

ISSUES FOR REHABILITATION OF CONSTRUCTIONS AND SITES IN MINING LANDSCAPES

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Abstract

The frantic pace of technological development in all the fields of production, agricultural, forestry, industrial and mining, as well as in the area of regional and urban planning, infrastructures, tourism, leisure, etc., are promoting acceleration without control in the transformation of landscape.

On the other hand, the growing concern for the environment and the conservation of its resources has provoked the search for alternatives to non-renewable energy resources. At the same time it has generated the appearance of numerous zones characterized by the abandonment of their traditional activity, and consequently depopulation of the area. The most immediate consequence is a landscape alteration proportional to the size of the abandoned activity, indirectly associated with a setback in the regional development. And when that activity is mining, consequences receive an exceptional dimension.

Within the framework of the research project subsidized by the Ministry of Education and Science in Spain "Model of sustainable construction for the rehabilitation and protection of environmentally degraded or fragile zones: the Mining Valley of Laciana", it is tried to develop a model for constructions and existing infrastructures and their surroundings, from sustainability criteria. Mining activity was the main source of income in the region of Laciana (León, Spain) for its economy between 1950 and 1980, and it has left its fingerprints and scars in the Laciana landscape, as derelicted buildings and infrastructures.

Through a text selection, an exhaustive revision has been made, analyzing all the aspects considered on the basis of performances and interventions on landscapes marked by mining activities or generically, as it is described in many of the bibliographical references consulted, of industrial type. The present work tries to reflect the state-of-the-art, exposing the followed criteria and the solutions adopted in the past so that they become recommendations in future management performances in the built landscape.

Key-words: *mining landscape, industrial heritage, sustainable construction.*

1. Introduction

Changes affecting the world-wide economy, as well as an increasing concern about the environment and preservation of its resources, have caused the search for alternatives to nonrenewable energy resources. At the same time it has generated the appearance of plenty of areas characterized by the abandonment of its traditional activity and its consequent depopulation. The most immediate consequence is an alteration in landscape of proportional magnitudes to the abandoned activity, indirectly associated to a movement backwards in the regional development.

Namely, the activity of mining directly relates to the development of infrastructures in a territory and to its landscape, concordantly generating great impacts, as much in the social-labor scope, or economic, as in the environmental and the landscaping one.

The region of Laciana, in Leon, is so marked by its mining activity, which was the main source of income for its economy between the 50's to the 80's of the 20th century. As a result, it has left its fingerprints and scars in the Laciana landscape in the form of completely abandoned buildings and infrastructures.

From an exposition inspired by the principles of Sustainable Construction, it is intended as main target, protection, management and landscape and built environmental planning in the area, as well as the establishment of guidelines for the suitable and sustainable management of future constructions, by means of interventions that promote activities adapted for the economic development and the social revitalización of the territory, to the time that reinforces the region's own identity and culture: To sum up, obtaining a Model of Sustainable Construction for an environmentally deteriorated and fragile area, such as the Valley of Laciana.

For that reason, the present study tries to document all those existing projects, performances, initiatives, as well as the real alternatives that are raised in the field of the mining and that allow it to integrate the three fundamental aspects of its sustainability. This study will be based on the compilation and existing publication revision, articles of excellent scientific magazines, as well as the present news of different media sources. Ergo, it is attempted to provide the most global and useful vision of the approaches made in this field.

- Sklenicka, P. & Lhota, T. (2002). Landscape heterogeneity – a quantitative criterion for landscape reconstruction. *Landscape and Urban Planning*, 58: 147-156.
- Strand, S.M. & Fossdal, S. (2003). Do standards and regulations supply the necessary incentive for sustainable building? *Sustainable building and construction*. Vol. 26, 2-3; Abril-Septiembre.
- Suárez, F. (2005). La organización de los espacios mineros de la hulla en Asturias. Tesis. *Geo Crítica / Scripta Nova*. Revista electrónica de geografía y ciencias sociales. Barcelona: Universidad de Barcelona, 15 de diciembre de 2005, vol. IX, núm. 203. [<http://www.ub.es/geocrit/sn/sn-203.htm>]
- Wanhill, S. (2000). Mines – A Tourist Attraction: Coal mining in Industrial South Wales. *Journal of Travel Research*, 39, 60-69.
- ZOLLVEREIN (2006). Información extraída de la página oficial de internet (búsqueda: Zollverein – Essen). [www.zeche-zollverein.de; www.route-industriekultur.de]

¹ Heritage and Industrial Archaeology were consolidated as disciplines thanks to British influence and efforts to preserve remaining industrial ruins. In this sense, Benito del Pozo (2002) emphasizes the contributions of Kenet Hudson (1963) and Augus Buchanan (1972): "The former defined the scope of industrial archaeology as the discovery, cataloguing and study of the physical rests, the communications and the industrialist past; the latter explained it as a practical and theoretical field under study, supported by field work and aiming to protect industrial monuments by means of theoretical analysis of the industrial vestiges, in a social and technological historical context".

² Beethoven Radio, July the 9th of 2006, "Sewell also World Heritage" [<http://www.radiobeethoven.cl/panoramas/eventos/220.act>].

³ Founded in 1978 in The United Kingdom it is constituted by more than 60 countries all over the World as members, collaborates together with UNESCO, The European Council, ICOMOS, as well as other international organizations.

⁴ Article by Borja Hermoso, 12th of August 2006 "Veraneo a 50 metros bajo tierra", *El Mundo*.

⁵ Site shall be understood as any area in the valley or the surroundings affected by anthropic actions (Aguiló, 1999).

