



## Tuff Turf®

### Specification for Installation

Tuff Turf® is HDPE reinforced turf erosion control product, suitable for use in stormwater systems (channels, drains, detention basins, etc) and on embankments. When installed to this specification, the product will prevent soil erosion at water velocities up to 5m/s.

This erosion control system relies upon the development of a deep well developed turf root system to bind the soil profile and healthy turf surface to prevent soil removal and to trap sediments.

Channels and drains should be constructed to profiles specified by engineer. Sudden changes in grade or profile should be avoided, in order to prevent cavitation, hydraulic jumps and erosion above or behind the Tuff Turf® installation. Entries to, or exit from culverts shall be smooth, so as to limit turbulence at these points. For flush joints, recess bare soil surface 35 mm below adjacent concrete apron at headwalls, manholes or other drainage service fixtures.

Tuff Turf® is supplied in maxi-roll form, i.e. 1.2m wide rolls. All installations should therefore be designed to suit multiples of 1.2m.

#### Stormwater Systems

Construct the profile to provide a firm surface for installation work. Avoid the use of loose sand, gravel, rocks or heavily compacted clays. Remove any soil clods or rocks which may create air pockets under the turf, as these will prevent root development.

Tuff Turf® rolls shall be laid parallel to the invert of channels and drains. The centreline of single roll or multiple roll installations shall coincide with the invert of the channels or drain. At culvert headwalls the rolls shall be laid up to the height of the design profile. Above this point unreinforced turf products may be used to cover the soil surface. Where wingwalls are used in conjunction with headwalls, Tuff Turf® shall be laid up to the lower point of the splayed edge of the wingwalls. Lay unreinforced turf products above this point, to prevent soil loss from headwalls and wingwalls.

The upstream edge of the Tuff Turf® rolls shall be buried. Dig a trench 150mm deep and turn down the edge of the roll into the trench. Stake this edge with minimum 3 timber stakes (similar to survey pegs) per roll, then back fill and tamp soil flush with turf and upstream soil or concrete surface. At end to end roll joints, compress roll ends and stake upstream edge of lower roll. Longitudinal roll joints should be laid tight and flush by pulling edges together firmly with rakes. Longitudinal rolls on the profile banks should also be pinned along their upper edges to hold them on the bank until established.

#### Embankments

Tuff Turf® rolls shall be laid perpendicular to the toe of the embankment. Extend the roll at least 0.5m over the upper edge and stake with minimum 3 Stakes per roll. Roll edges shall be pulled together firmly with rakes. Trim the top and bottom edges to a neat line.

#### Establishment

Tuff Turf is a Living product and requires water and nutrients for establishment. Lay rolls with 24 hours of harvest. Immediately after installation, water the turf heavily to ensure that water penetrates into the soil below the turf. Maintain moisture for a minimum of 2 weeks to ensure rapid root development. Irrigation frequency can be reduced after the turf is tightly bound to the soil profile. Apply slow release fertiliser prior to installation, or alternatively apply ECO 88 or "dynamic lifter" after root system has developed. Top dress as required.

Remove stakes only after turf is tightly bound to soil profile.