

Advanced Turf® System (ATS)

Structural design guidance for walkway access



The Advanced Turf System (ATS) is suitable for a wide range of trafficked applications where a free-draining, compaction resistant and high load bearing, discreetly reinforced natural grass surface is required. Typical applications include fire & emergency access lanes, HGV maintenance & MEWP routes, overflow parking, event areas, helipads & airfield aprons, pedestrian & disabled access, and sculptured slopes. This document is intended to be a summary presenting typical solutions. Contact ABG for detailed site specific advice.

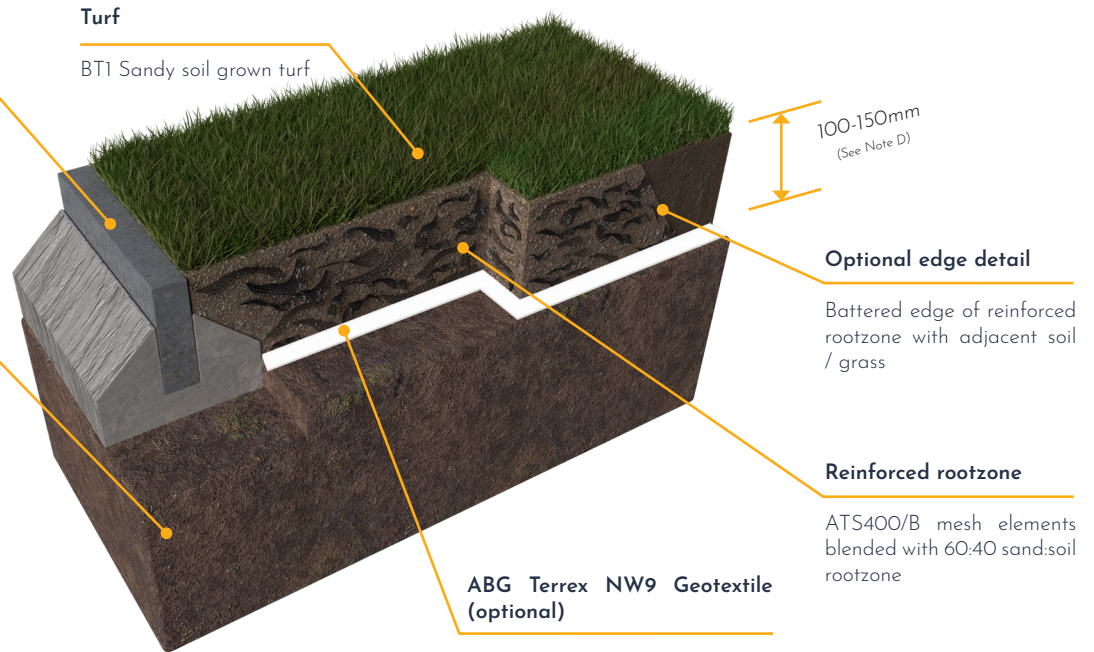
Typical Construction Detail

Paving edge restraint

A concrete, timber, plastic or steel edging detail

Subgrade

Consolidated good quality, free-draining soil or a drained Podium Deck



Technical Specification

System	Advanced Turf® System (ATS)
Colour	Brown
Mesh material	Polypropylene Homopolymer
Mesh density	905 - 908 kg/m ³
Mesh element dimensions	100mm x 50mm
Mesh aperture pitch	10mm + 2mm - 1mm
Mesh tensile strength	3.3kN/m (longitudinal and transverse)
Mesh junction strength	≥ 50% of the strand strength
Mesh flexural recovery	High flexural recovery ≥ 95%
Mesh/rootzone blend ratio	5.4kg mesh elements per 1m ³ of rootzone (3kg mesh / tonne)
Permissible axle load	Cars & Light Vans < 3.5 tonne gross vehicle weight
Chemical resistance	Excellent
UV stability	High resistance to colour & strength degradation
Infiltration capacity	High infiltration rate up to 150mm/hr, dependent on subgrade permeability

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NOTES

- A. For advice on the installation and maintenance of ATS, please refer to the ABG Advanced Turf® Installation Guide.
- B. Advice on subgrade CBR% strengths, ground conditions, and construction over weak ground is available from ABG. To achieve the required performance, compact the sub-base in accordance with the site-specific advice from the ABG Design Department.
- C. Typical paving edge restraint solutions include concrete, timber, railway sleepers, steel, heavy-duty plastic, or by simply leaving a 45° battered edge to the compacted ATS rootzone layer where it will abut an adjacent grassed area.
- D. To avoid leaching of ATS rootzone where the subgrade / formation material is very free-draining, such as on an aggregate base or a podium deck detail. An optional ABG Terrex NW9 geotextile layer placed below the ATS rootzone should be considered. Contact ABG Ltd for advice.
- E. For applications where Advanced Turf® is providing surface water source control for SuDS (Sustainable Drainage System) via infiltration, drainage may be modified or omitted as determined by subgrade soil & site criteria. Where infiltration into the subgrade is not possible, typical drainage details are 100mm diameter perforated pipe drain laid at minimum gradient 1:100, bedded on gravel in trench backfilled with DTp Type A drainage stone covered or wrapped with a geotextile fabric (ABG Terrex NW9), 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. Fildrain drainage geocomposite may be considered as a means of providing linear drainage channels. Contact ABG Ltd. to discuss further.
- F. Fertiliser will help to establish and maintain a healthy grass sward which is capable of sustaining walkway access traffic. Local and seasonal weather conditions will determine the degree of irrigation required. Inadequate irrigation during the grass establishment period may result in drought conditions and a failure to establish uniform quality grass cover.
- G. The maximum advised gradient for vehicle and disabled access is 8% (1:12) 5°.
- H. When designed in accordance with the recommendations, Advanced Turf 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' Section 6.
- I. All stated dimensions & weights are nominal and in accordance with manufacturing +/- tolerances.
- J. The recommendations in this document are only suitable for use with ABG products.
- K. Advanced Turf® is a registered trademark of Schweitzer-Mauduit International (SWM).
- L. ABG Ltd shall not be held liable for any warranties or collateral warranties arising from construction undertaken in accordance with this guide.