

POLITECNICO DI TORINO  
SECOND SCHOOL OF ARCHITECTURE  
Master of Science in Architecture (Environment and Land)  
**Honors theses**

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**Borgomercato 's area: project of the environmental sustainable urban  
requalification**

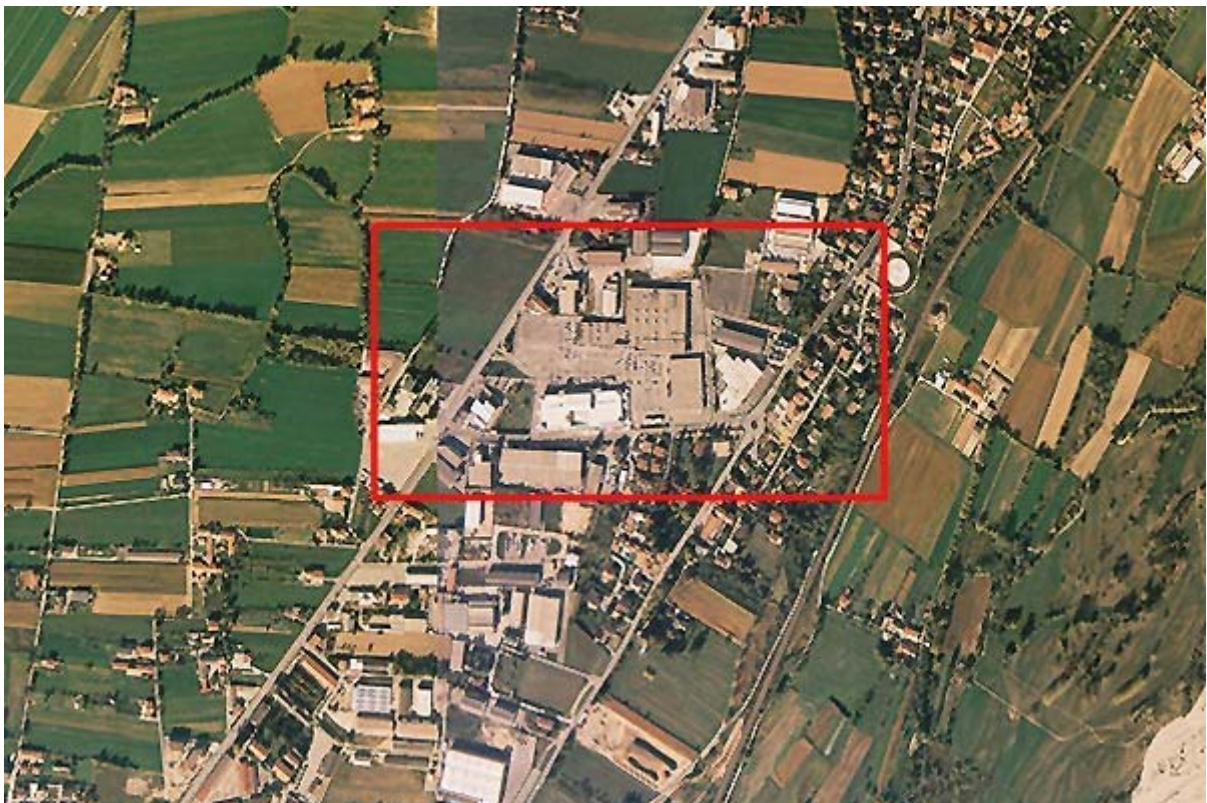
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The environmental and climatic themes are often careless, particularly in the urban planning, in order to give more attention to the aesthetic and economical aspects. Through our thesis we propose a careful planning of such issues, making the environmental sustainability and the consumption's welfare two reference points around which the different angles of the planning turn. The connotation of the bachelor course pursued (Architecture, Environment and Landscape) has strongly influenced our selection, leading our architecture of spaces and volumes towards well defined directions.

The area, which is the subject of the intervention, is in the suburbs of Cuneo, called "Borgomercato"; it is an area with a commercial destination, on which we can find a lot of buildings and where the open space has been, for convenience, asphalted and used for parking.



Although this area doesn't give us particular planning starting points; the neighbouring areas offer some interesting peculiarities, in particular from the territorial and landscape point of view. The historic agrarian parcelling out, currently still very recognizable and extended on the most part of the cuneese tableland, was defined as a leading element in the open space design of the new trade centre. The big parking among the elements will be laid underground and the asphalt layer will be removed. It will be replaced by a new design of the square with a lot of references to the agrarian parcelling out read with a modern key.



The space will be divided in irregular shares, each one dealt in an univocal way: we'll going to have green areas, pavement areas, fountains, cold paving and phito-depuration mortaboards.

It is necessary to pay attention on these two last elements because they represent the most important point of the system for the recovery of sewage and the control of the external temperature, inserted and integrated into our project. With this particular system, sewage will be brought back another time after a phito-depurative treatment and employed for the control and the regulation of external climate (thanks to the evaporation and the termal-mass effect) and for the irrigation of the several green spaces following the project. Particularly cold paving is a valid and new example of how, for outer spaces too, it's possible to operate on the atmosphere control. Also the existing volumes will be involved in the requalification: it is expected, in fact, the re-treatment of the frontages through the affixing of a double tile ventilated skin to cover the existing prefabricated panels.



In reference to the commission agent's demands, the trade gallery will be widened with the realization of a new volume, built near the existing one, in order to guarantee the continuity of the inner existent way. The steel structure will be covered with the same above-mentioned panels. The cover, flat and partially constituted by glass windows, will be surmounted by a metallic support structure with breaksun elements integrated to photovoltaic cells.



The plan system, bound together with a series of particular vertical aeolian turbines, will satisfy more than 70% of the electric power requirements of the entire trade gallery. With the aim to reduce the operative costs of the building, it has been proposed the development of a bioclimatic project for the ventilation of the inner locals, thanks to the correct disposition of the openings and to the addition of buried ducts for ventilation. Good performances for all the year are guaranteed. Our project proposes, shortly, a coherent solution with the landscape features of this zone, respecting environment and resources, without overlooking the comfort needs and the usability of the users.

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