

Tensar® HX5.5 Geogrid stabilisation in Action

KEZAD Foodhub

Abu Dhabi, UAE

Tensar International LLC (Tensar) was approached by the Consultant, AECOM to provide a more cost-effective and sustainable solution for flexible pavements within the KEZAD Foodhub Development Project. Tensar's alternative design was implemented, incorporating a Tensar Mechanically Stabilised Layer (MSL) with reduced layer thicknesses compared to the conventional unbound construction.

CLIENT'S CHALLENGE

The consultant was seeking a cost-effective and sustainable alternative that met all the client's requirements, accelerated the construction time, and maintained the required pavement design life.

TENSAR SOLUTION

By incorporating Tensar geogrids, the required thickness of both the asphalt and base course layers was reduced, delivering an overall saving in pavement cost. A minimum geogrid overlap of 300 mm was specified to ensure individual rolls perform together as a unified stabilising system. Recycled crushed aggregates were used as the base course material, supporting both sustainability and performance objectives. Beyond cost savings, the optimised pavement design also reduced construction time and lowered carbon emissions, improving overall project efficiency and reducing environmental impact.

Tensar®

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PROJECT DETAILS

Application
Paved Roads | No. 550

Constructed in
2026

Client
AD Ports

Consultant
AECOM

Product
Tensar® HX5.5



Recycled crushed aggregate base course being placed over HX5.5 geogrid.

B E N E F I T S

- **Savings in Cost** – 10%
- **Construction Time Reduction** – 4%
- **Reduction in Carbon Emissions** – 13%

PROJECT BACKGROUND

The KEZAD Food Hub is a strategically planned 3.3 sq km integrated food trading and logistics ecosystem in Abu Dhabi, serving as a central platform for wholesale food trade across the region. Designed to strengthen the UAE's role as a global food gateway, the hub benefits from exceptional geographic reach, connecting major international markets including the Far East, Middle East, Africa, the CIS region, and the Indian Subcontinent. Its location provides seamless multimodal connectivity through established sea, land, and air networks, as well as future rail linkages, ensuring efficient and resilient supply chain operations. The site's proximity to key transport corridors such as the E311 and E11 highways further enhances access and reduces transit times for regional and international food distribution.

Within this large-scale development, Tensar contributed a value-engineered pavement design that improved the project's construction efficiency. Rather than adopting a conventional pavement structure over competent subgrade, Tensar proposed an optimised approach incorporating its stabilisation geogrid within the aggregate base course. This allowed for a reduction in the required thickness of the aggregate layer whilst meeting all structural performance criteria. By reducing material quantities and associated handling, the solution lowered overall construction costs, contributed to faster installation, and improved sustainability outcomes. Tensar's geogrid-based design delivered a durable, economical, and high-performance pavement system well suited to the broader development goals of the KEZAD Food Hub.



HX5.5 Geogrid Installation at Site.

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