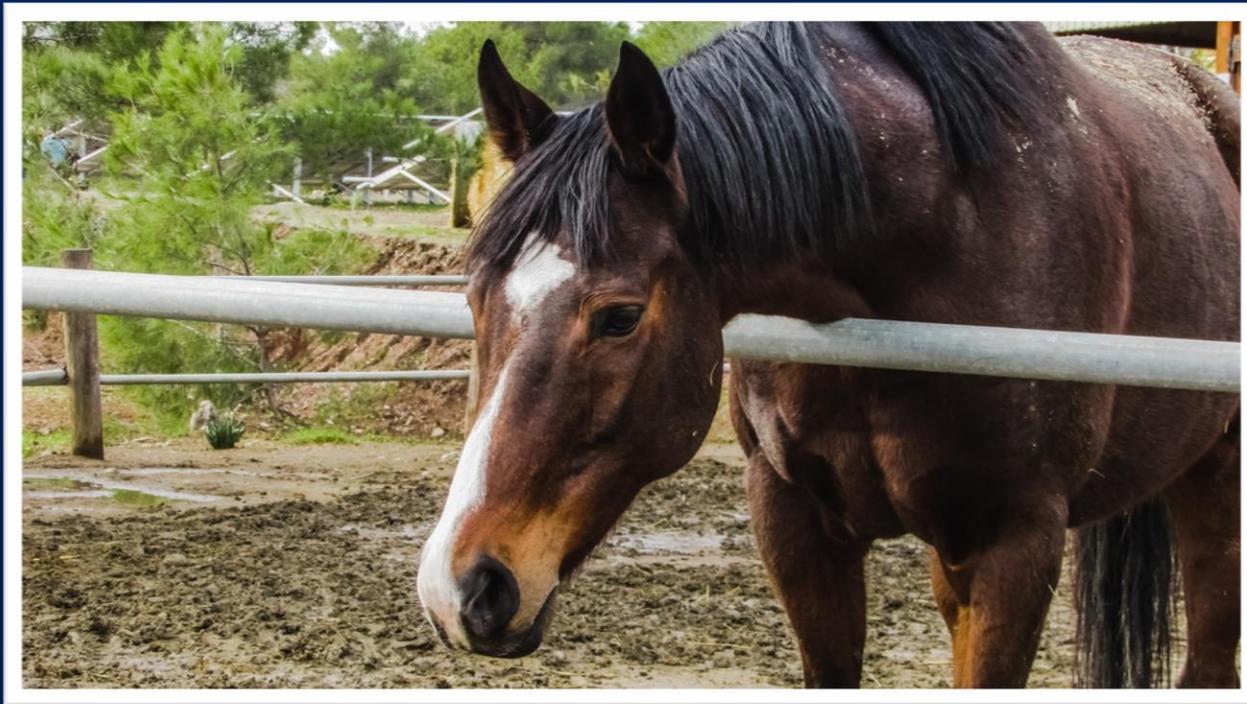


Case Study

Mud Management on a Horse Farm



PROBLEM: Messy, unsafe mud on horse farm



PROBLEM: Messy mud on horse farm



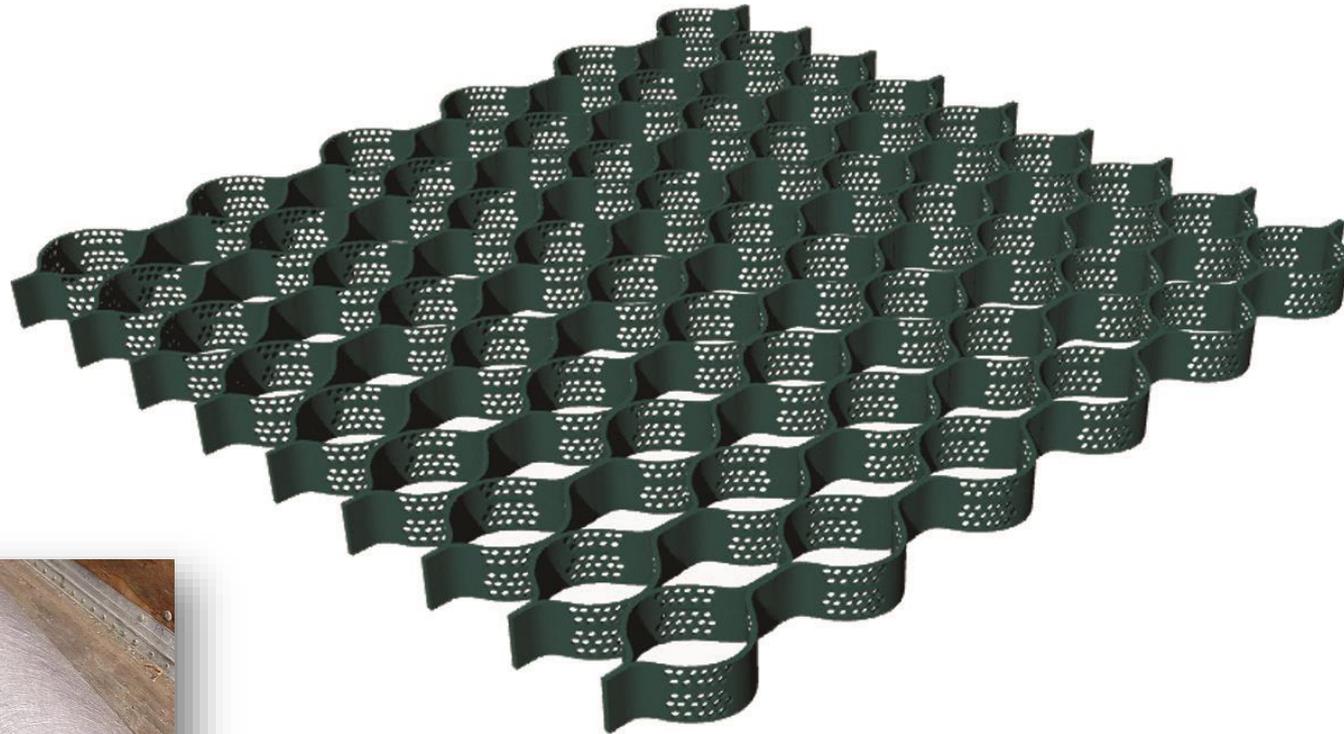
This area is approximately 12 feet wide x 40 feet long and is the ingress / egress that 3 – 5 horses use on a daily basis when going from the barn to the pasture. The horses have free rein, so this area is traveled many times a day, in all weather. The ground is red clay which turns to a slippery, muddy mess when it is wet. In an effort to eliminate the mud, I covered the area with pine mulch and wood chips. This method helped in the short term, but, eventually, the constant pounding of the horses hooves churned the mulch and chips into the clay. I entered a cycle of trying to remove as much wet footing as possible and replacing it periodically with yet more wood chips and mulch. Finally, after a particularly wet winter, I ended up with about 6 inches of muddy muck that the horses walked through 10-12 times per day.

I received a flyer in the mail regarding a grid product that promised to take care of my mud problem! I began researching this geo-grid application and believed that it could really help my situation. However, this particular product, marketed directly to horse owners, was more than my budget could take.

SOLUTION: Cell-Tek's LSG Series® Load Support Grid

I began researching less costly alternatives to the horse grid and found the Cell-Tek Geosynthetics website. Their LSG Grid Panels appeared very similar to the "horse" ones. I contact Julie at Cell-Tek to learn if their product would work for my application. It appeared to me that the main differences are that the panels are much larger with bigger grid openings. I read everything on their website and decided to give it a try.

I ordered three LSG-3 panels, the landscape fabric, and the j-hooks and the order was shipped directly to my location. I purchased the correct stapler to connect the grid panels. I had a 4x6 post that would serve as the border on the end of the area. I hired a local landscape / gravel guy to do the installation for me. I recently added sand to my arena and used excess sand as footing on top of the grid.



SOLUTION: Cell-Tek's LSG Load Support Grid was installed to stabilize the muddy area leaving a firm foundation without rutting.

Since the area was deep mud, it had to be excavated and the mud hauled away. The area was then scraped clean and gently sloped to allow for proper drainage. The 4 x 6 was installed on the end that required a border and was secured by 2' rebar hammered through the lumber. The rebar had washers welded to the end of it to make a smooth edge for safety and to secure the lumber in place. The landscape material was placed in overlapping layers to cover the entire area. The grid was stretched and secured with the j-hook rebar. Additional grids and pieces were stapled to the first until the entire area was covered. I ended up with several pieces of left over grid that may be usable for smaller projects. My gravel man decided on a mix of washed screenings and #8 gravel, which he delivered to the site and missed with his loader. The gravel mix was placed in the grid with the loader and then raked out so that it was about an inch above the top of the 3" grid. It was then tamped down using a walk-behind plate compactor. The area was watered and then compacted again. After a thorough tamping, two inches of sand was placed on top and watered in to settle it.

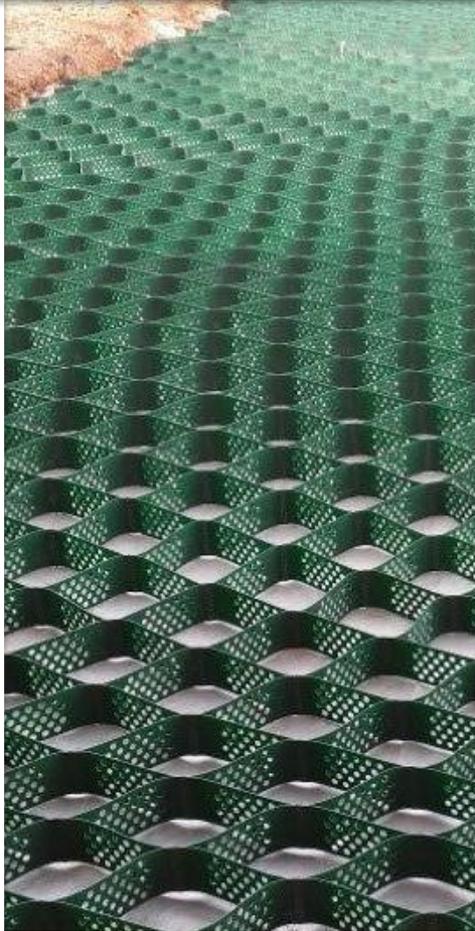


PROBLEM & SOLUTION

Before:
Muddy ingress / egress



LSG-3 expanded in area



Infill mix



After:
Solid and firm walking area



Actual testimonial from horse farm owner, Cheryl W.:

“LSG-3 was installed per Cell-Tek's instructions. I filled it with a mix of washed screenings and #8 gravel, overfilled with the same. We tamped it down, watered, and tamped again. Then, we covered it with a 2" layer of sand and watered it.”



“The area looks beautiful, and works perfectly. We have had a record wet spring and early summer and the entire area remains dry. Heavy rains penetrate the sand surface and percolate through the grid. Any excess water seeps out at the bottom of the lower corner that was designed for drainage. The top surface of the area resembles a sand beach right at the water line, with nice firm sand that is easy to walk on.”

- Cheryl W.



6 months AFTER installation of LSG Load Support Grid and after a period of heavy rains:



We followed up with Cheryl 6 months later:

"Both installations are working fabulous! I have not had mud - at all - at either location, even after very heavy rains, and 10" of snowfall! The surfaces stay hard and any rain water - or snow melt - it just drains right through. I am very pleased!"
- Cheryl W.



*See more information about LSG Load Support Grid at
www.celltekdirect.com
888-851-0051
info@celltekdirect.com*