

Tenax Reinforced Soil Walls and Steep Slopes Using the Tenax Rivel System

1. Level and compact the subgrade as required by the contract and prepare steel formwork units (recommended - 8mm diameter and 150mm x 150mm apertures) to the required slope angle as per design instructions (the form work is generally layer height). Note: The horizontal and the inclined sides of the steel formwork units are linked by special hooked steel bars that guarantee the geometrical shape and stability of the face, even during the compaction of the soil.

2. Position the first layer of steel formwork units and align the face of the structure by connecting adjacent units together using steel or plastic wire.

3. Cut Tenax TT geogrids to the required length and lay them horizontally along the internal face of the steel formwork units, perpendicular to the face of the slope and side by side with adjacent lengths of grid butt jointed. Leave the wrap-around portion of the geogrid (typically 1.5m) to over-hang the steel units at the face.

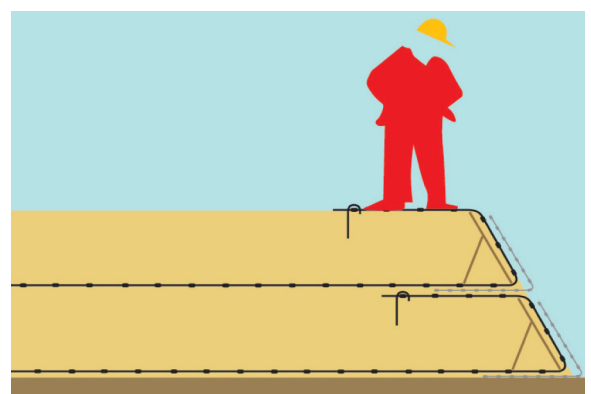
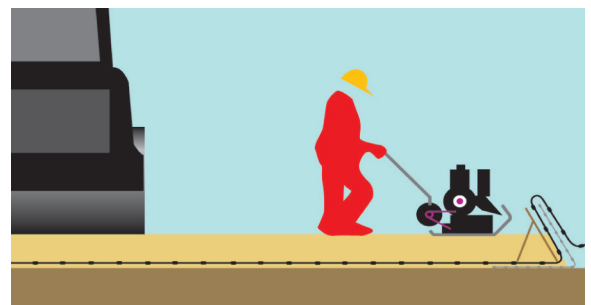
4. Place and secure a geotextile or vegetation matting, if required, inside the wrap-around face to prevent the loss of fill material through the face. Place the hooked bars to fix the geometry of the formwork to the slope angle as per design. If appropriate place a nominal thickness of at least 150mm of topsoil immediately behind the geotextile or matting to promote vegetation.

5. To minimise movement at the face, begin by placing fill material close to the face of the slope and spreading material back over the remaining geogrid length in layers of 300mm.

6. Place and compact the fill material up to the next layer of Tenax geogrid by using suitable roller compactors and keeping a distance of at least 1.5 metre away from the face of the slope. Lighter hand-held compaction plant such as a vibrating plate should be used near the face of the slope with a total mass less than 1000kg. Construction traffic should not be allowed to pass over any exposed reinforcement before a cover of 100mm of fill has been placed.

7. Wrap the over-hanging geogrid length from the formwork around the fill layer. Pull back and tension the face of the wrap-around by anchoring the free end back into the fill material or by pinning back the grid with 'U' shaped pins.

8. Repeat operations 2-7 above for each layer of Tenax geogrid until the full height of structure is reached. Notes: Site safety The Contractor must fully assess the safety risk associated with working at height and where appropriate install any necessary temporary edge protection. Vegetation: Tenax Rivel allows for the creation of steep slopes with faces up to 70°-80°, completely vegetated thanks to the use of biomats, which provide a perfect medium for preventing the washout of the soil and for the support of the growing plants. The vegetation of the face is further enhanced by hydro-seeding the face at the end of the construction of the reinforced.



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