FORMED BY 215 x 103 x 65 SOLID ENGINEERING BRICK CLASS A OR B AS PER DRAWING - SEE NOTES ROCKER PIPE —				PIPE SHOULD THE INSIDE SU MANHOLE WA CHANNEL EXT LENGTH OF TH FOR PRECAST RELIEVING AR 215 x 103 x 65 BRICK CLASS DRAWING - SE
	BENCHING AND PIPE CHANNEL PIPE SURROUND CL 20/20 CONCRETE 225mm THICK CL20/20 MASS CONCRETE FOUNDATIONS	SHORT LENGTH OF PIPE AND PIPE JOINT EXTERNAL TO MANHOLE SHALL NOT EXCEED 600mm FROM THE INNER FACE OF MANHOLE WALL				BRAWING - SE SHORT LENGT PIPE JOINT EX MANHOLE SH/ 600mm FROM OF MANHOLE — ROCKER PIPE
215 200			200 215	1360 _ 215	5 200	

# MINIMUM MANHOLE DIAMETERS

L DIA. OF	MIN. PRECAST ROOF	MIN. IN-SITU ROOF	
.E(mm)	SLAB EFFECTIVE	SLAB EFFECTIVE	
	THICKNESS (mm)	THICKNESS (mm)	
00	160	225	
50	160	225	
00	170	225	

### ROCKER PIPE | ENGTH

DIA. (mm)	ROCKER PIPE	
	LENGTH (mm)	
to 600	600	
HAN 600 to 750	1000	
HAN 750	1250	

## **IRISH WATER NOTES:**

#### GENERAL NOTE:

ALL PIPEWORK, MANHOLES, CHAMBERS AND ASSOCIATED PIPEWORK TO BE CONSTRUCTED TO CURRENT IRISH WATER CODES OF PRACTICE AND STANDARD DETAILS

#### COVERS:

MANHOLE COVERS AND FRAMES TO COMPLY WITH THE REQUIREMENTS OF IS/EN 124:1994 & BS 7903 COVERS IN SERVICE YARDS TO BE APPROVED MINIMUM CLASS E600 WITH 600mm CLEAR OPENINGS. ROADWAYS TO BE AN APPROVED MINIMUM CLASS D400 WITH 600mm CLEAR OPENING. COVERS IN GRASSED AREAS AND FOOTPATHS NOT ADJACENT TO ROADWAYS TO BE MINIMUM CLASS C250 WITH600mm CLEAR OPENING.

COVER TO BE SET IN CEMENTITOUS EPOXY RESIN/POLYESTER MORTAR 30N/mm2

# MANHOLE STEPS:

MANHOLE STEPS TO COMPLY WITH IS EN 13101, ENGLISH GARDEN WALL BOND. TYPE D, CLASS 1, GALVANISED MILD STEEL & PLASTIC ENCAPSULATED. STEPS ARE REQUIRED IN MANHOLES UP TO A DEPTH OF 2.5m.

#### ACCESS LADDERS:

ACCESS LADDERS TO BE MANUFACTURED FROM MILD STEEL WITH 65mm x 12mm STRINGERS 300mm APART WITH 20mm DIAMETER RUNGS AT 300mm c/c. MILD STEEL STAYS 65mm x12mm TO BE PROVIDED AT STAYS TO BE HEAVILY GALVANISED TO BS 729AFTER MANUFACTURE. THE LADDER IS TO BE FIXED WITH 18mm DIAMETER STAINLESS STEEL BOLTS.

LADDERS ARE REQUIRED FOR MANHOLES WITH A DEPTH IN EXCESS OF 2.5m & ARE TO COMPLY WITH IS EN 14396 & WITH BS 4211.

#### **BENCHING**:

1:3 CEMENT:SAND MORTAR WITH STEEL TROWEL FINISH AT A 1:30 SLOPE TOWARDS THE CHANNEL



JARE OPE IN ROOF

#### OLE CONSTRUCTION

FINISHED IN 2:1 SAND ORTAR WITH A SMOOTH NISH, AT 1 IN 30 SLOPE CHANNEL LD BE CUT FLUSH WITH SURFACE OF THE VALL SO THAT THE

EXTENDS THE FULL THE MANHOLE (EXCEP AST MANHOLES)

ARCH FORMED BY **65 SOLID ENGINEERING** SS A OR B AS PER SEE NOTES

IGTH OF PIPE AND EXTERNAL TO SHALL NOT EXCEED

OM THE INNER FACE LE WALL

#### NO DIMENSION SHALL BE SCALED FROM THIS DRAWING, ALL DIMENSIONS SHALL BE SITE CHECKED. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES BEFORE WORK PROCEEDS

# General

Notes :-

- 1. If this drawing has been received electronically it is the recipients responsibility to print the document to the correct scale.
- 2. All dimensions are in (mm.) unless otherwise noted.
- 3. All levels are in meters above datum unless otherwise noted.
- 4. This drawing is to be read in conjunction with all the relevant Engineers', Services Engineers, Manufacturers & Architects drawings and specifications.

### GENERAL NOTES :-

- ALL BRICK TO BE SOLID ENGINEERING BRICK CLASS A OR B
- FOR PIPE DIAMETER >750mm USE MANHOLE WITH INTERNAL DIAMETER SIZE= PIPE SIZE + 1 METRE + 300mm
- DISTANCE FROM THE TOP RUNG OF THE LADDER TO GROUND LEVEL MUST BE A MAXIMUM OF 500mm.

### SURFACE WATER MANHOLE NOTES:-

FOR SURFACE WATER MANHOLES HIGH DENSITY BLOCKS TO CL.S10 OF I.S.20 PART 1: 1987 OR CL.30/20 IN-SITU CONCRETE. BLOCKWORK SHALL BE BEDDED AND JOINTED USING MORTAR DESIGNATION THREE TO I.S.406. BEDS AND VERTICAL JOINTS SHALL BE COMPLETELY FILLED WITH MORTAR AS THE BLOCKS ARE LAID. JOINTS SHALL BE FLUSH POINTED AS THE WORK PROCEEDS ALL FOUL MANHOLES MUST BE FACED IN SOLID ENGINEERING BRICK (MIN CLASS A OR B), OR IN-SITU CONCRETE FOR 1m ABOVE BENCHING LEVEL BRICK TO BE BONDED TO BLOCKWORK USING

### MANHOLE COVER NOTE:

CLASS D400 MANHOLE COVER AND FRAME TO IS/EN 124. 150mm DEEP FRAME FOR ROADS, 100mm DEEP FOR FOOTPATHS AND GREEN AREAS. NON-ROCK DESIGN, CLOSED KEYWAYS, MANUFACTURED FROM SPHEROIDAL GRAPHITE CAST IRON (DUCTILE CAST IRON), 600x600 (OR 600 DIAM) CLEAR OPENING, COVER & FRAME COATED IN BITUMEN OR OTHER APPROVED MATERIAL, COVER TO HAVE A MINIMUM MASS OF 140kg/m2, FRAME BEARING AREA SHALL BE 80,000mm2 INTERVALS NOT EXCEEDING 2.4m. LADDER AND | MIN., FRAMES SHALL BE DESIGNED TO PREVENT COVERS FALLING INTO MANHOLE. FRAMES SHALL BE BEDDED ON APPROVED MORTAR TO MANUFACTURER'S CONSTRUCTIONS.

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