



StrataGreen
...grow with us

MIRACELL® INSTALLATION GUIDE

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MiraCell® is a three-dimensional, honeycomb-like geocell system made from ultrasonically welded HDPE strips. Designed for slope stabilization, erosion control, and soil retention, MiraCell® expands onsite to form a strong cellular confinement system suitable for vegetative or granular infill.

1. SITE PREPARATION

Clear the slope of all vegetation, stone, debris, and loose or organic material.

- Dress the slope to the desired grade and contour.
- Compact the surface to eliminate undulations and provide a stable base for MiraCell® deployment.



2. CREST ANCHORAGE

Excavate an anchor trench at the crest of the slope based on project-specific dimensions.

- Ensure a minimum of 500mm setback from the edge to prevent shear failure or erosion.
- The trench should be dry with no water flow to maintain structural stability.



3. CONNECTIONS AND PLACEMENT

- Use 1 x steel U-pin per sqm to hold the MiraCell panel in position
- Connect adjacent MiraCell® panels using suitable fasteners (e.g., cable ties or MiraLock connectors) along both length and width.
- Run anchoring cords or straps through the panel slots prior to expansion to aid in layout control and secure positioning.

4. MIRACELL® PLACEMENT

- Expand MiraCell® panels downslope from the crest trench.
- Ensure the system conforms to the slope dimensions and curvature.
- Secure the panels in the anchor trench, then backfill the trench with specified material to lock the system in place.



5. INFILL

- Begin infill from the top of the slope, working downward to avoid stress buildup.
- Drop height of infill should not exceed 0.5 m to avoid damaging MiraCell®.
- Overfill cells by 25–50 mm with vegetative soil, sand, or gravel to account for settlement.
- Light mechanical tamping is recommended. If concrete is used, finish flush to the MiraCell® top edge.



6. FINISHED SLOPE

Once infilling is complete:

- Vegetated slopes should be seeded and watered as per specification.
- Concrete-filled systems should be troweled to a smooth finish with no visible MiraCell® edges.