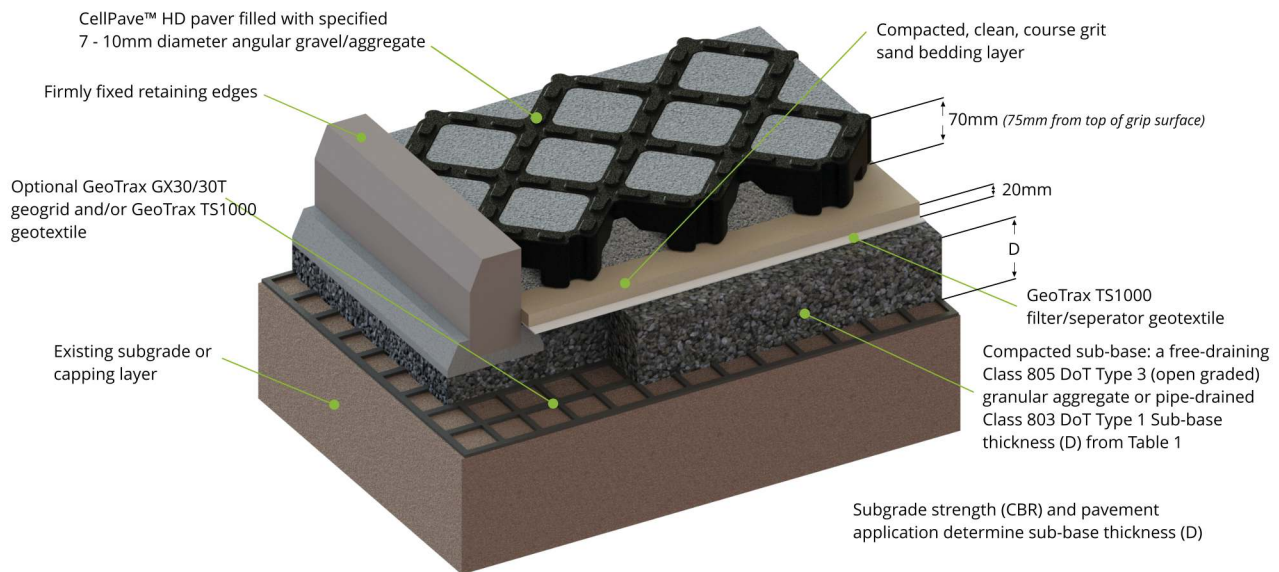


CELLPAVE™ HD - Truck-Grade, Heavy Duty Paving System INSTALLATION GUIDE - GRAVEL SURFACES

Design, installation and maintenance guidance for gravel surfaces

CellPave™ HD cellular paving is suitable for a wide range of trafficked applications and landscaped areas where a confined, free-draining gravel surface is required and where high vehicle loads are expected. Typical applications include: coach and truck parks, emergency access and maintenance routes.



TECHNICAL SPECIFICATION

Paving Unit Size	600mm x 400 mm x 75mm
Coverage Rate	4.17 pavers per m ²
Weight	8kg per paver (33.36kg/m ²)
Wall Thickness	35mm
Internal Cell Dimensions	104mm x 104mm

Colour	Dark Grey
Bedding Layer Material	Clean, coarse grit sand
Bedding Layer Thickness	20mm
Sub-Base Reinforcement (optional)	GeoTrax GX/30/30T
Lower Filter/Separator Geotextile (optional)	GeoTrax TS1000

Installation Instructions

The following generic guidance must be read in conjunction with the specific project specification within the contract documents and the design notes below.

1. Install the optional geogrid, geotextile and/or geomembrane onto the prepared subgrade formation.
2. Install the specified sub-base layer and optional drainage.
3. Install any edge restraints which may be specified. Timber, plastic or concrete kerbing are all suitable.
4. Install the filter/separator geotextile on top of the sub-base layer.
5. Install the specified sand bedding layer to a uniform thickness.
6. Ensure an accurate right-angled CellPave™ HD laying pattern by setting-out the site using string-lines. Check the lines regularly for accuracy. Start installing the CellPave™ HD pavers. Wherever possible start laying from a right angled corner and progress across the site in rows. The pavers can be installed in a width or lengthwise orientation and cross-bonded if required or appropriate to fit the site. When installing the pavers ensure that the male/female connectors are fully located together. Use protective gloves to avoid abrasions.
7. CellPave™ HD pavers can be cut to fit around obstructions & curves using a hand or power saw. Wherever possible avoid using small cut-pieces less than one-third original size.
8. When installed, fill the paver cells loosely to the finished level (top of cells) with the specified angular gravel/aggregate. Remove excess gravel from the surface of the pavers and do not overfill the cells. A single pass with a light vibrating plate machine or roller may be used to firmly bed the pavers and settle the gravel, but do not compact the gravel. It is preferable that the gravel is left just below the top of the cells to reduce its abrasion by traffic. The surface may be trafficked by slow moving plant during the cell-filling process, but care must be taken not to displace the open-celled grids with heavy-treaded or tracked machinery, nor compact the gravel during this operation.
9. A routine management and maintenance programme to keep the surface in good condition and free of debris and weed growth, will help to sustain the porosity, quality and longevity of the system.

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Design Notes

Note 1: If the optional geogrid is omitted, the total sub-base layer thickness is typically increased by a minimum of 50%. Selecting an alternative geogrid will require a redesign of the sub-base thickness.

Note 2: Use of GeoTrax GX30/30T geogrid. If construction traffic axle loads will be greater than 60kN (approximately 6 tonnes), minimum sub-base thickness over the geogrid shall be 150mm. Maximum sub-base particle size should match minimum sub-base thickness but must not exceed 75mm diameter. For sub-base thicknesses of around 100mm, a minimum 37.5mm particle size should be adopted to allow effective installation of the geogrid.

Note 3: Sub-base attenuation utilising a geomembrane and optional geotextile protection, is typically necessary to create a water storage facility and/or a groundwater protection function.

Note 4: A permeable open-graded (reduced-fines) Sustainable Drainage System (SuDS) sub-base layer such as Dot Type 1x, Type 3 or Type 4/40, is preferred. However, where a conventional DoT Type 1 sub-base is to be installed, it is essential that a drainage system is incorporated to assist in the mitigation of issues associated with saturation. This drainage system would typically comprise of a network of perforated pipes or drainage geocomposite.

Note 5: CBR% = California Bearing Ratio: an indicative measurement of subgrade soil strength. Specialist advice should be sought from a suitably qualified person for high load or critical applications.

Note 6: The SuDS permeable sub-base must be overlaid with a GeoTrax TS1000 geotextile to provide separation, enhanced water treatment function and prevent migration of the sand bedding layer. The sand bedding must be a clean, coarse-grained sand free from silts & clays: it must not be soft building sand or silver sand.

Note 7: The paver fill material should be an angular gravel with a particle size up to 20mm. It is not recommended to use a rounded pea or river gravel as these are not load bearing.

Note 8: The maximum advised gradient for vehicular trafficked applications is 8% (1:12) 5°.

Note 9: When designed in accordance with the recommendations, CellPave™ HD complies with BS8300:2009 : "Design of buildings and their approaches to meet the needs of disabled people" – Code of Practice (ISBN 9780 580 57419) & Building Regulations Document 'M' Sec. 6.

The following table is for general guidance only. Please contact us for scheme specific advice.

APPLICATION/LOAD	CBR % OF SUBGRADE	SUB-BASE THICKNESS	GEOTEXTILE (A)	GEOGRID (B)	
LIGHT DUTY (CARS)	OVER 6 %	150 mm	TS1000		
	4 - 6 %	200 mm	TS1000		
	CBR 8%	2 - 4 %	230 mm	TS1000	GX20/20
		1 - 2 %	350 mm	TS1000	GX20/20
	BELOW 1 %	CONTACT US			
MEDIUM DUTY (7.5T)	OVER 6 %	150 mm	TS1000		
	4 - 6 %	200 mm	TS1000	GX20/20	
	CBR 10%	2 - 4 %	300 mm	TS1000	GX30/30
		1 - 2 %	430 mm	TS1000	GX30/30
	BELOW 1 %	CONTACT US			
HEAVY DUTY (HGV)	OVER 6 %	230 mm	TS1000	GX20/20	
	4 - 6 %	310 mm	TS1000	GX30/30	
	CBR 15%	2 - 4 %	470 mm	TS1000	GX30/30
		1 - 2 %	CONTACT US		
	BELOW 1 %	CONTACT US			



For more information, contact us
or visit the dedicated website:
www.cellpave.com

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