

# TERRAMESH SYSTEM

### Reference

Please refer to Gabion Installation Guideline.

**Working at height** - Refer to the Health and Safety provisions in Employment Act 1992 regarding the need to take all practicable steps to ensure safety of workers. Further information of on how to prevent falls from height can be obtained from the Department of Labour at [www.dol.govt.nz](http://www.dol.govt.nz) and Site Safe New Zealand at [www.sitesafe.org.nz](http://www.sitesafe.org.nz)

### Material Delivery

Terramesh® System units are manufactured with all components mechanically connected at the production facility. All Terramesh and gabion units 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 are shipped in boxes.

### Foundation Preparation

The foundation on which the Terramesh® System 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 Phases

Carefully remove the units from the bundle and position it on a flat hard surface. When the units are unfolded for assembly, they will have one or two shipping folds. They can be removed by placing the fold over a 2" x 4" board and walking along the sides.

1.) **Assemble the facing section** by erecting the front, back panel, and diaphragm. Ensure that all panels are in the correct position, and the tops of all sides are satisfactorily aligned as shown in Fig 1.

2.) **Place** required length Terramesh panel on prepared surface and place assembled gabion on top and in line with front section.

3.) **Connect** with lacing wire between adjacent units as shown in (Fig. 2)

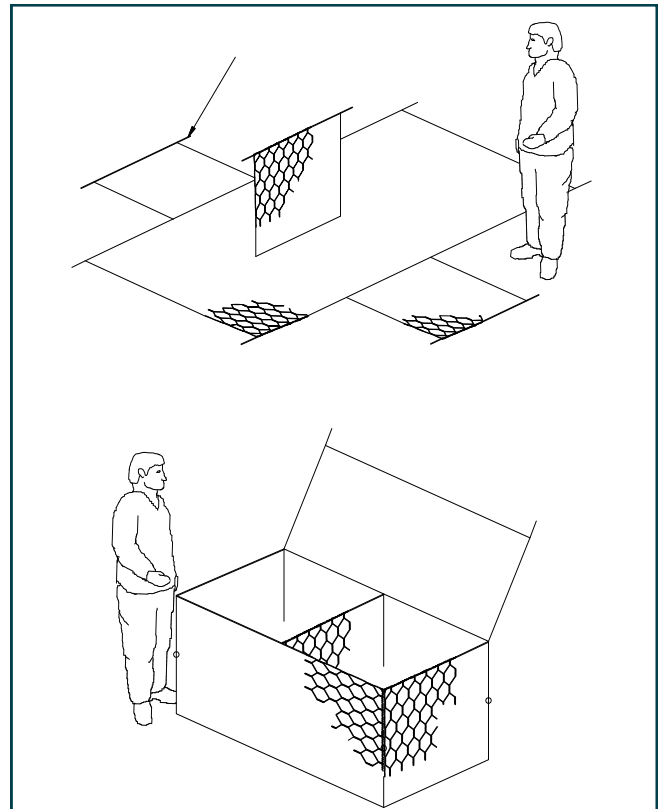


Figure 1

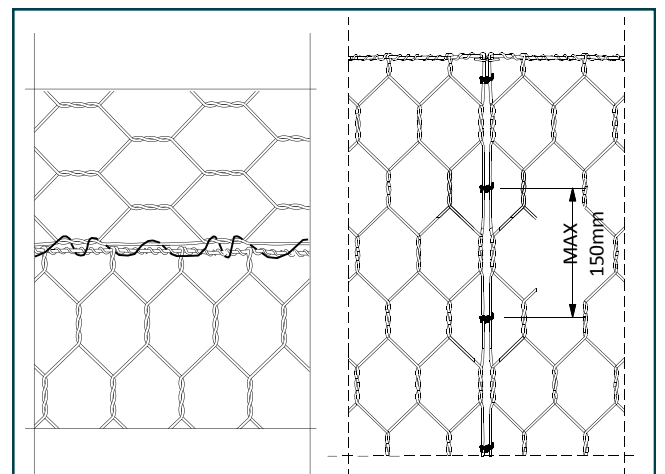
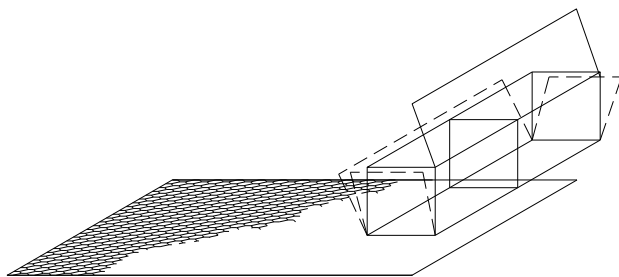
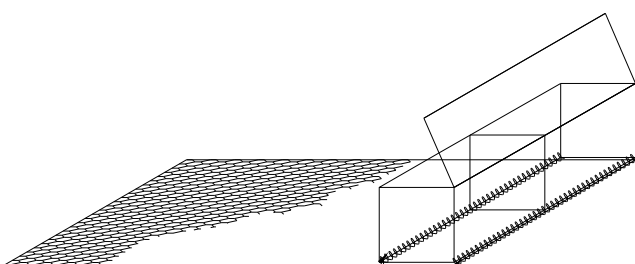


Figure 2



Connections made along the panel edges assure a flat surface for fill placement.



### Rock Specification

Rock for the facing section of a Terramesh® unit shall be hard, angular to round, durable and of such quality that they shall not disintegrate on exposure to water or weathering during the life of the structure. The rocks shall range between 100mm and 200mm. The range in sizes shall allow for a variation of 5% oversize and/or 5% undersize rock, provided that it is not placed on the exposed surface. The size shall be such that a minimum of three layers of rock must be achieved when filling the 1m high Terramesh® units and a minimum of two layers for the 0.5m high units.

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4.) **Stone Filling** of the facing section shall occur so that each cell be filled to a depth not exceeding 0.30 m higher than the adjoining cell. For vertical or near vertical structures the exterior of the basket may be carefully hand placed to give a neat, flat, and compact appearance. Care shall be taken when placing fill material to assure that the sheathing on the PVC coated baskets will not be damaged. It is also recommended to slightly overfill (20-30mm) the baskets to allow for settlement of the rock.

5.) **Internal Connecting Wires** shall be provided as shown below, fixed at 1/3 and 2/3 of the height for 1m Terramesh® units as the cell is being filled. In 0.5m high units stiffeners may be fixed at the half height level. Internal connecting wires shall connect the exposed face of a cell to the opposite side of the cell. Lacing wire or prefabricated internal connecting wires may be used.

6.) **Backfill** structural embankment. Prior to starting this operation, a geotextile filter shall be placed at the facing section and backfill interface. The geotextile should have a 300mm return at both top and bottom.

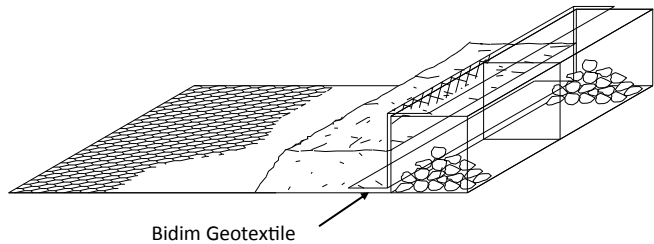
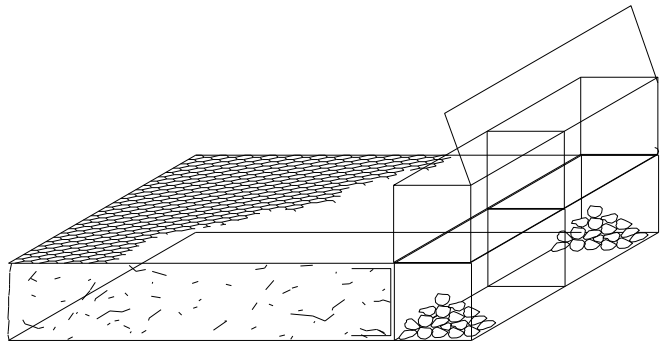
Compaction within 1m of the face should be carefully performed with a walk-behind compactor to prevent any distortions in the wall or slope face.

## SOIL COMPACTION

Place soil fill in approximately 300mm lifts and compact it to the required level. Mechanically stabilized earth structures shall be made of a good quality, free draining, granular and/or selected fill. The recommended soil gradation is in the range of 0.02 mm to 60 mm. Soils outside of this range may be suitable, providing they have been approved by a geotechnical engineer.

Compaction shall be performed to 95% of Standard Proctor, by use of conventional compaction equipment.

7.) **Installation** of additional units requires that the rows above and below are to be connected together at the contact edges of the face.



Bidim Geotextile

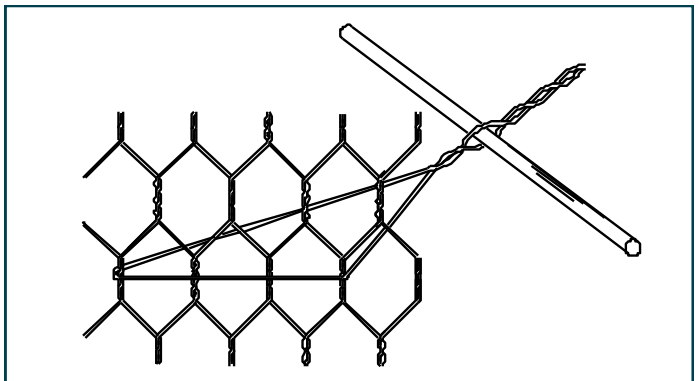


Figure 4

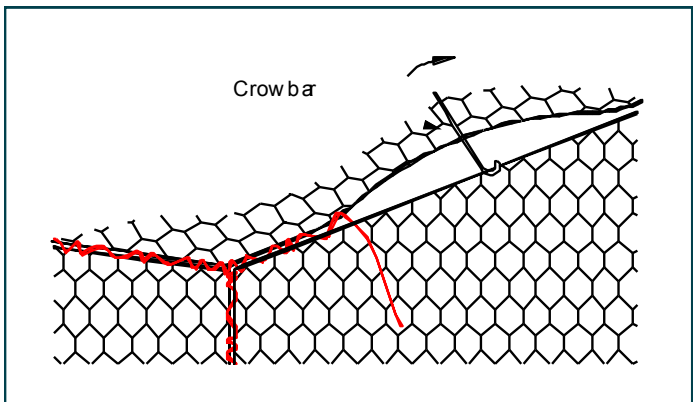


Figure 5



1. Pliers
2. Pliers with nipper
3. Nipper
4. Closing tool
5. Gloves
6. Rubber mallet

Figure 3

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