

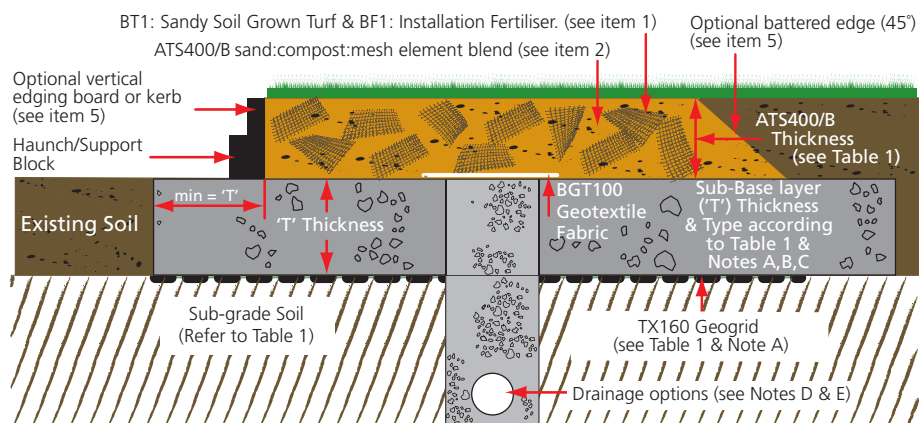
## DESIGN GUIDANCE

Fire Service & HGV routes,  
Overflow car parks, Events areas,  
Helipads, Occasional vehicle routes

## For Access Routes



### Typical Construction Profile



### A typical vehicle access route profile would consist:

1. The specified BT1: Sandy Soil Grown Turf (<20mm thick) & BF1: Installation Fertiliser.
2. A 150mm or 200mm thick layer of ATS400/B rootzone, installed according to Fiberweb Geosynthetics Ltd., recommendations. Refer to Table 1 for advice on the required ATS400/B layer thickness.
3. **Where a sub-base is not required.**  
Lightly cultivate and re-consolidate the sub-grade formation layer. Refer to Table 1 to determine if a sub-base layer is required.
4. **Where a sub-base is required.**  
A layer of 'DoT Type 1' sub-base (see Note B) or similar approved material, compacted in accordance with DoT specification for Highway works. Refer to Table 1 for required sub-base layer thickness.  
In some cases, such as Sustainable Drainage Systems (SuDS) applications, where improved drainage is required, a reduced fines, permeable 'DoT Type' sub-base or similar may be specified. (see Notes B, D & E).
5. Edges of the Advanced Turf can be retained with kerbs or edging boards or by leaving a (45°) battered edge to the ATS400/B rootzone where it abutts an adjacent grassed area.
6. Access routes can be delineated using kerbs, bollards, shrubs or trees etc.

### NOTES

#### Refer to 'Installation Guidance' literature for detailed installation advice.

Items 1-2 above are normally supplied to site by Fiberweb Geosynthetics Ltd., as part of the Advanced Turf System. Specific project application advice and design support can be obtained from Fiberweb Geosynthetics Ltd., technical advisors.

- Note A:** If the Geogrid is omitted, then the total sub-base layer 'T' thickness must be increased by a minimum 50%.
- Note B:** A 'DoT Type 1' sub-base may be used, provided that an adequate drainage system is installed, or alternatively a porous/open-graded (reduced fines, i.e. 'DoT Type 3') sub-base layer, e.g as part of a Sustainable Urban Drainage System (SuDS) application may be specified. If a SuDS solution is specified, the permeable sub-base layer must be covered with either a geotextile filter membrane and/or a suitable clean gravel blinding layer, to avoid loss of the overlying rootzone (ATS400/B) into the permeable sub-base.
- Note C:** Specific advice on ground conditions, CBR% and construction over ground with a CBR less than 1% is available from Fiberweb Geosynthetics Ltd., technical advisors.
- Note D:** Typical drainage details; 100mm diameter perforated pipe drain laid at minimum gradient 1:100, bedded on gravel in the trench, backfilled with 'DoT Type A' drainage stone, covered or wrapped with a geotextile fabric and leading to a suitable outfall or soakaway. Drains placed down centres or one edge of access routes up to 5m wide. Wider areas may require additional drains at 5m - 10m centres. Drainage design by specifier based on specific ground conditions on site. The drainage system will be modified or omitted if a SuDS solution is specified.
- Note E:** Specific advice on Sustainable Urban Drainage Systems (SuDS) is available from Fiberweb Geosynthetics Ltd., technical advisors.



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**Table 1: Design Layer Thickness & Profile Guidance**

Subgrade Soil Strength (see chart 1)	Specified layer thickness in millimetres			Tensar TriAx™ Geogrid Layer (see note A)
	Rootzone	DoT sub-base layer ('T') (refer to notes A, B & C)		
CBR% *	ATS400/B	For Light vehicles	For HGV's	Type
≥ 12% (light vehicles)	150mm	No sub-base	N/A	None
≥ 12% (HGV's)	200mm	N/A	No sub-base	None
= 6 < 12%	200mm	No sub-base	No sub-base	None
= 4 < 6%	200mm	100mm	100mm	TX160
= 2 < 4%	200mm	100mm	150mm	TX160
= 1 < 2%	200mm	200mm	300mm	TX160

\*CBR% California bearing ratio (see Chart 1 below)

**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 50-75mm	2-4	Approx 1	Approx 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 by thumb	Loaded construction vehicle ruts by 25mm	15-30	4-6	75-150

*This Field guide is provided as a guideline for assessing the mechanical stabilisation requirements in commonly encountered field conditions. Fiberweb Geosynthetics Ltd., accepts no responsibility for any loss or damage resulting from the use of this guide.*

• Omission of the TX160 geogrid layer, or substitution with an alternative product is not recommended unless approved by the specifier. Alternative products will not provide equivalent structural integrity and may compromise the design profile.

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