

GREEN TERRAMESH® **VEGETATED (GREEN) FACED SOIL REINFORCED SLOPE**

Material Delivery

Green Terramesh® units are supplied pre-assembled at the production facility. They are supplied in the collapsed form, folded and bundled. The bundles are compressed and strapped together at the factory for easy shipping and handling.

Each bundle is labeled with a tag reporting the sizes of the units contained. Lacing wire is supplied in coils and ring fasteners (if ordered) are shipped in boxes.

Assembly

The folded units shall be taken out from the bundle and placed on a hard flat surface. Green Terramesh® units shall be opened, unfolded and pressed out to their original shape. When the units are unfolded for assembly, they will have one or two shipping folds. Folds/crimps can be removed by placing the fold over a board and walking along the sides, to leave a flat straight panel.

Fastening Procedure

When using lacing wire, cut off a piece of wire approximately 1.5 times the length of the edge to be tied. The maximum length of the edge to be tied at one time shall not exceed 1 m. Longer edges shall be joined by several lengths of wire. Lacing wires shall be secured around the selvedge wire or heavier edge wire, where present, by looping and twisting the lacing wire around itself. Proceed tying with alternate double and single loops. Double loops shall be made at intervals not greater than 150 mm. The units should be pulled tightly together during the tying operation. Pliers may be used to create tight joints. The other end of the tie wire shall be secured by again looping and twisting the wire around itself. Care should be taken to avoid damaging the wire coating.

When steel ring fasteners are used, the use of a pneumatic fastening tool is required. Rings shall be installed at a maximum spacing of 150 mm along all adjacent edges. Connections made along the panel edges ensure a flat surface for fill placement.

Foundation Preparation

The foundation on which the Green Terramesh® units are to be placed shall be cut or filled and graded to the lines and grades shown on the construction drawings. Surface irregularities, loose material, and vegetation shall be removed during the preparation of the foundation.

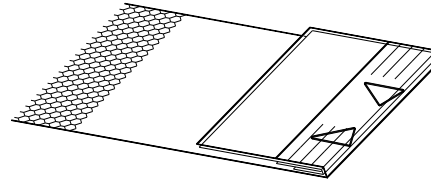
Installation and Soil Compaction

After the foundation has been prepared, the pre-assembled Green Terramesh® units are placed in position empty, and shall be tied or fastened to adjacent units along all edges in order to form a continuously connected, monolithic structural unit.

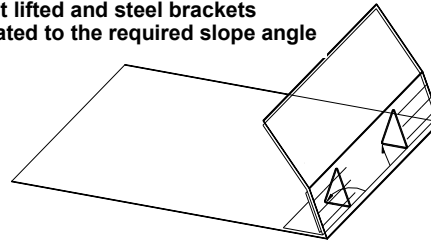
Units shall be placed in position according to the required slope angle. Triangular steel brackets shall be rotated and securely attached to the bottom of the main unit using the conventional fastening tools (lacing wire or rings). Tie-rods (supplied) are attached between the welded fascia panel and the transverse bar within the woven mesh base panel.

The erosion control blanket of each unit shall overlap for 100mm with the adjacent unit's blanket on the side in a manner to ensure that the vegetative soil behind will not be exposed at any time.

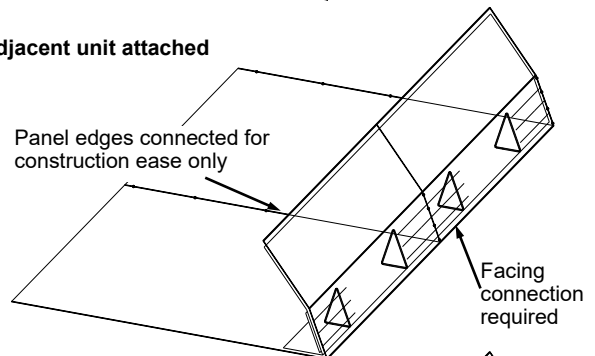
Unit unfolded



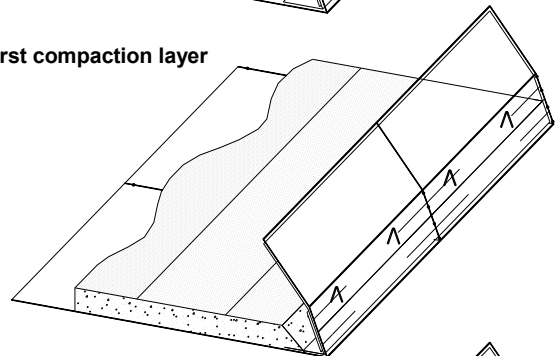
Unit lifted and steel brackets rotated to the required slope angle



Adjacent unit attached



First compaction layer



Vegetative soil placement

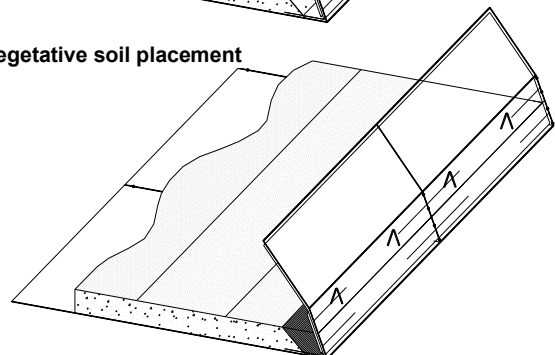


Figure 1

This is a simplified installation guide. Please consult our Installation Manual for more comprehensive installation details and advice.

Care shall be taken when placing the backfill to ensure that the PVC coating is not damaged. After a layer of backfill has been placed, sufficient hand shovelling shall be performed to achieve a uniform top surface before backfill compaction is performed.

Place and compact backfill fill in lifts appropriate to the compaction plant as listed in the Specification for Highway Works leaving approximately 200-300mm for topsoil behind the facing. Reinforced soil shall comprise good quality, free draining, granular and / or selected backfill (Class 6I / 6J), or as indicated in the project specification. Backfill outside of this range may be suitable, providing it has been approved by a geotechnical engineer. Compaction shall be performed to 95% of Standard Proctor, by use of conventional compaction equipment.

Vegetative topsoil is placed behind the facing for about 200mm to 300mm. Soil compaction within 1m of the face should be carefully done with a walk-behind compactor to prevent any slope distortion or bulging of the facing unit. Consolidating the topsoil must not exceed a packing density of 1400kg/m³ retaining 12% air voids. Compacting the topsoil beyond this figure will prevent plant growth. When placing the topsoil wedge, it is advised to include hand-cast grass seeds at 60g/m² face. This may remove the necessity for post construction hydroseeding. Once the compacted backfill and topsoil layers have achieved the level of the top of the Green Terramesh® unit, the top panel is folded and securely stapled to the backfill surface.

Care shall be taken to ensure that all adjacent units (above, underneath and sideways) will be connected along the face at the contact edges. The top return portion of the last unit on top of the structure shall be folded down and fully overlapped and connected to a length of rockfall netting (2m wide), rolled along the length of the face and c-ringed with 2 rows of 13 rings per m or a double line of lacing wire (single and double turns in alternate apertures). This should then be buried approximately 300mm beneath the backfill surface.

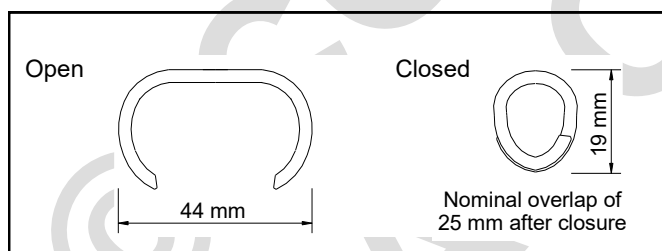
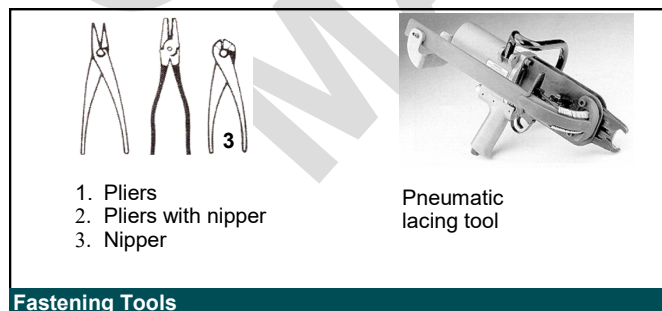
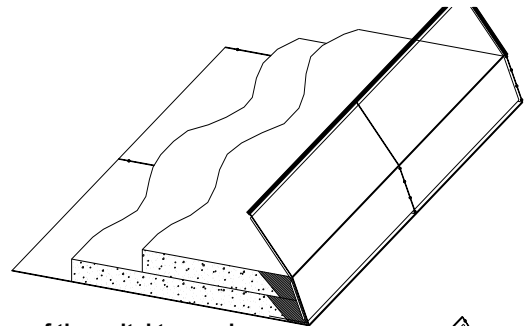


Figure 3

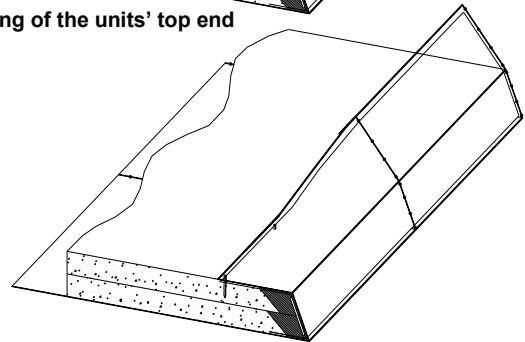


Fastening Tools

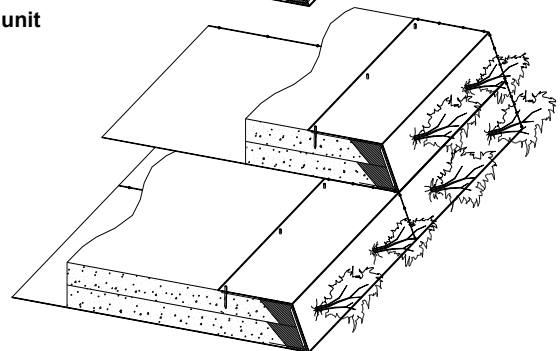
Successive compaction layers



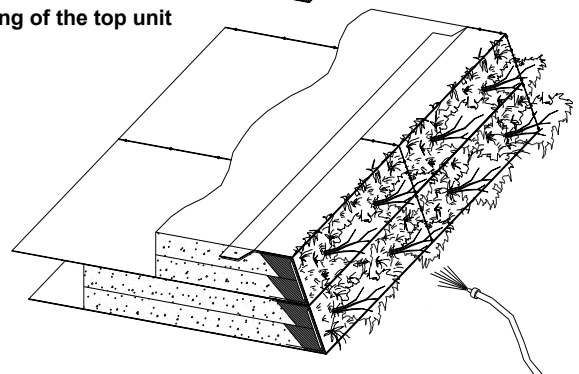
Folding of the units' top end



Next unit



Folding of the top unit



Hydroseeding treatment

Figure 2

Hydroseeding of the slope can be carried out if desired. It is strongly recommended that climbing plants and low height plants are inserted post-construction as their varied root architecture and climate growth preferences will significantly increase the reliability of maintaining the "green" facing. Plant lists are available. Irrigation may be necessary in drier climates/seasons.

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