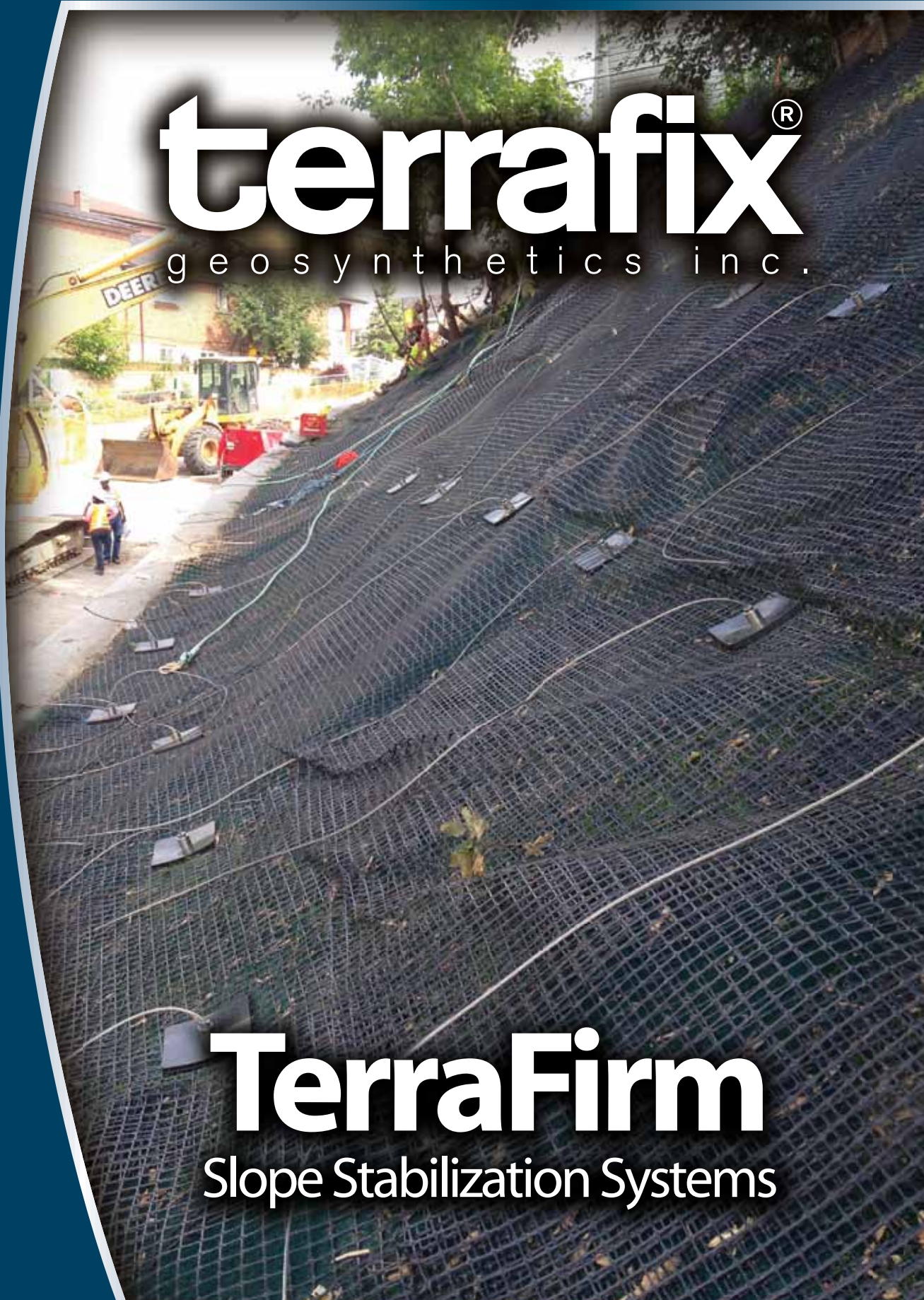


Canada's leader of complete geosynthetic solutions

The background image shows a construction site for a slope stabilization project. A large, dark, grid-like geosynthetic material is being installed on a hillside. Several workers in safety gear are visible on the slope, and a yellow excavator with 'DEER' written on its arm is positioned at the base of the slope. The scene is set in a residential or commercial area with buildings and trees in the background.

terrafix[®]

geosynthetics inc.

TerraFirm

Slope Stabilization Systems

To view our complete product line visit us at www.terrafixgeo.com

TerraFirm Surficial Slope Stabilization

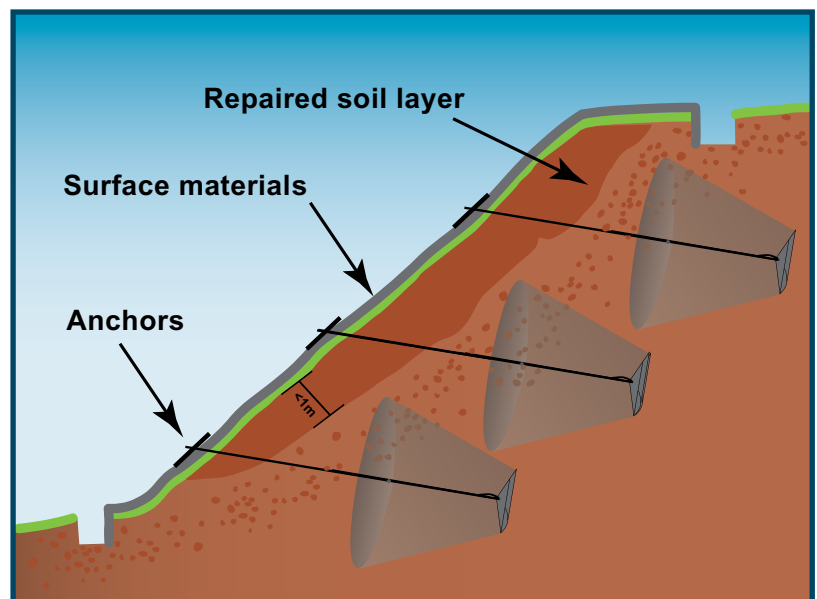
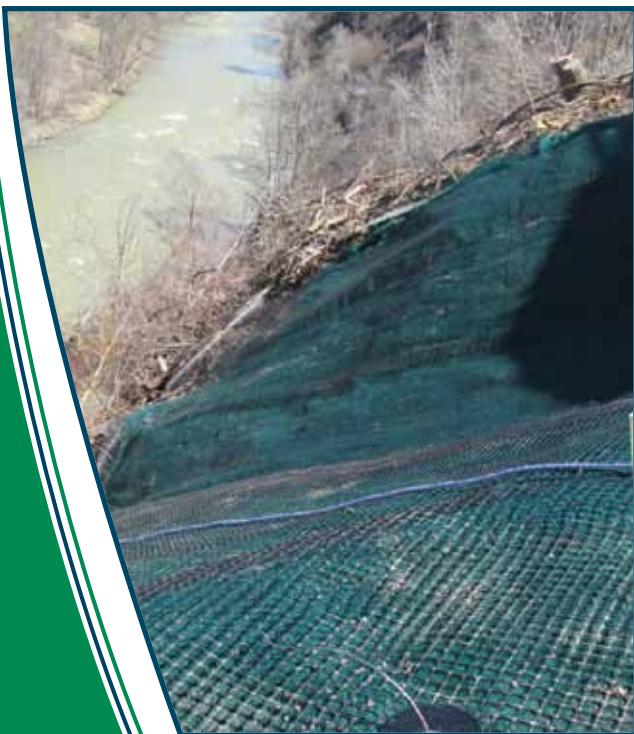
Steep slopes and embankments create numerous challenges both during construction and long term. Although they are necessary for efficiency of land use, you may find yourself dealing with problems due to one or more of the following:

- Erosion due to over land flow
- Poor drainage
- Shallow sliding failures
- Space constraints

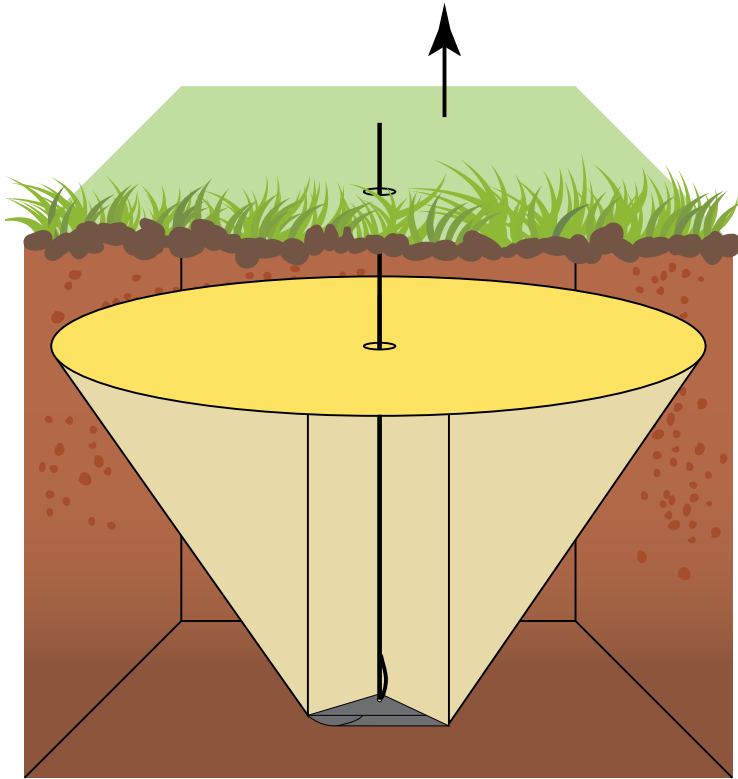


TerraFirm Anchoring Systems offers a unique mechanical stabilization solution for many steep slope challenges featuring:

- Fast and easy installation
- Wide variety of surface protection options
- On-site assistance
- **Stabilization without excavation**
- Low environmental impact



Anchored Stress Distribution



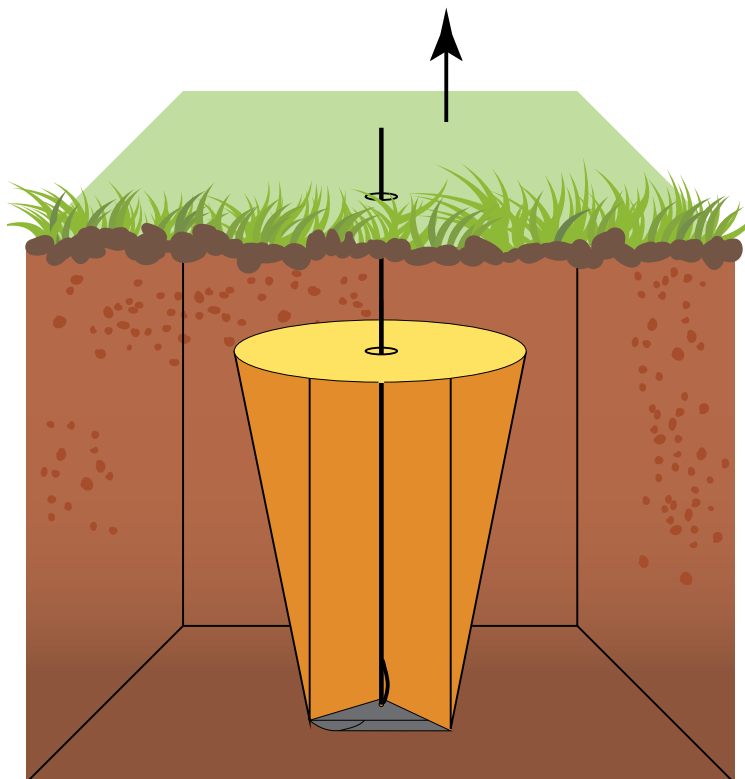
Granular / Non-Cohesive Soils

The stress distribution in front of a loaded anchor can be modeled using foundation theory. The ultimate performance of an anchor within the soil is defined by the load at which the stress concentration immediately in front of the anchor exceeds the bearing capacity of the soil.

Factors that will affect the ultimate performance of the anchor include:

- Shear angle of the soil
- Size of the anchor
- Depth of installation
- Pore water pressure

Anchors perform exceptionally well in a granular / non-cohesive soil, displaying short loadlock and extension characteristics, a broad frustum of soil immediately in front of the anchor and extremely high loads.



Cohesive Soils

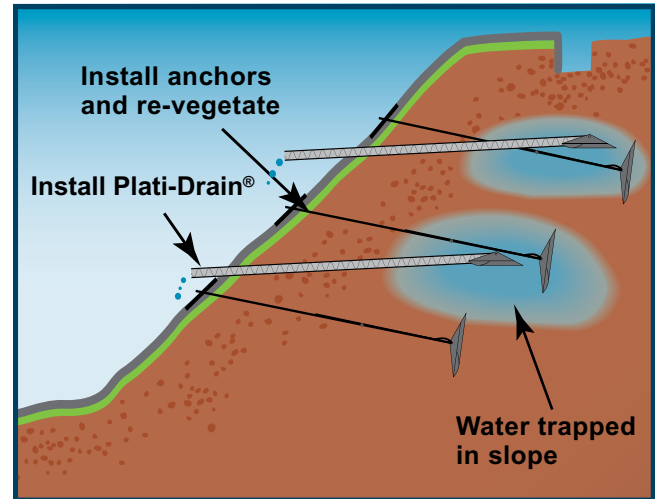
Stiff cohesive soils, such as boulder clays, can also give outstanding results. However, weaker cohesive soils, like soft alluvial clays, can result in long loadlock and extension distances and a small frustum of soil in front of the anchor. Consequently these conditions require a larger size of anchor and if possible a deeper driven depth to achieve design loads.

Drainage Solutions

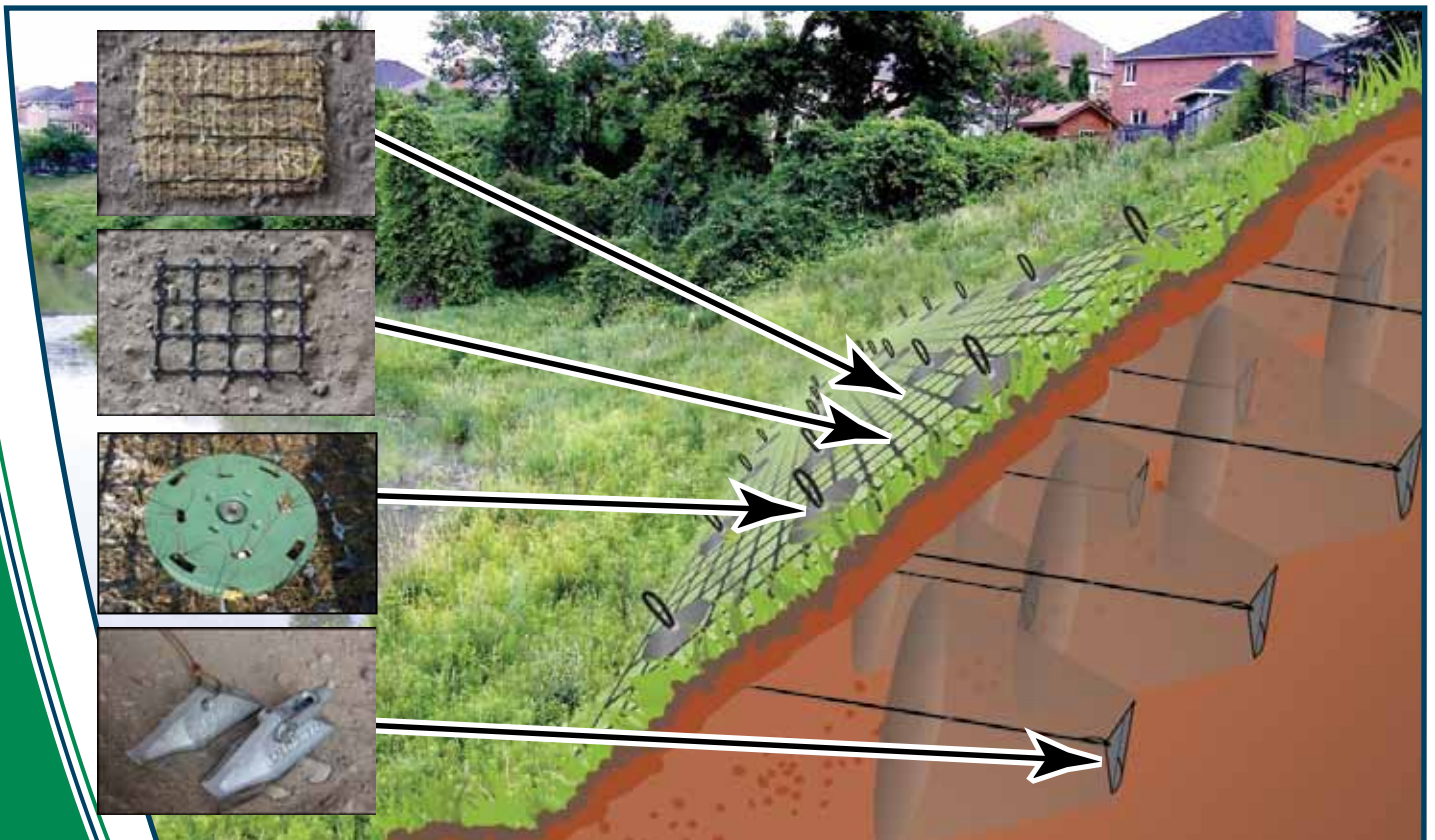
Plati-Drain®

Excess water due to a high water table or high pore water pressure can lead to instability of embankments.

Plati-Drain® provides a unique solution that reduces pore water pressure within fine grained soils in both embankments and retaining walls. Plati-Drain® uses a sacrificial anchor to drive the prefabricated drain deep into the soil (up to 10 m). Water is easily drained from the soil providing increased stability for the embankment to wall structure.



TerraFirm Surficial Slope Stabilization



TerraFirm Applications

Erosion Control

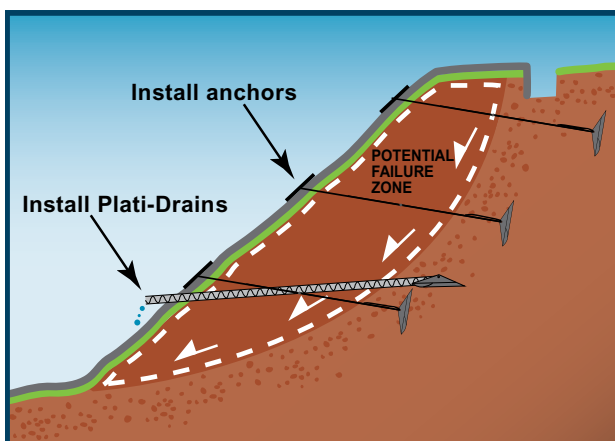
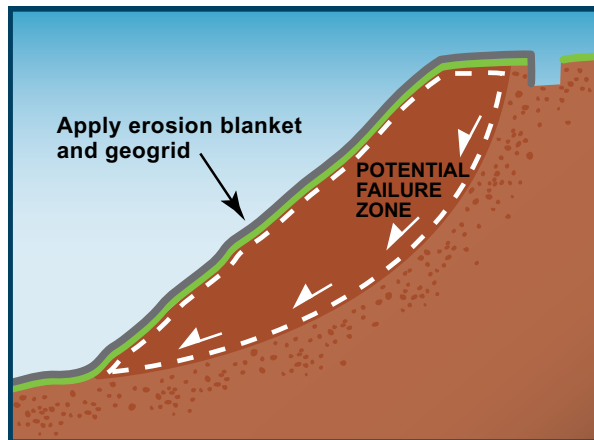
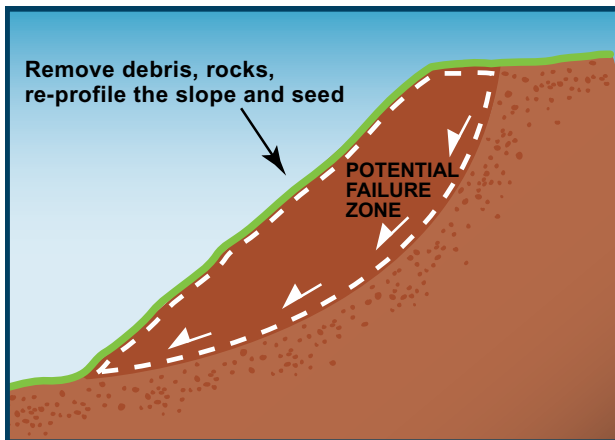
TerraFirm anchors and surface mats provide a long-lasting solution to many erosion control challenges. Surface protection materials may include: Biaxial geogrids, TRMs, biodegradable blankets.

Shallow Slide Repair

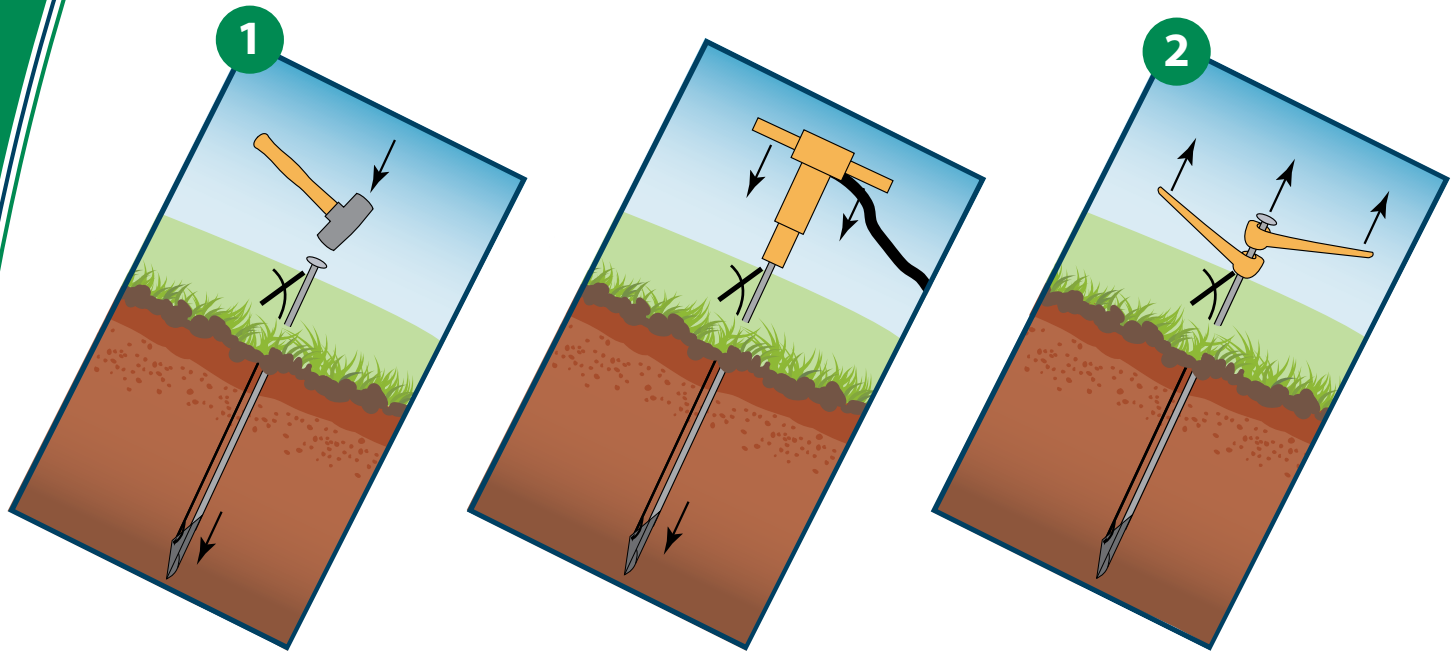
TerraFirm anchors are driven beyond slip surfaces to re-stabilize replaced soil layers and surface mats permit revegetation of the slope.



Stability Applications



Installation



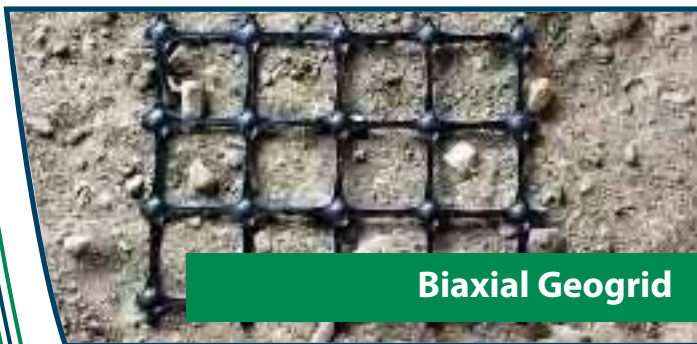
Driving the Anchor

Drive rods are selected based on the size and type of anchor being used. Manual and power options are both available. Drive the anchor into the ground attaching additional drive rod sections as necessary until the anchor has reached its required installation depth.

Removing the Rods

Remove the drive rods by hand or with optional rod removers.

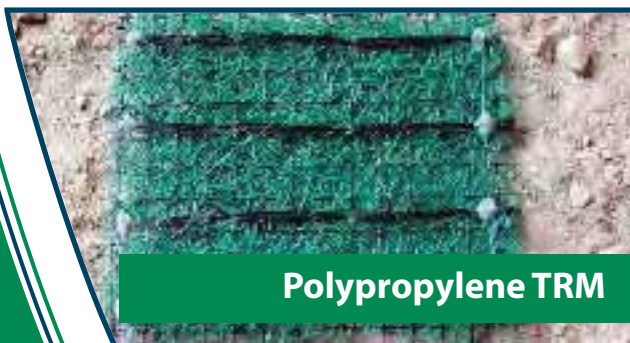
Surface Protection Options



Biaxial Geogrid



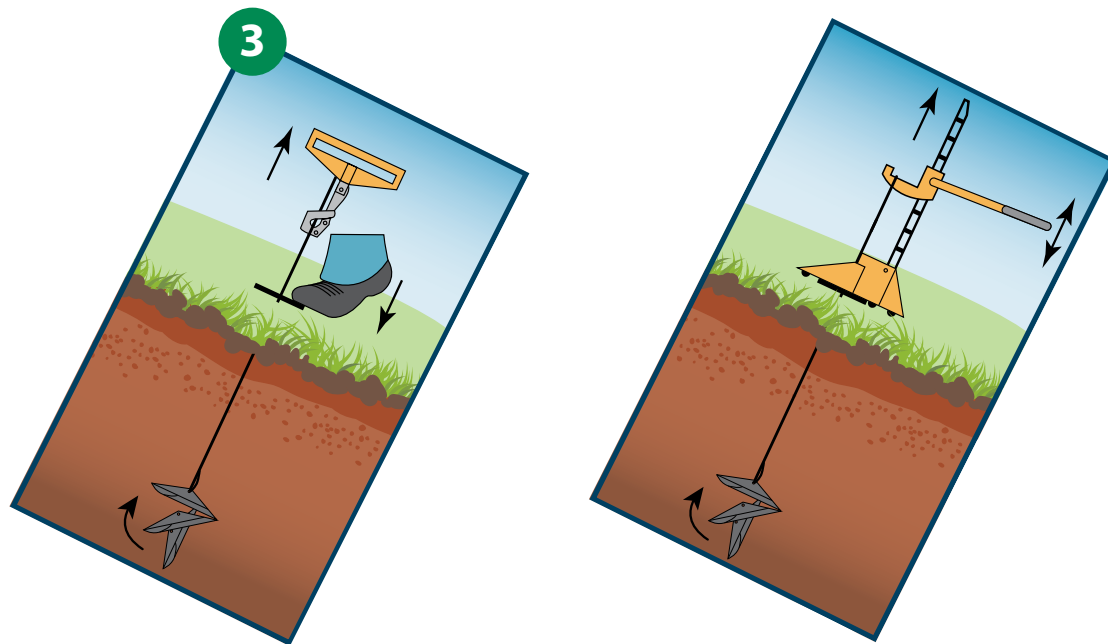
Fortrac 3D



Polypropylene TRM



Erosion Control Blanket



Loadlocking/Setting

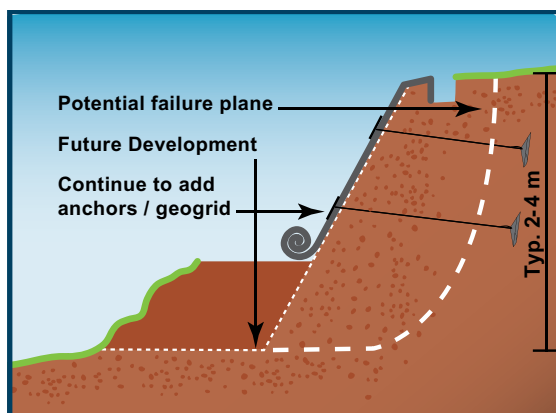
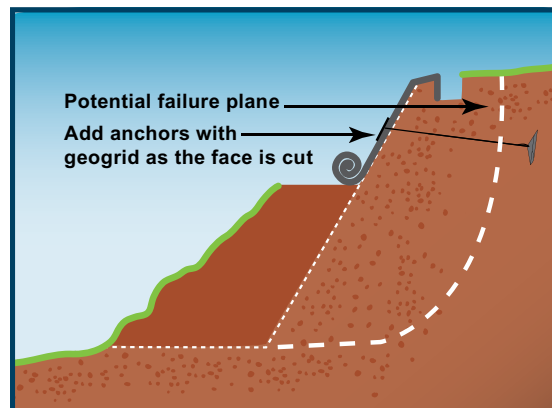
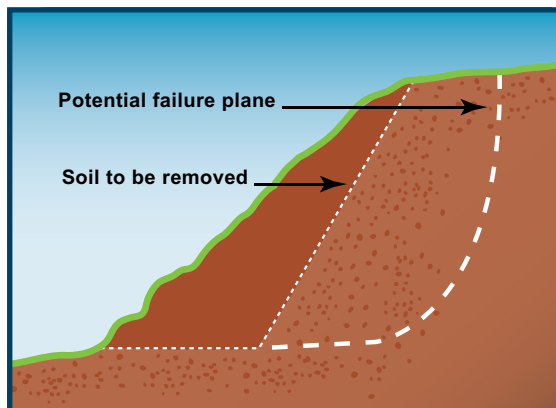
Install the surface plate and locking grip (if not already in place) securely against the surface materials. Place your foot on the plastic plate assembly and hold it down firmly. Loadlock the anchor to its full working load by applying tension to the wire tendon. Ensure that the plastic plate and locking grip assembly are secured tightly against the surface protection materials. If using a copper ferule rather than the locking grip, use the hand swage tool to close the ferule so that the plate applies pressure to the surface protection materials.

Product Selection Chart

Defect	Failure Depth	Slope	Suggested Anchor Type (subject to site test of anchors)	Anchoring Depth (beyond slip plane)	Spacing (staggered both directions)	Surface Material
Erosion Control	< 0.5m	< 2:1	S2, S4	0.45m - 1.5m	1.5m	C200, TBX3000
Shallow Slide Repair	< 1m	< 2:1	S4, S6	1.5m min.	1.2 - 1.5m	TRM, TBX3000
Deep Seated Stability	< 1m	< 1:1	Bat	Engineering Required	Engineering Required	TRM, TBX3000
Cut Slope		< 1:1	S6 - Bat	Engineering Required	Engineering Required	Sheet steel, TBX3000, geotextiles, timber lagging

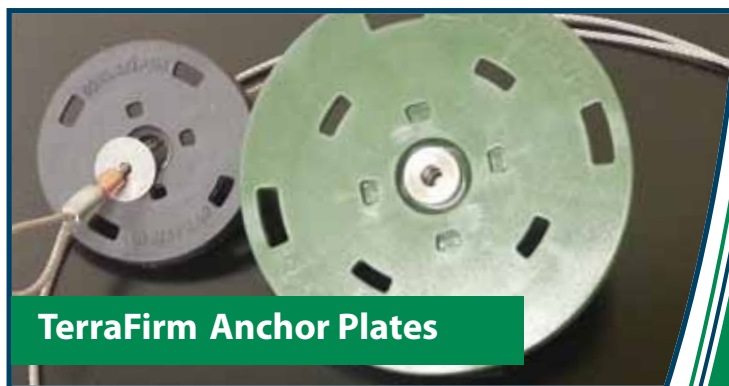
Cut Slope Stabilization

TerraFirm anchors are driven beyond slip surfaces to stabilize replaced soil layers and surface mats permit revegetation of the slope.



Complete Design and Construction Support

We have an in-house Engineering Department that specializes in Retaining Walls and Steep Slope Solutions. We also support our projects with top-notch construction site assistance. Tap into our vast experience - call us today for a solution that addresses the unique challenges of your project. **You can also check us out at www.terrafixgeo.com.**



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February 2016