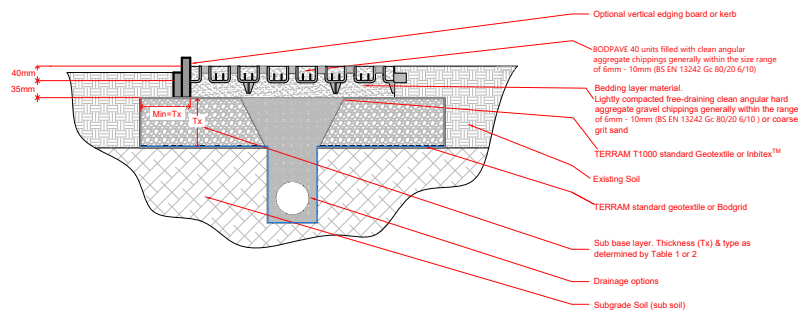


1 Isometric Showing unit connections
Scale : N.T.S.

2 BodPave®40 - Typical Plan View
Scale : N.T.S.



3 BodPave®40: Gravel Surface : Typical Construction Profile
Scale : N.T.S.

DESIGN NOTES:

Note 1: Minimum subbase thickness (Tx) can be selected from table 1 or 2. In the absence of any site specific ground investigation report, refer to the ground strength and permeability estimate on Pg 9 of the specification, design and installation guide.

Note 2: If the Terram Bodgrid layer is omitted, then the total sub-base layer thickness (Tx) must be increased by 50%. A Terram standard geotextile separation layer should be specified with lower subgrade strength (CBR value) requiring a more robust grade in accordance with BS8661:2019 (see table 2).

Note 3: Bodpave units are an ideal surface for source control porous paving SUDS (Sustainable Drainage Systems) with a permeable sub-base; DoT Type 3 (Type 1x) porous/open graded granular material as described in Specification for Highways Works clause 805. If a higher water storage (attenuation) capacity (void ratio) is required a hard crushed angular "clean stone" such as a coarse graded aggregate (CGA) type 4/20 (4 mm minimum and 20 mm maximum particle size) can be used. The type of SUDS design (attenuation, total or partial 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 (permeability coefficient $k < 10^{-6}$ m/s). Clays with a low plasticity index (<20%) will reduce in strength when saturated; a full attenuation system with an impermeable membrane directly on top of the subgrade is recommended. Specific advice on suitable drainage and construction over very weak ground (CBR <1%) is available from TERRAM.

Note 4: Alternatively traditional 'DoT' Type 1 well graded granular material may be used for the subbase provided that an adequate drainage system is installed. Typical drainage details: 100mm diameter perforated pipe drain laid at minimum gradient 1:100, bedded on gravel in trench backfilled with SPM clause 505 Type A drainage aggregate (or CGA type 4/20), covered or wrapped with Terram T1000 standard nonwoven geotextile and leading to a suitable outfall or soakaway. Drains placed down the centre or along the edge of access routes up to 5m wide. Wider areas may require additional drains at 5m - 10m centres.

Note 5: The sub-base must be covered with a layer of Terram T1000 standard or Inbitex™ nonwoven geotextile to prevent settlement due to mixing of the bedding & subbase layers and to provide filtration & pollution control.

Note 6: Bedding layer material should be lightly compacted, free-draining clean angular hard aggregate gravel chippings generally within the size range of 6mm - 10mm (BS EN 12342 Gc 80/20 6/10) or coarse grit sand. Bodpave units should be filled with clean angular aggregate chippings generally within the size range of 6mm - 10mm (BS EN 12342 Gc 80/20 6/10). Rounded pea shingle is not suitable.

Note 7: The final pavement and drainage design should be undertaken by a suitably qualified civil engineer and based on specific site conditions.

Note 8: Maximum advised gradient for traffic applications is 12% (1:8) 7", Bodpave units have specific fixing points for steel u-pins if required for steep slope applications.

For further guidance, refer to the specification, design and installation guide.

TABLE 1 MINIMUM SUBBASE THICKNESS (Tx) WITH BODGRID

SUBGRADE CBR* %	Cars/ light vehicles (#)		Coaches/Heavy goods/emergency vehicles (#)		Overlap (mm)
	Thickness (mm)	Bodgrid	Thickness (mm)	Bodgrid	
1	300	GC30	400	GC30	600
2	150	GC30	250	GC30	500
3	125	GC30	175	GC30	450
4	125	GC30	150	GC30	400
5+	100	GC30	125	GC30	300

TABLE 2 MINIMUM SUBBASE THICKNESS (Tx) WITHOUT BODGRID

SUBGRADE CBR* %	Cars/ light vehicles (#)		Coaches/Heavy goods/emergency vehicles (#)		Overlap (mm)
	Thickness (mm)	Standard geotextile	Thickness (mm)	Standard geotextile	
1	450	T2000	600	T2000	600
2	225	T1500	375	T1500	500
3	200	T1000	300	T1000	450
4	200	T1000	225	T1000	400
5+	150	T1000	200	T1000	300

* California Bearing Ratio test

Regular tight turning of vehicles and 'dry' steering may cause damage to the Bodpave units and/or displace gravel in-fill; vehicle manoeuvring should be carefully considered at specification/design stage. Gravel filled units may require some maintenance when subjected to regular channelised and turning traffic loadings. Terram Bodpave™ and Truckpave™ pavements are generally recommended for occasional overruns or regular HGV traffic respectively. If construction traffic axle load exceeds 60kN (6 Tonnes), minimum subbase thickness over TERRAM Bodgrid should be 200mm.