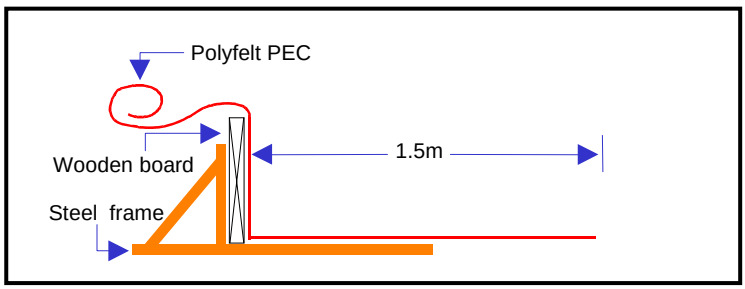
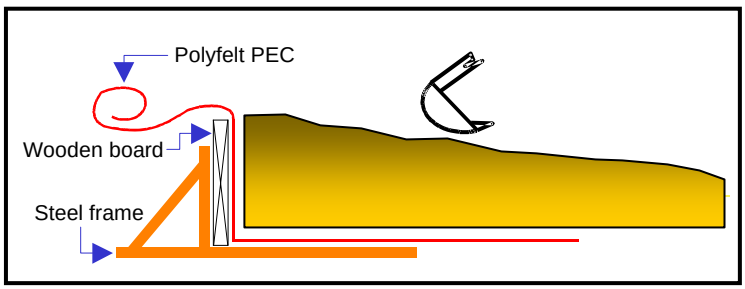
Method Statement
for
Construction of Polyfelt PEC Reinforced Soil Slope
(with wrap – round facing)

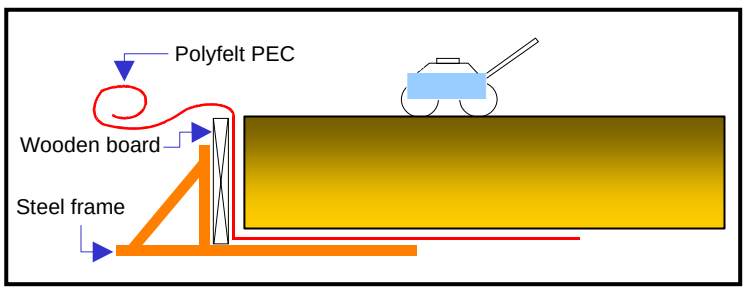
For further information call your nearest authorized TenCate distributor or Tel. +60 3 5192 8568, Fax +60 3 5192 8575



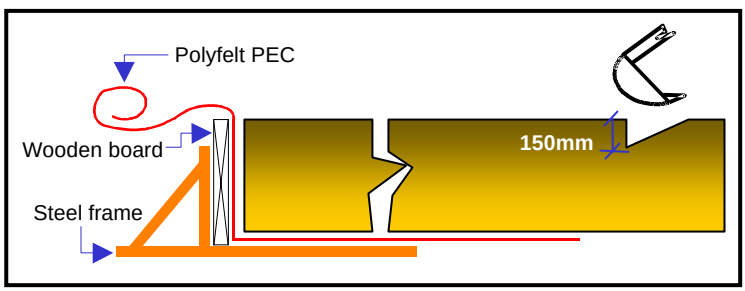
1. L shaped steel frames to support continuous wooden brace board shall be used as a backing for the geotextile. Distance between steel frames: max 1.5m (along the wall). Thickness of wooden board: about 30mm.



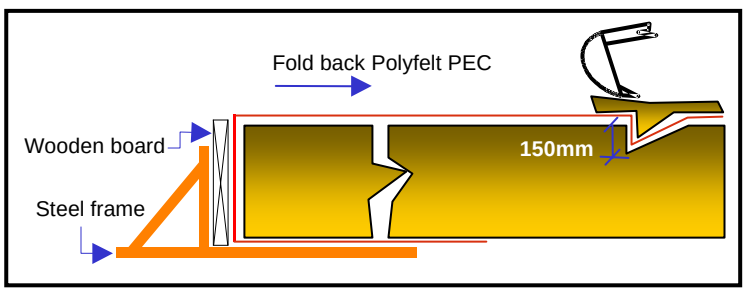
2. With the wooden board in place, backfill the first layer of soil. To ensure adequate compaction the maximum recommended depth of soil layer is 400mm.



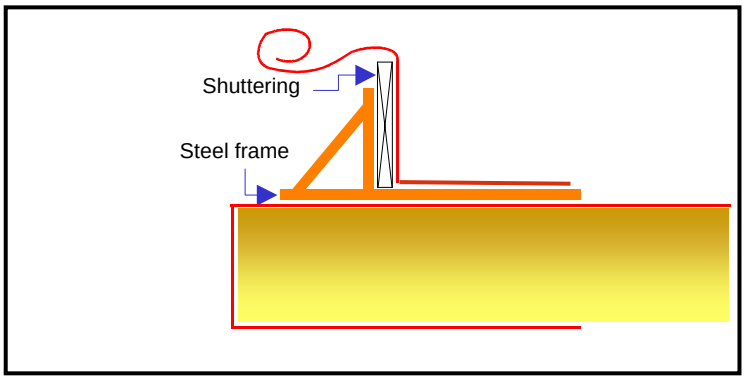
3. Compact the first layer of soil to achieve Proctor compaction of 90%. The density of each compacted layer of fill must be checked before proceeding with subsequent layers. Light compaction equipment must be used to compact the face zone of the wall.



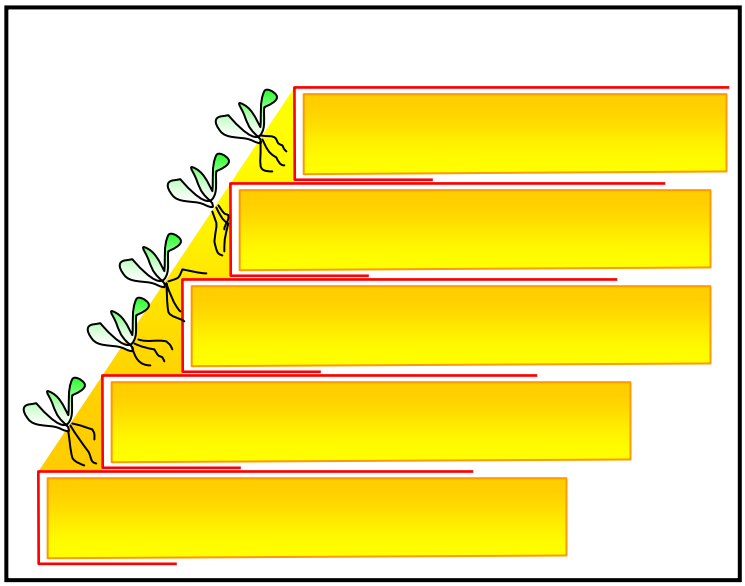
4. Excavate trench for geotextile tensioning.



5. Fold back the geotextile (long end) over the compacted fill. Pretension the geotextile by hand (pegging recommended). Place and compact soil layer over back of geotextile forcing the geotextile into the trench. Lay and compact remainder of soil layer.



6. Remove the wooden form and place at the next lift. Repeat the entire sequence until the full height of the wall is reached.



7. Backfill with soil and do close turfing or hydroseeding with a layer of Polymat EM4 geotextile for surface erosion control.

NOTES

Whilst Polyfelt PEC reinforcing geosynthetics have the potential to substantially reduce the cost of geosynthetic reinforced wall structures by facilitating the use of residual soil backfill instead of granular soil, correct installation of the product is essential to the stability of the structure.

1. Pretensioning of geotextile

The tensile strength of Polyfelt PEC is mobilised by friction. Loose laid geotextile cannot mobilise its tensile strength especially when the soil comprises a high percentage of clay.

Therefore it is crucial that each layer of geotextile is pre-tensioned, pegged and anchored before backfilling and compaction of subsequent soil layers.

2. Compaction of soil backfill

Adequate compaction of soil backfill is a prerequisite for any geosynthetic reinforced soil structure. Inadequately compacted backfill is the primary cause of failure of most geosynthetic reinforced soil structures. This is particularly critical in tropical environments where heavy rainfall is common and when residual soil backfill is used.

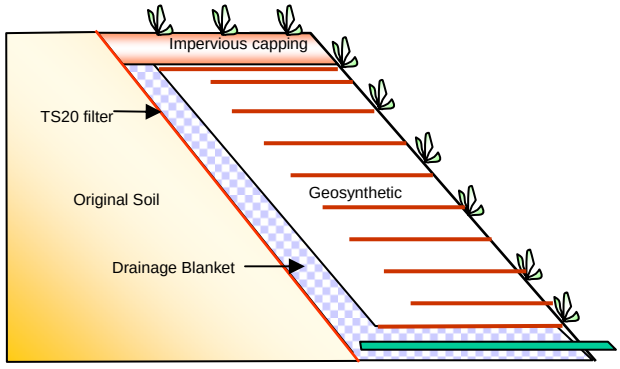
Therefore it is critical that the supervising engineer be aware of, and carefully control this aspect of construction.

It is recommended that the compaction density of each soil layer be checked to ensure compliance with the required compaction effort, before proceeding with subsequent soil fill layers.

3. Drainage layer

Residual fine grained soil backfill such as sandy clays have low permeability.

Therefore it is a prerequisite for all geosynthetic reinforced soil structures to have a stone drainage layer at the back of the soil mass (see diagram) to drain excess seepage water away from the soil mass.



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