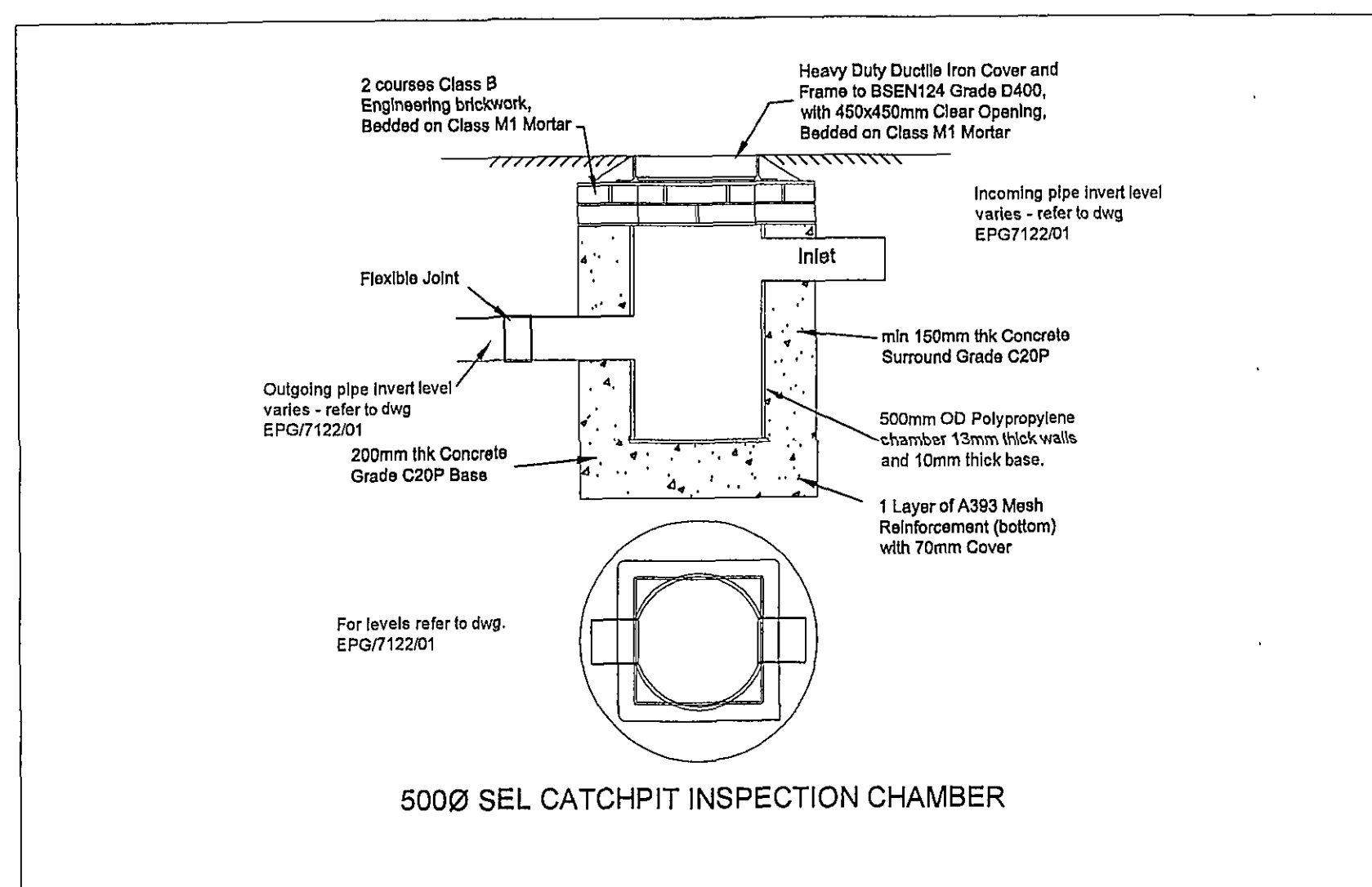
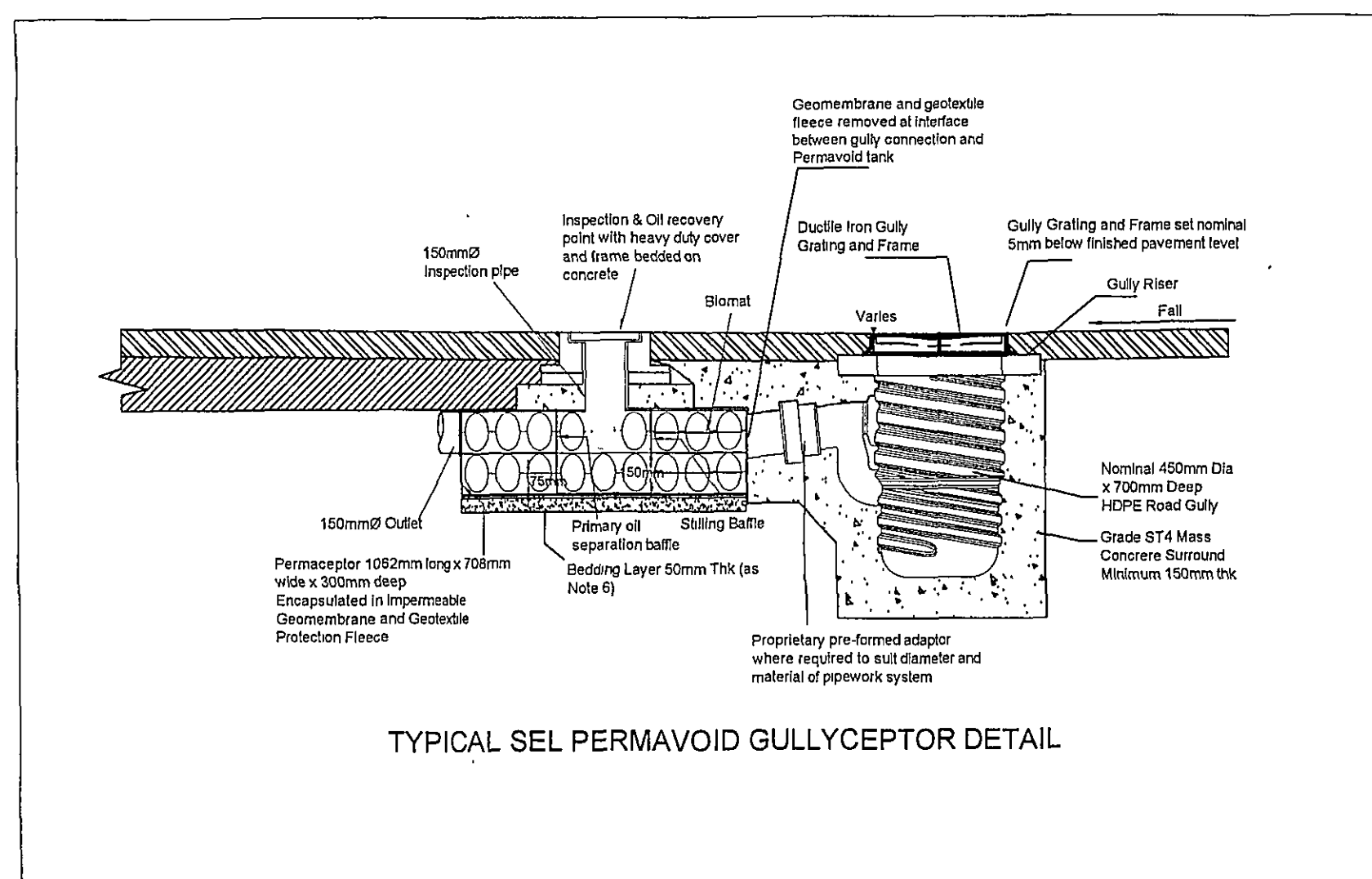
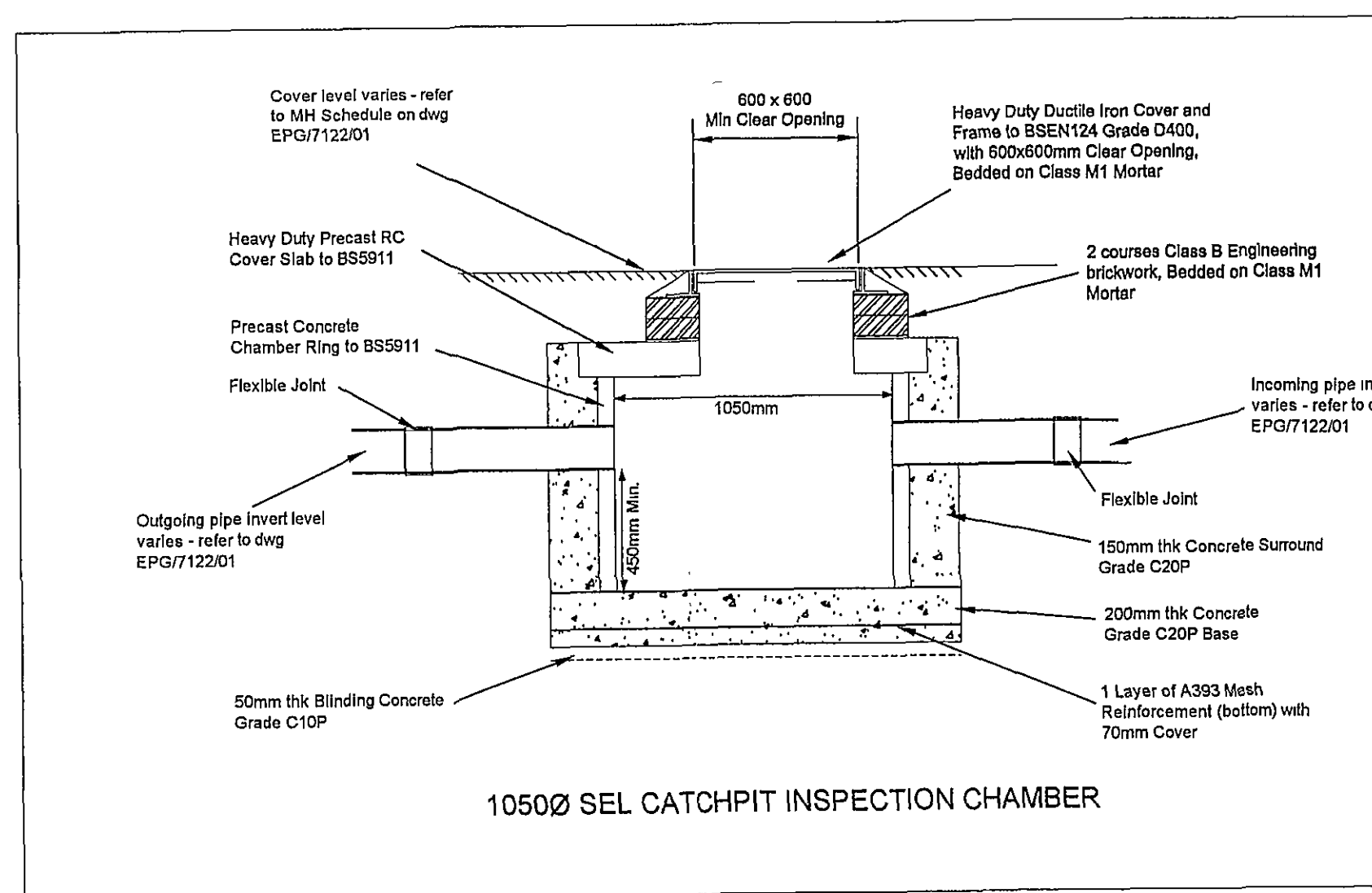
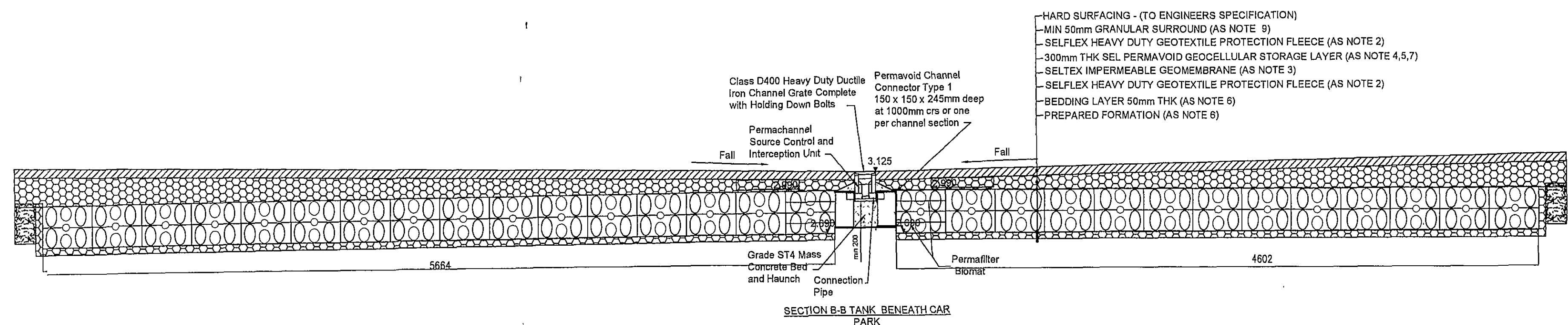
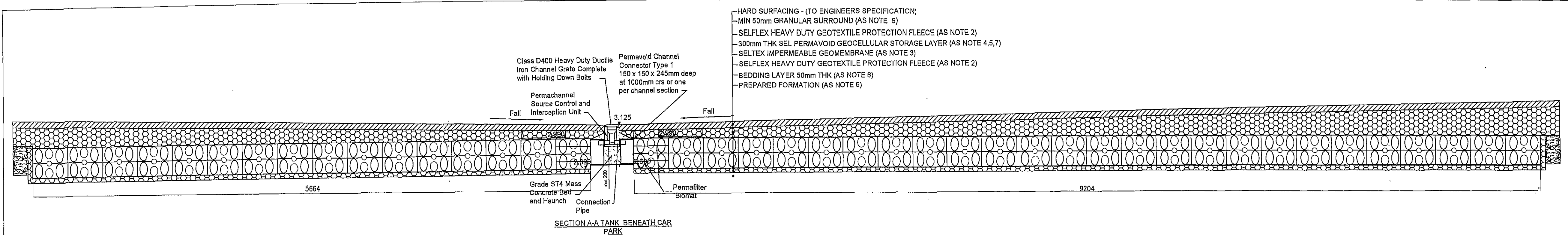




NOTES

- Yard and roadway surfacing design and construction to Engineer's Specification (by others).
- Heavy duty geotextile fleece to be non-woven needle-punched with specific oil treatment properties as per the specification. Geotextile to be laid with minimum 300mm overlaps and to be applied to all external surfaces of Permavoid drainage units.
- Waterproof geomembranes, where used, to be single layer cold applied robust welded flexible membrane as per Specification suitable for waterproofing to structures and for water containment. Membrane to be nominal 1mm thick laid with minimum 120mm laps and welded seams.
- Stormwater attenuation/infiltration system shall be Permavoid or equal approved pre-formed modular geocellular sub-base replacement with minimum 95% volumetric void ratio and minimum 52% effective perforated surface area. Units shall be manufactured with integral interlocking creep resistant ties (Permaties) to maintain rigidity and minimise detection. Geocellular units to be fully encapsulated with high performance filter geotextile (as Note 2). Geocellular layer to be fully in accordance with the Specification.
- Multi-layered Permavoid tank configurations shall be fixed with proprietary shear connectors between each vertical layer to maintain rigidity and minimise lateral displacement. Shear connectors shall to be fitted in accordance with the manufacturer's recommendations.
- Permavoid units to be laid on a prepared even formation that shall be free from undulations. The formation shall be graded to achieve a maximum deviation of 5mm in 3.0m in any direction. A 50mm thick blinding layer of 20/6 clean crushed stone to BS EN1242:2002 shall be used to achieve a suitable bedding surface.
- Where appropriate, the constructed pipe work and connections shall be air tested in line with manufacturer's instructions to demonstrate watertightness.
- Permavoid units shall generally be laid with zero falls unless noted otherwise.
- The Permavoid tanks shall be backfilled with an initial layer minimum 50mm thick (U.N.O.) of 20/6 clean crushed stone to BS EN1242:2002.
- Permachannel units are nominal 1000mm long with preformed drain outlets at each end. Each preformed outlet shall be fitted with the appropriate proprietary Permavoid outlet in accordance with the manufacturers recommendations.
- All dimensions are in millimetres unless otherwise stated.
- Pre-cast concrete products shall comply with the relevant provisions of BS 5911 and be 'Kite Marked'.
- All pipes and pipe fittings shall be HDPE twinwall and have current British Board of Agreement Certification.
- Manhole covers and frames, grids and frames shall comply with the relevant provisions of BS EN 124.
- Do not scale from this drawing. If in doubt ask.

This drawing to be read in
Conjunction with EPG/7122/01

2 8 NOV 2007
1566/07

Job No	To	Rev
File	Dr	
16 SEP 2007		

For Construction

REV	DESCRIPTION	DATE

EPG
Unit CU 7
Warrington Business Park
Long Lane
Warrington
WA2 8TX
Telephone : 01925 652 980
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Email : ep@epg-ltd.co.uk

PROJECT
**Springfields Retail & Hotel
Extension**

CLIENT
Interserve Ltd

**DETERMINED
PLAN**

DRAWING TITLE
**SURFACE WATER MANAGEMENT
TYPICAL SECTIONS & DETAILS**

SCALE
1:16 @ A0

DATE
04/09/2007

DRAWN BY
PW

CHECKED BY
PDC

Rev

DRAWING No
EPG/ 7122/02

INTERSERVE BUILDING EAST MIDLANDS	Rev	By	Date	Checked	Date	Approved	Date
Rev'd by RO	1	RO	05 SEP 2007				

INTERSERVE BUILDING
- 6 SEP 2007
ISSUE FOR COMMENT