

# Grenoble - Les Eaux Claires secondary school



## Country

France

## Client

Région Rhône-Alpes

## Date

Studies: 2009-2012

Construction: 2010-2013

## Cost of works

€26m excl. VAT

## Sogreah's services

- ▶ Project management (basic assignments included in the French public buildings procurement law) + working design for the following:
  - Removal of asbestos
  - Demolition
  - Main structure
  - Roads & utilities and landscaping
  - Green areas and earth tubes

## Group of contractors:

R2K Architectes (leading partner), Sogreah, EA2C, CET



## Context

The redevelopment of Eaux Claires secondary school consists of the construction of several compact buildings on the northern part of the former school grounds, freeing up space on the southern third of the area for other projects.

The school is located in an urban area, close to Grenoble's main boulevards and to tramway line No. 3.

## Description of the project

- Demolition of the existing school and boarding school: 31,000 m<sup>2</sup>.
- Total reconstructed floor area : 22,000 m<sup>2</sup>.

- First category (French legislation) public building with a canteen and accommodation.

## Technical features

### Deconstruction

Removal of asbestos and deconstruction of the three existing nine-floor buildings, following a phased schedule in order to allow classes to continue.

### Reconstruction

Reconstruction of the new school, including:

- A day school;
- A boarding school;
- A canteen;

- A maintenance building;
- Staff accommodation.

The buildings rest on superficial, shallow foundations in sand and gravel, with a 2.5 ground bearing coefficient.

In certain places, next to the demolished building's foundations and basement, pillars made with coarse aggregate concrete allow the building to rest on the unworked bedrock.

Seismic stability of the buildings is provided by cross walls, allowing the facing walls to be separated from the slabs thanks to the

insertion of thermo-acoustic insulation to eliminate thermal bridge effects.

This project is part of a sustainable development programme which is compliant with several HEQ (High Environmental Quality) targets such as using appropriate building material (wood), managing energy efficiency

(insulation reinforced on the outside) and managing water resources (collection & use of rainwater).

**External development work**

- Utility and water networks and connexion with public networks.
- Porous aggregate and plant based binder.
- Installation of an underground

tank to store rainwater, used to water green areas.

- Creation of green roofs and terraces.
- Revegetation of areas that have not been built on with trees or field hedges.
- The existing enclosure wall is preserved and extended next to the new buildings.