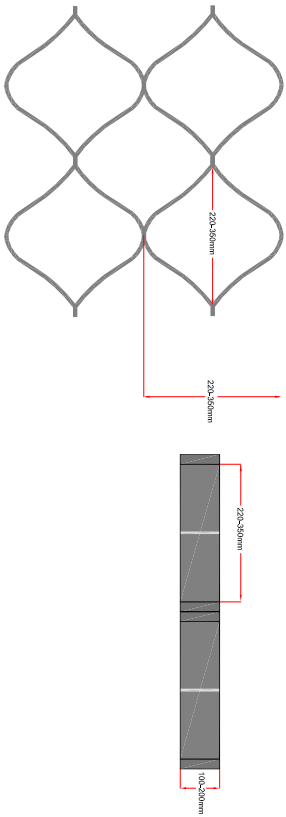
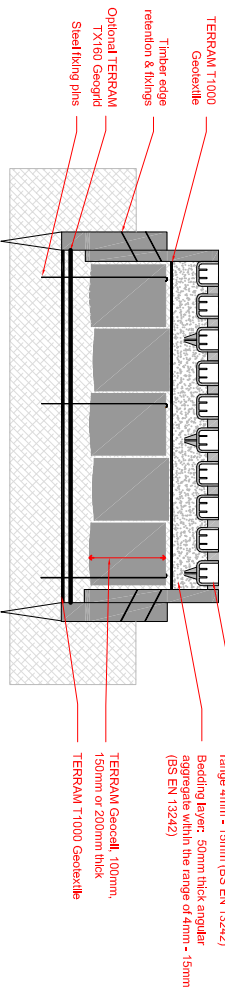


1 Plan and Isometric View Showing Porous Pavement Surface BodPave @ 85
Scale: N.T.S.



2 Geocell Detail: TRP Sub-Base Layer
Scale: N.T.S.



3 Tree Root Protection (TRP): Typical Construction Profile with BodPave @ 85
Scale: N.T.S.

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Geocell Tree Root Protection - Bodpave® 85
Porous Gravel Filled Surface
Specification Design and Installation Guidance

DESIGN NOTES:

- Note 1: BSS8337 advises that any new permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the TRP area.
- Note 2: Geocells must be filled with clean, open graded angular aggregate, normally in the particle size range of 5mm - 45mm. Clear #20 or 440 stone or a medium-fine DOT Type X or Type 3 may be incorporated. Specific sized rounded aggregate or DOT Type 1 should not be used.
- Note 3: Geocells must be installed over a prepared subgrade with strength and proposed traffic bearing.
- Note 4: Specific advice on CBR's, strengths, ground conditions and construction over the weak ground with a CBR less than 1% is available from TERRAM. CBR% = California Bearing Ratio is a measurement of subgrade soil strength.
- Note 5: Specific advice on CBR's, strengths, ground conditions and construction over the weak ground with a CBR less than 1% is available from TERRAM. CBR% = California Bearing Ratio is a measurement of subgrade soil strength.
- Note 6: In most cases 80% - 85% of a trees root system are in the upper 7m of soil and the small fibrous tree roots are the most important to a tree's health. The fine roots enable transport of water and nutrient to the tree via the larger roots which also anchor the tree and provide stability. Severing 80% a small proportion of the fine surface root structure can severely affect the tree causing stress, die back and loss of stability.

Table 1 : Geocell TRP thickness

APPLICATION/LOAD	CBR (%) STRENGTH OF SUBGRADE SOIL (see Chart 1)	GEOWALK/Sub-base thickness (mm)	TERRAM GEOWALK reinforcement layer
Pedestrian/Cycles	3 < 1 < 3	100mm 100mm	TX160 TX160
Car/light vehicle	3 < 2 < 2 1 < 2	150mm 150mm 200mm	TX160
HGV's	3 < 2 < 3 1 < 2	200mm 200mm 300mm	TX160 TX160 TX160

Table 2 : Geocell Specifications

GEOWALK GRADE	CELL DIMETER AND DEPTH	WALL PERMEABILITY (Limes)²	JOINT BOND
ZS10	250mm x 100mm	20	Chemical
ZS115	250mm x 150mm	20	Chemical
ZZ220	220mm x 200mm	20	Chemical

Chart 1: Field guidance for estimating sub-grade strengths

Consistency	Tackle (feel)	Visual (observation)	Indicator		Strength	
			Mechanical (test)	CBR	CU	NMISqmm
Very Soft	Hand sample squashes through fingers	Hand standing will sink ~ 70mm	SPT < 2	% < 1	< 25	< 25
Soft	Easily moulded by finger pressure	Hand walking sinks 50 - 70mm	24	Around 1	Around 25	Around 25
Medium	Moulded by moderate finger pressure	Man walking sinks 25mm	4-8	1-2	40-75	40-75
Firm	Moulded by strong finger pressure	Utility truck sinks 10 - 25mm	8-15	2-4	40-75	40-75
Stiff	Cannot be moulded but can be indented by thumb	Loaded construction vehicle sinks by 25mm	15-30	4-6	75-150	75-150