Autorità di Sistema Portuale
del Mar Ligure Orientale
Porti di La Spezia e
Marina di Carrara

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

Port Authority of the Eastern Ligurian Sea

A SUSTAINABLE PORT SYSTEM

Italian ports, with very rare exceptions, have over time grown together with the cities they were born within, having with them a symbiotic relation not easy to manage. Therefore, the ports' growth has to face an issue of environmental sustainability of the port activities, which focuses on various aspects:

- quality and quantity of emissions (naval and dock activities) both in the air and in the sea;
- noise generated by goods handling and ships landing;
- production of waste and its treatment;
- port-city interface;

the coast's change due to the presence of the port, for instance connected to the realization of new infrastructures and to the consumption of primary resources.

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

In order to give an environmental harmonization to the port activities, the Energy and Environmental Planning Document of the Eastern Ligurian Sea Port System (DEASP) was drawn up and adopted, based on a careful analysis of the two ports' economic, social and environmental context, also as regards their impact on the local and national territory.

The DEASP will be the basis of the new port system planning, defining the strategic guidelines to improve energy efficiency, to increase the use of energy from renewable sources, to reduce polluting emissions and noise coming from port activities, to improve the port-city interface also by moving away the activities from residential areas and requalifying that spaces with new green areas with recreational functions.

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

In the port area, three macro areas have been identified:

A – Boats' energy consumption, from large ships to small service boats; this area includes the docks electrification, but eventually also the supply of large LNG ships, providing both new infrastructures for refueling and incentives for ship-owners who are willing to upgrade the ship themselves.

B – Buildings and port structures energy consumption, including equipment such as cranes, service vehicles, refrigerated warehouses. This area also includes all civil construction works (frames, efficient heating systems, cooling reduction shielding) and outdoor lighting.

C –Support actions for the terminal operators who are willing to invest in less energy-intensive plants and equipment or for renewable energy sources, for instance by rewarding energy efficiency and good operation processes.

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

Less road transport means less CO2 emissions. And one of the strengths we want to invest in is transport intermodality, especially transport by rail, which is already used for over 1/3 of containers arriving to or departing from the port of la Spezia.

Today, about 39 Million Euro, financed by CIPE in 2016, are being invested in this sector, and other 12 Million will be, recently provided by the Ministry of Infrastructures and Transport in the funds dedicated to ports.

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

The goal is to further increase traffic by rail and reduce the number of heavy vehicles coming to the port. This is the reason why the restructuring and upgrading of La Spezia Marittima railway station inside the port area is planned. The new station's definitive layout will have nine equipped platforms for trains arrivals and departures. As regards Cold Ironing (docks electrification for energy supply to the ships), AdSP joins since 2020 the panel discussion set up at the Technical Mission Structure of Ministry of Infrastructures and Transport to draw up the National Cold ironing Plan and solve the technical and economic problems affecting the development and use of this technology, which is able to eliminate harmful emissions caused by on-board generators while ships are moored.

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

In the Port of La Spezia, Enel will grant the first 10 Mw power for cruise ships at the Garibaldi pier in the first months of 2021.
At the same time, the ground works for the energy distribution on pier were projected, with particular reference to a new transformer cabin at the pier root.
On the head of the Garibaldi pier, inside the port area, a new waste (including dangerous waste) collection and treatment plant was built thanks to a multifunctional platform. It is a state-of-the-art facility, probably the most advanced in the Med.
The facilities are located on an area of 2.400 sq., of which 1.040sq. are a waterproof uncovered surface and 1.360sq. are warehouses and offices, and they can operate sterilization and shredding on solid and liquid waste.

ENVIRONMENTAL SUSTAINABILITY IN THE PORT OF LA SPEZIA

Tanker and barges transport production activities' or ships' waste waters, which pass through a lifting screw, a fine drum grid and a compacting screw and then go to a sand trap hydro cyclone. These first operations, followed by other very complex ones, have the purpose of eliminating all eventually suspended solids and sand.
Besides, two new generation hybrid (Diesel-Electric) locomotives will soon be operational in the port, allowing a considerable reduction of air pollution and noise.

THE NEW ANTIPHONIC BARRIER

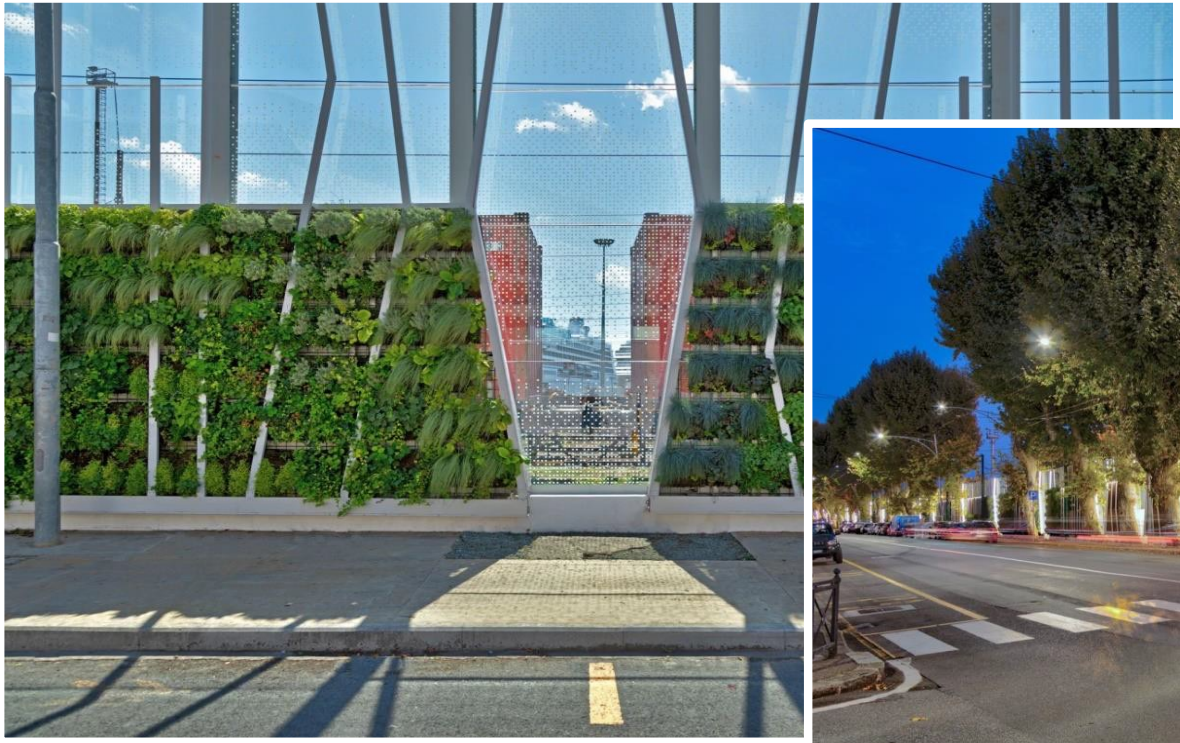
THE NEW ANTIPHONIC BARRIER

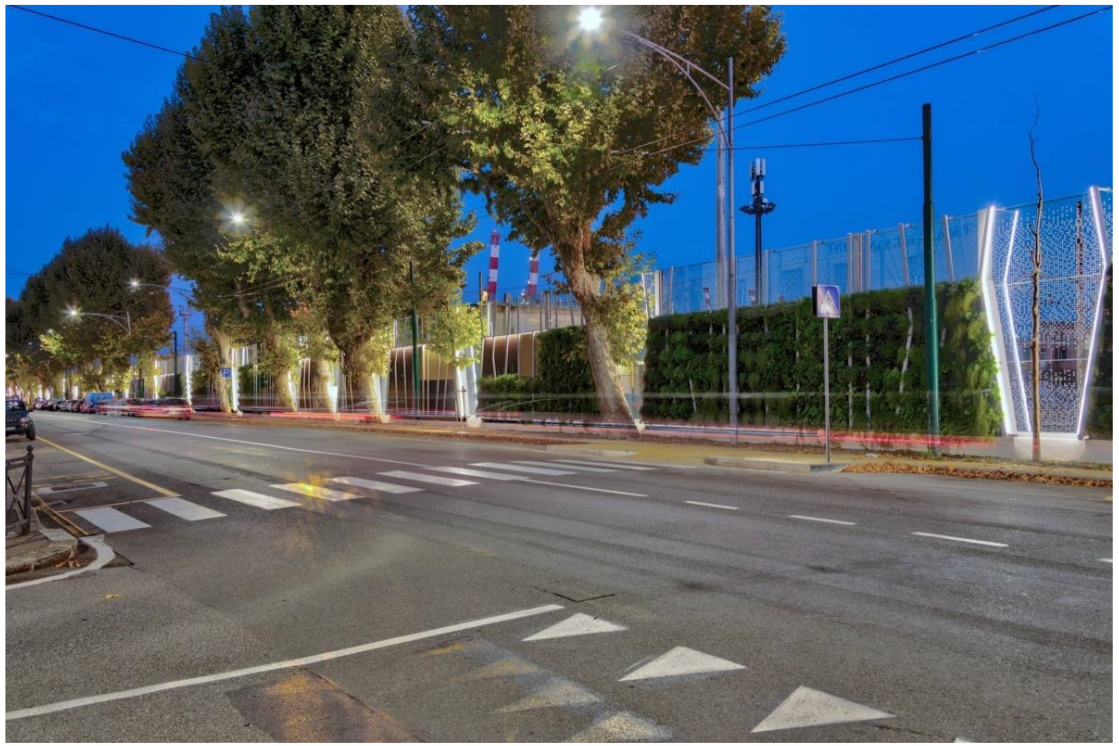
The commitment of the PA continues to improve the city-port relationship with the noise barrier that run along Viale San Bartolomeo, the main road close Canaletto, a very inhabited neighborhood in front of the port of la Spezia.

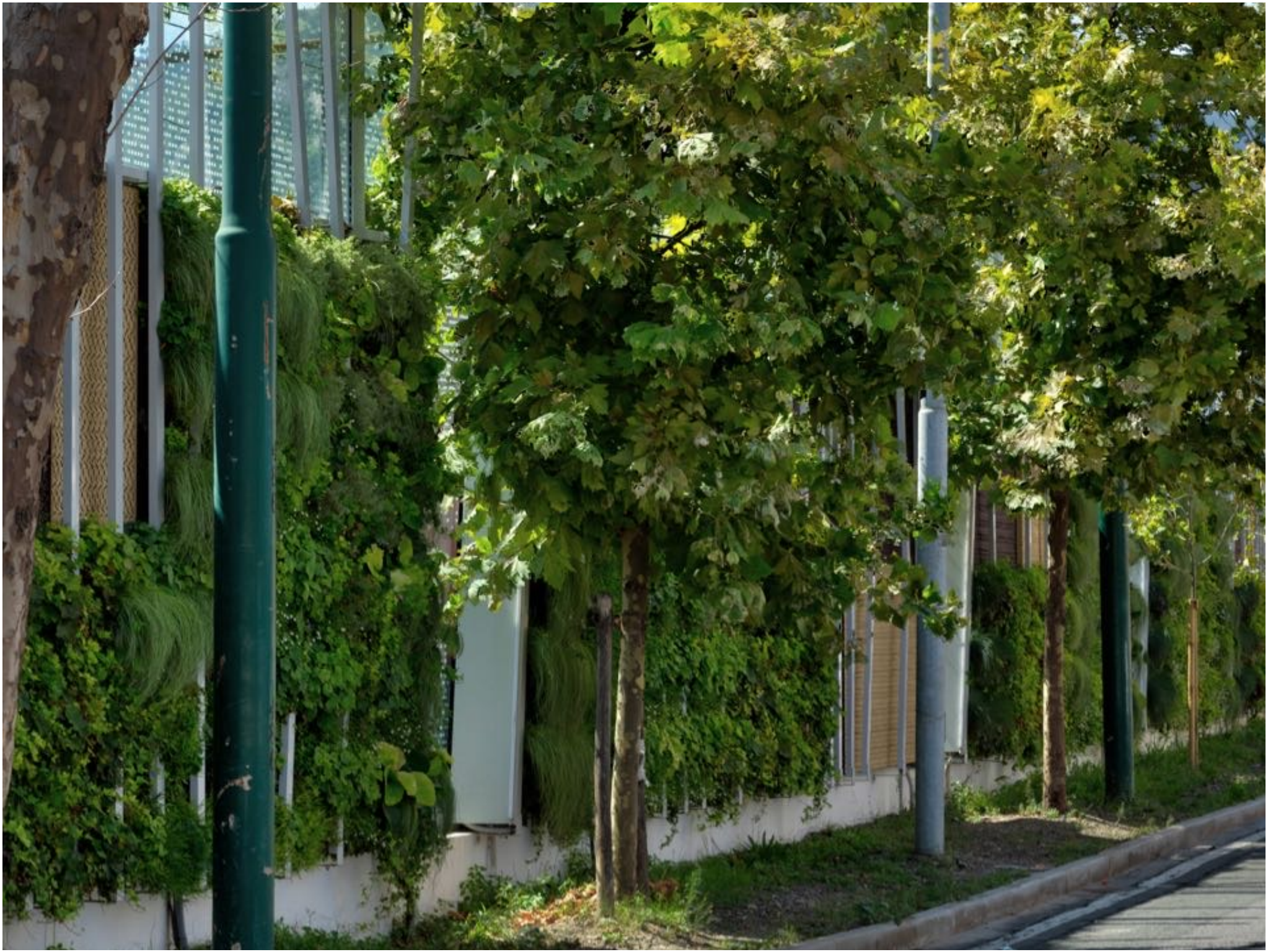
The functional architectural redevelopment of the port-city interface continues with the protection measures, that equips a large part of the eastern city area with a technologically advanced antiphonic barrier that is very usable by citizens.

The barrier, which is 1,400 meters long was entirely built with the Port Authority's own resources.

THE NEW ANTIPHONIC BARRIER







Tolax

THE NEW ANTIPHONIC BARRIER

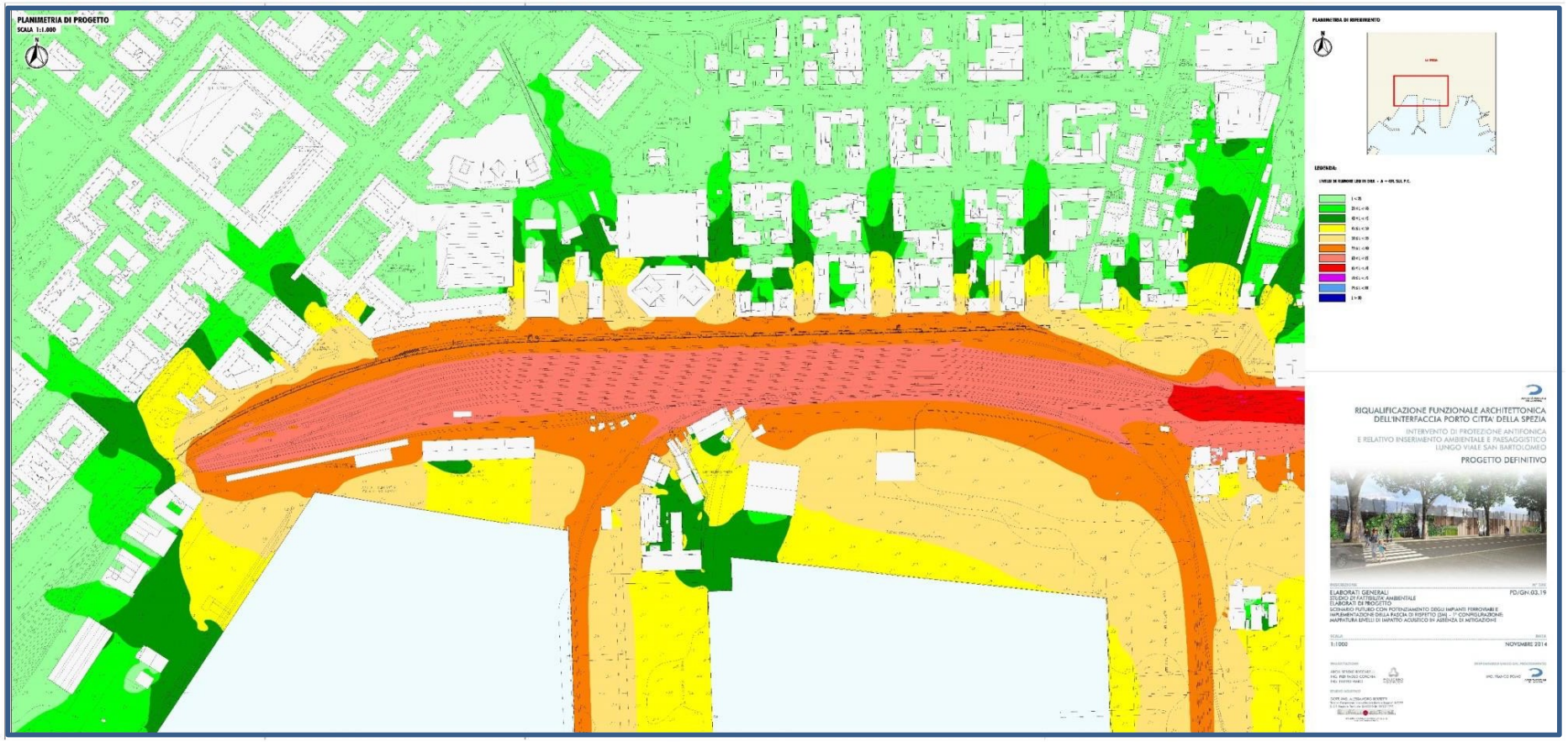
THE NEW ANTIPHONIC BARRIER

Integrazione delle protezioni antifoniche lungo la rampa di ingresso porto della galleria subalvea

THE NEW ANTIPHONIC BARRIER

THE NEW ANTIPHONIC BARRIER

PROPAGATION OF NOISE ORIGINATED BY RAILWAY AND ROAD SYSTEMS BEFORE INTERVENTION



THE NEW ANTIPHONIC BARRIER

PROPAGATION OF NOISE ORIGINATED BY RAILWAY AND ROAD SYSTEMS AFTER INTERVENTION