

## Backfilling 'catches' in Lille region

Soil improvement and reinforcement

2012 - 2014

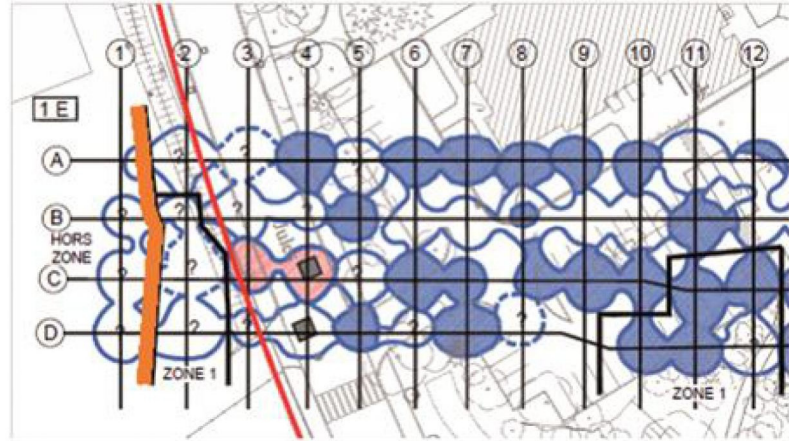


FRANCE - Nord

Client

AGENCE PIERRE  
GANGNET

Project owner  
Lille Métropole



### Description of the project

In Lille as in Paris, urban expansion has reached the fields of catches, 'bottle'-shaped traditional underground quarries (200 to 350 m3 in general) grouped in bunches.

These catches present risks of subsidence at the heart of the Lille conurbation,

#### Key features

- Geotechnical project management for catches identification and treatment

### Description of the mission

TERRASOL was involved within the framework of the overall project management of the redevelopment of the southern districts to deal with this problem:

- Preliminary phase: identification and updating the locations (layout) of the 260 catches listed in the area (summary of existing data, definition and supervision of additional explorations, condition of each catch – empty or partly backfilled);
- Project phase: definition of the primary treatment (elimination of potential subsidence by backfilling with economical run materials, by tipping or drilling) and, if necessary, secondary treatment (control of settlement under vulnerable roads and utilities by installing a reinforced concrete slab or grouting);
- Works phase: definition of the operation stages taking the complex urban context into account and adjusting the grouting cycle in order to manage the quantities injected (payment by the quantities according to the contract).

Works were completed in autumn 2013, and the assessment is positive: the improvement principles were validated and, although individually the treatment of most of the catches differed from the initial estimate, the contract quantities were complied with.