

Subgrade Stabilisation at RCPL Industrial Plant using Tensar H-Series

Subgrade Stabilisation for the internal and external pavement for RCPL Industrial plant.

Bardoli, Surat in the state of Gujarat

CLIENT'S CHALLENGE

The RCPL site presented a challenging subgrade condition, with in-situ CBR values of just 2–3% – well below the 10% required for pavement design. The clay soils were considered unsuitable, raising the prospect of extensive excavation and disposal. At the same time, the project demanded a compliant pavement design solution that could be delivered without significant cost or programme impact.

TENSAR SOLUTION

Tensar proposed a Mechanically Stabilised Layer (MSL) to address the weak subgrade, raising the effective CBR from 2% to the required 10%. The MSL comprises two granular layers, each reinforced with a layer of Tensar H-Series geogrid, forming a total thickness of 300 mm over the existing soft subgrade. This approach eliminated the need to excavate and dispose of the unsuitable clay, met the subgrade design requirement, and delivered savings in both construction time and overall project cost.

B E N E F I T S

- **Avoided excavation and disposal** of unsuitable clay material.
- **Raised subgrade CBR from 2% to 10%**, meeting pavement design requirements.
- **Reduced construction time** and overall project cost.
- **Reduced carbon footprint** through a less material-intensive construction approach.



Tensar®

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PROJECT DETAILS

Application

Subgrade Stabilisation | No. 559

Constructed in

2026

Client

Reliance Consumer Product Limited

Consultant

AEDPL

Product

Tensar H-Series



PROJECT BACKGROUND

RCPL is constructing a large-scale integrated food and beverage manufacturing facility in Bardoli, Gujarat. The site has clay soils extending to a depth of 6 m, with in-situ CBR values of just 2%, making the existing subgrade unsuitable for pavement construction. A conventional approach would have required significant excavation and disposal of the clay material, resulting in extended construction time and substantial cost.

RCPL engaged Tensar through distributor SCM Noble Agencies. Tensar proposed a Mechanically Stabilised Layer (MSL) comprising two granular layers, each reinforced with a layer of Tensar H-Series geogrid, raising the effective CBR to the required 10%. This eliminated the need for excavation, met the pavement design requirements, and delivered savings in both construction time and overall project cost. The client also acknowledged the reduction in carbon footprint achieved through the less material-intensive construction approach.

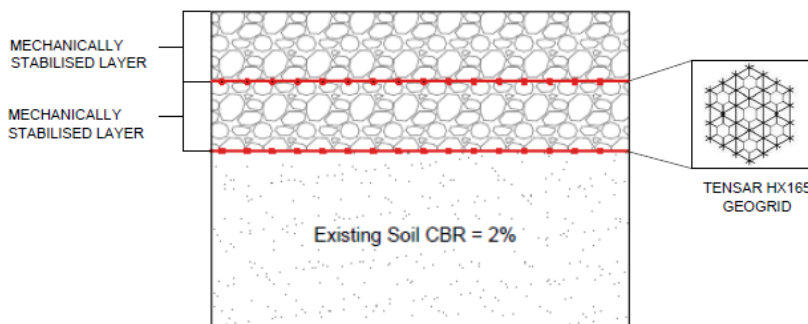


Figure 1 : Cross-section of the pavement with Tensar H-Series stabilisation geogrid.

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