

 **ECORASTER®**



Permeable
Ground Reinforcement



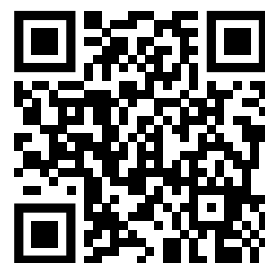
ECORASTER® E80 heavy



Project Report: Container Transshipment Site

Logistics area „Grüne Engel“ Nuremberg

Check the video:





ECORASTER® E80 heavy, the permeable solution for green-blue infrastructure. The E80 heavy is the answer to the (dynamic) forces that occur when turning. Herewith we have proven that truck turning areas and logistics areas can become part of the sponge city!

Project description:

The area:

The area near the port of Nuremberg serves as a container transshipment point and is exposed to heavy truck traffic. The E80 heavy test area is located in the middle of the site its size is approx. 400 m². It is a combination of an access road and a turning area for trucks. Previously, the surface was purely mineral-based and required regular reworking. An average of 280 truck movements are made here every day, including additional set-down and roll container loads.





Information on the structure:

Substructure: Single-layer structure with RC material (crushed) - grain size 0/32 mm.
Substructure constructed in accordance with RStO, with 120 MPa compaction

Compaction: Top edge of base course 120 MPa (determined with load plate pressure test), not more compacted to ensure infiltration capacity of the overall structure.

Vibration plate: Operating weight 500 kg with 40 cm depth effect.

Ground nails: 600 mm soil nails all around the edge of the surface at a distance of one meter from each other, sunk into the ECORASTER® (hole in E80 heavy) without clamps. Turning area: one 600 mm soil nail per m² sunk directly into the E80 heavy without clamps.

Filling: E80 heavy been filled with RC chippings (crushed) - grain size 8/11 mm

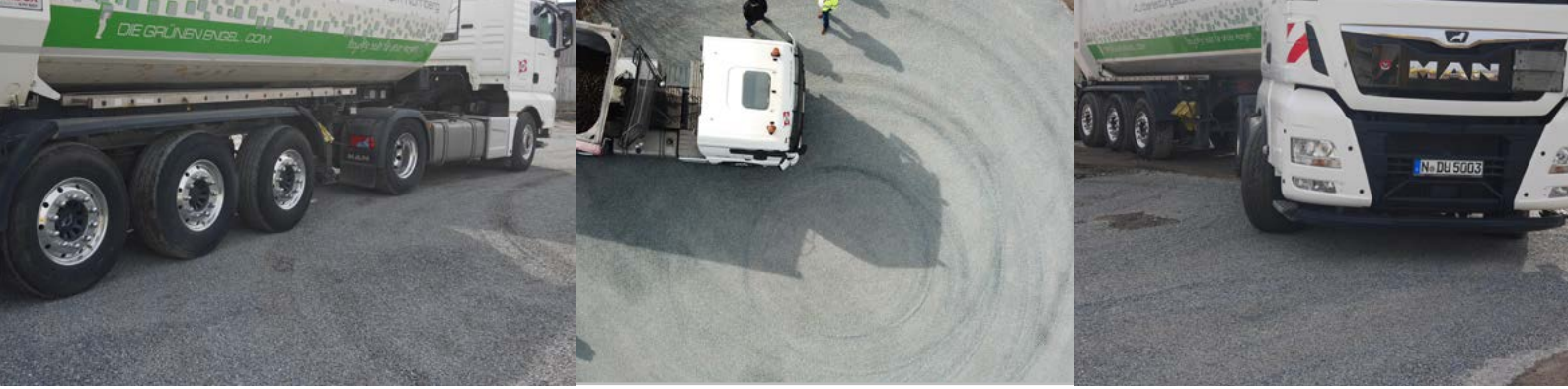
No leveling layer under the ECORASTER® - made possible by "grader" machine use

Laying the E80 heavy **without edging**.

Surface vibrated twice with the above-mentioned vibrating plate.



Laying the E80 heavy: 4 hours with 3 people. The substructure material and the gravel backfill were supplied by Durmin, also a member of the Dettmer Group.



Informationen on the test, March 2025:

- Vehicle: 3-axle tipper (semi-trailer) with tractor unit
- Test Drive: Driving on the (over-)covered E80 area with turning maneuvers in both directions, tight radius turn with full load (40.6 tons) at the end of the test.
- Weight: Tested in steps, starting empty (15 tons) up to 40.6 tons total weight.
- Conclusion: After several test drives no wear or tear, neither displacement.

Repeated testing, June 2025:

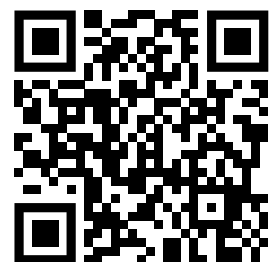
- Vehicle: 3-axle tipper (semi-trailer) with tractor unit
- Area: Overfilling of the E80 was removed, filling only up to the top edge of the grid.
- Test Drive: Driving on the surface with turning maneuvers in both directions, Turning with a tight radius and **increased speed**. (feasible limit for the vehicle)
- Weight: 40.5 tons total weight, lift axle tested at up and down.
- Conclusion: No wear or tear! **Test successful!**



Coverage April 2025 vs without coverage June 20205:



Next steps: (long-term) test of the infiltration performance of the area



Check the Video: