

Wastewater treatment plants in **Ge-Quinto** and **Arenzano-Cogoleto**

General information

- ✓ Years: 2003-2004
- ✓ Customer: Genova Acque SpA
- ✓ Value of work: € 6,400,000

Preliminary and final architectural and structural design. Environmental screening procedure

Ge-Quinto wastewater management plan Characteristics of the project

The revamping of the wastewater management plant is aimed at increasing its hydraulic and functional capacity to allow wastewater from the municipality of Bogliasco and part of that from Pieve Ligure, which already naturally gravitates to the Bogliasco sewer network, to be channelled to the plant, in addition to wastewater from the public utilities in Levante Cittadino, which are already connected.

The intervention will ensure the waste water disposal complies with the limits set by Legislative Decree No. 152/99 and subsequent amendments.

The plant will have a capacity of 60,000 A.E.

The plant will exclusively treat domestic wastewater.

The current building envelope consists of a parallelepipedal structure 90x50x6 m in size, located by the sea adjacent to the coastal road.

"Environmental screening" verification

The "screening" verification for the project was drafted in accordance with L.R. 38/98.

Structural works

The adaptation and upgrading of the wastewater management plant involved the following structural interventions:

- Building rehabilitation works on existing structures
- Work on existing and new tanks
- Provision of bases and supports for pipes, channels and components

New roof arrangement

The renovation of the urban decoration on the plant roof has become necessary due to the demolition and subsequent structural and functional restoration work. The project involves the complete makeover of the garden decor, with the inclusion of a metal brise soleil roof to create a shaded relaxation area, a children's play area and, towards the sea, a wooden deck to provide a platform for games, rest, relaxing and strolling.



Photo-montage of the new roof arrangement at the Ge-Quinto wastewater management plant

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Arenzano Wastewater Management Plant Characteristics of the project

The new Arenzano and Cogoleto wastewater treatment plant will be located in the area of the former Lupara quarry, at the natural inlet along via Aurelia known as Fosso Lupara, in an underdeveloped stretch of coastline in a clear state of decay. The “screening” verification for the project in question, involving the construction of an inter-municipal wastewater management plant, with a capacity of 50,000 A.E., to serve Cogoleto and Arenzano and Genova Vesima, was drafted in accordance with L.R. 38/98.

The building which will house the water purification plant is obliged by plant engineering requirements to be in an L-shape, with its larger sides measuring 65x38 metres and with a main decking level at a altitude of + 22.50 m above sea level and an average height of about 7 m; below the decking some tanks will reach an altitude of + 18.50, a level made necessary due to hydraulic and process needs. On the upstream side, where the quarry face is located, piled containment walls

with an average height of 9 m have been planned in order to ensure the overall stability of the slope and minimize excavation volumes. For its proper operation, the plant requires three driveways for the evacuation of sludge and sand; the first, for the aerobic digestion plant, is at a height of + 14.50 and the other two are at a height of + 22.50, one for access to the nitrification tanks (south side) and the other for access to the microfiltration tanks and the offices (north side). The access to the north will use much of the quarry road route and, passing along newly planted rows of trees, will reach a height of 22.50 where a turning and parking space will also provide access to the offices and personnel rooms. The first part of the access ramp to the south, also at a height of 22.50, will be created in a trench, behind the continuation of the wall for the original road; the ramp will then come out, becoming in its turn a perimeter wall up to the envisaged height. Olive trees and bushes typical of Mediterranean scrub will mainly be planted in these new strips, running in a regular direction and parallel to the coast.



*Photo-montage of the new
Arenzano and Cogoleto inter-
municipal wastewater treatment
plant*