

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE. 2. PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND BS 5911-PART 3. 3. THICKER MANHOLE BASES REQUIRED FOR SEWERS IN EXCESS OF

3m DEEP WHERE THE SIZE IS GREATER THAN THE STANDARD MINIMUM SIZE. 4. APPROVED PRE-CAST CONCRETE BASES MAY BE USED INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER APPROVAL AND COMPLYING WITH BS 5911-PART 4 2002.

5. STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW. 6. MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED

7. MANHOLE ROOFS SHOULD 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 APPROVAL AND COMPLIANCE WITH BS 5911 PART 4: 2002.

STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER APPROVAL.

8. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO APPROVAL FROM IRISH WATER.

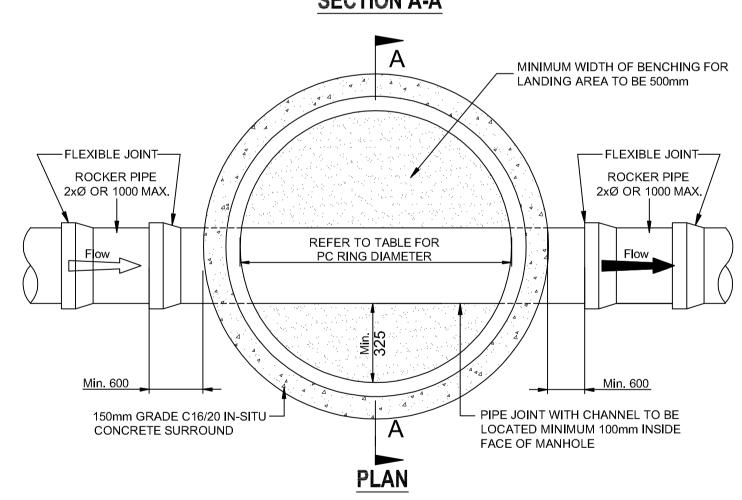
9. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVERS IN GREEN AREAS. 10. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED

FROM IRISH WATER.

SHALL COMPLY TO IS EN 124 AND BS 7903 AS PER MANUFACTURER'S (ALL CLASS D400 COVERS SHALL HAVE MIN. FRAME — — SPECIFICATION ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION DEPTH 150mm) OPE. 675x675mm MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO APPROVAL 11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206: 2013. 1 No. COURSE MIN. 3 No. COURSES MAX OF CLASS B ENGINEERING BRICKS SET IN C50/60 MORTAR -PRECAST CONCRETE MANHOLE RINGS TO IS 420 IN CONJUNCTION WITH IS EN 1917: 2004 ELASTOMETRIC JOINT SEAL — TO EN 681 —150mm GRADE C16/20 IN-SITU CONCRETE SURROUND REFER TO TABLE FOR PRE-CAST RING DIAMETER BOTTOM PRECAST SECTION TO BE BUILT INTO BASE CONCRETE MINIMUM 75 mm 1: 3 CEMENT:SAND MORTAR WITH STEEL TROWEL FINISH AT A 1:30 — CONSTRUCTION JOINT SLOPE TOWARDS THE CHANNEL -DISTANCE BETWEEN TOP OF PIPE & UNDERSIDE OF PRECAST SECTION TO BE MIN. 50mm TO MAX. 300mm SELF CLEANING TOE HOLES TO BE ~ PROVIDED WHERE CHANNEL EXCEEDS 600mm WIDE FIRST RING SUNK INTO IN-SITU CONCRETE BASE STAINLESS STEEL CHAIN IN "DOWN"-POSITION SECURED TO RESTRAINING -REINFORCED CONCRETE BASE GRADE C30/37 HOOK, WHEN CHAMBER IS OCCUPIED WHERE THE PIPE DIAMETER IS 450mm OR MORE INVERT SHOULD BE FORMED WITH CAST-INSITU CONCRETE C25/30 20mm AGGREGATE FINISHED WITH A 1:3 CEMENT SAND MORTAR TO BARREL OF PIPE -75mm GRADE C12/15 BLINDING CONCRETE **SECTION A-A** 

COVER TO BE SET

HINGED DOUBLE LEAF MANHOLE COVER AND FRAME



MINIMUM MANHOLE DIAMETERS				
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)			
LESS THAN 375	1200			
375 TO 450	1350			

NORMAL INTERNAL DIAMETER	MINIMUM TRENCH WIDTH (mm)	MAXIMUM TRENCH WIDTH (mm)	
100	450	650	
150	500	700	
225	600	800	
300	700	900	
375	375 950 1150		
450	1050	1250	

MAX. & MIN. TRENCH WIDTHS

## PRE-CAST CONCRETE MANHOLE

## **MANHOLES**

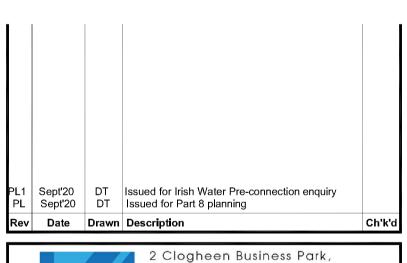
- 1. Pre-cast concrete manholes to be accordance with IS 420: 1989.
- 2. Manhole covers to roads to be Cavanagh Panther heavy duty Ref: A0011 to EN 124 or similar approved.
- 3. Manhole covers to gardens and medium trafficked areas to be Cavanagh Tiger Duty Ref: A0053 to EN 124 or similar approved.

- 1. DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS DRAWINGS.
- 6. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT IRISH AND BRITISH STANDARDS. 7. ALL WORKS TO BE CARRIED OUT IN CONJUNCTION WITH CORK CITY COUNCIL/IRISH WATER DRAINAGE DEPARTMENT.
- 8. CONTRACTOR TO KEEP FULL RECORDS OF POSITIONS OF ALL DRAINS AND CONNECTIONS AND ON COMPLETION, FULL AS-BUILT DRAWINGS TO BE PRODUCED BY THE CONTRACTOR.

No part of this document may be re-produced or transmitted in any form or stored in any retrieval system of any nature without the written permission of Ray Keane & Associates as copyright holder except as agreed for use on the project for which the document was originally issued. Original Drawing Size A1



- GENERAL NOTES:
- 2. ALL DIMENSIONS IN MILLIMETRES.
- 3. SETTING OUT DETAILS TO BE OBTAINED FROM ARCHITECTS DRAWINGS. 4. ARCHITECT TO BE INFORMED OF ANY DISCREPANCIES IMMEDIATLEY.
- 5. ENGINEER TO BE NOTIFIED OF ANY STRUCTURAL CONC. POURS SO THEY MAY BE INSPECTED AND PASSED.





CONSULTING ENGINEERS CIVIL | STRUCTURAL | PROJECT MANAGEMENT

**Proposed Housing at** Errigal Heights The Glen, Cork City

Proposed Manhole Details								
Designed:	Drawn:	D.T.	Date: SEP	Г 2020				
Eng Chk:	Dwg. Chk	:	Scale: As shown					
Project. No:	0600-48	32						
Drawing No:	100/	1	Status:	Rev:				

PROPOSED MANHOLE DETAILS