BCI BUILDING CHEMISTRY INDUSTRY

Method Statement for Installation of BC Geocell System

Scope of Work

This method statement outlines the procedure for the installation of a geocell system for soil stabilization, erosion control, or load distribution on surfaces such as road bases, slopes, embankments, and channels.

Materials and Tools Required

BC Geocell panels (as per design requirements)
BC Geotextile fabric (optional, depending on project specifications)
Aggregate, sand, or soil (for filling the geocell)
Stakes or anchors
Excavator or shovel (for surface preparation)
Compactor (vibrating plate or roller)
Measuring tape
Utility knife or scissors
PPE: gloves, safety boots, goggles

Surface Preparation

Clearing and Leveling:

Clear the surface of all vegetation, debris, and large stones. The surface should be relatively smooth and even before geocell installation.

Excavation:

If required by the design, excavate the site to the specified depth. Ensure proper drainage by sloping the surface as needed.

Compaction:

Compact the subgrade (soil) to the required compaction level to provide a stable base for the geocell.

Installation of BC Geotextile Fabric (Optional)

Positioning:

Lay the geotextile fabric (if specified) over the compacted subgrade. The geotextile acts as a separation layer and improves stability.

Overlapping:

Overlap the geotextile sheets by at least 300 mm where two sheets meet to prevent soil migration.

Securing:

Secure the geotextile in place using pins or stakes to prevent it from shifting during the geocell installation.

Installation of BC Geocell Panels

Expanding the Geocell: Unfold and expand the geocell panels to their full length, ensuring the cells are fully opened.

Positioning: Position the geocell on the prepared surface, ensuring the panels are placed in line with the project's layout plan. If working on a slope, place the geocell parallel to the slope direction.

Anchoring: Secure the geocell in place using stakes or anchors at the edges and at intervals along the panel. The number and spacing of the stakes will depend on the manufacturer's recommendations and project design.

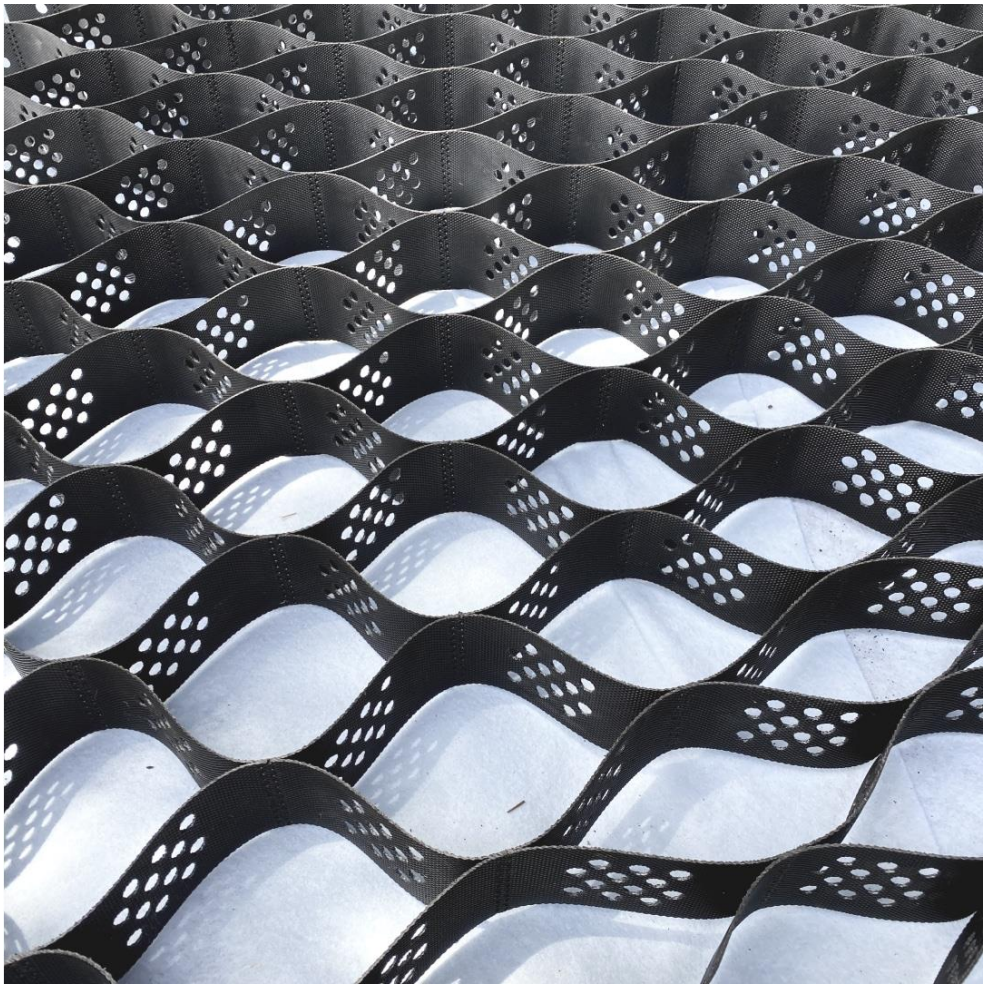
Connecting Panels: If multiple geocell panels are used, connect them using staples, clips, or ties, ensuring continuous and seamless coverage. Overlap adjacent panels slightly to ensure stability.

Filling the Geocell

Material Selection: Choose fill material such as aggregate, sand, soil, or a mix, depending on the project's design and load-bearing requirements.

Filling the Cells: Begin filling the geocell panels with the selected material, ensuring each cell is fully filled. Do not drive heavy equipment directly on the unfilled geocell.

Compaction: Once filled, compact the material in the cells using a vibrating plate compactor or roller. Ensure the fill material is evenly compacted to avoid differential settlement.



Finishing

Surface Layer: If required, apply an additional surface layer of aggregate or asphalt over the filled geocell to create a smooth and durable finish.

Edge Treatment: If working on slopes or embankments, ensure the edges of the geocell are properly anchored and secured to prevent erosion.

Drainage: Check that proper drainage systems (e.g., weep holes, channels) are in place to prevent water accumulation or erosion.

Inspection and Testing

Visual Inspection:

Inspect the installed geocell system to ensure all panels are properly filled, compacted, and anchored.

Compaction Testing:

Conduct compaction tests as per the project specifications to ensure the material inside the geocell meets the required compaction level.

Water Drainage Test:

In areas prone to erosion, conduct a water drainage test to ensure the geocell provides adequate erosion control.

Health and Safety

Ensure that all workers wear appropriate PPE, including gloves, safety boots, and goggles.

Use caution when operating heavy machinery or handling sharp tools during excavation, cutting, and compacting.

Follow all site-specific safety regulations, particularly when working on slopes or near water bodies.

Clean-Up

Remove any excess materials, equipment, and debris from the site.

Ensure that all waste materials, such as geotextile offcuts and unused fill material, are disposed of according to local regulations.

Maintenance

Regularly inspect the geocell system for any signs of settlement, erosion, or damage.

Perform repairs or re-anchoring of geocell panels if required after heavy rain or settlement.

This method statement ensures a stable, long-lasting installation of the geocell system for soil stabilization, load distribution, or erosion control.