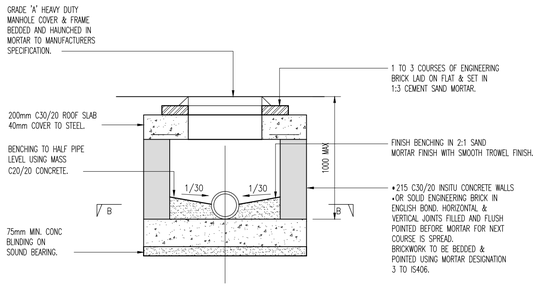
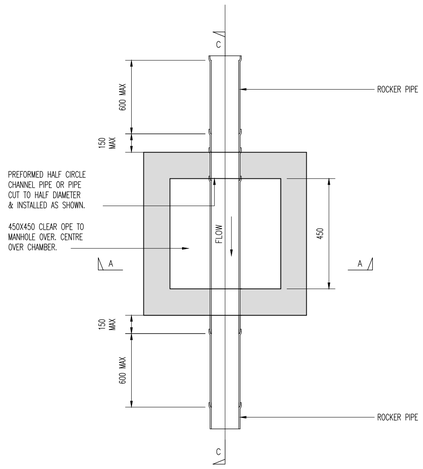
© Martin Peters Associates

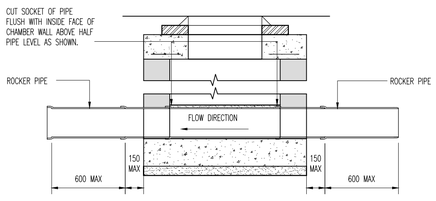
## DEPTH TO IL <= 1.0
## ø's 150 TO 450 INCL



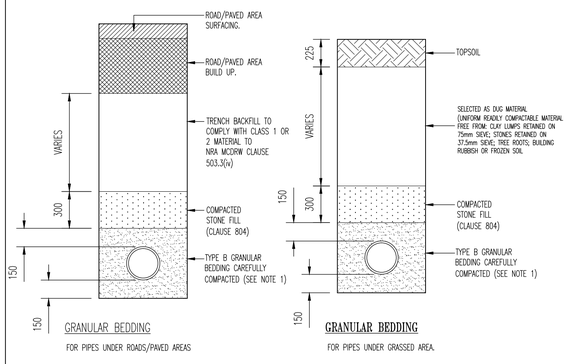

SECTION A–A




SECTION B–B



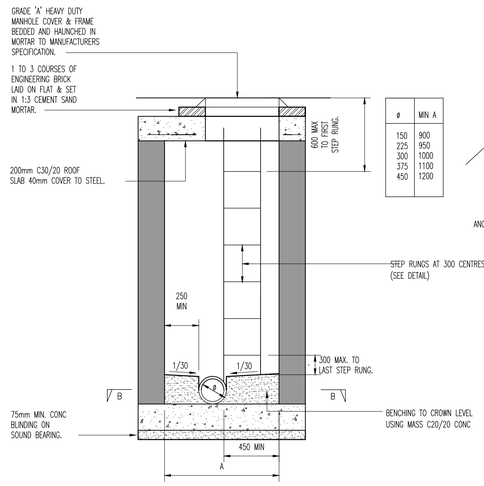

SECTION C–C




NOTES: –
1) GRANULAR BEDDING TYPE B SHALL CONSIST OF GRAVEL GRADED FROM 9.5mm TO 4.75mm. OTHER GRANULAR MATERIALS MAY BE USED SUBJECT TO APPROVAL
2) ALL PIPES UNDER FOUNDATIONS AND FLOORS SHALL BE HAUNCHED

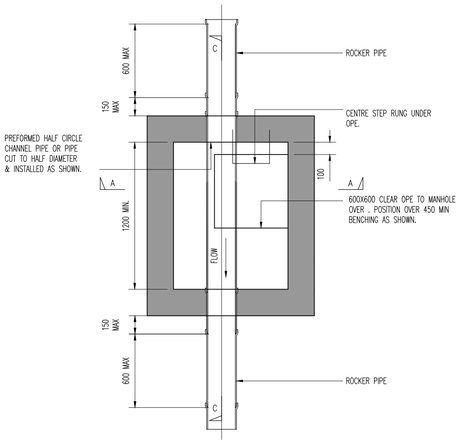
TYPICAL FOUL SEWER & SURFACE WATER PIPE BEDDING DETAILS

## 1.0 < DEPTH TO IL <= 3.0
## ø's 150 TO 450 INCL

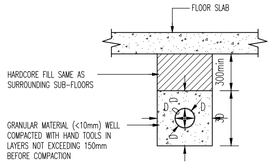



| ø | MIN A |
|---|---|
| 150 | 900 |
| 225 | 950 |
| 300 | 1000 |
| 375 | 1100 |
| 450 | 1200 |

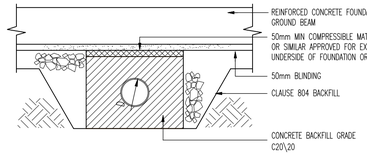
SECTION A–A




SECTION B–B




PIPE BEDDING DETAIL FOR UNDERFLOOR DRAINAGE



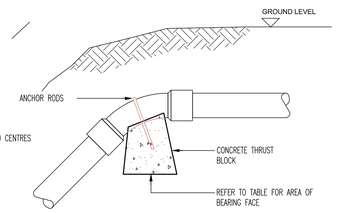

PIPE UNDER FOUNDATION

| MIN AREA OF BEARING FACE OF THRUST BLOCK | | |
|---|---|---|
| | FIRE MAIN | WATER MAINS |
| BLANK ENDS, TEES, VALVES | 2.4m² | 1.3m² |
| 90° BEND | 3.3m² | 1.75m² |
| 45° BEND | 1.8m² | 1.0m² |
| 22½ ° BEND | 0.9m² | 0.5m² |
| 11¼ ° BEND | 0.6m² | 0.3m² |

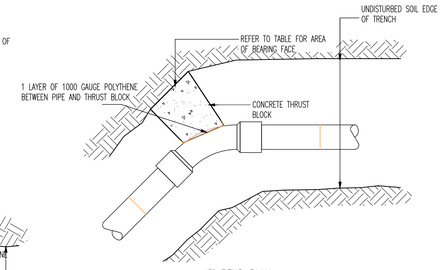
NOTE
FOR HORIZONTAL BENDS, VERTICAL HEIGHT IS TO BE NO MORE THAN HALF THE TRENCH DEPTH.

| MIN VOLUME OF CONCRETE THRUST BLOCK | | |
|---|---|---|
| | FIRE MAIN | WATER MAINS |
| BLANK ENDS, TEES, VALVES | 1.8m³ | 1.0m³ |
| 90° BEND | 3.3m³ | 1.1m³ |
| 45° BEND | 1.5m³ | 0.6m³ |
| 22½ ° BEND | 1.2m³ | 0.6m³ |
| 11¼ ° BEND | 1.2m³ | 0.6m³ |

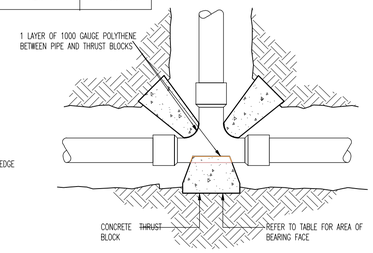
THRUST BLOCK: –
FOR SIZE OF THRUST BLOCKS REFER TO TABLE BELOW.
ALL RODS FOR THRUST BLOCKS SHALL BE GALVANISED.
THRUST BLOCK CONCRETE SHALL BE PLACED BEHIND THE SOCKET OF THE FITTING & NOT ALLOWED AGAINST THE PIPE OR JOINT.
BLOCKS TO BE CAST AGAINST UNDISTURBED EARTH.
ALL VALVES & HYDRANTS SHALL BE FIRMLY SUPPORTED BEFORE BLOCKS ARE POURED.
CONCRETE COMPRESSIVE STRENGTH SHALL BE 20N AT 28 DAYS.
1 LAYER OF 1000 GAUGE POLYTHENE TO BE PLACED BETWEEN PIPE AND THRUST BLOCK



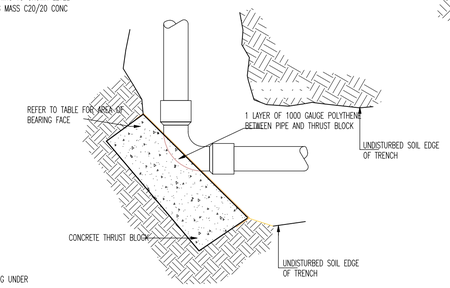

45° BEND ELEVATION



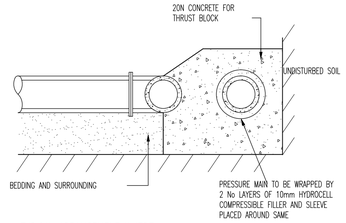

45° BEND PLAN




LATERAL TEE PLAN

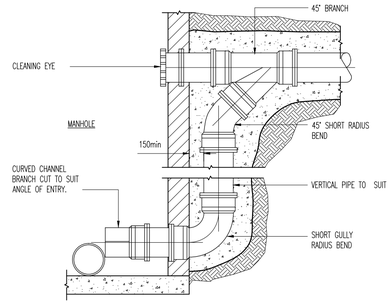



90° ELBOW PLAN

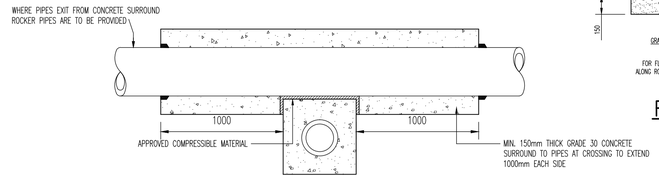



TYPICAL ARRANGEMENT WHERE PRESSURISED MAIN PASSES THROUGH THE THRUST BLOCK

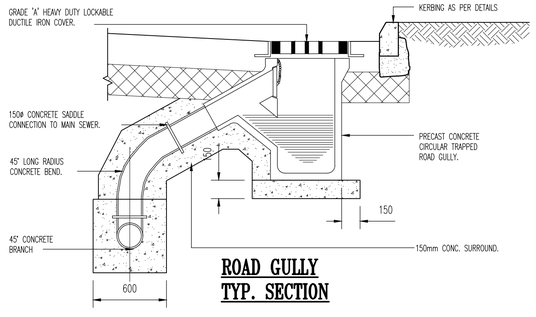
THRUST BLOCK DETAILS



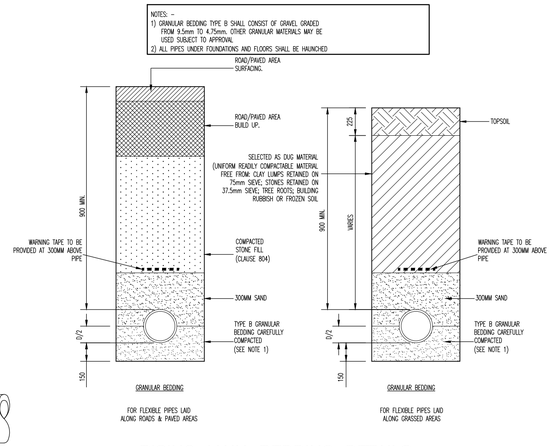

BACKDROP MANHOLE DETAIL




TYPICAL DETAIL AT PIPE CROSSING
(FOR GAPS BETWEEN PIPES OF LESS THAN 300mm)




ROAD GULLY TYP. SECTION




RISING MAIN BEDDING DETAILS

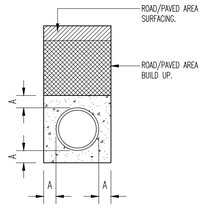
## NOTE

DIM A=100m
15N/mm2 CONCRETE

REQUIRED WHERE COVER TO PIPES IS LESS THEN 0.9m & REQUIRED THROUGHOUT FOR PIPES UNDER FLOOR SLABS.

ALSO REQUIRED WHERE COVER TO SEWER PIPES IN GRASSED/LIGHTLY TRAFFICKED AREAS IS LESS THEN 0.9m FOR PVC PIPES & 0.6m FOR EARTHENWARE PIPES.

PROVIDE 12mm VERTICAL MOVEMENT AT MAX. INTERVAL OF 5m IN CONCRETE SURROUND.




CONCRETE SURROUND

## GENERAL NOTES:–

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS & ENGINEERS DRAWINGS & SPECIFICATIONS.
2. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. ALL DISCREPANCIES TO BE NOTIFIED, IN WRITING TO ENGINEERS AND ARCHITECTS FOR RESOLUTION.
4. ALL DIMENSIONS ON DRAWINGS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.

ALL SETTING OUT DIMENSIONS TO BE CHECKED AGAINST ARCHITECTS DRAWINGS. ARCHITECTS DRAWINGS TO TAKE PRECEDENCE.

### Issue Register

| No. | Date | Revision | Drawn | Checked | Approved |
|---|---|---|---|---|---|
| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
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| -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- |
| PL1 | 25/10/17 | PLANNING ISSUE | LMJ | MJP | MJP |
| PL1 | 16/10/15 | PLANNING ISSUE | PJN | MJP | MJP |

PLANNING

Martin Peters Associates
Consulting Engineers
Ormonde Road
Kilkenny
T: + 353 56 7702761
F: + 353 56 7790728
E: info@mpa.ie

Client: KILKENNY COUNTY COUNCIL
Project: DEVELOPMENT AT ST. FRANCIS BREWERY, KILKENNY
Drawing Title: PROPOSED MANHOLE & SEWER DETAILS
Project No: 141078
Scale: A1–VARIES
Drawing No: 141078/T/101
Rev: PL2
Drawn: PJN
Checked: MJP
Date: 16/10/15