

**Environmental and Technological renovation of an urban industrial site: the Paracchi's Carpet's Factory. Performance assessment through the Green Building Tool Software**

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The aim of this research is to suggest an intervention for the environmental and technological renovation, connected to the healing of those industrial unusable areas. In particular the purpose of this thesis' is to study the clearance project of the Paracchi's Carpet's Factory.

This factory occupies the northern western areas in the city of Turin, between the river Dora and the Pianeza Street.

Since 1920 until the Forties' the Paracchi Factory has passed through several widening works. The working activity of this factory has definitely stopped during the second half of the Eighties and the building has been abandoned until September 2002.



Paracchi's Carpet's Factory's façade on Pianeza Street in Turin.

The Town Plan set by the municipality of Turin has stated the clearance for the factory and the change of its using destination.

The executive project provides a new function for some parts of the factory, according to what has been started by the Superintendence for the Piedmontese Architectural Properties.

Some parts are supposed to become offices, while some others are designed to be residential areas.

The Dega Studio in Turin has developed the preliminary and the definite project to transform the factory in a building where modern offices will be set up according to the statement approved by the Municipality of Turin, last September 2002.

This Dega's project has stressed, most of all, the change of using purpose of that area, as arranged by the town plan, while the environmental side of the problem hasn't been taken under consideration this thesis, on the contrary intend to examine carefully the environmental energy project's performance, suggesting also some alternatives that makes the intervention more compatible to the respect of the environment, following the line of the Green Building Architecture.

In order to get this aim, the software Green Building Tool 1.81 has been used to test the above mentioned performance.

The screenshot shows the GBTool interface with the following elements:

- Header:** GBTool, GBC Assessment Requirements, Voting for Weights by Teams
- Project Info:** Manifattura Tappeti Paracchi, Uffici, Torino, Italia
- GBC 2002 Logo:** A globe icon with 'GBC 2002' text.
- Table: Vote for relative importance of Major Issue Areas**

	GBC default	Your Team Selection	Your Team selection as percent
<i>Weighting examples are provided</i>			
R RESOURCE CONSUMPTION	20	31	31%
L LOADINGS	25	41	41%
Q INDOOR ENVIRONMENTAL QUALITY	20	28	28%
S SERVICE QUALITY	15		0%
E ECONOMICS	10		0%
M PRE-OPERATIONS MANAGEMENT	10		0%
T COMMUTING TRANSPORT	0		0%

Principal page of the Green Building software

GBTool is a still experimental software, developed in Excel, used to estimate a building's environmental performance, no matter it has been recently built, restored or just designed.

GBTool, compared to all the others softwares, thanks to its valuation method makes possible to discover parameters among all the energy and environmental aspects of the project that have to be analysed.

So, starting from the project approved by Turin's Municipality, the first GBTool compilation didn't give any interesting results; considering these results a new intervention proposal has been developed including less environment impact technology.

In this thesis a lot of importance has been given to the energy and water use, to the air-conditioning units, to the separating rubbish collection, to the improvement of the physical characteristics of the external building structure.

At last, the insertion of all the informations in GBTool software let us come to a final valuation of an intervention.

The result we got, through the GBTool elaboration, ends up with a strong improvement of the building environmental impact, compared to the original task.



Final graphics of the GBTool 's environmental valuation

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