

CORE COMMERCIAL Installation Guide

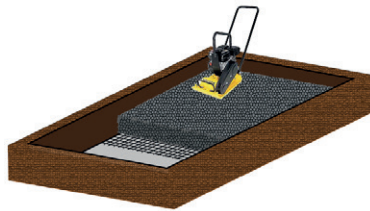
SUDS Compliant Construction

STEP 1



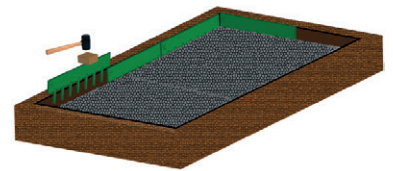
Excavate area for subbase to be installed. *For subbase calculation see overleaf.* When calculating depth from surrounding surfaces allow for an additional: 20mm for grit bedding layer and 30mm for depth of grid.

STEP 2



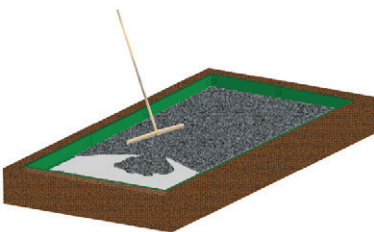
Install membrane and geogrid if required and then the subbase material. Ensure the subbase depth is suitable for the intended traffic load and is well compacted using a vibrating roller and vibrating road plate.

STEP 3



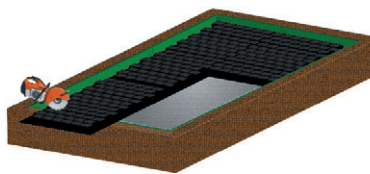
Install a suitable edging around all open sides. This can be a tanalised wooden edging; block pavements; granite setts; concrete path edgings or our very own flexible metal edging (CORE Edge).

STEP 4



Lay a separation membrane over the subbase and cover the entire area with a minimum 20mm bedding layer of fine aggregate, screed to level and compact. This layer will help to eliminate any minor undulations you may have in your subbase.

STEP 5



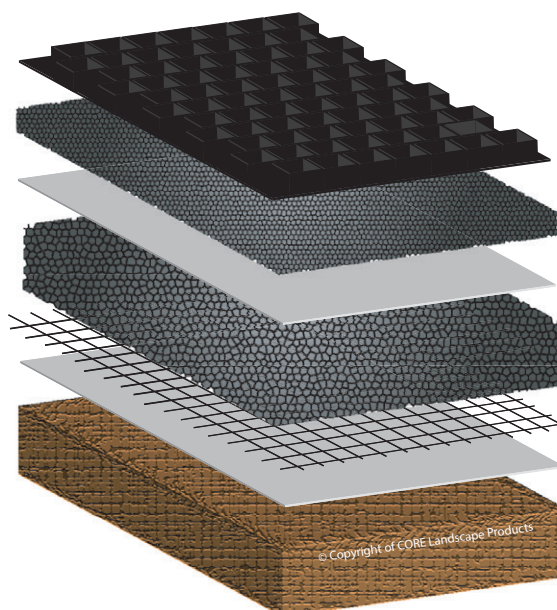
Install the grid in a brick bond pattern starting from your longest straight edge, working your way out to maintain a staggered triangle (similar to block paving). Ensure to connect all panels using the locking mechanism. Cut to shape using a petrol disc cutter or grinder. Please ensure to wear necessary PPE for the equipment being used.

STEP 6

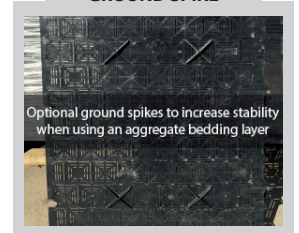


Fill the grid with your chosen aggregate either using a wheelbarrow or direct from a truck. Ensure the truck does not drive on unfilled cells.

- CORE COMMERCIAL Grid with perforated base
- Gravel bedding layer
- 2-6mm Agricultural Grit (approx. 20mm)
- CGSMT1000 Membrane
- Subbase material (4-40mm mixed aggregate)
For depth see CBR table
- CGSBXG 20Kn Biaxial GeoGrid (optional)
- CGSMT1000 Membrane (optional)
- Existing Subgrade



GROUND SPIKE



STILL UNSURE?



For site specific advice and guidance on optional materials, please give our technical team a call on

0800 118 22 78

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Subbase Calculation

STEP 1



Use the table opposite to determine the CBR% value of your subgrade once you have carried out either the tactile, visual or mechanical test.

CBR % VALUE INDICATOR					
CONSISTENCY	IDENTIFYING FACTOR			STRENGTH	
	Tactile (feel)	Visual (observation)	Mechanical (test) SPT	CBR %	CU kn/m ²
Very Soft	Hand sample squeezes through fingers	Man standing will sink >75mm	<2	<1	<25
Soft	Easily moulded by finger pressure	Man walking sinks 50-70mm	2-4	Around 1	Around 25
Medium	Moulded by moderate finger pressure	Man walking sinks 25mm	4-8	1-2	25-40
Firm	Moulded by strong finger pressure	Utility truck ruts 10-25mm	8-15	2-4	40-75
Stiff	Cannot be moulded but can be indented (thumb)	Loaded construction vehicle ruts by 25mm	15-30	4-6	75-150

STEP 2



Next, use this table to help you identify your intended traffic load according to vehicle size and frequency.

INTENDED TRAFFIC LOAD			
VEHICLE TYPE →	DOMESTIC VEHICLES	COMMERCIAL VEHICLES	HEAVY GOODS VEHICLES
TRAFFIC FREQUENCY ↓			
LOW FREQUENCY < 10 per day	LIGHT TRAFFIC	MEDIUM TRAFFIC	HEAVY TRAFFIC
MEDIUM FREQUENCY 10-20 per day	MEDIUM TRAFFIC	MEDIUM TRAFFIC	HEAVY TRAFFIC
HIGH FREQUENCY > 20 per day	HEAVY TRAFFIC	HEAVY TRAFFIC	HEAVY TRAFFIC

STEP 3



Lastly, use the CBR% value and traffic type you have identified to calculate the depth of subbase required for your project.

SUBBASE CALCULATION			
CBR (%) STRENGTH OF EXISTING SUBGRADE	LIGHT TRAFFIC	MEDIUM TRAFFIC	HEAVY TRAFFIC
>6	100 mm	110 mm	120 mm
= 4 < 6	100 mm	125 mm	150 mm
= 2 < 4	135 mm	165 mm	200 mm
= 1 < 2	260 mm	330 mm	400 mm

The table above indicates typical subbase thicknesses required depending on the subgrade CBR value and intended traffic load. Please note this is intended as a general guide in accordance with BS7533.

For further details on permeable paving design please refer to BS7533 Part 13; for installation refer to Part 1. The design for build up should satisfy two parts; firstly to support the intended traffic load and secondly to manage surface water.