



# GEOFEM®



## CASE STUDY

### LPG Bottling Rail Tracks, Jawaharlal Nehru Port, India

Geofem was commissioned by Tensar India to conduct satellite displacement monitoring of a recently installed TensarTech® Stratum® mattress, a cellular foundation system designed to reduce differential settlements on soft and compressible soils. The results indicated relatively uniform displacements of up to around 52mm on the soft foundation soils over the one-year monitoring period.



SCAN THE QR CODE to find out more.



#### THE CHALLENGE

The client needed an accurate and reliable method to assess the settlement performance of the TensarTech® Stratum® cellular foundation mattress.

In-situ monitoring techniques available may have lacked the accuracy needed over long distances required for this critical infrastructure.

#### THE SOLUTION

InSAR monitoring was used to analyse the rail track using data from the period between September 2023 and October 2024.

The results indicated relatively uniform displacements of up to around 52mm on the soft foundation soils over the one-year monitoring period.

#### THE BENEFITS

The InSAR analysis technique demonstrated its capability to provide a significant number of displacement data points along the rail track, offering an effective and reliable means of monitoring the performance of the ground improvement measures.



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## Satellite analysis meets engineering insight

Nicosia, Cyprus +357 22623062 | Staines, UK +44 (0)20 3519 7697