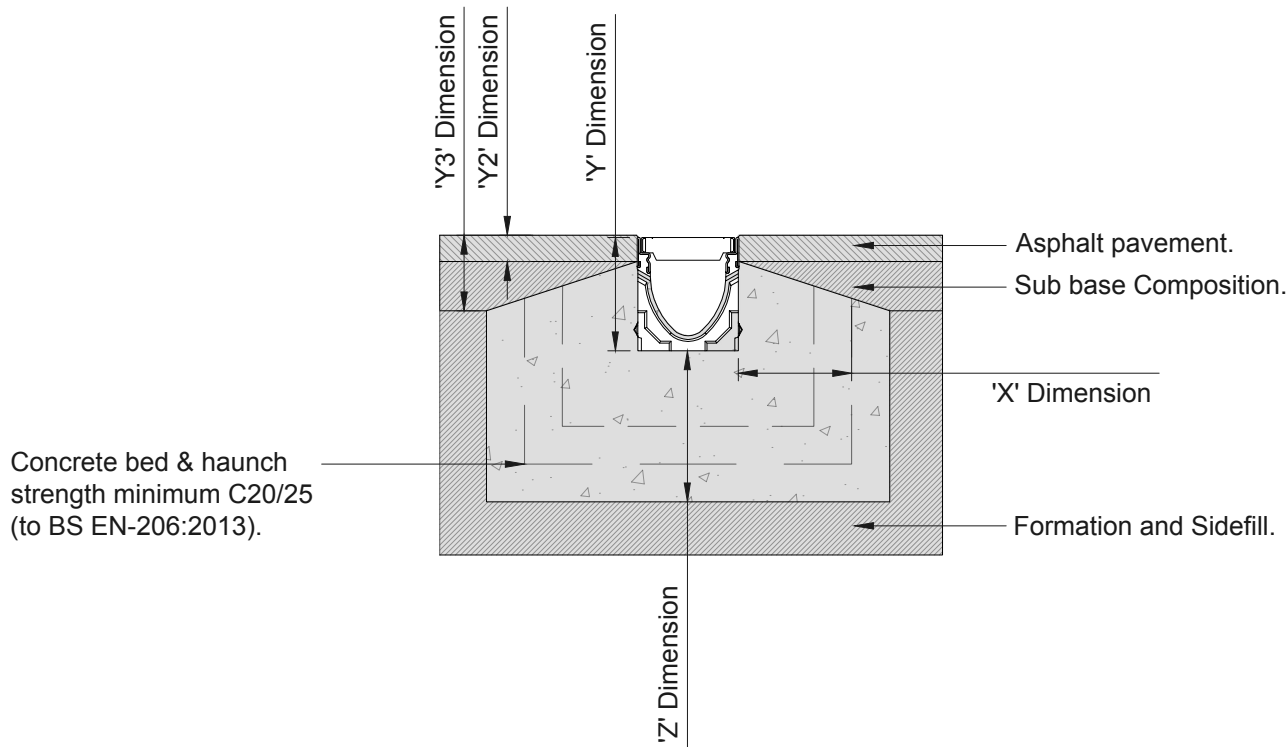




1 : 10 ACO MultiDrain Asphalt Pavement

1.0 Load Class
Installation recommendations shown are ACO minimum recommendations for BS EN 1433:2002 load class requirements.

2.0 Ground Conditions
The long term performance of a channel installation to sustain vertical and lateral loads depends upon A) ground conditions B) stability of the adjacent pavement and C) a durable concrete bed and surround. The recommended installation detail may require the minimum dimensions to be revised to achieve site specific load class requirements (referred to in 1.0 above).

3.0 Cutting and Jointing
Mitre joints are formed by cutting the channels to the required angle and butting them together with appropriate sealant (e.g. Sikaflex 11FC or similar) or ACO Repair Kit. Where possible 90° joints and Ts should be formed so that gratings do not have to be cut. Angles can be formed by connecting them using proprietary PVCu pipework attached to ACO inlet/outlet endcaps. For further details please contact ACO Design Services Team.
Note: For Load Classes higher than C 250, mitred joints are not recommended in vehicular areas. Where requested ACO can custom manufacture angled junctions to order.

4.0 Isolation Joints
The channel must be isolated from the surrounding environment. An isolation joint must be positioned up to 1500mm from the channel wall. Any dowel bars must be located no nearer than 150mm from the channel wall. Other isolation joints in surrounding slab must be continued through the channel. Additional crack control may be required to comply with specifier requirements.

5.0 Installation into in-situ Slab
Where a channel is to be installed into an existing concrete slab it is necessary to cut a suitably sized pocket in the slab. The channel will then need to be bedded in polymer modified mortar of 25mm minimum thickness (this may vary depending on the type of mortar used). Engineering advice may be necessary.

6.0 Temporary Installation
A channel installation is not complete until the final surfacing is laid. In any temporary condition, i.e. with the channel walls projecting above adjacent ground, site traffic should not cross channels. Loose boards, stone fill or cover plates will not protect the channel walls or grating. A temporary channel crossing should be formed by raising the ground level locally, to 3 - 6mm above top of edge rail, either side of a channel for a distance of 750 to 1000mm, to form ramps. Note that the channel load class should be adequate to carry the site traffic.

7.0 Block Pavements
The channel must be supported laterally. Blocks laid directly against a channel must be laid as a soldier course and restrained from movement by bedding securely on the concrete haunch e.g. by using a polymer modified mortar for bed and

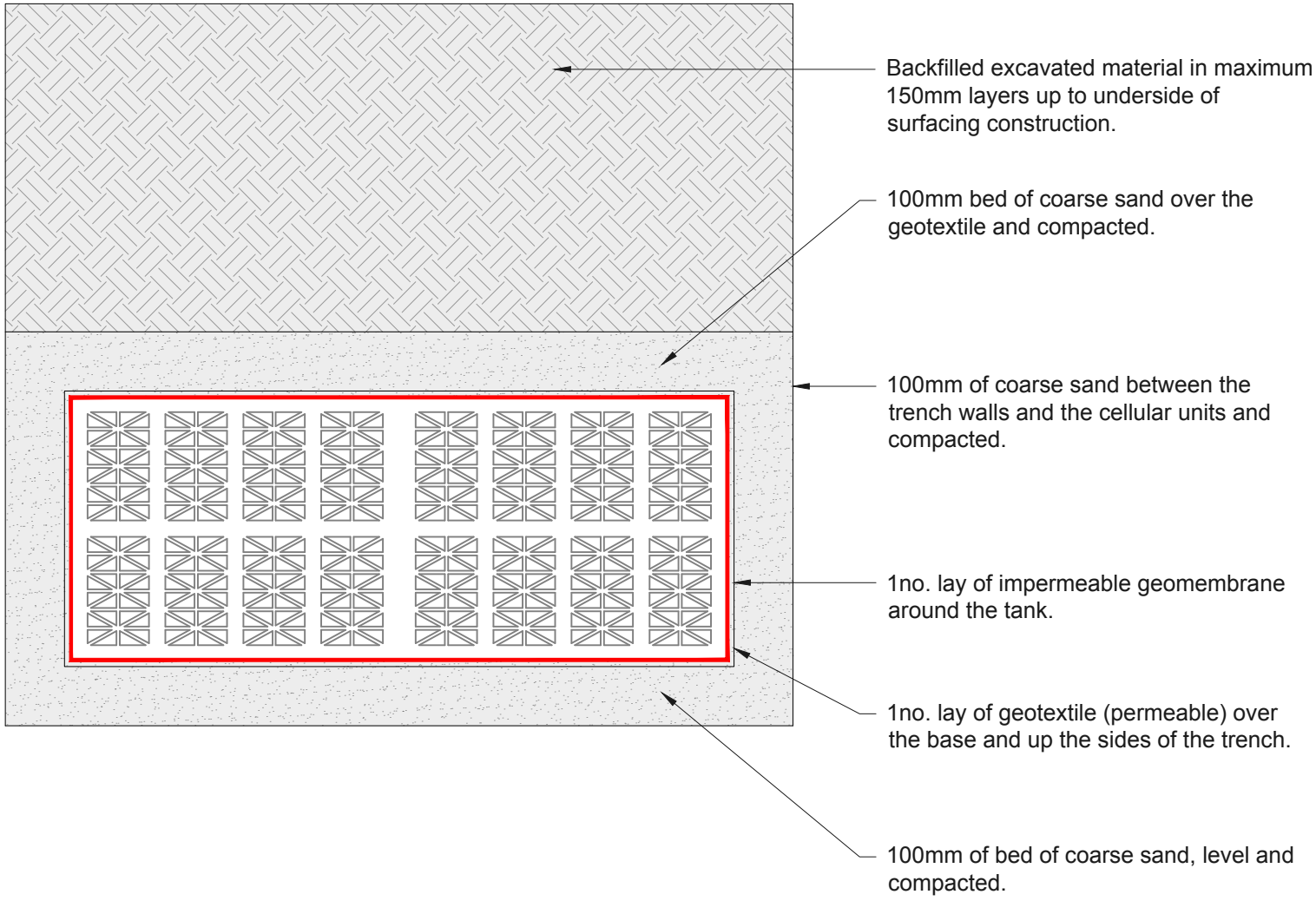
perpendicular joints (e.g. RONAFIX mortar mix C or similar). Blocks or slabs bedded on sand remote from the channel should be set at a higher level to compensate for possible settlement of the paving in service.

8.0 Grate Locking System
Gratings should be securely fixed to the channel, where required, using an appropriate grate lock system (where available).

9.0 Channel Protection
Avoid contact between compaction equipment and top of ACO channel edge rail. The installer must ensure that the finished surface level lies above the top of the edge rail (by at least 3-6mm). Covering or protecting the grating, before concreting the haunch or laying blocks, removes the time and cost associated with cleaning the channel and grating of cement material and embedded stones. (Please note that ACO channels must be installed with the grating in place to prevent deformation of the channel).

10.0 Watertight Installation to BS EN 1433:2002
Where ACO channel joints/fittings and channel/pavement interfaces are to be sealed, an appropriate sealant should be used (e.g. Sikaflex 11FC or similar). Guidance on the necessary surface preparation and/or priming should be sought from the sealant manufacturer.

- For Guidance a typical method of application follows:
- The end faces of the channels are to be sound and free from dust, oil, and grease, with any loose material or dirt removed, e.g. by mechanical wire brush. No water drops should be evident.
 - Using a standard cartridge gun, apply the sealant evenly and with no flaws. The detail on the ends of a channel varies from one product to another:
 - Products with a basically flat face - apply the sealant in a layer approximately 5mm thick to one face of the joint.
 - Products with a sealing groove within the end face - apply the sealant in a bead of approximately 10mm diameter into the sealing groove.
 - Products with a sealing groove following the inside shape of the channel - apply the sealant to the end face of the channel and to the sealant groove, such that when the joint is completed, the sealant will both cover the end face and fill the groove.
 - The channel unit should be placed on the prepared concrete bedding and pressed against the previously placed channel unit. A sealed joint of approximately 1-2mm width should be formed between adjacent channel units.
 - Excess sealant should be wiped from the inside face of the channel to leave a smooth finish.
 - The sealant is to be left to cure for 24 hours, during which time the sealant should be kept as dry as possible.
- Note: Galvanised steel and iron products have good corrosion resistance to concrete and mortar products but may experience corrosion if high chloride and/or sulphate content is present. Use only good quality concrete and consider using corrosion inhibitors where necessary. The use of protective coatings, such as paint, can minimise the risk of corrosion.



Cellular Attenuation Tank Installation Detail
(Scale 1:10)

IMPERMEABLE GEOMEMBRANE		
PHYSICAL PROPERTIES		
Thickness	Min 0.75 to 1.0mm	ASTM D5199
Density	900kg/m³	ASTM D1505
MECHANICAL PROPERTIES		
Tensile strength, at yield	Min 1600 N/m²	ASTM D4885
Elongation at break	>500%	ASTM D4885
Puncture resistance	Min 170N	ASTM D4833
Tear resistance	Min 67N	ASTM D1004 Die C
Impact resistance	Min 15 Joules	ASTM 3998 mod
Stress crack resistance	Min 200 hrs	ASTM D5391 (SP=NCTL)
Permeability coefficient	Max 2.0 x 10 ⁻¹²	ASTM D
pH	Resistant to all naturally occurring soil acids and alkalis	
Chemical/biological resistance	Resistance to all substances found to naturally occur in soils and rainwater. Detailed information would need to be provided to geomembrane manufacturer in instances of contaminated land.	

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General Notes

1. Do not scale this drawing.
2. All dimensions are in millimeters unless stated otherwise.
3. This drawing is to be read in conjunction with all other relevant drawings & specifications.
4. All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.
5. No works shall commence on site until approval has been obtained from all relevant Agencies / Authorities.
6. All dimensions referred to in this drawing must be verified.

P1	First Issue	14.12.2017
Revision	Description	Date

PRELIMINARY

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Project
Developments by Boutique Limited
Residential Development off Park View,
Brierley, Barnsley

Title
Private Construction Details - Sheet 2 of 2

Drawn by CB	Checked by SG	Paper Size A1
Drawing Number 06-0075-008		Scale As Shown
		Date 14.12.2017