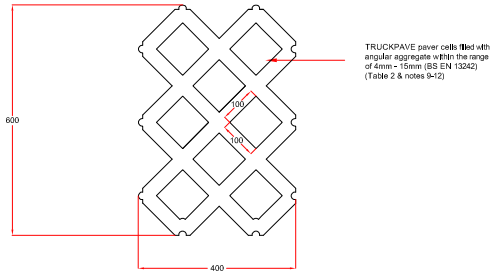
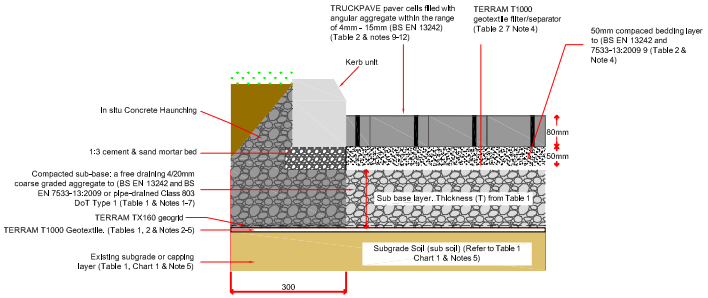


1 **TRUCKPAVE : Gravel Surface Paving Grid**
Scale : N.T.S.



2 **TRUCKPAVE: Gravel Surface : Typical Construction Profile**
Scale : N.T.S.

This field guide is provided as an aid to assessing the mechanical stabilisation requirements in commonly encountered site conditions.Fiberweb Geosynthetics ltd accepts no responsibility for any loss or damage resulting from the use of this guide.

Please note that the information above is given as a guide only. All sizes and weights are nominal figures and may vary to what is published. Fiberweb Geosynthetics ltd cannot be liable for damage caused by incorrect installation of this product. Final determination of the suitability of any information or material for the use contemplated and the manner of its use is the sole responsibility of the user and the user must assume all risk and responsibility in connection therewith.

DESIGN NOTES:

Note 1: A free-draining 4/20mm coarse graded aggregate to BS EN 13242:2002 and BS EN 7533-13: 2009 is preferred where a SUDS (Sustainable Drainage System) is proposed. A low permeability Class 803 DoT Type 1 may be considered, but an adequate and functioning drainage system MUST be installed within this sub-base variation. To prevent collapse of the construction profile edges when trafficked, the sub-base profile must extend beyond the edge-line of the pavement layer by a minimum equivalent length (mm) to that of the specified sub-base thickness (mm) (T).
Note 2: If a TERRAM TX160 geogrid layer is omitted from the specification, the total granular sub-base (GSB) layer thickness (T) must be increased by minimum 50%. The use of alternative geogrids will influence the required sub-base layer thickness according to manufacturer's recommendations.
Note 3: Use of TERRAM TX160 geogrid. If construction traffic axle loads will be greater than 60kN (approx 6t), minimum sub-base thickness over TERRAM TX160 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 a TERRAM TX160 grid.
Note 4: Where the preferred 4/20mm course graded aggregate sub-base is specified, the TERRAM T1000 geotextile separator MUST ALWAYS be installed over the sub-base to avoid the settlement. The bedding layer must be a 2-6mm grit to BS EN 13242:2002 & BS EN 7533:2009.
Note 5: Specific advice on soil CBR% strength, ground conditions, capping-layers & construction over weak ground with a CBR less than 1% is available from TERRAM. N.B. CBR% = California Bearing Ratio, a measurement of subgrade soil strength.
Note 6: Where a low-permeability DoT Type1 sub-base is specified, sub-surface drainage MUST be provided, typically consisting: 100mm diameter perforated pipe drains leading to a suitable outfall or soakaway and laid at minimum gradient 1:100, pipes bedded on clean gravel in trench backfilled with DoT Type 'A' drainage aggregate. Drainage trenches must interface cleanly with the bedding layer profile and be covered or fully wrapped with a TERRAM T1000 geotextile filter. Drains installed down centre or one edge of areas up to maximum 5m wide. Larger areas may require additional main and lateral drains at 5m - 10m centres. Drainage design to be determined by the specifier based on known site criteria.
Note 7: Drainage outfall detail for a Sustainable Urban Drainage System (SUDS) application with an open graded aggregate sub-base will vary according to each site, but generally allows for water attenuation within the construction profile and/or infiltration to the subgrade by omitting extensive trench & pipe systems within the sub-base layer. The type of SUDS design (attenuation or infiltration) will depend upon the underlying ground conditions and not all sites are suitable for infiltration. Weak and low-permeability cohesive sub-grades are generally unsuitable for infiltration SUDS.
Note 8: The use of edge restraints is required. These, heavy-duty concrete, steel or plastic kerbs, timber edging or railway sleepers, must be strong and firmly fixed.
Note 9: The gravel/aggregate paver fill should be clean, hard, free-draining, angular material within the specified particle size range (advisory 4-15mm). NOT rounded pea shingle.
Note 10: Maximum advised gradient for traffic applications: 8% (1:12) 5°.
Note 11: TRUCKPAVE pavers comply with BS8300:2009 - Design of buildings and their approaches to meet the needs of disabled people - Code of Practice. (ISBN 978 0 580 57419) & Building Regulations Document 'M' section 6.

Specific advice on the use of TRUCKPAVE pavers on steep slopes, drainage suitability and Sustainable Urban Drainage Systems (SUDS) applications, can be obtained from TERRAM. TRUCKPAVE pavers are intended for use in low-speed traffic applications only.

Table 1 : Typical Sub-base Thickness (Tx) Requirements - refer to (2) Typical Construction Profile

APPLICATION/LOAD	CBR (%) STRENGTH OF SUBGRADE SOIL (see Chart 1)	SUB-BASE MINIMUM THICKNESS (mm) (T) Incl geogrid	(T) mm (see Notes 1-7) excl geogrid	TERRAM TX160 GEOGRID (See Notes 1-3)
Fire trucks, Coaches and occasional HGVaccess	≥ 6 = 4 < 6 = 2 < 4 = 1 < 2	100 120 190 380	150 180 285 570	TX160 TX160 TX160 TX160
Light vehicle access and overspill car parking	≥ 6 = 4 < 6 = 2 < 4 = 1 < 2	100 100 135 260	150 150 200 390	TX160 TX160 TX160 TX160

Table 2 : Paving Grid Specification

Description	Data
Product	**TRUCKPAVE**
Material	100% Recycled mixed polymers
Colour	Grey
Paver dimensions (Plan)	600mm x 400mm
Paver Depth	80mm
Nominal internal cell size	100mm x 100mm
Structure Type	Rigid-walled, open cells
Cell wall thickness	40mm
Weight (Nominal)	9 kg/paver - (37.5kg/m²)
Load bearing capacity (Filled)	<60 tonnes gross vehicle weight <20 tonnes single axle
Crushed resistance (Unfilled)	<1500 tonnes/m² (15,000kN/m²)
Open cell %	50%
Connection Type	Tongue & Groove (TP80)
Chemical resistance	Excellent
UV Resistance	High
Toxicity	Non Toxic

Chart 1: Field guidance for estimating sub-grade strengths

Consistency	Indicator			Strength	
	Tactile (feel)	Visual (observation)	Mechanical (test)	CBR	CU
			SPT	%	kN/sqm
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	40-75
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 by thumb	Loaded construction vehicle ruts by 25mm	15-30	4-6	75-150

TERRAM
Geosynthetics you can trust

Fiberweb Geosynthetics Limited
Blackwater Trading Estate
The Causeway
Maldon, Essex CM9 4GG England
Tel: +44 (0) 1621 874200
Fax: +44 (0) 1621 874299
e.mail: info@terram.com
website: www.terram.com

NOT FOR CONSTRUCTION

Copyright © Fiberweb Geosynthetics ltd. All rights reserved .

DISCLAIMER:
THE INFORMATION CONTAINED IN THIS DETAIL IS PROVIDED FOR THE CONVENIENCE OF THE USER AND DOES NOT TAKE PLACE OF CONSTRUCTION PLANS AND/OR SPECIFICATIONS. FIBERWEB GEOSYNTHETICS LTD CANNOT BE HELD RESPONSIBLE FOR THE USE OR MISUSE OF THIS INFORMATION. WE RECOMMEND YOU CONTACT US FOR FURTHER DESIGN ASSISTANCE.
THIS DETAIL IS FOR CONCEPT PURPOSES ONLY AND DOES NOT IMPLY ANY ACTUAL DESIGN OR ENGINEERING HAS BEEN COMPLETED. ENGINEERING MODELING WILL NEED TO BE PERFORMED TO DETERMINE PROPER HYDROLOGICAL AND STRUCTURAL REQUIREMENTS AND COMPONENTS INCLUDING SAND AND AGGREGATE.
ALL MATERIALS ARE SUBJECT TO APPROVAL BY FIBERWEB GEOSYNTHETICS LTD.

TRUCKPAVE Heavy-Duty Pourous Pavers
For Gravel Surfaces

Design and Specification Guide