Installation Guide

Landlok® TRM's and PYRAMAT® HPTRMs

Site preparation

Grade and compact area of TRM/HPTRM installation as directed and approved by Engineer. Subgrade shall be uniform and smooth. Remove all rocks, clods, vegetation or other objects so the installed mat will have direct contact with soil surface.

Prepare seedbed by loosening the top 50-75 mm minimum of soil. Incorporate amendments such as lime and fertilizer and/or wet the soil, if needed. Do not mulch areas where mat is to be placed.

Seeding

Apply seed to soil surface before installing mat. Disturbed areas shall be reseeded. When soil filling, first install the mat, apply seed and then soil-fill. Consult project plans and/or specifications for seed types and application rates.

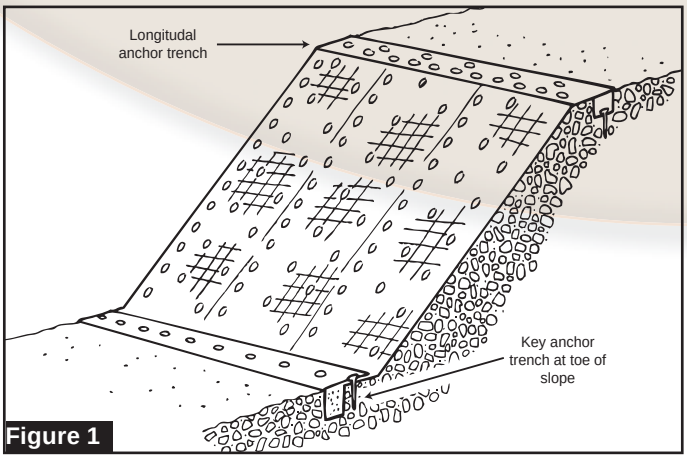

Figure 1

Installation on soil slopes

Excavate a 300 x 15 mm minimum longitudinal anchor trench 600-900 mm over crest of slope (see Figure 2). Install top end of mat into trench and secure to bottom using ground anchoring devices spaced every 300 mm minimum. Backfill and compact soil into trench (see Figure 2).

Unroll mat down slope. Overlaps shall be 150 mm minimum and anchored every 450 mm minimum along the overlap. Secure using suggested ground anchoring devices shown in Table 1 for appropriate frequency and pattern. Overlaps are shingled away from prevailing winds (see Figure 1).

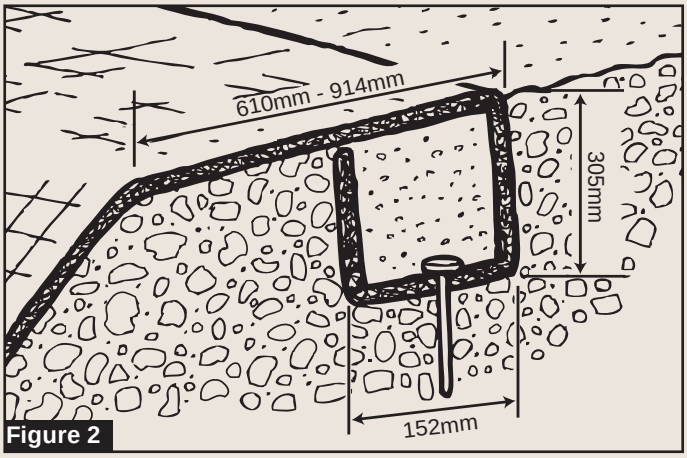

Figure 2

Unroll mat in a manner to maintain direct contact with soil. Secure mat to ground surface using ground anchoring devices.

Excavate a 300 x 150 mm key anchor trench at toe of slope (see Figure 3). Place bottom end of mat into key anchor trench at toe of slope and secure to bottom of trench using ground anchoring devices spaced every 300 mm minimum. Backfill and compact soil into trench (see Figure 3). If the potential for standing and/or flowing water exists at the toe of slope, the key anchor trench at the toe detail (see Figure 3) is not sufficient. Consult the project engineer for the

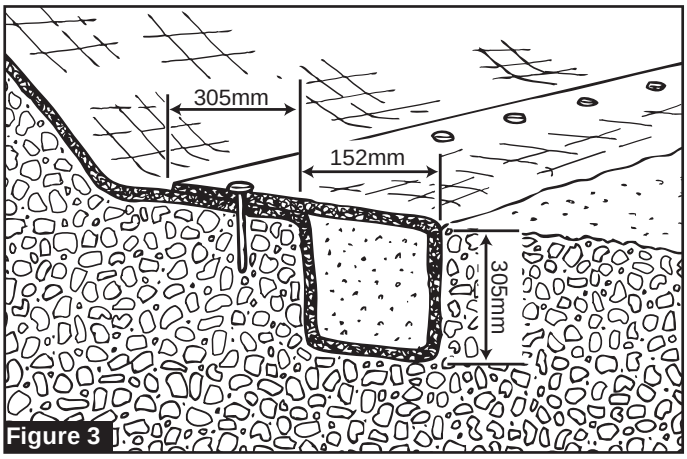

Figure 3

appropriate detail. Irrigate as necessary to establish/ maintain vegetation. Do not over-irrigate.

Installation in storm water channels

Figure 4 shows general installation layout and details for TRMs and HPTRMs in storm water channels.

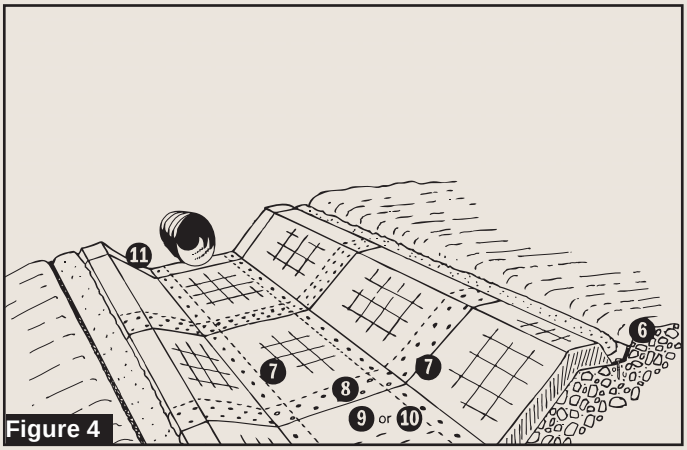

Figure 4

Excavate an initial anchor trench 300 mm minimum deep and 300 mm minimum wide across the channel at downstream end of project (see Figure 5). Deeper initial anchor trench is needed in channels that have the potential for scour. Excavate longitudinal anchor trenches 300 mm minimum deep and 150 mm minimum wide along both sides of the installation to bury edges of mat (see Figure 6). The trench shall be located 600-900 mm over crest of slope.

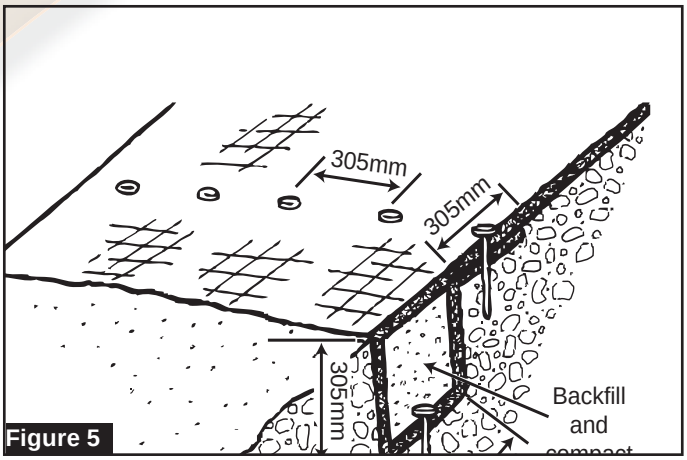

Figure 5

Place roll end into the initial anchor trench and secure with anchoring devices at 300 mm minimum intervals (see Figure 5). Position adjacent rolls and secure in anchor trench in same manner. Backfill and compact soil into trench. Unroll mat in the upstream direction over the compacted trench. Continue installation as described above, overlapping adjacent rolls as follows:

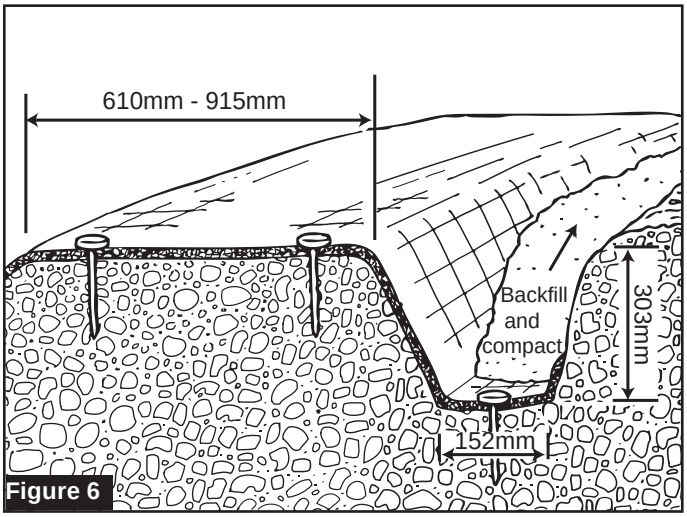

Figure 6

- Roll edge: 150 mm minimum with upslope mat on top. Secure with one row of ground anchoring devices on 300 mm minimum intervals (see Figure 7).
- Roll end: 300 mm minimum with upstream mat on top. Secure with two rows of ground anchoring devices staggered 300 mm minimum apart on 300 mm minimum intervals (see Figure 8).
- Fold and secure mat rolls snugly into intermittent check slots. Lay mat in the bottom and fold back against itself. Anchor through both layers of blanket or mat at 300 mm intervals then backfill and compact soil (Figure 9). Continue rolling upstream over the compacted slot to the next check slot or terminal anchor trench. Check slots are placed at 7.6 to 9.1 m intervals perpendicular to flow.
- An alternate method to the intermittent check slot is the simulated check slot. This method includes placing two staggered rows of anchors on 100 mm centers at 9.1 m intervals (see Figure 10).
- Excavate terminal anchor trench 300 x 300 mm minimum across the channel at the upstream end of the project (see Figure 11). Deeper terminal anchor trench is needed in channels that have the potential for scour.
- Anchor, backfill and compact upstream end of mat in 300 x 300 mm minimum terminal anchor trench (see Figure 11). Unroll mat in downstream direction over compacted trench with a minimum 600 mm lap. Secure mat using ground anchoring devices. Seed and fill with soil for enhanced performance. Irrigate as necessary to establish/maintain vegetation. Do not over irrigate.

Special transition guidelines

Rock Riprap

Excavate an anchor trench 300 x 300 mm minimum at the transition between the mat and the rock riprap. Place roll end into anchor trench and secure with anchoring devices at 300 mm minimum intervals. Position adjacent rolls and secure in anchor trench in same manner. Backfill the anchor trench with rock riprap. Place rock riprap as specified, extending approximately 1m minimum beyond the anchor trench onto the mat.

Concrete

- Alternative 1: Concrete Apron

- Place ready mixed concrete directly onto a 0.9 m wide minimum strip of mat.

- Alternative 2: Concrete Backfill

- Excavate an anchor trench 300 x 300 mm minimum at the edge of the concrete structure.
- Place roll end into anchor trench and secure with suggested anchoring devices at 300 mm minimum intervals. Position adjacent rolls and secure in anchor trench in same manner.
- Backfill trench with concrete slurry.

• Alternative 3: Bolt to Structure (HPTRMs Only)

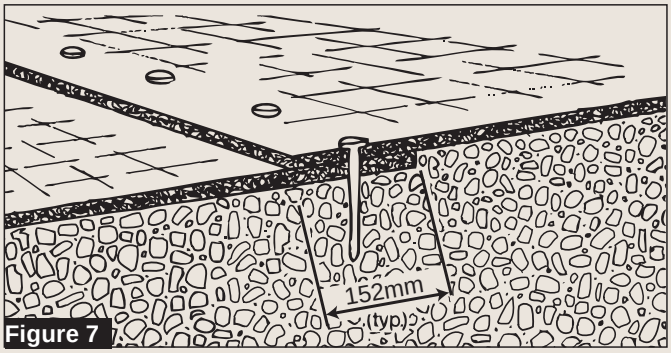

Figure 7

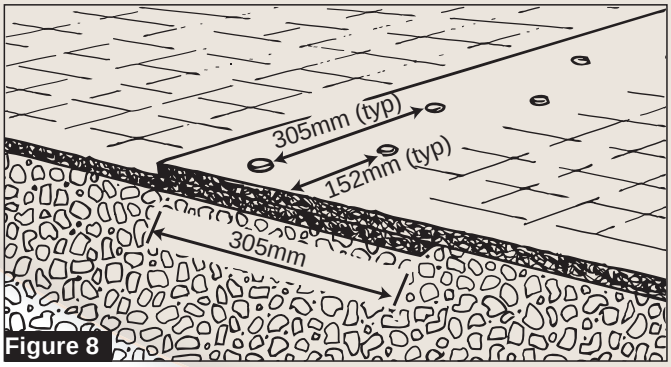

Figure 8

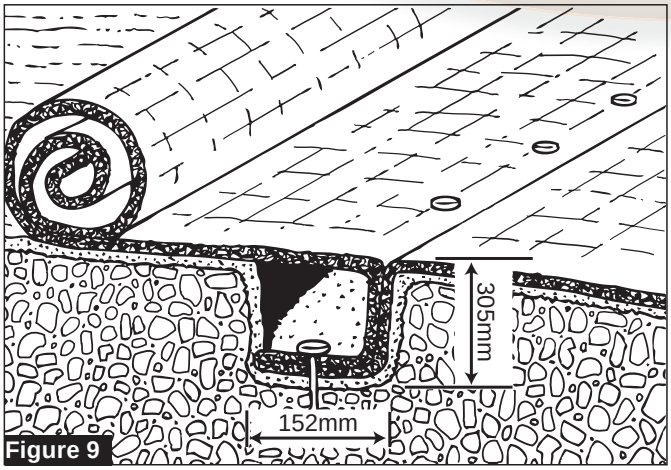

Figure 9

- Cast threaded dowel in fresh ready mix concrete or install expanding bolt into cured concrete. Then affix HPTRM with washer (minimum 2 in or 50 mm diameter) or batten strip and bolt.

• Pipe Inlets/Outlets (HPTRMs Only)

• Review the construction drawings and project specifications to evaluate the required area to be treated.

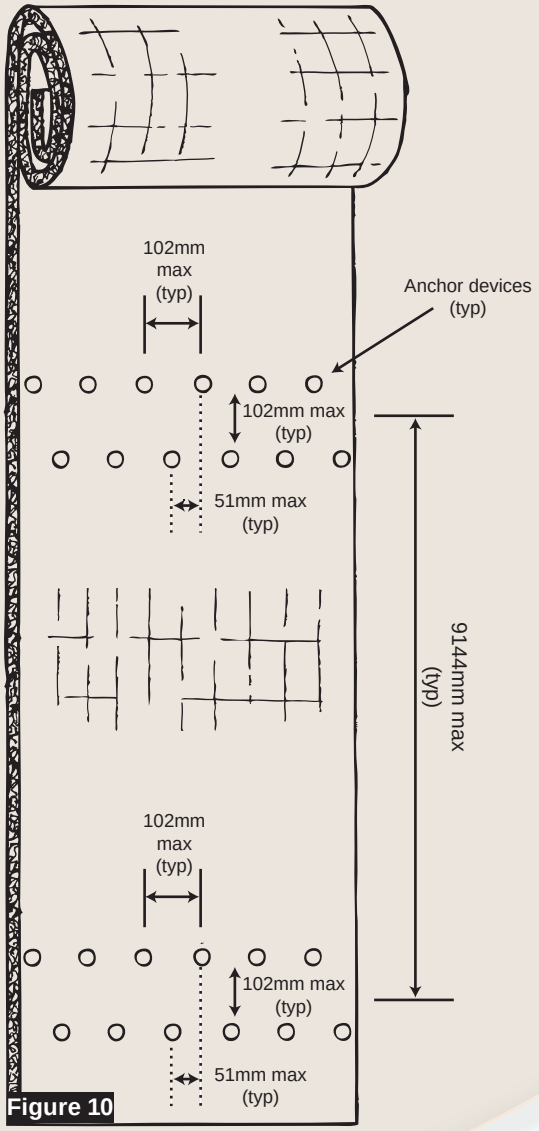

Figure 10

• Excavate an anchor trench 300 x 300 mm minimum above the pipe to bury end of HPTRM roll. The trench shall be located a minimum 600-900 mm above the pipe inlet/outlet.

• Backfill and compact soil into trench.

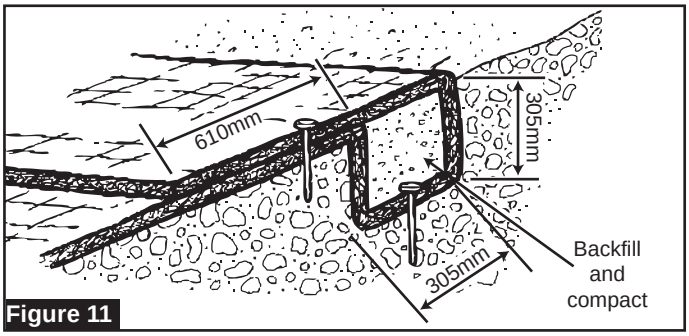

Figure 11

• Cut HPTRM to meet project requirements, slope length and pipe diameter.

• Unroll HPTRM down the slope and secure around pipe circumference with ground anchoring devices spaced 6 in (150 mm) minimum.

• Also, the HPTRM can be secured around the pipe in a 300 x 300 mm minimum trench filled with concrete slurry.

Disclaimer

The information presented herein, while not guaranteed, is to the best of our knowledge true and accurate.

While every effort has been made to provide accurate and reliable information, it is up to the user of this brochure to verify all information, including designs it might be based upon, with an independent source. Application of this data must be made on the basis of responsible professional judgement.

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