

# CONSTRUCTED WETLANDS SYSTEM FOR WASTEWATER TREATMENT OF TOR BELLA MONACA



## ORIGINAL NEED

URBAN, community initiative for integrated development and environmental requalification, has chosen a wide sector of the eastern suburb of Rome, a context marked by differentiated problems, pointing to the integrated activation of "innovative projects." Among the interested districts, Tor Bella Monaca is the most establishment of public housing built in the '80s (about 28,000 people) and has significant signs of urban blight.



## DESCRIPTION

It was set up a laboratory school for design the inclusion of any requalification of the ditches (characterized by a strong sanitary impact, mainly due to not treated discharges and hydraulic disposal problems) and the construction of a constructed wetlands system, facilitating the introduction of a innovative theme as the natural purification of the inhabitants.

The lab school has been working on the idea that it is unthinkable operate the recovery of a watercourse (species in an area with difficult social circumstances) without regenerating adjacent areas with physical and social actions for the integration in the new fabric. Therefore, it is started with the idea of creating a filter made of works (a square, a bike path, children's play-area) realise with a participate design.

### LOCATION

District of Torre Bella Monaca  
Municipality of Rome  
Italy

### COMMITTANT

Ecomed (Society of ACEA S.p.a.)

### NUMBER OF PERSON EQUIVALENT

500-1000

### WASTEWATER TYPOLOGY

Urban

### PLANT TYPOLOGY

2 parallel lines, each formed by a basin SFS-h + a basin FWS

### AREA (M<sup>2</sup>)

Total 3800 (2450 SFS-h + 1350 FWS)

### YEAR OF REALIZATION

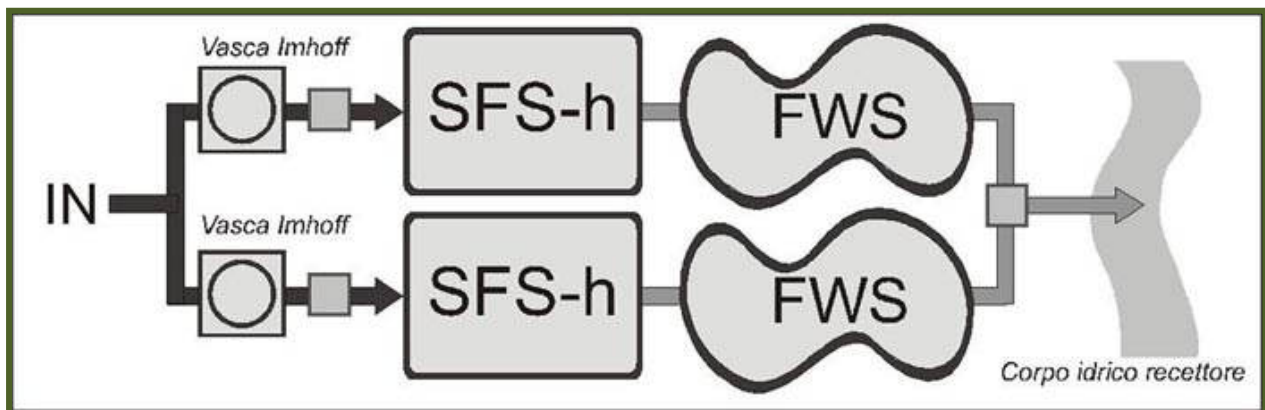
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The realization of the wetlands system has allowed then:

- to treat a portion of the wastewater to maintain a constant flow of clean water to be input into the ditch and thus remove the polluted waters, promoting the revitalization of the watercourse;
- the creation of a "garden-plant" usable by the citizenry;
- the arrangement of the riverbed through techniques of naturalization and soil bioengineering in the banks of the ditch;
- the participation, the awareness and the launch of a process of involvement of the citizen in green-belt management;
- construction by students of some small play areas, designed in the laboratory and integrated with the pedestrian and cycle path built in the intervention.



**Were made training modules on the cycles of water, and students have contributed to the project filters-areas between the ditch and the inhabited part**



Block scheme of the plant

The design of the plant was carried out in collaboration with Arch. Paolo Anella, who was also in charge of planning of all the works side.