Stabilisation geogrids providing safe and reliable wind farm infrastructure

Windfarm VES Augstkalni

Smiltene Municipality, Latvia

To facilitate the construction of a 112 MW-capacity wind farm in Smiltene Municipality, Latvia, Tensar's mechanical stabilisation geogrids were used to optimise pavement thickness within the project design phase and construct safe and efficient access roads and hardstand areas, providing foundation for crane loading, wheeled vehicles, and material storage over variable soils.

CLIENT'S CHALLENGE

With a need to construct safe and economical infrastructure for the installation and servicing of 16 wind turbines, including a hardstand area for each and 17km of connecting access roads, the Augstkalni wind farm project team required a solution that optimised aggregate requirements whilst still ensuring resilient construction and durable long-term performance.

TENSAR SOLUTION

Tensar worked alongside the project consultant, SIA Via Verde, to propose a suite of solutions for mechanically stabilised access roads, working platforms, and hardstanding areas over local subsoils. The various infrastructure needed to meet E_{V2}-modulus, frost resistance, and performance-based requirements, including provision of bearing capacities with a high factor of safety to support gross vehicle weight loading of up to 170t whilst minimising the long-term deformation of access roads.

A Tensar mechanical stabilisation geogrid was subsequently installed across the project, ensuring safe construction procedures, all-season availability, and reduced ongoing maintenance requirements.

B E N E F I T S

- Tensar's mechanical stabilisation geogrids facilitated **safe design within 17km of access roads and associated hardstand areas, for vehicle axle loads of up to 20t**
- Wind farm infrastructure designed to reliably and efficiently **meet both construction and long-term project requirements, minimising ongoing maintenance requirements**
- **Collaborative design processes** between SIA Via Verde and Tensar International

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Application
Working Platforms and Unpaved Access Roads

Constructed in
2025-2026

Client
SIA WPR2

Consultant (infrastructure design)
SIA Via Verde

Contractor
Pilnsabiedrība "MB.MS"

Distributor
SIA OK Būvmateriāli

Tensar geogrids were used to mechanically stabilise the granular fill used in roads and hardstand areas to optimise thickness and maintain performance.

let us help you with your next challenge: www.tensarinternational.com email: tensarinfo-intl@cmc.com