MANHOLE COVER AND FRAME SHALL COMPLY TO IS EN 124 AND BS 7903 (ALL CLASS D400 COVERS SHALL HAVE MIN. FRAME DEPTH 100-150mm) MIN. OPE. 600x600mm or 600mm Ø.

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

SEE NOTES 9, 10 & 11.

FINISHED GROUND LEVEL

1 TO 3 COURSES OF CLASS B SOLID ENGINEERING BRICKS SET IN M30 MORTAR TO ISEN 998 PROPRIETARY PRECAST RISER PIECES BEDDED ON M30 MORTAR MAY BE USED TO ACHIEVE CORRECT TOP OF COVER LEVEL (2 No. Max.)

675mm MAX. TO FIRST STEP

MIN. 600

225

25x25mm CHAMFER

120

MANHOLE STEPS TO COMPLY WITH IS EN 13101, TYPE D, CLASS 1, GALVANISED MILD STEEL & PLASTIC ENCAPSULATED. STEPS ARE REQUIRED IN MANHOLES WITH A GROUND TO PIPE SOFFIT DEPTH OF LESS THAN 3m, MANHOLE LADDERS ARE REQUIRED FOR MANHOLES WITH A DEPTH IN EXCESS OF 3.0m & ARE TO COMPLY WITH IS EN 14396.

300MIN

CONCRETE GRADE C30/37 IN ROOF, WALLS AND BASE

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

INVERT SHOULD BE FORMED WITH CAST IN-SITU CONCRETE C25/30 20mm AGGREGATE FINISHED WITH A 1:3 CEMENT SAND MORTAR

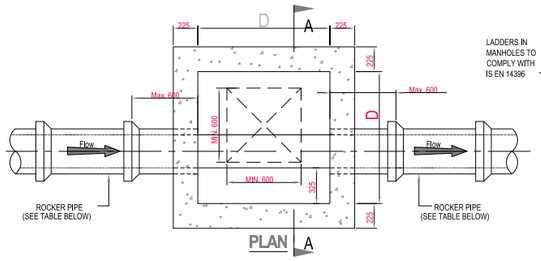
STAINLESS STEEL CHAIN IN "DOWN" POSITION SECURED TO RESTRAINING HOOK, WHEN CHAMBER IS OCCUPIED WHERE THE PIPE DIAMETER IS 450mm OR MORE

75mm GRADE C12/15 BLINDING CONCRETE

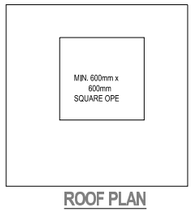
150

225

SECTION A-A

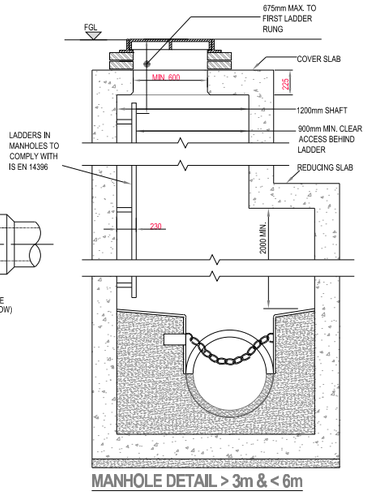


PLAN



ROOF PLAN

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. IN-SITU MANHOLES TO HAVE A MINIMUM WALL AND FLOOR THICKNESS OF 225mm FOR MANHOLE DEPTHS UP TO 3.0m AND 300mm OR MORE WHEN THE MANHOLE DEPTH EXCEEDS 3.0m.
3. STRUCTURAL DESIGN & REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW. MANHOLE ROOFS SHALL CONSIST OF A REINFORCED 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 APPROVAL AND COMPLIANCE WITH IS 420.
4. MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW.
5. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
6. 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND TO BE PROVIDED COMPLETE WITH MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.
7. 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.
8. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 : 2013.
9. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
10. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
11. 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.
12. IF DEPTH FROM GROUND TO PIPE SOFFIT EXCEEDS 6m, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED.
13. THE INTERNAL MANHOLE DIMENSIONS SHOWN IN THE TABLE BELOW ARE MINIMUM DIMENSIONS AND WILL INCREASE DEPENDING ON THE NUMBER AND DIAMETER OF ADDITIONAL INLETS AND FINISHED WITH A 1:3 SAND/CEMENT FINISH TO SUIT FLOW OF INLETS AND OUTLET.



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

(NOTE: ON MANHOLES <1.5m SHAFT DIMENSION, REDUCING SLAB NOT TO BE USED & SHAFT TO CONTINUE UP TO COVER SLAB)

ROCKER PIPE LENGTH	
PIPE DIAMETER (mm)	**ROCKER PIPE LENGTH (mm)**
150 TO 600	600
GREATER THAN 600 TO 750	1000
GREATER THAN 750	1250

MINIMUM MANHOLE DIMENSION "D"	
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	**INTERNAL DIMENSION OF MANHOLE (mm)**
LESS THAN 375	1200
375 TO 450	1350
500 TO 750	1500

* SEWERS GREATER THAN 450mm Ø ARE OUTSIDE THE SCOPE OF THE STANDARD DETAILS. MANHOLE SIZE OF THESE CHAMBERS MAY BE REUIRED DUE TO MULTIPLE PIPES WITHIN MANHOLE.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
3	07/20	RH	TOC	Notes Updated	MOD
2	11/17	JMC	TOC	Added rocker pipe table, deep manhole detail, added & updated notes.	MOD
1	08/16	JMC	TOC	Added steps & revised access ope & cover notes	MOD
0	09/15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WASTEWATER

TITLE: IN-SITU CONCRETE MANHOLE

SCALE: NOT TO SCALE | DATE: SEPT. 2015

DRAWING No.: STD-WW-11 | REV: 3

MANHOLE COVER AND FRAME SHALL COMPLY TO IS EN 124 AND BS 7903 (ALL CLASS D400 COVERS SHALL HAVE MIN. FRAME DEPTH 100-150mm) MIN. OPE. 600x600mm or 600mm Ø.

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

SURFACE BOX

SEE NOTES 9, 10 & 11.

FINISHED GROUND LEVEL

1 TO 3 COURSES OF CLASS B SOLID ENGINEERING BRICKS SET IN M30 MORTAR TO ISEN 998 PROPRIETARY PRECAST RISER PIECES BEDDED ON M30 MORTAR MAY BE USED TO ACHIEVE CORRECT TOP OF COVER LEVEL (2 No. Max.)

675mm MAX. TO FIRST STEP

MIN. 600

225

25x25mm CHAMFER

EXTENDED SPINDLE SUPPORTS AT 1.0m CENTRES MAX.

120

MANHOLE STEPS TO COMPLY WITH IS EN 13101, TYPE D, CLASS 1, GALVANISED MILD STEEL & PLASTIC ENCAPSULATED. STEPS ARE REQUIRED IN MANHOLES WITH A GROUND TO PIPE SOFFIT DEPTH OF LESS THAN 3m, MANHOLE LADDERS ARE REQUIRED FOR MANHOLES WITH A DEPTH IN EXCESS OF 3.0m & ARE TO COMPLY WITH IS EN 14396.

300MIN

CONCRETE GRADE C30/37 IN ROOF, WALLS AND BASE

SURFACE MOUNTED KNIFE GATE VALVE OPERATED FROM ABOVE.

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

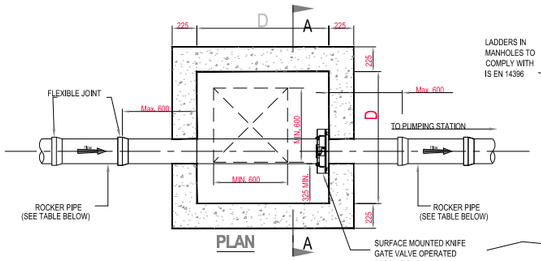
TO PUMPING STATION

150

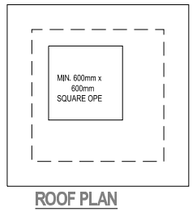
225

75mm GRADE C12/15 BLINDING CONCRETE

SECTION A-A



PLAN

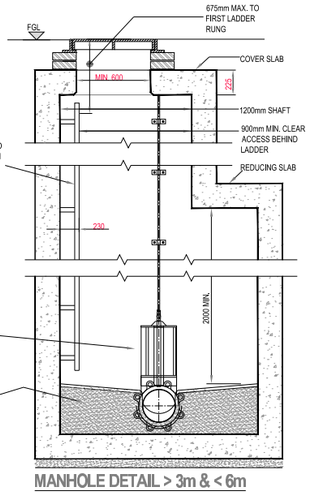


ROOF PLAN

SURFACE MOUNTED KNIFE GATE VALVE OPERATED FROM ABOVE.

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

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(NOTE: ON MANHOLES <1.5m SHAFT DIMENSION, REDUCING SLAB NOT TO BE USED & SHAFT TO CONTINUE UP TO COVER SLAB)

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DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	**INTERNAL DIMENSION OF MANHOLE (mm)**
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No.	Date	Drn	Chk	Description	App
0	07/20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WASTEWATER

TITLE: CAST IN-SITU CONCRETE PUMPING STATION INLET MANHOLE.

SCALE: NOT TO SCALE | DATE: APR. 2020

DRAWING No.: STD-WW-11A | REV: 0

Notes:

Do not scale from drawing.
For Planning Purposes only. Not for Construction.
All dimensions are in metres.
Any discrepancies found consult with design office.

Rev	By	Date	Description

Drawing Status: PLANNING
NOT CERTIFIED FOR CONSTRUCTION

Project Title: RINGWOOD PHASE 2 DEVELOPMENT

Drawing Title: PROJECT CONSTRUCTION DETAILS SHEET 03

Client: CLOCKSTRIKE LTD.

M.H.L & Associates Ltd.
Consulting Engineers
Unit 1b, The Atrium, Blackpool, Cork
Tel: 021-4840214
Fax: 021-4840215
E-Mail:info@mhl.ie

Job No:	Designed:	Drawn:	Checked:
21079HD	DM	DM	BM

Scale: AS SHOWN | Date: Nov. 2025

Drawing No: BLR-2-02-SW-ZZZ-DR-MHL-CE-03002 | Rev: _03