



Country / City	Italy, Rome
University / School	University of Rome "La Sapienza"
Academic year	2016-2017
Title of the project	Landscape Strategy: Ecological Redevelopment and Social Regeneration for Colli Aniene
Authors	Alessandro Aquilante





PERFORMATIVE NATURE

Barcelona International Landscape Architecture Biennial

September 2018 **Barcelona**

SCHOOL PRIZE

X International Landscape Architecture Biennial

Máster d'Arquitectura del Paisatge -DUOT - UPC
ETSAB- Escola Tècnica Superior
d'Arquitectura de Barcelona
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TECHNICAL DOSSIER

Title of the project Landscape Strategy: Ecological Redevelopment and Social Regeneration for Colli Aniene
Authors Alessandro Aquilante
Title of the course Master thesis
Academic year 2016-2017
Teaching Staff Supervisor: Gianni Celestini
Department/Section/Program of belonging DIAP - Dipartimento di Architettura e Progetto
University/School University of Rome "La Sapienza"

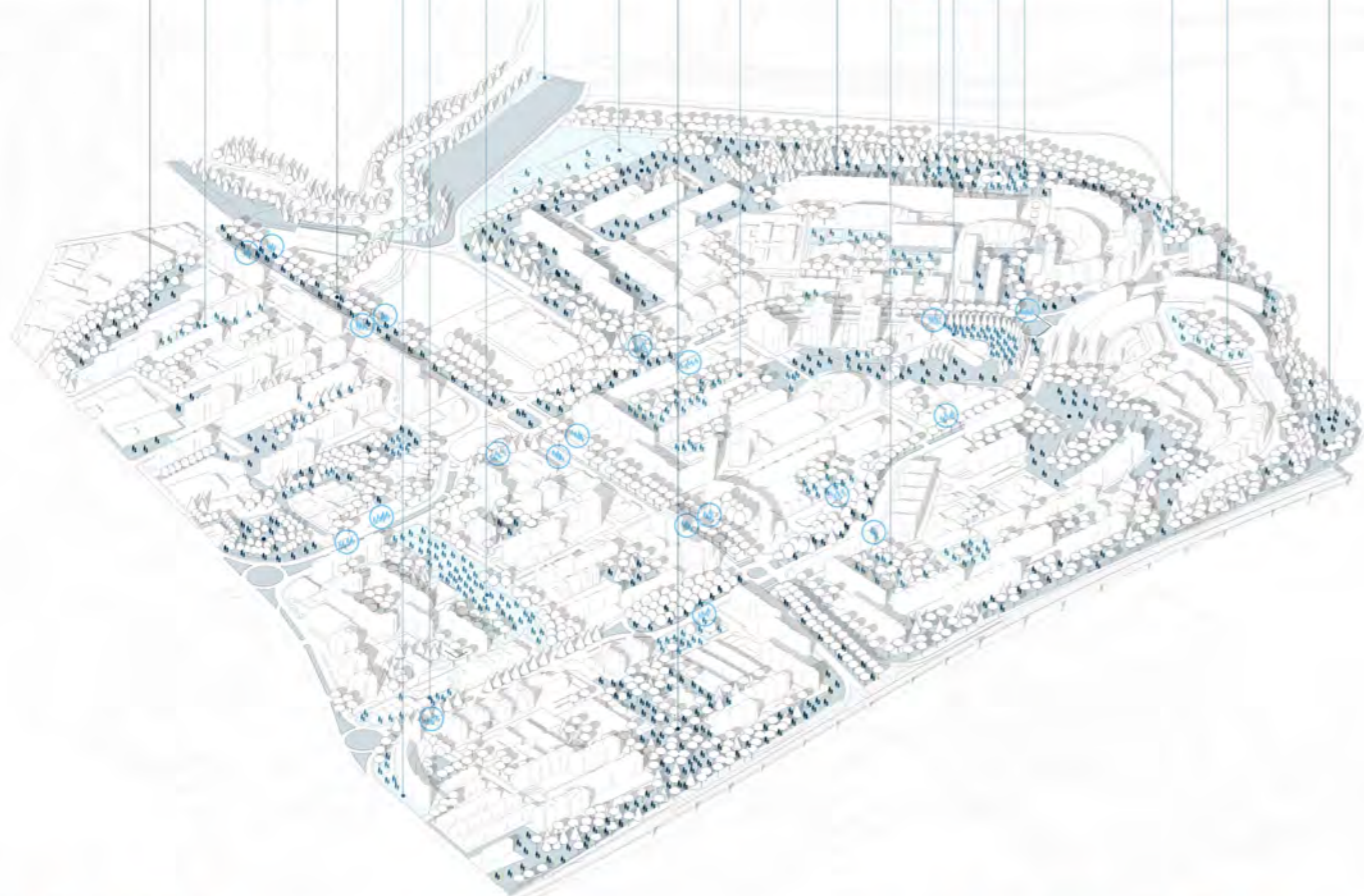
Written statement, short description of the project in English, no more than 250 words

Colli Aniene is a high-density residential district in East Rome. It is a paradoxical district: although it is rich of open range fields and vegetation, nevertheless it is not yet able to offer a high quality of life to its resident people (such as air quality, thermal comfort, social relations). These public spaces are inadequately equipped; moreover, the huge urban infrastructures (highway, subway, bus terminal) close to the district produce a very high level of pollution and a strong spatial split, with a consequent social cleavage. Therefore, the project aims to revitalize the whole district by using the vegetation as the mean to improve both the environmental comfort and the social regeneration. The vegetation is thought to be a meeting place and a channel for the civic education of the people. The requalification is centered in the creation of a urban forest, which is conceived on the ground of its natural growth. The forest is marked by variously high and colored species of trees to help to identify the single areas. To reduce the budget, the forestation is served by a rainwater recovery system equipped with recovering points and helpful rain gardens to avoid the road breaking. Finally, the social path is thought to come out of the empty spaces inside the forest, by showing different forms and functions in each single areas, and by being conceived as a mean to connect the urban fabrics and to generate social relations in the neighborhood.

For further information
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Consult the web page <http://landscape.coac.net/>

USES OF DISTRICT



SECTION A-A' ON USES OF OPEN SPACES - 08:00/10:00 a.m



SECTION A-A' ON USES OF OPEN SPACES - 04:00/06:00 p.m



MAP ON CONCENTRATION OF NO2



MAP ON CONCENTRATION OF PM2.5



INDEX OF LANDSCAPE CONSERVATION



SOIL PERMEABILITY



EXISTING VEGETATION



HEAT ISLAND - WINTER

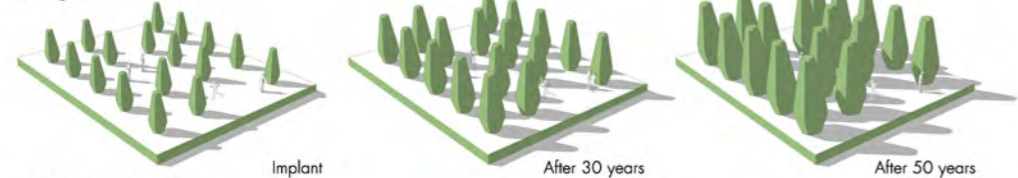


HEAT ISLAND - SUMMER



THE SCHEMATIC PROJECT

Living woodland



Implant

After 30 years

After 50 years

Pollution reduction

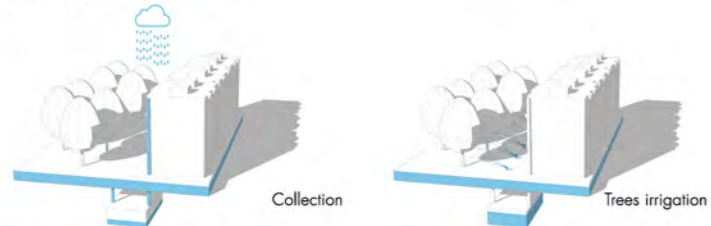


Implant

After 30 years

After 50 years

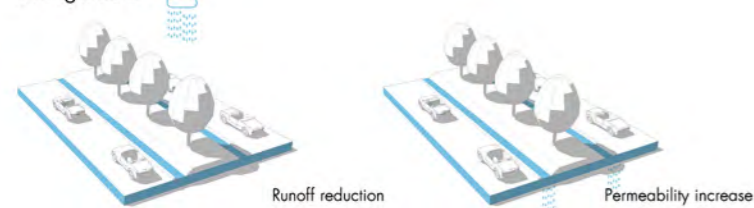
Rainwater collection



Collection

Trees irrigation

Rain gardens



Runoff reduction

Permeability increase

Spatial seam

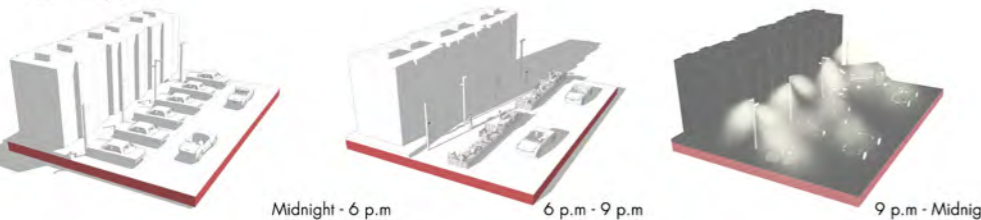


Urban seam

Social path

Social spaces

Flexible spaces



Midnight - 6 p.m

6 p.m - 9 p.m

9 p.m - Midnight

THE MASTERPLAN

TOTAL COST OF FORESTRY:
851.736 EURO

CO² CAPTURED BY 2.112 TREES:
31.000 kg/year



TOTAL COST TO m²:
0,48 EURO

TOTAL COST PER INAHBITANT:
24,33 EURO

URBAN FORESTRY



RAIN GARDENS



SOCIAL PATH



WOODS TYPES

<p><u>Mixed poplar (<i>Populus nigra</i> and <i>Alnus glutinosa</i>)</u></p> <p>First implant (6m, 4,5m)</p>	<p><u>Urban poplar (<i>Populus alba</i>)</u></p> <p>First implant (6m)</p>	<p><u>Lime woodland (<i>Tilia cordata</i>)</u></p> <p>First implant (5m)</p>	<p><u>Coloured woodland (<i>Cercis siliquatum</i>)</u></p> <p>First implant (5m)</p>
<p>After 25 years (15m, 10m)</p>	<p>After 25 years (20m)</p>	<p>After 25 years (15m)</p>	<p>After 25 years (8m)</p>
<p>After 50 years (30m, 15m)</p>	<p>After 50 years (30m)</p>	<p>After 50 years (25m)</p>	<p>After 50 years (12m)</p>
<p><u>Urban poplar (<i>Populus tremula</i>)</u></p> <p>First implant (4m)</p>	<p><u>Acer line (<i>Acer campestre</i>)</u></p> <p>First implant (4,5m)</p>	<p><u>Togliatti's urban woodland (<i>Acer campestre</i>, <i>Arbutus unedo</i>, <i>Fraxinus ornus</i>)</u></p> <p>First implant (4,5m, 1,5m, 5m)</p>	<p><u>Prunus woodland (<i>Prunus cerasifera</i> <i>Pissardii</i>)</u></p> <p>First implant (2,2m)</p>
<p>After 25 years (15m)</p>	<p>After 25 years (12m)</p>	<p>After 25 years (12m, 4m, 17m)</p>	<p>After 25 years (5m)</p>
<p>After 50 years (25m)</p>	<p>After 50 years (18m)</p>	<p>After 50 years (18m, 7m, 23m)</p>	<p>After 50 years (8m)</p>

THE SOCIAL PATH

<p>Bus stop</p>	<p>Cycle path</p>	<p>Playground</p>	<p>Pause space</p>	<p>Multifunctional structure</p>	<p>Pause space</p>
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THE BLUE STRATEGY

RAINWATER CAPTATION

PHOTOCATALYTIC PAVING

RAIN GARDENS

PERMEABLE PAVING

