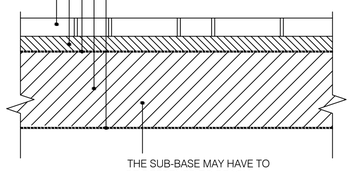
CBR of subgrade	Adjustments to thickness of coarse graded aggregate in the case of System A (infiltrating) pavements (mm)$
1%	250 +300* ^
2%	250 +175 ^
3%	250 +125 ^
4%	250 +100 ^
5%	250
8%	250
10%	250
15%	250

^ Subgrades of CBR less than 5% are often too fine to permit sufficient infiltration.



Typical Particle Size Distribution for Course Graded Aggregate	
Sieve Size (mm)	Percentage Passing (%)
40	100
31.5	98-100
20	90-99
10	25-70
4	0-15
2	0-5

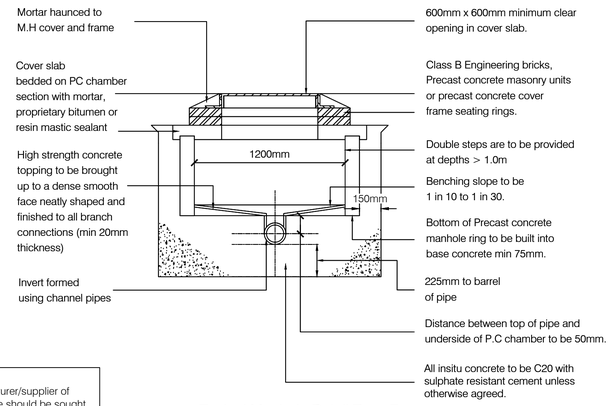
Typical Particle Size Distribution for Laying and Jointing Material	
Sieve Size (mm)	Percentage Passing (%)
14	100
10	98-100
6.3	80-99
2	0-20
1	0-5

NOTES:
- This detail gives minimum specifications. Manufacturer/supplier of block paving may override this specification. Advice should be sought from engineer if this is the case.
- If contractor wishes to carry out CBR testing, this should be an Equilibrium Suction Index type of CBR, as water will not be allowed to flow to the sub-grade following completion of the road
- Protection from construction traffic can be achieved by either:
  - Construct full capping layer to be used as temporary road.
  - Construct permeable sub-base and cover with geotextile and min 100mm thk hardcore.
  - Construct permeable sub-base and cover with impermeable layer of dense bitumen macadam (DBM) installed in accordance with BS 4987-2:2003.

Permeable Paving for Footway/Domestic Parking (System A & B)

scale 1:10

Cover and frame to be grade D400 for heavy load traffic having a 600 mm minimum opening.
Cover frame to be bedded on mortar.

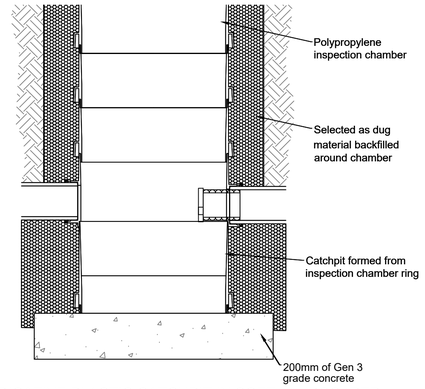


Typical Manhole Detail Type E

Depth from cover level to soffit of pipe 1.0m to 1.50m . Max sewer diameter 375mm
NTS

Build over or near sewer agreement to be made with Water Authority or other sewer owner if required

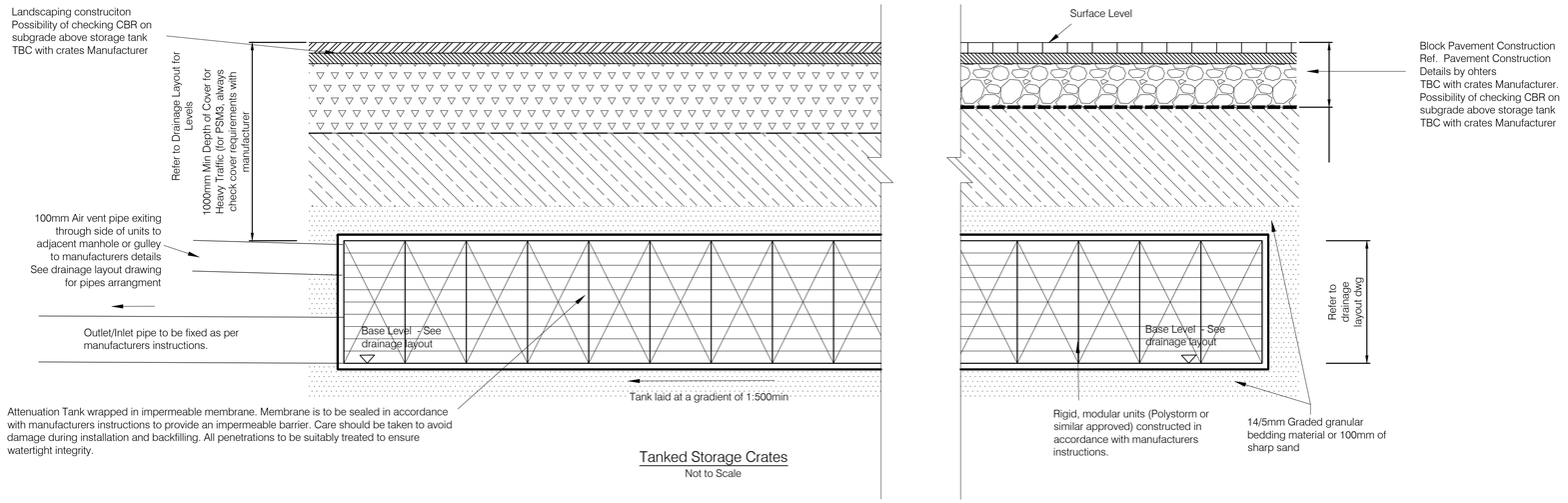
Foundations to be deepened in case of clash with drainage.



INDICATIVE PLASTIC CATCHPIT IN SOFT LANDSCAPED AREAS WITH AN ORIFICE SEE LAYOUT DRAWING AND MANUFACUTER DETAILS (recommended proprietary orifice chambers e.g. Oriflow or simialar)

(1:10)

For hard landscaped areas use cover and surround detail as inspection chamber details



Tanked Storage Crates

Not to Scale

LOCATION OF EXISTING SEWERS ARE ASSUMED. THE CONTRACTOR SHALL CONFIRM THE LOCATIONS, LEVELS, DIAMETER AND CONDITION OF THE SEWERS PRIOR TO COMMENCING CONSTRUCTION WORKS ON SITE.

CONTRACTOR TO COMPLETE S106 APPLICATIONS AND OBTAIN APPROVAL PRIOR TO CONTRUCTION AND CONNECTING TO THE PUBLIC SEWER.

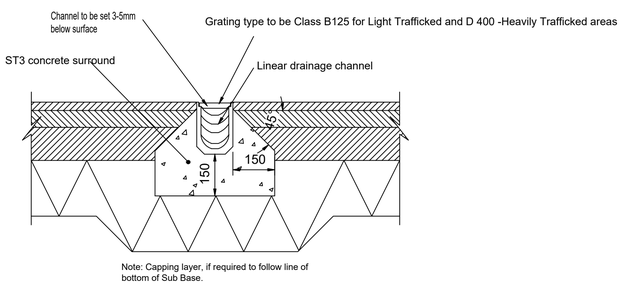
SHRUBS AND VEGETATION PLANTED TO BE CHECKED THAT ROOTS NOT DAMAGE DRAINAGE SYSTEM UNDERNEATH. DUCTILE IRON PIPES MAY BE USED, WHERE COVER NOT SUFFICIENT FOR PIPE CONCRETE PROTECTION

All redundant sewers to be blocked and sealed.

Design subject to change when position of RWPs, SVPs, etc is confirmed. Group of appliances assumed rather single appliances for internal drainage. Cover levels indicative and subject to change as well as the re-design when surfaced levels are finished.

Linear drain to be checked and confirmed with manufacturer

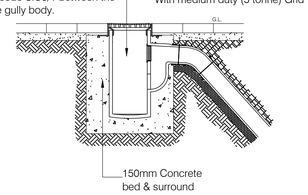
All details genereric - to be confirmed in detailed design



Note: Capping layer, if required to follow line of bottom of Sub Base.

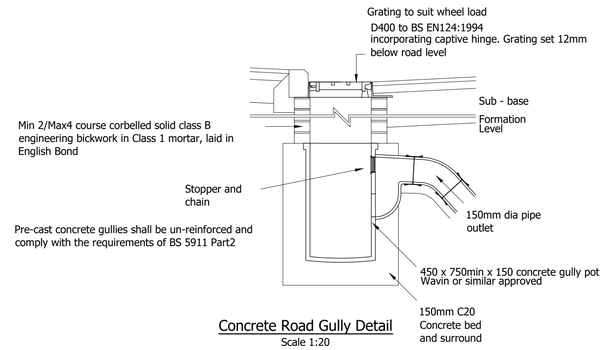
Linear Drain Detail

NB-
The depth of the gully can be increased by up to 300 mm by fitting a 225 mm coupling code VC1/3 and a 300 mm high raising piece code SIC3/1 between the frame and the gully body.



Yard Gulley Detail.

Scale 1:20



Concrete Road Gully Detail

Scale 1:20

Notes:

1. DO NOT SCALE.
2. This drawing should be read in conjunction with all other relevant drawings and details.
3. If there is any conflict between the information on this drawing and that indicated on other drawings the Engineer should be informed BEFORE commencement of construction on site.
4. It should be understood that all drawings issued are Preliminary and NOT for construction until technical approval has been obtained from the relevant Authority. If the contractor commences site work prior to such approval being given, it is solely at his own risk.
5. All dimensions are given in millimetres unless noted otherwise.
6. The Risk Assessment and Hazard Identification and information for this project must be reviewed and understood by the contractor BEFORE the commencement of any works on site.
7. The Contractor is responsible for checking all tie-ins for line and level with existing prior commencement of any works. If any errors are found The Engineer, should be notified immediately in writing.
8. The positions of soil & vent pipes & rainwater pipes etc and level information on this drawing are indicative only. Refer to current Architects Plans' for location(s). The drainage design may require the change after all those locations have been confirmed. All rainwater and soil and vent pipes shall be completed with rodding access.
9. The Building Regulations Part H apply to all private drainage to be constructed.
10. All private drains/sewers to be 100 mm diameter unless noted otherwise.
11. For details of pipes penetrating walls and pipe runs near buildings refer to Building Regulations Part 'H'.
12. All workmanship should be in accordance with the most current British Standards.
13. The drainage is designed for the permanent case. Should additional loads over & above those designed for may arise during the construction process, the Contractor shall ensure any necessary temporary protection is in place for pipelines, manholes etc. so nothing is damaged as a result of his method of working.
14. Pipe gradients shown are indicative only and are not be used for setting out purposes.
15. Internal drainage indicative only. Architects or M&E engineers drawings should be referred to for in-house connections.
16.Contractor to liaise with Statutory Undertakers and Services Owners to agree services diversions if necessary.
17.Design subject to change when foundation type confirmed.
18. Cover levels may need adjustment to suit the surface (if lower than shown Engineer is to be notified).
20. IF GRADIENTS STEEPER THAN 3% ON PERMEABLE PAVEMENT - CHECK DAMS TO BE PROVIDED.

Rev	Date	Description	By	Ckd

PK DESIGN CONSULTANTS

Client: CBS Engineering

Project: 105 Relaigh rd Layout

Title: Drainage Details Sheet 1

Drawing Status: PRELIMINARY

Job No.: PK146

Drawn	Checked	Scale at A1	Date	Issue Date
PK	PK	As shown	16.06.25	16.06.25

Drawing No.: PK146-161 | Revision: P0