



## Country

France (Nord)

## Client

MAGEHA

## Date

2004-2009

## Sogreah's services

- Studies concerning the integration, the connection of the golf complex to the town's networks to existing facilities.
- Design of the internal road infrastructures
- Study of the hydraulic developments and of alternative runoff water treatment
- Monitoring and coordination of the implementation phase

## Context

Project preparations started in 2002 at MAGEHA and the design phase in May 2004.

The implementation phase started in January 2006 and has been separated into several steps, the final delivery date being 2009.

## Description of the project

### Earthworks

- A 36-hole golf course spread out on 180 ha of the 36 tracts on 180 ha (25% of the town's area);
- 340,000 m<sup>3</sup> of earthworks:
  - 120,000 m<sup>3</sup> of topsoil;

- 220,000 m<sup>3</sup> of soil.
- 53,000 T of filler material to build the roads.

### Roads and various networks

- Stormwater:
  - 7,000 lm of pipes (ø: 300 mm to 800 mm) ;
  - stormwater treatment plants.
- Wastewater:
  - 5,700 lm of pipes (ø: 200 mm);
  - wastewater pumping stations.
- 16,000 lm of common trenches.
- Installation of 7 voltage transformers.
- Installation of 220 lighting masts.
- 5 km of internal roads to get to the 180 independent plots,

apartment buildings and business areas (shopping centre, hotels, club house).

### Storage

- 15,000 m<sup>3</sup> of basin active storage capacity.
- 48,000 m<sup>3</sup> of storage capacity in the swales, with flood regulating dams.