Eco-sewage treatment plant in Bois-le-Roi, Chartrettes - France

A lecture of this project was given in the department of equipments of Fontainebleau in 2010, and for the architecture school : ESA.
The project was also published in "Environment magazine" in 2008 and in "Ecologik" in 2009.

Industrial site, HQE® approach : water, treatment and phytoepuration

Client	Cites of Bois-le-Roi Chartrettes Fontaine-le-port
Location	Bois-le-Roi
Project	Eco-design HQE®
Mission	Design concept and follow up mission, architecture HQE® and landscaping
Design and build	AR ARCHITECTES, Contractors OTV France Nord, CAVAZZA
Area	plot 5 476m²
Capacity	10 000 inhabitants
Cost	2 100 000 €
Date	From 2007 till 2008

Reed water pond

Perspective on the bioclimatic operating buildings

Bois le Roi- Chartrettes- Fontaine-le-Port: a waste water treatment plant or an ecological park?

An innovative waste water treatment plant with a capacity of 9 800 Equivalent-inhabitants, treating 1933 m³/d of sewage water in the heart of the Livry Park in Chartrettes. The site is surrounded by forests and the river Seine where water is rejected. Rustic bushes are part of the scenery and are used for pedestrian walkways. Wetland as ecosystems are recreated in this environment.

Architectural and landscaping perspective of the plant in the Bois-Le-Roi forest's environment.


View of the building in wooden cladding with boxes for birds.


View from the green ditch

HQE® targets

Landscaped architecture

The whole idea is even more interesting as this Seine and Marne waste water treatment plant is located in the heart of the protected area within the Livry Park itself. We must respect this environment and value the building to prove that even a waste water treatment plant can be designed in harmony with its environment.

Four important axes have been defined:

•Zero visual pollution objective:
Bois le Roi waste water treatment plant has a perfect visual integration with its environment. A terrace was created above the operating rooms letting the public to view the site and appreciate the landscaping. A green ditch collects water from the plant, then let it back to the river La Seine completly cleanned.
Wetland ecosystems are recreated in their environment.

• Zero olfactory pollution objective:
The polluted air from the plant is treated at a rate of 67 200m3 per day using a biological treatment.

• Zero sound pollution objective :
Sound from the mecanical process are entirely treated by the use of sound insultation materials. The site has a global sound of 30dB.

• Restoring natural resources and creating biodiversity:
Buildings have built-in biodiversity conservation techniques such as rustic swallow nest boxes.