



Tensar geogrid improves ballast performance through mechanical stabilisation



Rail
№ 467

Rama VI Bridge

📍 Bang Sue, Bangkok,
Thailand

CONSTRUCTED IN 2022

Benefits

300% improvement
in maintenance cycles
(from 4 months to 1 year)

**Controlled differential
settlement**
through mechanical
stabilisation

Subgrade protection
with effective granular
interlocking mechanism

Trackbed Stabilisation on a Railway Embankment

At the Rama VI Bridge section of the State Railway of Thailand, the ballast layer was not performing well due to the mixture of fine material into the layer. To resolve this, Tensar stabilisation geogrid was introduced to stabilise the ballast layer whilst providing subgrade protection.

CLIENT'S CHALLENGE

The railway's differential settlement was a pressing issue experienced by the client. This happened due to the infiltration of subgrade fine material caused by dynamic train loading, leading to the frequent tamping of railway ballast every 3 to 4 months.

TENSAR SOLUTION

The Tensar geogrid has been successfully introduced and installed beneath the ballast layer, providing a notable extension to the overall longevity of the railway. The incorporation of Tensar geogrid has stabilised the ballast layer mechanically, which not only acts as a protective measure for weak foundations but also efficiently mitigates differential settlement.