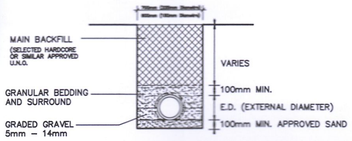
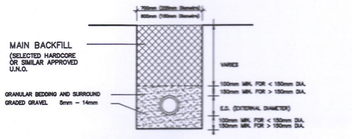


GRANULAR BEDDING FOR CONCRETE PIPES



GRANULAR BEDDING FOR P.V.C. FLEXIBLE PIPES

NOTES:
(A) IN TRENCHES IN ROADS, MAIN BACKFILL SHALL BE GRANULAR MATERIAL TO CLAUSE 804 M.O.T. SPECIFICATION AND SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 150mm LOOSE DEPTH.
(B) WHERE COVER IS LESS THAN ALLOWABLE, I.E. 1.20M IN ROADS AND 0.9M ELSEWHERE, A 150MM (20N MIX) CONCRETE SURROUND IS TO BE PLACED AROUND PIPE.
THE CONCRETE SURROUND SHALL HAVE 25MM BREAKS EVERY 6.0M (uP.V.C. ONLY) THE BREAKS ARE TO BE FILLED WITH A COMPRESSIBLE MATERIAL.

MANHOLE COVERS, WATERMAIN CHAMBER COVERS,SERVICE CHAMBER COVERS, GULLY FRAMES AND GRATINGS

GENERAL
All frames and covers shall be manufactured from ductile iron and shall comply with European Standard EN 124, have quality assurance to BS EN ISO 9001 and have Third Party Certificate to BS EN 124.

Classification
Gully tops and manhole tops are divided into the following classes: A 15, B 125, C 250, D 400, E 600 and F 900.

The numeric in each class i.e. 250 represent the test load in KN which the cover shall withstand.

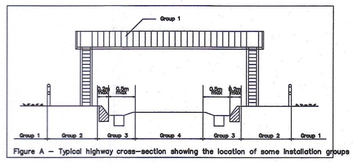


Figure A – Typical highway cross-section showing the location of some installation groups

PLACE OF INSTALLATION

The appropriate class of manhole top or gully to be used depends upon the place of installation. The various places of installation have been divided into groups numbered 1 to 6, as listed below, Figure A shows the location of some of these groups in a highway environment. A guide as to which class of manhole top or gully top should be used is shown in parentheses for each group. The selection of the appropriate class is the responsibility of the designer. Where there is any doubt, the stronger class should be selected.

Group 1 (min. Class A 15)
Areas which can only be used by pedestrians and pedal cyclists.

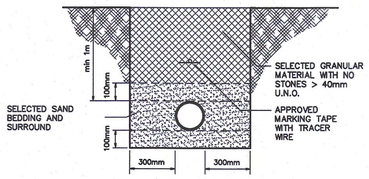
Group 2 (min. Class B 125)
Footways, pedestrian areas and comparable areas only.

Group 3 (min. Class C 250)
For gully tops installed in the area of kerbside channels of roads (Figure 9a) which when measured from kerb edge, extend a minimum of 0.5m into the carriageway and a maximum of 0.2m into the footway.

Group 4 (min. Class D 400)
Carriageway of roads (including pedestrian streets), hard shoulders (Figure 9a) and parking areas, for all types of road vehicles.

Group 5 (min. Class E 600)
Areas imposing high wheel loads, e.g. docks, aircraft pavements.

Group 6 (min. Class F 900)
Areas imposing particularly high wheel loads. e.g. aircraft pavemenst.

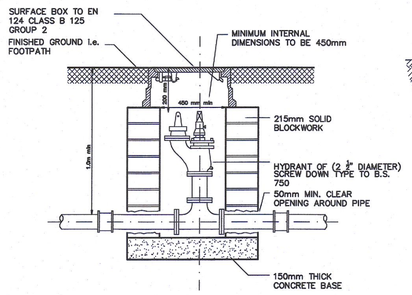


WATERMAIN BEDDING DETAILS

PIPE ANCHORAGE

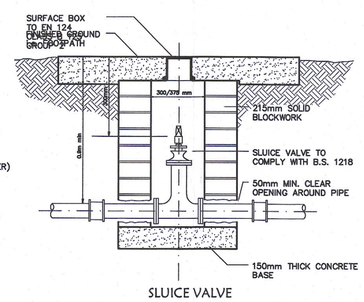
Concrete anchor blocks shall be provided on watermains at dead ends, tees, curvature bends greater than 22.5° and both sides of a sluice valve chamber. Anchor blocks shall encase the pipe to minimum thickness of 150mm all around and shall be a minimum of 600mm long.

90° BEND ANCHOR BLOCK | "T" JUNCTION ANCHOR BLOCK | REDUCER ANCHOR BLOCK



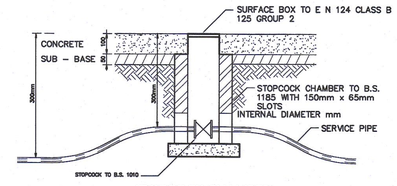
FIRE HYDRANT

NOTE
The depth of the hydrant outlet shall not exceed 200mm below finished ground level

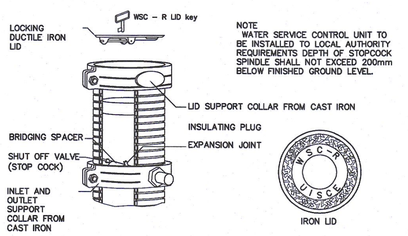


SLUICE VALVE

NOTE
The depth of the sluice valve spindle shall not exceed 300mm below finished ground level

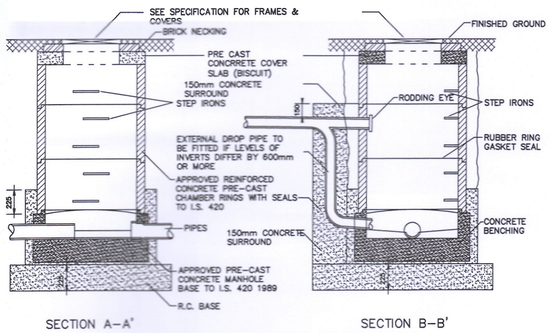


STOPCOCK CHAMBER



NOTE
WATER SERVICE CONTROL UNIT TO BE INSTALLED TO LOCAL AUTHORITY REQUIREMENTS DEPTH OF STOPCOCK SPINDLE SHALL NOT EXCEED 200mm BELOW FINISHED GROUND LEVEL.

WATER SERVICES CONTROL UNIT - LOCAL AUTHORITY

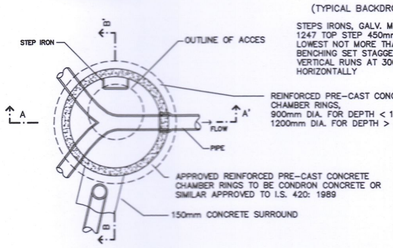


SECTION A–A'

SECTION B–B'

(TYPICAL BACKDROP DETAIL)

STEPS IRONS, GALV. MALLEABLE TO BS 1247 TOP STEP 450mm BELOW COVER LOWEST NOT MORE THAN 300mm ABOVE BENCHING SET STAGGERED IN TWO VERTICAL RUNS AT 300mm CENTRES HORIZONTALLY

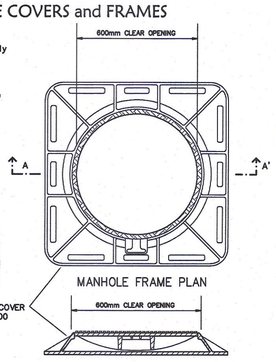


MANHOLE COVERS and FRAMES

Manhole covers and frames shall be as approved and unless otherwise shall comply with E.N 124.
The minimum opening dimensions shall be 600x600mm rectangular or if circular then 600mm diameter.
The appropriate grade of cover and frame which shall be used is given in table 1.

TABLE 1 MANHOLE COVERS and FRAMES	
E N 124	LOCATION
D 400 GROUP 4	CARRIAGEWAYS, FOOTPATHS, VERGES, VEHICULAR ACCESS

TABLE 2 THE SLUICE VALVE and STOPCOCK BOXES	
E N 124	LOCATION
CLASS B 124 GROUP 2	FOOTPATHS, PEDESTRIAN AREAS, CAR PARKS

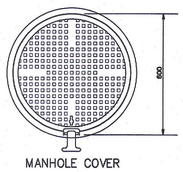


APPROVED LOCKABLE DUCTILE IRON COVER AND FRAME TO E N 124 CLASS D 400 GROUP 4

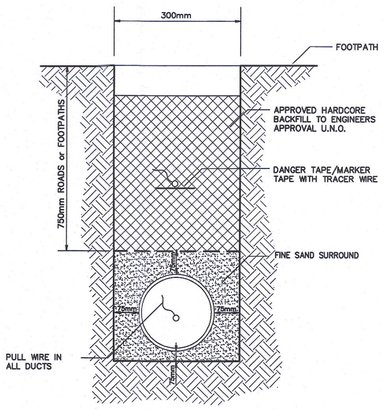
SECTION of MANHOLE FRAME and COVER A– A'

INDICATOR PLATES and MARKER POSTS

Hydrants, air valves and sluice valves shall be located by indicator plates positioned to the approval of the local authority 200 x 175 mm highe aluminium hydrant indicator plates of a yellow color paint with raised black letters and edge. This shoul comly with B.S. 3251. Air valve indicator plates shall comply with the specification for single hydrant indicator plates with fixed letters in B.S. 3251 except that they shall be coloured white and instead of the letter H it shall bear lettering AV and SV respectively as approved. Where marker posts are used, they shall be concrete complying with I.S. 162



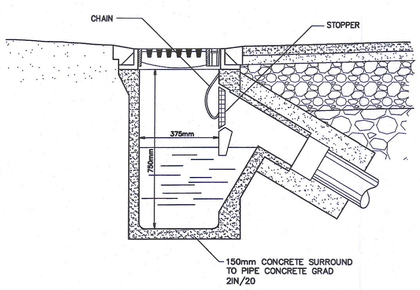
MANHOLE COVER



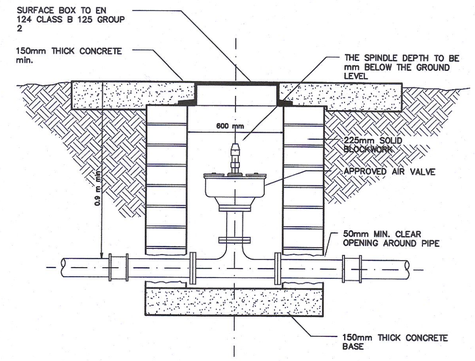
100mm DIA. u.P.V.C. DUCT PIPE

(FOR UNDERGROUND TELECOM, E.S.B. CABLES ETC)
E.S.B. PUBLIC LIGHTNING (50mm DIA. u.P.V.C. DUCT)
E.S.B. UNDERGROUND CABLE (125mm DIA. u.P.V.C. DUCT)
TELICO (110mm DIA. u.P.V.C. DUCT)

GULLY GRATING



TRAPPED GULLY POT



AIR VALVE

Note:
ALL WORKS TO BE CARRIED OUT IN COMPLIANCE WITH THE BUILDING REGULATIONS 1997 AS AMENDED BY THE 2000 REGULATIONS, AND THE HEALTH, SAFETY, AND WELFARE AT WORK REGULATIONS 1995.

Thor Design & Management
Architectural/Structural & Civil Engineering and Surveying Consultancy.

Ballindarra, Birr, Co. Offaly
Tel: 0509 21688
Fax: 0509 21692
Mobile: 086 8727752
Email: thordesign@hotmail.com

Consultant Engineer Hugh O'Rourke Beng. Stec. Reg No.137735, Vat Reg No.IE5322598o

- ☐ Architectural
- ☐ Planning
- ☐ Surveying
- ☐ Building
- ■ Civil
- ☐ Structural

Drawn H O'Rourke

Approved H O'Rourke

Project Title
Proposed Additional 6No. Dwellings @ St. Finian's Way, Newcastle, Co. Dublin

Client Pavement Homes Ltd

Drawing Title
Proposed Sewer & Water Details

Drawing No. PHL–22S–07 | Rev. P2

Date: 30th Aug. 2022 | Scale N.T.S