

POLITECNICO DI TORINO
SECOND SCHOOL OF ARCHITECTURE
Master of Science in Architecture for Sustainability
Honors theses

The urban form of sustainability.

Greenwich Peninsula. Urban regeneration in south-east London

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The degree thesis, carried out in London with the assistance of Foster's partner: Arch. Giulia Galiberti, tries to answer the problem of abandoned fields along the river banks, called "Brownfield".

The area that we choosed is located sud-east of the Thames into the Greenwich borough: the Greenwich peninsula.

In the past this area was strongly characterized by the industrial presence. The first industry for the submarine cables and the global giant of gas work settled there. Today there are some important elements that feature this area: the O2, the most big tensostrutture in the world designed by Richard Rogers; the highway A102 developed from north to sud; the Greenwich Millenium Village an innovative sustainable residential complex; the cablecar and some industries witnesses of the past.

The first objective of our master plan was to solve the problem of the A102: it divides the entire peninsula without allowing a dialogue between the area east and the west and it is also a source of pollution noise and air pollution. Having ruled out the idea of burying it as too expensive operation, we decided to build two embankments at his side in order to "put it in the trenches" creating walkways green (green bridge). Then we wanted to resume the symbol of the submarine cable on the Enderby Wharf, for the creation of a sinuous boulevard whose nodes become squares and around which focus the services.

Existing roads and old industries that have made the history of the peninsula are maintained. In particular, the gasometer particularly important for his strong visual impact. From it, turned into a covered market, take shape five optical cones.

As a final step we designed a large park of union that allows to regenerate the ecological corridors interrupted highway.

The residences, settled in the west of the peninsula, keeping both the north and south areas of the filter produced by the presence of offices and industries.

The Morden Wharf becomes a new university campus and the 'Alcatel a new stop jubilee line. The docks are maintained and the public parking for the O2 are covered by a green hill.



3D project views and masterplan

Now we concentrate about the residences and the stormwater management.

THE RESIDENCES

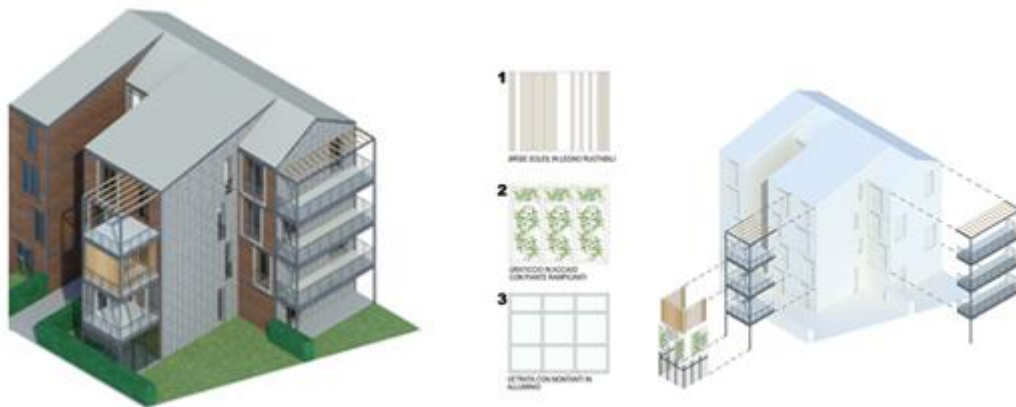
For the study of the residences we have designed a module base 3X6 m corresponding to the light of our pillars, that if it is repeated it produces different accommodations: a studio(36sqm), one bedroom apartment (54 sqm) and two bedroom apartments (72 sqm and 90 sqm).

For materials to be used, we remade some former industrial areas already rehabilitated in London. The key points are steel beams and columns to view, facing bricks, pitched roofs and balconies hanging.

We have different facades: facing the road and facing the inner courtyard. In the first case we use galvanized steel panels in the second facing bricks.

To the north we leave plates for a possible future realization of bow windows to create a delta that improves the thermal performance of the accommodation.

To the south, however,we designed balconies equipped with different types of closures at choice of the tenants: wooden rotatable brise soleil , metal grates for climbing plants or glass panels. In this way the facades may vary over time.



Building 3D and types of vertical closing

We studied, investigated as the focus of water resource influence the quality of the open space from the early stages of the project.

We followed two strategies.

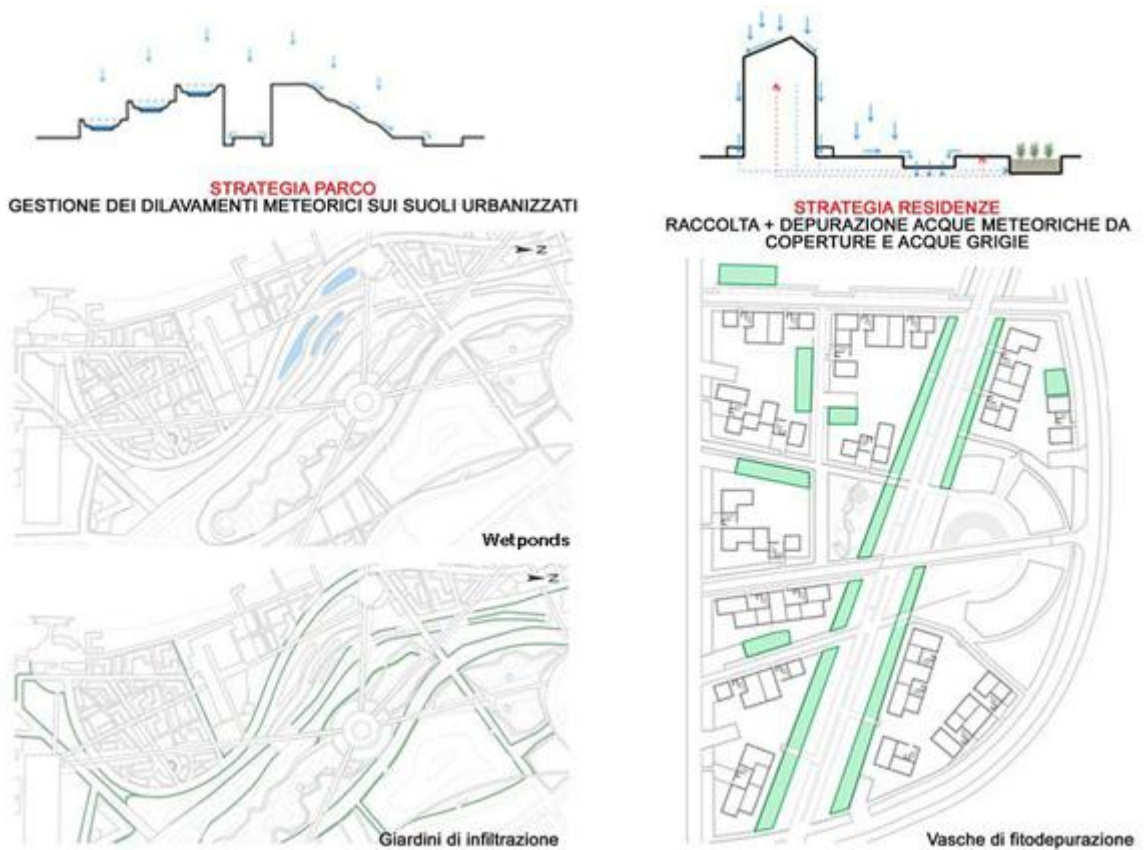
PARK AREA

We focused on the management of washouts meteoric urbanized soils. We designed wet pounds on the embankment to the west of the highway and linears infiltration gardens along all other roads.

RESIDENTIAL AREA

We thought about a collection and subsequent purification of stormwater for a reuse aimed at irrigation and drainage of the toilet.

We settled phytoremediation tanks in optical cones and the courtyard. They are fed by rainwater gardens and dalle stormwater boxes.



Study of rainwater harvesting for residential areas and the urban park

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