TERRA-GRID INSTALLATION GUIDELINES

1. Options for installing TERRA-GRID

There are various options for the installation of the TERRA-GRID ground reinforcement system, depending on the application and existing ground conditions, which must be taken into consideration. In many cases it is possible to roll the TERRA-GRID tiles directly into soft ground.

2. Installation on existing grass surface

When TERRA-GRID is to be laid directly on the existing grass surface, the grass should be cut as short as possible beforehand. Small undulations can be levelled out using topsoil or a sand/soil mixture. The TERRA-GRID sections are laid out in position and clipped together using foot pressure. **Installation should only take place when the ground is soft enough to ensure the sections can be compacted into the surface easily and completely. Installing in either dry or very wet or muddy conditions should be avoided. Installation on moist ground/grass shortly after rain or watering provides the best results.**

3. Installation with ground preparation.

In cases of extreme water-logging, very soft or uneven ground, or where heavy loads and/or frequent traffic are expected, some drainage is advisable and some ground preparation or foundation may be required. The top turf can be removed and a sub-base ballast between 20-40 cm deep (depending on conditions and intended use) laid down. This should be levelled and compacted. A layer of finer material approx. 2 cm deep follows and finally a layer of topsoil or a sand/soil mixture of approx. 5-7 cm depth (quality grass seed should be mixed in with the sand/soil). This should also be compacted. TERRA-GRID can also be rolled directly into fine gravel or chippings. Self-binding gravel, such as limestone is particularly suitable. The surface should be levelled and compacted and the top layer moist when the TERRA-GRID is installed. The TERRA-GRID sections, which are joined using foot pressure on the hooks, are placed in position and compacted into the prepared area in stages (see below). We recommend that some grass growth is re-established before installation of the matting, to provide the best stability and later grass coverage. TERRA-GRID tiles can also be installed inverted on a compacted sub-base and in-filled with soil or gravel.

4. Rolling/pressing TERRA-GRID sections into the ground

The ideal method to be used will depend on the prevailing ground conditions, size and shape of the area to be installed. On very soft ground (eg. after levelling/grading), a heavy duty compactor plate (300-500 kg) should be used initially. On grassed areas, less soft ground and particularly large areas, a vibrating roller (min. 5 to 8 tonnes) is the best option. **If the tiles have a tendency to heave up in front of the roller, reduce the number of tiles laid out before rolling in.** At least 1 row should be left unrolled, to which up to further rows of TERRA-GRID sections can be attached (see diagram). Motorised tampers (rammers) can also be used for compacting in small areas, where a roller may be unsuitable (see below).

The individual sections are specially designed with expansion tabs to allow for expansion during hot temperatures. Therefore, care should be taken when rolling or pressing the TERRA-GRID sections into the ground to ensure the tiles are not pushed completely together and that a small gap between each tile remains. The installed area should be rolled over at least 4-5 times. **The sections must be pressed into the ground completely for correct installation and to give the optimum load bearing capabilities.** After initial installation, the TERRA-GRID sections should be checked regularly to see that they remain flat and plane, especially after a ground frost or very hot temperatures. They can be rolled or pressed in again if there has been some initial movement. Once sufficient grass has grown back through the tiles, this will further strengthen the bond between the TERRA-GRID and the ground below, which should prevent further undulations occurring and provide the best stability and load bearing capabilities.

Note: if the tiles are not laid correctly or laid against immovable objects such as posts or curbs which could prevent expansion, this could result in small undulations forming during hot weather or extreme frosts. A gap at least 2 cm should remain between the tiles and any immovable object after rolling/compacting.

5. Removing or repositioning individual tiles

Individual tiles can be separated from neighbouring tiles for repositioning, by simply pulling the clips apart.

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Sections arranged on the ground

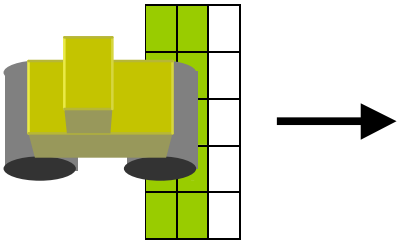
TERRA-GRID sections clipped together using foot pressure on the incorporated clips

After several rows are laid out, they should be rolled in leaving the last row unrolled, ready for the next sections to be added

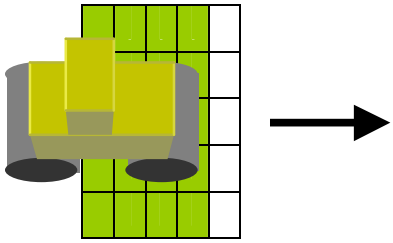
Recommended method for rolling-in TERRA-GRID sections

Rolled sections **Unrolled sections**

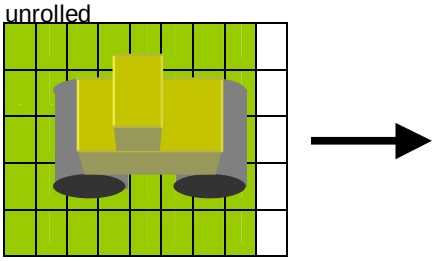
1 TERRA-GRID strip laid out several sections deep & first sections rolled in, leaving last row unrolled.



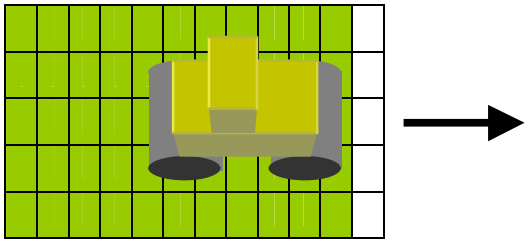
2 Further rows of TERRA-GRID sections added and rolled in leaving last row unrolled.



3 Continue to add several rows at a time and roll in always leaving last row unrolled



4 Large areas are progressively built up and rolled in, using this method



NOTE: If the tiles begin to heave up in front of the roller, reduce the number of sections laid out before rolling

Roll at a slight angle to avoid running directly along the joins between tiles

Motorised tampers can also be used to compact the tiles into the ground