TECHNICAL NOTE

Global Synthetics
LEADERS IN GEOSYNTHETICS

Terralink ® with ACEGrid® Geogrid

Installation Procedure

General Notes

- Drainage detail is an important consideration in a reinforced soil structure. Surface water should be diverted away from the reinforced zone and a collector system installed to collect and remove ground water from behind and beneath the structure.
- Geogrid strength grade, placement, vertical spacing and orientation are critical. Geogrid must be of the correct grade, of a continuous length (no end to end lapping is permitted) and be laid with the main strength direction (roll direction) perpendicular to the face of the structure.
- Compaction of a good quality granular fill as specified is critical in the reinforced zone. Compaction shall be achieved in accordance with the specification (and be not less than 95% MDD). Compliance testing frequency for compaction shall be as required by the project specification.

Step 1

Excavate and prepare site to required lines and levels provided.



Step 2

Install any required drainage pipes and outlets beneath and behind reinforced soil structure as required.



Step 3

Where required, use a fine grained material that will be easy to level such as sand or crusher dust to level the pad for the Terralink® panels to be founded on.



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Step 4

Position and place Terralink® mesh panels to the correct line and levels. A string line may be used to ensure an accurate line and level is achieved. Adjacent Terralink® panels may be overlapped 50mm or alternatively butted up and secured with hog rings at 150mm centres between rings. Pins may be used to secure the Terralink® panels to the ground below to assist in maintaining the correct alignment during the backfill operation.

Step 5

Place erosion matting if specified inside Terralink® panels and clip or zip-tie matting to face panel top and bottom. Allow 500mm of matting on the base of the Terralink® panels and 600mm inside the front face (for a standard 600mm height panel). Any additional matting shall be allowed to hang over the front of the Terralink® panel whilst backfilling.

Step 6

Cut ACEGrid® geogrid to the specified reinforcement length plus 0.6m for the panel height plus 1.5m for the return length as a minimum. ACEGrid® may be cut using a knife, scissors or shears. Mark the cut length at 1.5m from one end with paint or similar. Place the geogrid into position leaving the 1.5m portion hanging outside the face of the Terralink® panel using the paint marks to assist positioning by placing the mark directly on the crest of the Terralink® panel. Ensure that adjacent ACEGrid® geogrid strips are lapped a minimum of 100mm side to side.

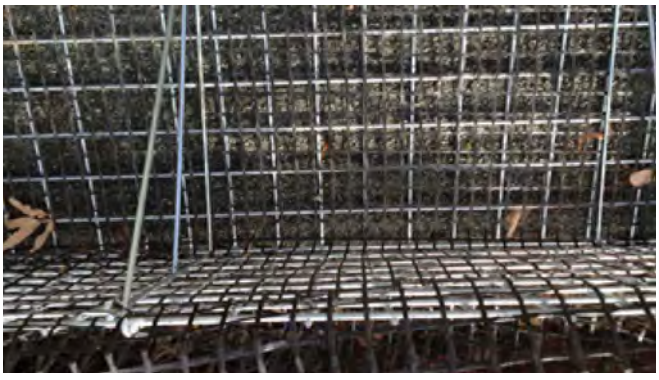


Step 7

Place Terralink® strut pieces by inserting the top pin into the geogrid and erosion matting if present at the crest of the panel and slide the entire strut forward with the hook on the base of the strut sliding under the base of the Terralink® panel. The Terralink® struts will be installed at no more than 600mm centres. If Terralink® facing panels are butted together, then a strut should be located no further than 150mm from the end of each panel.

Step 8

Once struts are located and "kicked" into place securing the geogrid and erosion matting (if present) to the front face, pull the front of the Terralink® panel to the strut and turn the top locking pin down onto the front of the Terralink® unit. A pipe or similar tool may be used to bend the pin. Where the ACEGrid® and/or erosion matting (if installed), are being fouled by the rotation of the pin to lock the Terralink® panel, local cutting of the geogrid and/or matting can be undertaken. Do not cut the geogrid straps running perpendicular to the face, only the cross straps.



Step 9

The ACEGrid® should then be pulled taught away from the front face maintaining a 100mm side to side lap, removing all wrinkles and slack prior to placement of backfill. Pins or pegs may be used to assist in keeping the geogrid is position so it is not disturbed during the backfill operation.

Step 10

Place and compact initial backfill lift over the ACEGrid® as required by the construction drawings/ specifications. Do not drive construction equipment directly on the geogrid. Place a minimum 150mm of backfill soil over the geogrid prior to trafficking. The backfill material shall be in accordance with the specification and compaction testing shall be carried out at the required frequency. Keep compacted fill at least 100mm away from rear of Terralink® struts.

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Step 11

Place coarse rock or soil in accordance with specification in the area between the compacted fill and the Terralink® facing panel being careful to avoid disturbance to the struts and facing. At all times, keep heavy compaction equipment 1m away from the front face.



Step 12

Place the second compacted fill lift bringing the fill up to the top of the Terralink® panel.



Step 13

Place coarse rock or soil fill to the area between the reinforced fill and the face and finish as level as possible but not above the top of the Terralink® panel crest.



Step 14

Ensure ACEGrid® and erosion blanket (if present) are cut as necessary to ensure they can now be be pulled back over the top of the soil or coarse rock infill, without being caught by the Terralink® locking pin. Pull the ACEGrid® back taught for the 1.5m distance. Take a hammer and knock the Terralink® locking pins inwards until none of them protrude out past the Terralink® face.

Step 15

Establish a flat platform to place the next level of Terralink® panels in place. Set a string line to assist if necessary with the alignment. Use a batter board to check the angle of the next layer is maintained. This is most accurate once the Terralink® struts are in place to fix the Terralink® panel angle (normally 65 degrees). Most importantly, use a level to ensure the base of the Terralink® panel is level front to back. If it is level, the Terralink® face angle will be maintained accurately. This next Terralink® panel may be clipped with hog rings to the panel below to maintain alignment and resist dislodgement during the next construction phase.



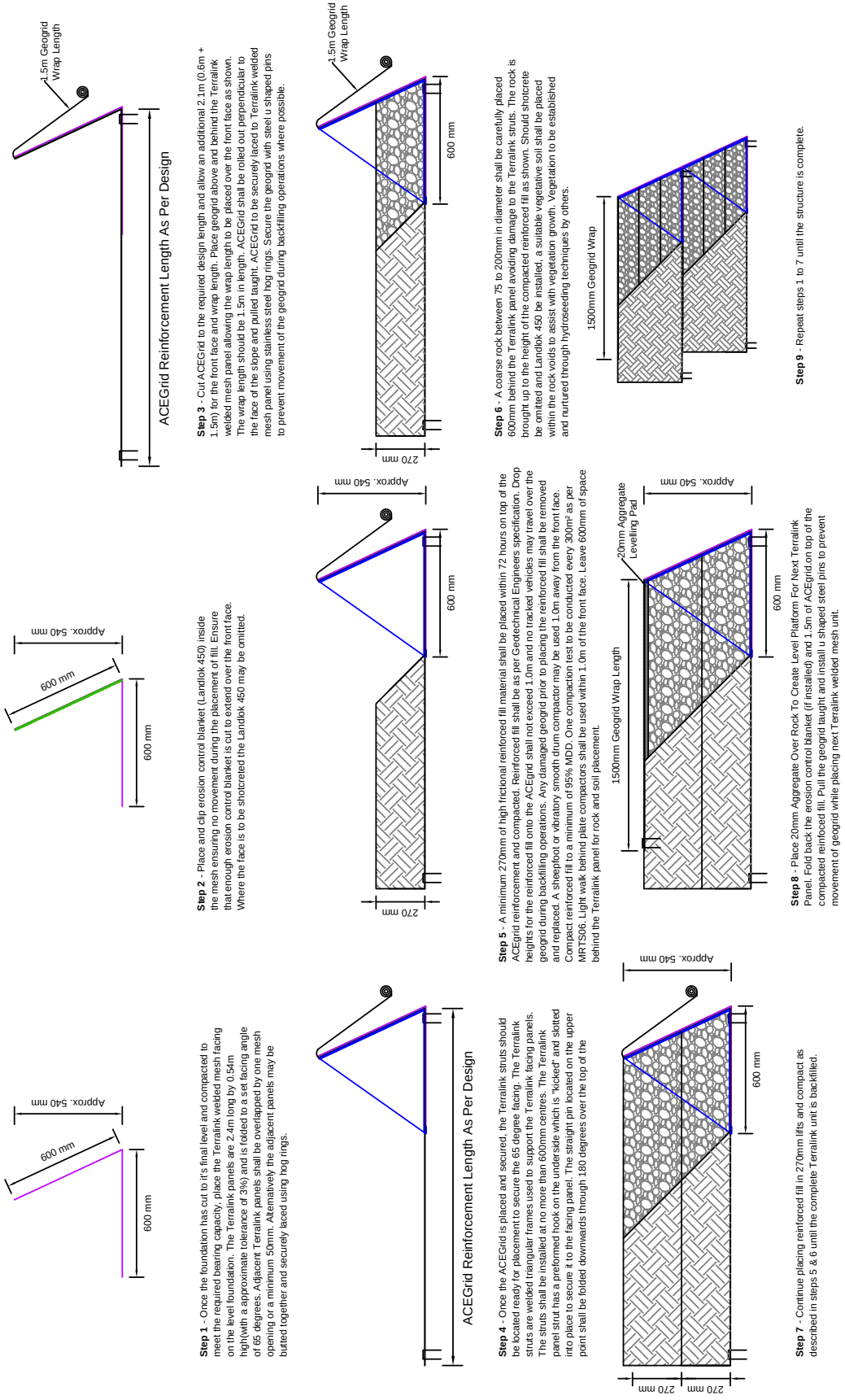
Step 16

Place next Terralink® panels and repeat the steps 4. to 15. above.

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Step 17

Typical construction sequence:



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Leaders in Geosynthetics

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We have supplied products to some of the largest recent infrastructure works in Australia. Global Synthetics provides major benefits to any geotechnical engineering project with the right products and our technical expertise.

Global Synthetics products are used in the following applications:

- Pavement Stabilisation
- Ground Improvement
- Soil Reinforcement and Retaining Structures
- Water Management
- Drainage Systems & Hydraulic Works
- Landfills
- Coastal Erosion Structures

Get in Touch

AUSTRALIA

Website
globalsynthetics.com.au

Email
info@globalsynthetics.com.au

New South Wales
(02) 9725 4321

North Qld
(04) 5921 1692

Victoria/Tasmania
(03) 9791 1772

Queensland
(07) 3865 7000

South Australia
(08) 8384 8894

Western Australia
(08) 9459 4300

NEW ZEALAND

Website
globalsynthetics.co.nz

Email
info@globalsynthetics.co.nz

Auckland
0800 510 120

Christchurch
0800 510 120



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