

The Integrated Urban Regeneration Implemented through the Reuse, Enhancement and Transformation of Disused Industrial Areas

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Abstract : The integrated urban regeneration represents a great opportunity to deliver correct management of the territory if implemented through the reuse, enhancement, and transformation of abandoned industrial areas, according to sustainability strategies. In environmental terms, recycling abandoned sites by demolishing buildings and regenerating the urban areas means promoting adaptation to climate change and a new sensitivity towards city living. The strategic vision of 'metabolism' can be implemented through diverse actions made on urban settlements, and planning certainly plays a primary role. Planning an urban transformation in a sustainable way is more than auspicious. It is necessary to introduce innovative urban soil management actions to mitigate the environmental costs associated with current land use and to promote projects for the recovery/renaturalization of urban or non-agricultural soils. However, by freeing up these through systematic demolition of the disused heritage, new questions open up in terms of environmental costs deriving from the inevitable impacts caused by the disposal of waste. The mitigation of these impacts involves serious reflection on the recycling supply chains aimed at the production and reuse of secondary raw materials in the construction industry. The recent developments in R&D of recycling materials are gradually becoming more and more pivotal in consideration of environmental issues such as increasing difficulties in exploiting natural quarries or strict regulations for the management and disposal of waste sites. Therefore, this contribution, set as a critical essay, presents the reconstruction outputs of the regulatory background on the material recycling chain up to the 'end of waste' stage, both at a national and regional scale. This extended approach to this urban design practice goes beyond the cultural dimension that has relegated urban regeneration to pure design only. It redefines its processes through an interdisciplinary system that affects human, environmental and financial resources.

Keywords : waste management, C&D waste, recycling, urban transformation

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