



Tensar®

 **ROADS AND
PLATFORMS**

A durable and effective road solution against asphalt cracking caused by expansive clay soils.

Surface crack prevention, in expansive clay areas.

Cracks in the regional road network prompted the research project into sustainable alternative repair and reconstruction methods.

CLIENT'S CHALLENGE

The road network in the Centre-Val de Loire region of France is becoming increasingly disrupted by cracking, caused by expansive clay subsoils. Previously tried solutions have shown considerable limitations when it comes to durability and sustainability. Key concerns are finding new, more economical options for pavement remediation that will overcome the problems caused by expansive clay subsoils and avoid surface cracking.

TENSAR SOLUTION

One of the solutions being adopted is the use of a mechanically stabilised granular base incorporating two layers of Tensar geogrid. Trial sections were installed in November 2018. A 5-year monitoring programme has been established and a monitoring committee is convened each year to review project operations. After more than two years, the solution proved to be a success and no degradation was observed on the road surface.

RD17 Ménéstreau- en-Villette

Road stabilisation over
expansive clay soils

 Ménéstreau-en-Villette,
France

BENEFITS

Reduction of cracking
within the asphalt and
future maintenance costs

Increased pavement life
and bearing capacity

**50% reduction in
rehabilitation cost**
from a reduction in the
base layer thickness
compared to alternatives

**40% reduction in
reconstruction time**
and disruption

REF TEN419



The road condition prior to application of the Tensar solution.

PROJECT BACKGROUND

A research project was launched in 2017, to find new, durable and economical techniques to rehabilitate roads affected by drought. Most disruptions to the road surface in the region are caused by the problem of expansive clay subsoils, and new solutions are needed to increase resiliency to ongoing climate change.

The project was put together by CEREMA in collaboration with the departmental councils of the Center Val de Loire and is called the Observatory of Drought-Affected Roads (ORSS). CEREMA is the French major public agency for developing and capitalising on public expertise in the fields of planning, regional cohesion, and ecological and energy transition. Worldwide, it is a partner of choice for both public institutions and private entities. Tensar are proud to be working on such an important project with this prestigious organisation.

In total, eight sites were monitored over four years to assess the impact of this work. The site trialing the Tensar geogrid solution has been monitored since the installation over two years ago, and during this timeframe, no sign of any degradation has been observed.

Main Contractor:
COLAS

Consultant:
CEREMA and ORSS

Client:
**Département du Loiret
(45)**

“Our solution resulted in huge project cost savings and a high performance answer to the expansive clay problem.”

Abdelghani Mekkaoui
Area Civil Engineer
Tensar International Ltd