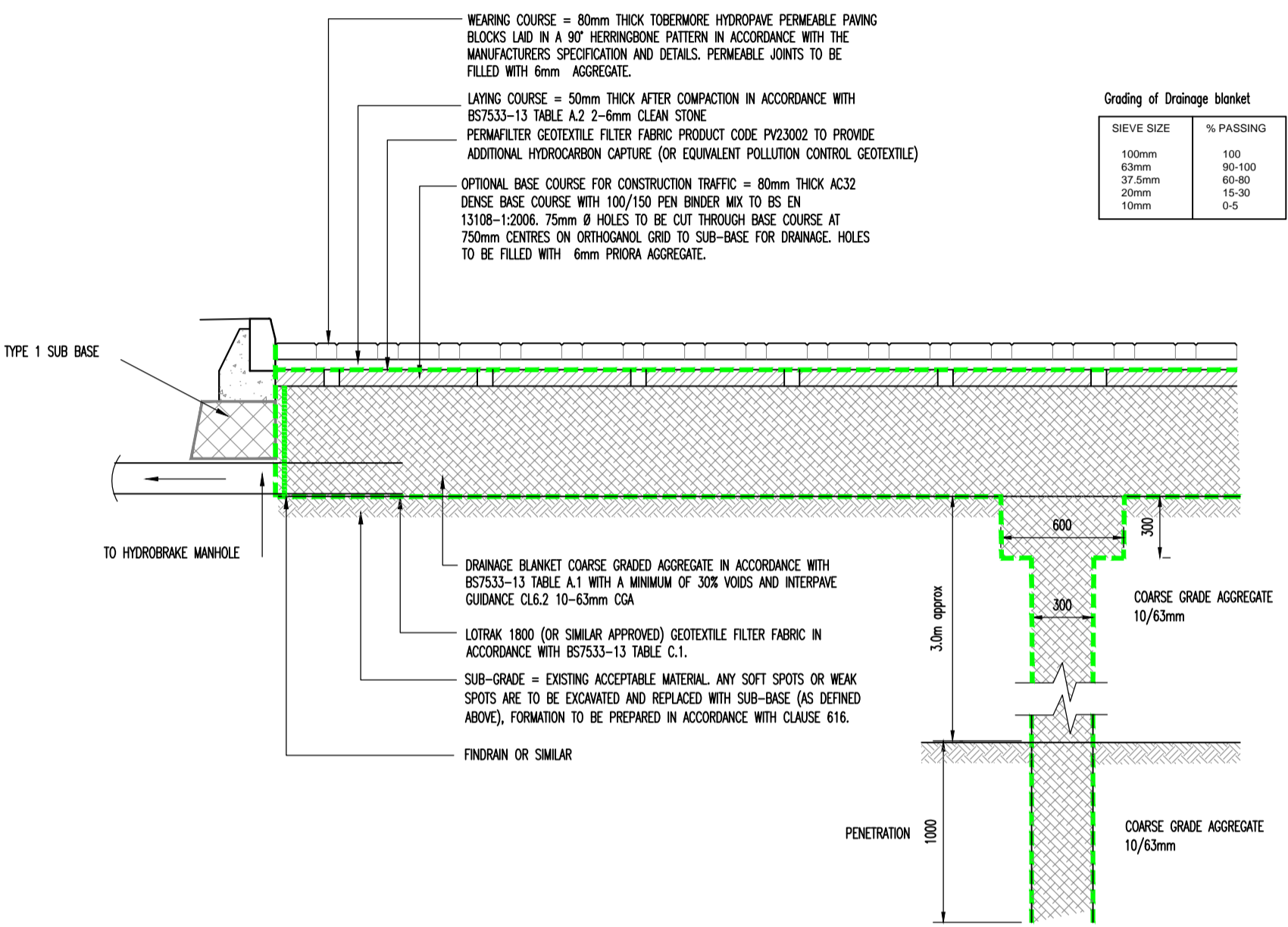


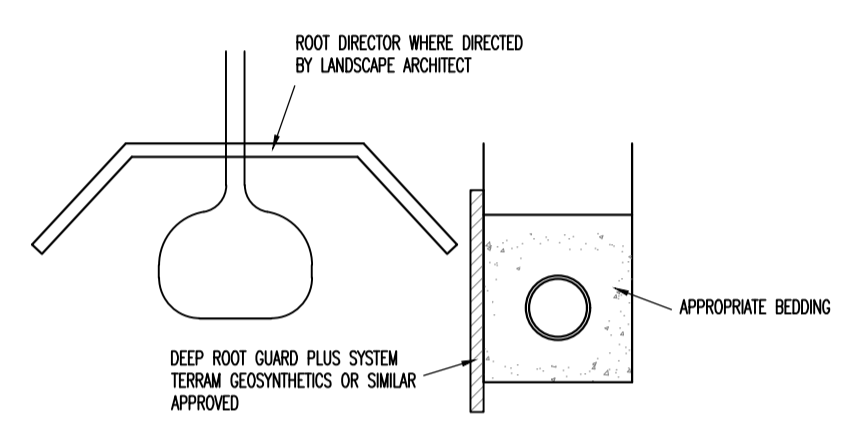
- NOTES: (CLASS S & CLASS Z)**
1. BEDDING BENEATH AND AT SIDES OF THE PIPE TO BE WELL COMPACTED.
 2. WHERE A CONCRETE CRADLE IS PROVIDED, THE FIRST 300mm OF FILL ABOVE THE CROWN OF THE PIPE IS TO BE LIGHTLY COMPACTED BY HAND. MECHANICAL COMPACTATION MAY BE USED ONLY ABOVE THIS LEVEL.
 3. CONCRETE CRADLES AND ARCHES MAY BE EXTENDED TO THE SIDES OF THE TRENCH.
 4. GEOTEXTILES MAY BE USED WHERE DIRECTED OR APPROVED BY THE ENGINEER TO CONTAIN BEDDING MATERIAL IN CERTAIN SOILS EG. RUNNING SAND.
 5. IN VERY WET CONDITIONS, WHERE DIRECTED OR APPROVED BY THE ENGINEER A TEMPORARY LAND DRAIN MAY BE LAD WITHIN THE GRANULAR BED.
- NOTES: (CLASS Z ONLY)**
6. WHERE PIPES WITH FLEXIBLE JOINTS ARE USED, THE CONCRETE PROTECTION IS TO BE INTERRUPTED OVER ITS FULL CROSS SECTION AT INTERVALS NOT EXCEEDING 6 METRES (OR AS DIRECTED BY THE ENGINEER) BY A SHAPED FORMER OF BITUMEN IMPREGATED COMPRESSIBLE FILLER. THESE INTERRUPTIONS SHALL COINCIDE WITH PIPE JOINTS.
 7. CONCRETE TO BE GEN 1
 8. WHERE FLEXIBLE PIPES ARE USED, CARE MUST BE TAKEN TO PREVENT THE PIPES FROM FLOATING.

- NOTES**
1. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY. IF IN DOUBT ASK.
 2. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
 3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS AND ARCHITECTS DRAWINGS AND SPECIFICATIONS.

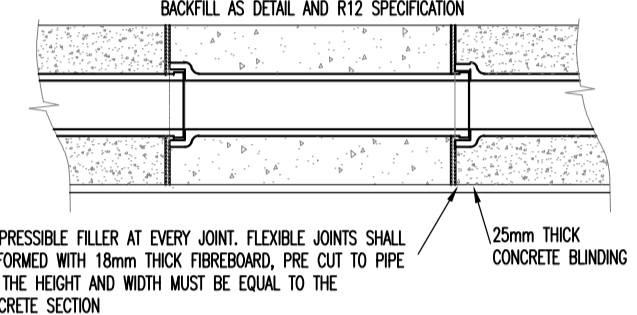
TYPICAL SECTION THROUGH BLOCK PAVED PARKING BAY AND PERMEABLE DRAINAGE



ROOT PROTECTION

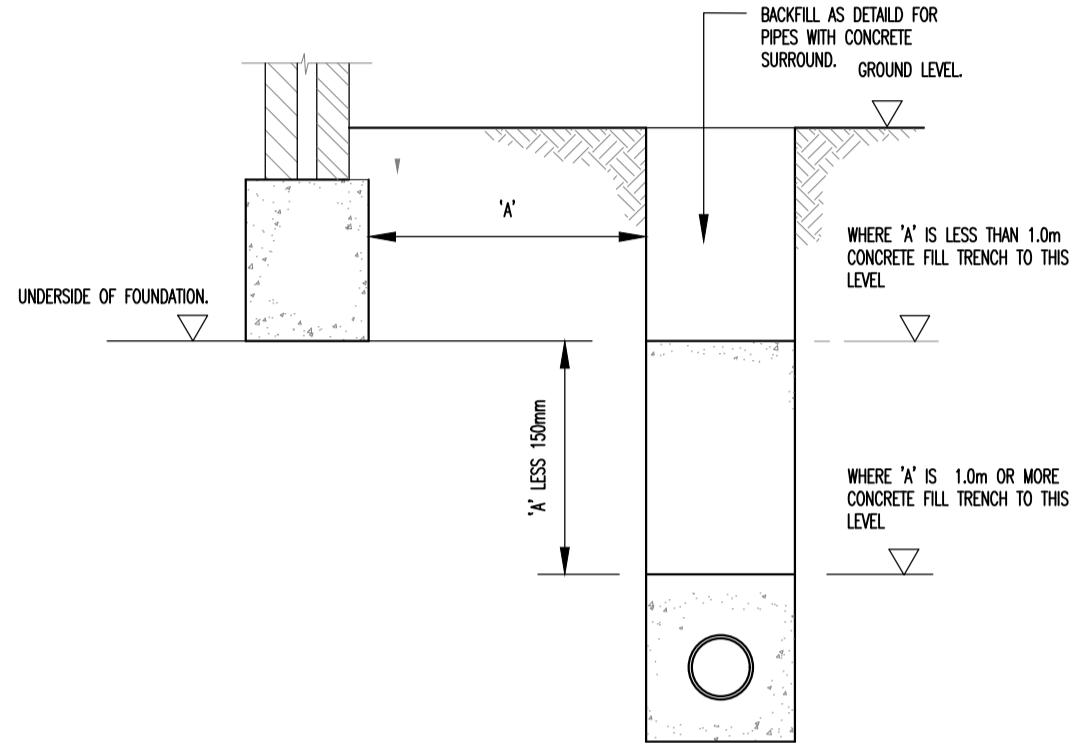


ELEVATION ON CLASS Z BEDDING

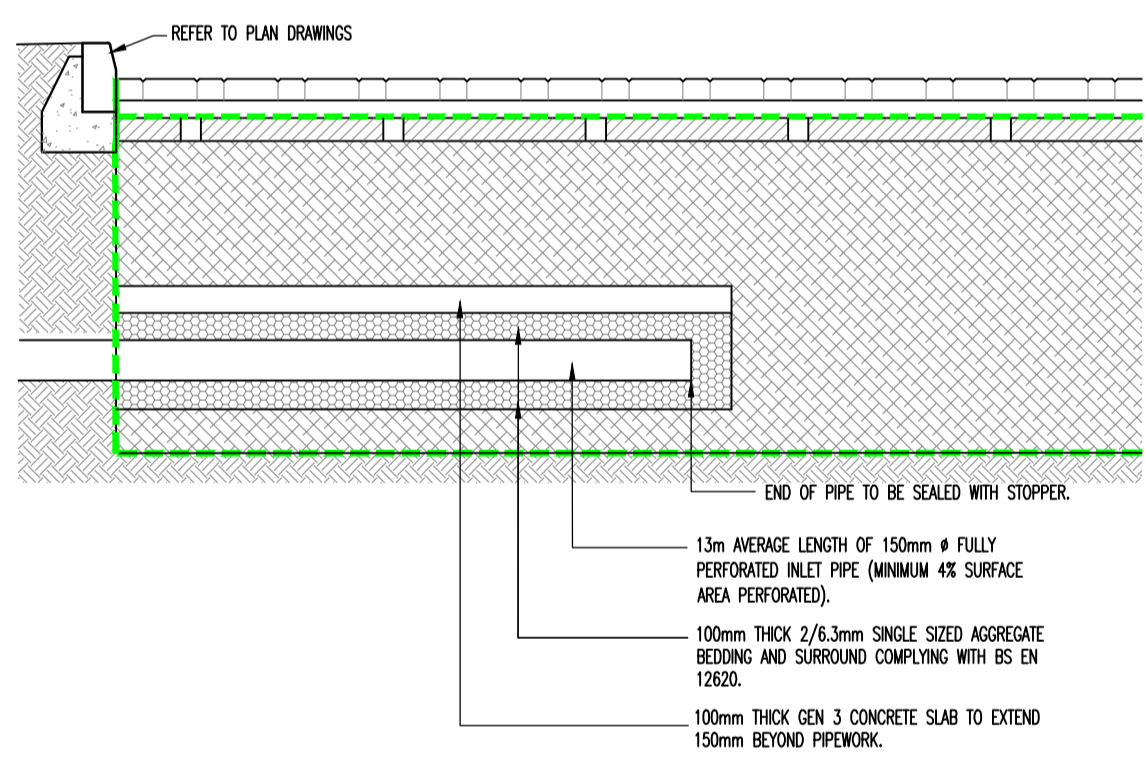


1. WHERE PIPES WITH FLEXIBLE JOINTS ARE USED THE CONCRETE PROTECTION SHALL BE INTERRUPTED OVER ITS FULL CROSS-SECTION AT EACH JOINT BY A SHAPED 18mm COMPRESSIBLE FILLER. IF PIPES ARE SURROUNDED IN CONCRETE THE JOINTS SHALL BE PROTECTED FROM THE INGRESS OF CONCRETE BY WRAPPING THEM WITH TWO COATS OF MASTIC BANDAGE TAPE.

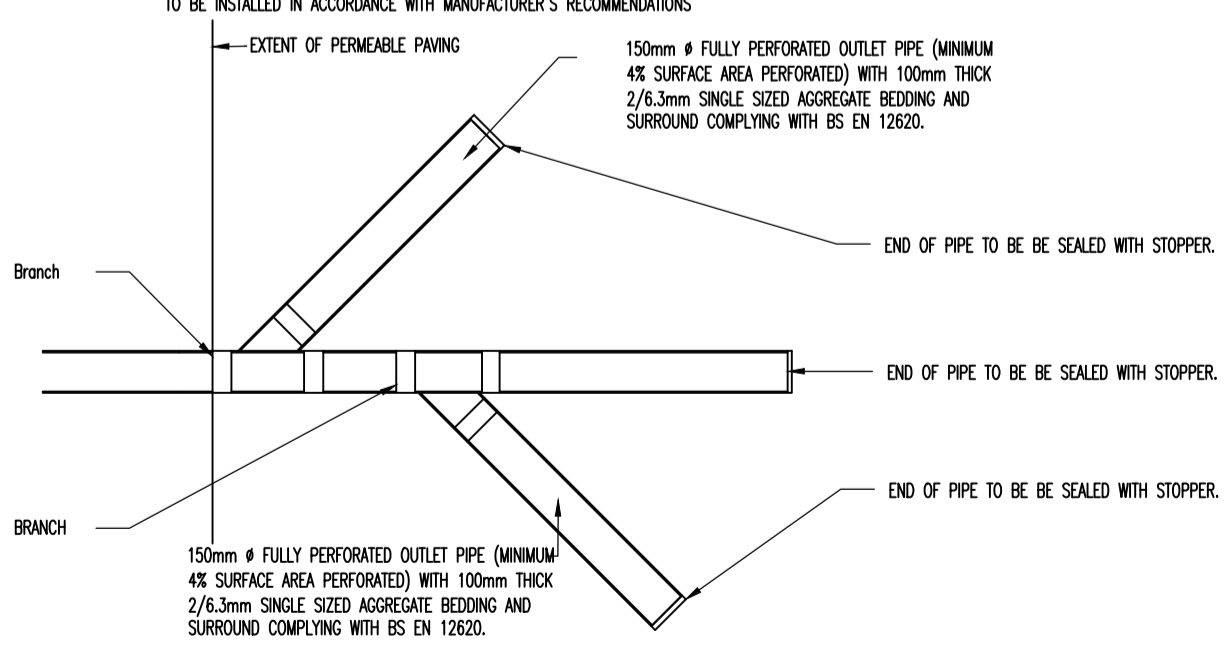
DETAILS ADJACENT STRIP FOUNDATIONS



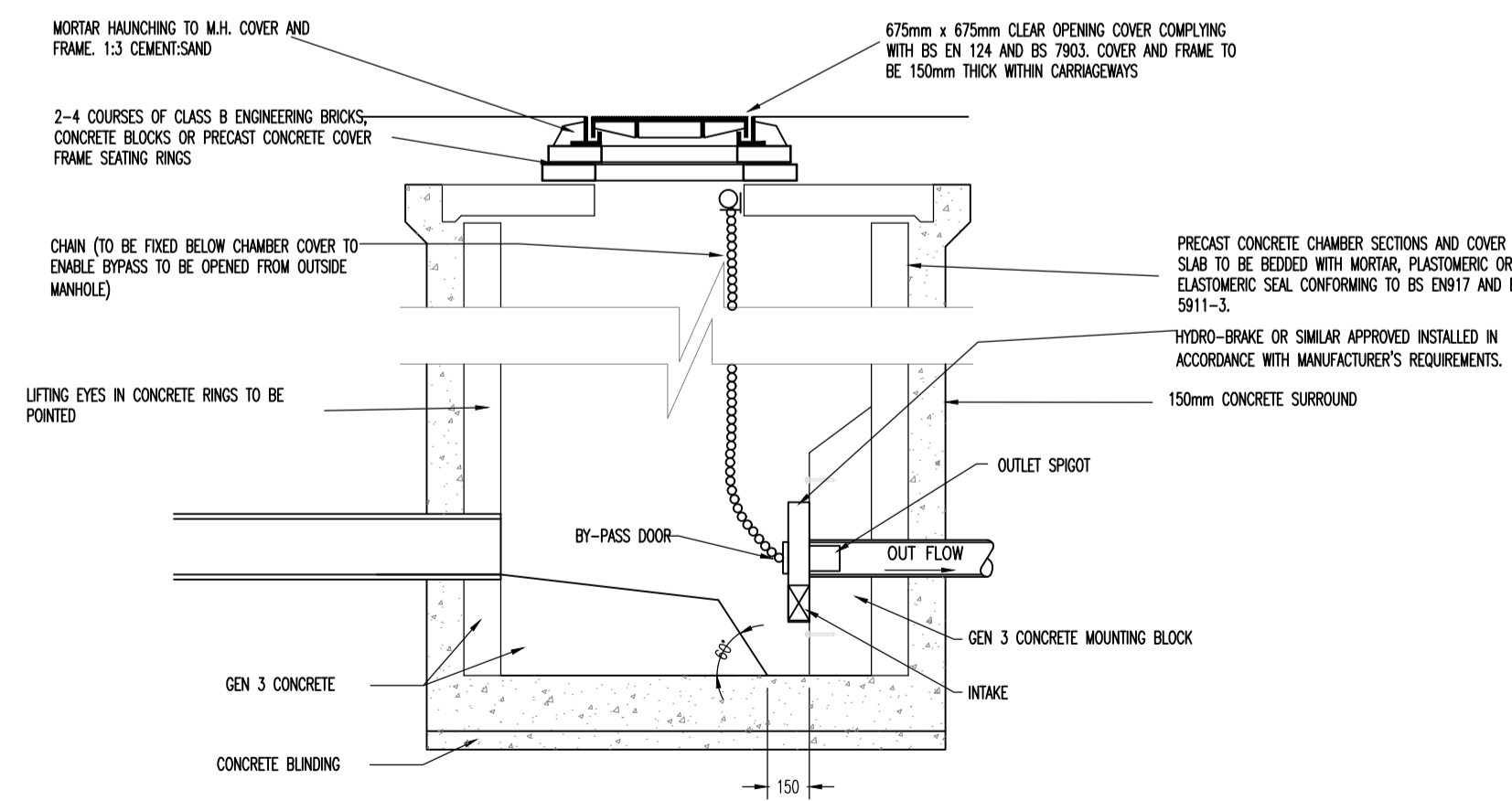
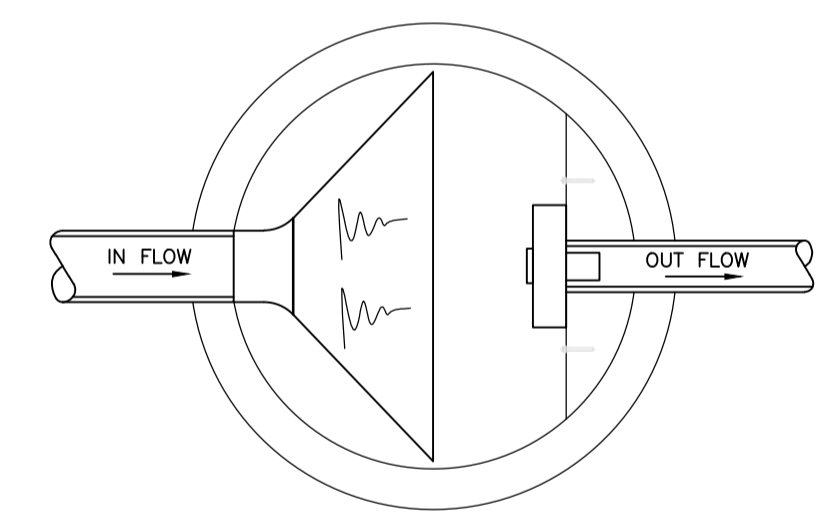
SECTION THROUGH DISTRIBUTION PIPE WITHIN DRAINAGE BLANKET



PLAN OF DISTRIBUTION PIPE WITHIN DRAINAGE BLANKET



HYDRO BRAKE CHAMBER PLAN



- NOTES**
1. CHAMBER COVER TO BE POSITIONED DIRECTLY ABOVE BY-PASS DOOR.
 2. DIMENSIONS ARE INDICATIVE ONLY AND ARE DEPENDANT ON TYPE OF CONTROL DEVICE USED. REFER TO MANUFACTURER'S SPECIFICATIONS FOR DETAILS.
 3. HYDROBRAKE FLOW CONTROL CHAMBER TO LIMIT FLOWS TO 2.0 l/s FOR ALL STORM EVENTS UP TO & INCLUDING THE 1 IN 100 YEAR STORM PLUS 30% ALLOWANCE FOR CLIMATE CHANGE/HYDROBRAKE TYPE MD-SHE-0061-2000-1490-2000 DESIGN HEAD = 1.49m ORFICE DIAMETER = 0.061m

HYDRO BRAKE CHAMBER SECTION

REVISION		DRAWN
DATE		CHECKED

Client: **MARBROOK**

Project Title: **BROADWATER ROAD WELWYN GARDEN CITY AL7 3AX**

Drawing Title: **PROPOSED DRAINAGE STRATEGY SURFACE WATER CONSTRUCTION DETAILS**

Drawn By: RN Scales: NTS @A1
 Date: JUNE 2019 Drawing Number: 10528-501P
 Checked By: Rev:
 Date: 10528-501P

Drawing Status: **PLANNING**

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