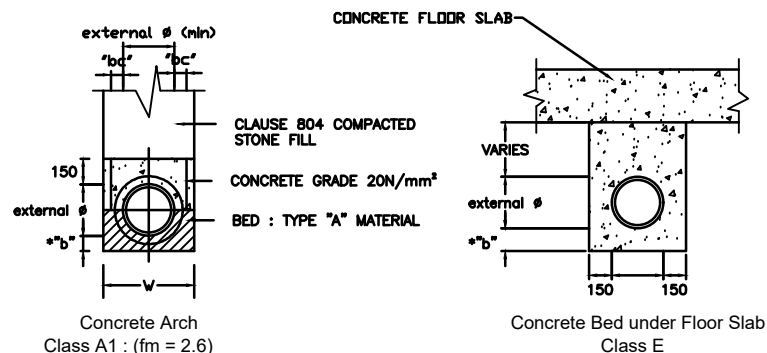
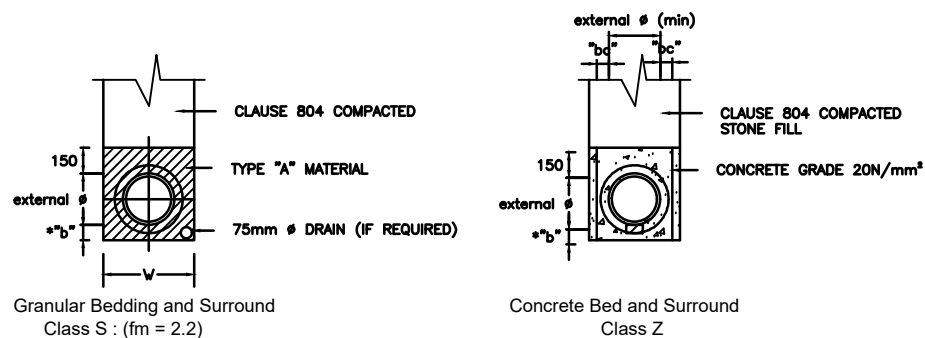


Trench Widths - Rigid Pipes

Trench Widths - Flexible Pipes

Dimension - bc

Figure 10 shows two typical cross-sections of concrete bed and haunch. The left diagram illustrates a cross-section with a circular drain in the center. The top layer is labeled "CLAUSE 804 COMPACTED STONE FILL". Below it is "TYPE "B" MATERIAL". The bottom layer is "BED : TYPE "A" MATERIAL" and contains a "Ø75mm DRAIN (IF REQUIRED)". Dimensions include a top width of 150, an external diameter ϕ , and a bottom width b . The right diagram is similar but the bottom layer is "CONCRETE GRADE 20N/mm²". It has an additional dimension b_c for the concrete layer thickness. Both diagrams have a "Scale 1:25" and a note "Granular Bedding Class B : (fm = 1.9)" and "Concrete Bed and Haunch Class A2 : (fm = 2.6)".



* UNIFORM SOIL

"b" = 150mm FOR PIPES UP TO AND INCLUDING Ø375mm
"b" = 200mm FOR PIPES GREATER THAN Ø375mm

* ROCK

"b" = 250mm FOR PIPES UP TO AND INCLUDING $\phi 375$ mm
 "b" = 300mm FOR PIPES GREATER THAN $\phi 600$ mm

TYPE 'A' MATERIAL

BROKEN STONE OR GRAVEL, GRADING AS FOLLOWS : -

- 1) RIGID PIPES - PIPE Ø UP TO AND INCLUDING 600mm
: SIEVE SIZE GREATER THAN 5mm AND LESS THAN 12mm
- PIPE Ø GREATER THAN 600mm
: SIEVE SIZE GREATER THAN 5mm AND LESS THAN 19mm
- 2) FLEXIBLE PIPES - SIEVE SIZE GREATER THAN 5mm AND LESS THAN 10mm.

TYPE 'B' MATERIAL

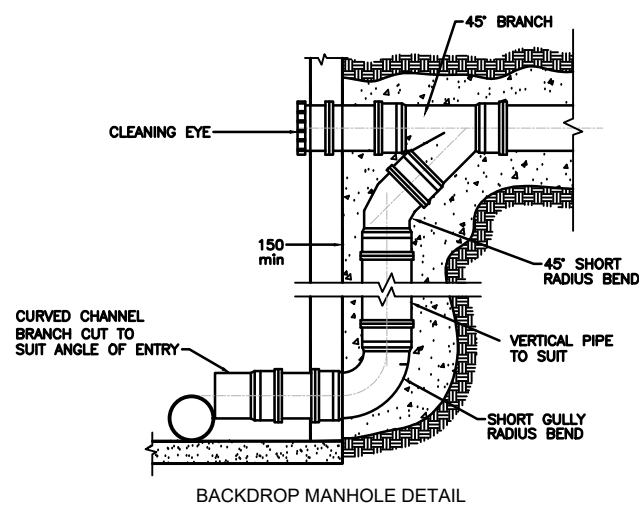
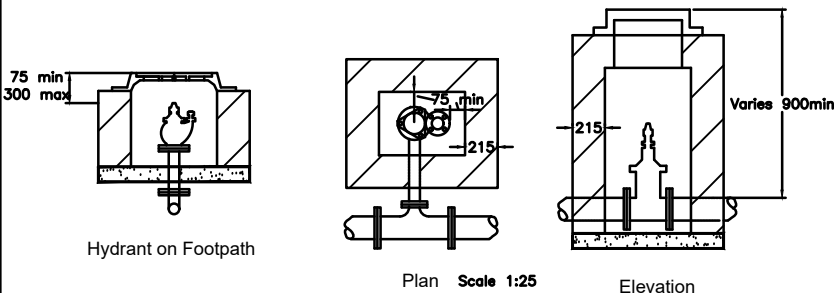
SELECTED FILL UNIFORM READILY COMPACTABLE MATERIAL FREE FROM : CLAY LUMPS RETAINED ON 75mm SIEVE, STONES RETAINED ON 25mm SIEVE, TREE ROOTS, VEGETABLE MATTER, BUILDING RUBBISH AND FROZEN SOIL.

Granular Bedding for Flexible Pipes laid along Roads

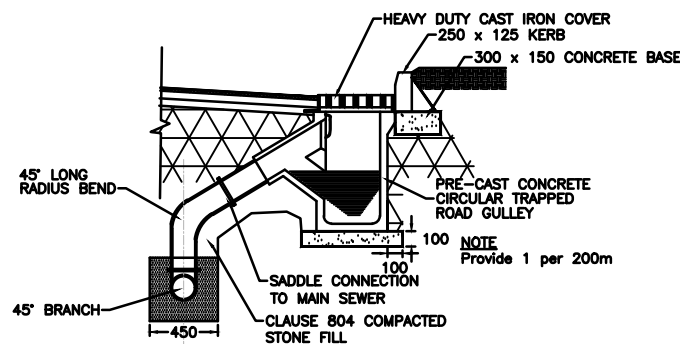
Scale 1:10
Granular Bedding
for Flexible Pipes
laid through
Grassed Areas

NOTES

1. **GRANULAR BEDDING TYPE C** : shall consist of gravel graded from 9.5mm to 4.75mm, other granular materials may be used subject to approval.
2. All pipes passing under foundations and floors shall be haunched.



BACKDROP MANHOLE DETAIL



TYPICAL SECTION THROUGH ROAD GULLEY

CLASS D400 (D800 on Roads) DUCTILE IRON COVER
WITH 600 x 600mm CLEAR OPENING BEDDED
AND HAUNCHED WITH MORTAR

1 to 3 COURSES
OF BRICKWORK

Max 675mm
TO TOP RUNG
OF LADDER
OR STEP

750

150mm 20N/mm²
CONCRETE SURROUND

PRECAST CONCRETE
RINGS WITH SEALED
JOINTS

900 min
(2000 IF REDUCING
SLAB IS USED)

500 min

500

150

75

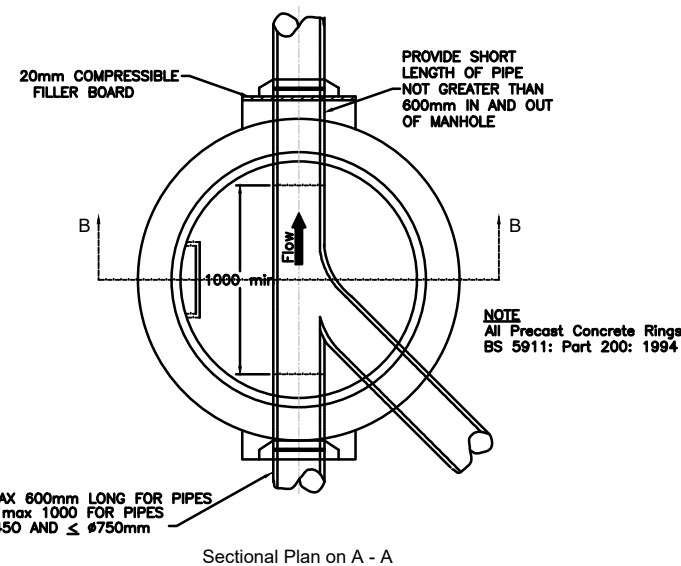
CONCRETE GRADE 20N/mm²

BACKFILL
WITH
CRUSHED
STONE

CONCRETE FILLET

GALVANISED MILD STEEL
LADDER BOLTED TO WALL
TO BE USED FOR DEPTH
TO INVERT >3000
STEP IRONS AT 300 c/c
FOR DEPTHS UP TO 3000

Sectional Elevation on B - B



ROCKER PIPES MAX 800mm LONG FOR PIPES
 $\leq \varnothing 450\text{mm}$ AND max 1000 FOR PIPES
 GREATER THAN $\varnothing 450$ AND $\leq \varnothing 750\text{mm}$

For terminal and straight through manholes only the following applies:

- Chamber Ø**
- a. where depth to invert level does not exceed 1,4 meters, 1050mm
Ø chamber rings shall be used.
- b. where depth to invert level does not exceed 2.4 meters, 1200mm
Ø chamber rings shall be used.

Note: If the sewer diameter is between the figures shown above then the sizes relative to the larger ϕ will apply.

NOTE

**All Precast Concrete Rings to
BS 5911: Part 200: 1994**

[illegible]

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	CONCRETE GRADE	COVER
EXPOSURE CONDITIONS		
MILD DRY ENCLOSED	30N/mm ²	25mm
FOUNDATIONS DAMP	35N/mm ²	30mm
SEVERE EXPOSED	40N/mm ²	40mm
	CEMENT CONTENT	MAX. FREE WATER CEMENT RATIO
EXPOSURE CONDITIONS		
MILD DRY ENCLOSED	275kg/m ³	0.65
FOUNDATIONS DAMP	300kg/m ³	0.60
SEVERE EXPOSED	325kg/m ³	0.55
MAX. SIZE OF AGGREGATE TO BE 20mm		

MAX. SIZE OF AGGREGATE TO BE 20mm

Issue:			
PLANNING			
Project:			
SINGLAND HOMES LTD. Nenagh, Co. Tipperary			
Client:			
SINGLAND HOMES LTD.			
Drawing Title:			
SERVICES CONSTRUCTION DETAILS (Typical Service Bedding Details)			
Drawn.	Scale.	Checked.	Date.
MP	NTS	DOM	17.01.2023



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Project No. 18068	Drawing No. C56	Revision
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