

SK-VOLVO Valaliky, Noise Protection Embankment, Slovakia

Valaliky, Košice, Slovakia



Zemný val vo výstavbe

TYPE OF PROJECT
Noise Barriers

YEAR OF CONSTRUCTION
2026

CLIENT
**Správa Ciest Košického
Samosprávneho Kraja**

CONTRACTOR
**Valaliky Industrial Park,
S.R.O.**

DESIGNER
DOPRAVOPROJEKT, A.S.

PROD. RELATED
TerraMesh (24 000 M2)

Challenge

The Valaliky Strategic Park is located south of the city of Košice, near the intersection of the R4 (R2) and I/17 roads. A Volvo car manufacturing plant will be built on the site.

The noise barrier embankment is designed as Reinforced Soil Walls, with the side facing with a stone facing at a 70° slope, and the rear side as a slope with a natural gradient of 1:1.5, intended for landscaping to ensure the noise barrier blends into the environment from the side of the village of Valaliky.

The Reinforced Soil Walls is designed to have a height of up to 7.5 m above the original terrain to ensure the requirement for a total height of 6.0 m above the level of the adjacent roadway. A 3.0 m high noise barrier wall is installed at the crest, consisting of double-sided absorbent panels between concrete columns anchored into a foundation strip at the crest of the embankment.



Subgrade preparation



Installation of the first row of the Mineral Terramesh® system

Solution

The noise barrier is divided into three separate sections measuring 1,370.9 m (Section 1), 1,710.0 m (Section 2), and 300.0 m (Section 3).

The side facing the roadway consists of a reinforced earth structure with a stone facing at a 70° slope—the Mineral Terramesh® system. This system was chosen as the most suitable solution due to its long service life and quick installation, as it is a prefabricated element.

Mineral Terramesh® consists of blocks made from double-twisted hexagonal woven steel mesh of the 8×10 type, which is made of steel wire with a Galmac surface treatment and additional PoliMac® polymer protection offering high resistance to abrasion and mechanical damage. The meshes are also suitable for environments with high pH (enriched soils).

The face features a welded panel made of Ø 5 mm wire with a 25×100 mm mesh and a stone fill of 32/63 mm fraction. The reinforcement blocks are connected at specified points with reinforcement geogrids to ensure overall stability.

The components of the Mineral Terramesh® system are pre-assembled during manufacturing, making the blocks ready for quick installation on-site, with an expected service life of 120 years. Installation is simple and does not require additional joining of the reinforcement mesh and facing element, as it is a single integrated product.



Mineral Terramesh® Construction in an Arch



Mineral Terramesh® Construction Underway



Top view of the Mineral Terramesh® structure



OPEN GOOGLE MAPS



OPEN GOOGLE EARTH