

Industrial Heritage: the past in the future of the city

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Abstract: The concept of cultural heritage has clearly meant different things to different groups of scholars and the public interested in reclaiming traditions and cultural landscapes. Changes associated with urban growth often involve the destruction of built characteristics and natural elements, eradicating the physical expression of former indigenous ways of life that are a very important part of people's culture. This fact was particularly evident after the Second World War, when industrial landscapes faced deep transformations that in several cases contributed to its dereliction and to the disappearance of numerous industrial values, commonly known as industrial heritage. This phenomenon added to the necessity of reusing abandoned industrial landscapes in detriment of consuming new ones, increases the need to enlarge the interpretation of the term "cultural heritage", to analyse and interpret the value and significance of post-industrial landscapes and to develop new mechanisms to preserve it. Furthermore, it is increasingly acknowledged that the values connected with culture and heritage are highly significant for people's lives and need to be identified and highlighted. This paper presents a set of design principles that will be applied to the post-industrial landscape of left margin to the Arade River. These principles describe in a general manner the ways in which relevant resources created and deposited by the industrial society can be enhanced and how they can best be reclaimed and used.

Key-words: Arade River, Culture, Industrial Heritage, Landscape Reclamation, Sustainable Development, Urban Redevelopment.

1 Introduction

"Cities are by far the largest creations of humanity" [44]; Cultural entities that contain representations from the past, via the present, to the future, running through the entire cultural evolution of the "city as object" [29]. In this way intrinsic values need to be determined, meaning given to elements of the city, its importance identified and exceptional sites highlighted.

The history behind the birth and development of a city should be traced and features revealed in order to retain, amend and transform implicit values. This analysis of society and this understanding of an area lead to a social perception of the kind of place people wish to live in, and to the realisation that the "whole" city is our 'heritage' [19, 50], regardless of whether it is large, small, historic, industrial, old or new. Cultural landscapes give us a sense of place and reveal our relationship with the land over time [9, 11, 16, 35, 54, 55]. They are special places that contain aspects of our origin and development through their forms, features, and history of use.

The concept of cultural heritage has clearly meant different things to different groups of scholars and

the public interested in reclaiming traditions – and landscapes – presented as part of shared, remembered pasts [12]. In 1949, the Statute of the Council of Europe, adopted in London, quotes that: "to achieve a greater unity it is imperious to safeguard cultural heritage and to facilitate economic and social progress" [48]. The years ahead proved that the conservation and safeguard of the natural and cultural environment (people's common heritage) was one of the major issues confronting society. Since then, several basic legal instruments were adopted in order to protect this heritage: the Bern, Granada, Valetta, Lugano, Strasbourg, and Florence conventions are good examples of this purpose [25, 41].

The fact that historic areas are progressively coming under threat of new development [52], and that the impact of new construction is noticed not only at nationally important sites, but also in local areas – where small changes can be very significant, diminishing landscape character and local distinctiveness – increased the need to develop new strategies and frameworks to protect and highlight our cultural heritage, an idea directly connected with the necessity to enhance the sense of place [38].

Considering that industrial heritage is an integral part of our culture, and that the member states of the Council of Europe which have adhered to the European Cultural Convention on the 19th of December of 1954 committed themselves – under Article 1 of that Convention – to take appropriate measures to safeguard and to encourage the development of their national contributions to the common cultural heritage of Europe; They recognised that heritage, regardless of being architectural, vernacular, industrial, etc., is an irreplaceable expression of the wealth and diversity of common culture. It is an “entity” shared by several people, which every country must show real solidarity in preserving.

This paper presents a set of design principles that might be applied to post-industrial landscapes that possesses environmental, cultural and social value. These principles describe in a general manner the reasons why relevant resources created and deposited by the industrial society should be identified and how they can best be reclaimed and used.

2 The Industrial Landscape

Industrialisation promoted significant changes in the landscape: greater densities in urban areas and the urbanisation of the natural and rural environment. The city acquired a new – industrial – face, and a new order [1]. This new landscape was defined by the concentration of industries and by the needs of a growing population, often new workers in a new society who demanded new public services and infra-structures, thus contributing to the image of the typical 20th century settlement.

However, over the past decades globalization, deindustrialization, industrial relocation and economic (re)conversion has had a profound effect on traditional industrial areas all over the world and produced a vast array of obsolete industrial facilities and the various impacts, which are generated from them [31]. The formal products of the modernist movement have become obsolete, forcing this generation to decide on the disposition of the last generation's industrial environment [31].

In recent years, several researchers have contributed to evaluating, documenting and developing remnants of the industrial society [5], in order to emphasise the necessity of taking post-industrial landscapes into consideration in the planning of the city, considering industrial heritage as a resource and as an integral part of collective identity. The classification of the landscape as industrial implied a qualitative perception in which

territory and industrial infrastructures were analyzed from a functional, cultural and historic perspective [53]. In this sense, and according to Borsi (1975), the industrial landscape may be defined as “the landscape resultant from a thoughtful and systematic activity of man in the natural or agricultural landscape with the aim of developing industrial activities”. This definition enabled the recognition of an entire landscape as a single “element”, as opposed to simply recognizing a building, or a group of buildings of an industrial site, allowing the expansion of the conception of industrial preservation to accommodate “recognized patterns of activity in time and place” [37].

The concept of industrial landscape is, in this logic, used to describe and classify the “remnant” materials of the industrial culture in order to attribute them a new meaning [23, 24], with the objective of creating a theoretical basis and a practical methodology both for the study and for the intervention in these landscapes, to adapt them to new production systems and new cultural uses.

2.1 Post-industrial landscapes: heritage or dereliction

Few towns or cities escaped factory closing in recent decades. This economic upheaval has caused the Industrial landscape to be re-envisioned as no man's land between former industrial buildings and the ascendant post-industrial economy [22, 45, 49]. This reality added to the fact that several countries are now facing various problems produced by landscapes constructed during the modern period [e.g. industrial revolution], currently in complete physical and functional decadency, contributed to enlarge the negative public perception about these spaces.

Even so, the meaning and the relevance of industrial landscapes is now larger than ever, especially because of the creation of the Nizhny Tagil Charter for the Industrial Heritage in 2003. This charter specified clearly that the buildings and structures built for industrial activities, the processes and artefacts used within them and the towns and landscapes in which they are located, along with all their other tangible and intangible manifestations are of fundamental importance [40]. They should be studied, their history should be taught, their meaning and significance should be probed and made clear for everyone and the most significant and characteristic examples should be identified, protected and maintained, in accordance with the spirit of the Venice Charter (1964) [52], for the use and benefit of today and of the future [40].

However, the spaces that have been recognised and defined as industrial heritage, still face inappropriate appraisal of material and cultural resources and stereotyped ideas of industry, once the way in which they were designed do not satisfy the aesthetic, ecological, and functional requirements and standards [3]. Appearance was and continues to be almost everything, given that the assessment of the industrial heritage is often anchored to visual values rather than to any other consideration of function or history [47]. Additionally, the interventions developed to post-industrial landscapes are frequently reprehensible, contributing to the disappearance of various buildings with significant meaning [e.g. figure 1 and 2]; besides that, they are often realized to isolated buildings, which is a mistake [2], as the analysis and intervention in these landscapes should never be directed to a single building, but to the entire industrial landscape.



Figures 1 and 2 – These photos represent good examples of several interventions that have been realised in post-industrial buildings in the Algarve during the last decades. The designers chosen to destroy the buildings completely, leaving the chimneys as if they represented the entire value of the building. Used by permission of Luis Loures © 2007, all rights reserved.

When analyzing and re-developing these landscapes, landscape architects, architects, designers and other planning professionals need to realise that post-industrial, typically part of ordinary or vernacular landscapes, incorporate the passage of time [29, 30, 32, 43], representing multiple layers of time and cultural activity therefore being part of the identity of a people and a place.

In this sense, these landscapes should be seen as assets, once as historic sites they enhance the possibilities of creative practice in preservation, design, and planning, given that they are by definition: unique, resulting from the combination of natural landforms and buildings defining a particular place or region. These changes in perception contributed to increase the relevance of industrial

landscapes and to highlight the need to study and protect the material and immaterial remains of our industry from a different perspective [13, 51].

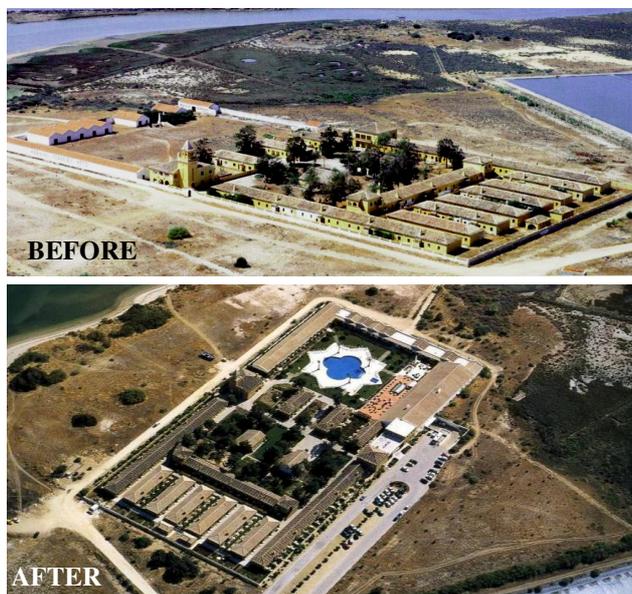
3 What future for the industrial heritage?

The concept of Industrial heritage was only introduced in England in the middle of the twentieth century, during a period when several industrial buildings and landscapes were destroyed [27]. By this time the concept of heritage crossed the boundaries of the industrial era, moving to a past much closer to the present [14]. Since then several efforts have been made in order to define what should and should not be considered as industrial heritage. According to the Nizhny Tagil Charter the “industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value” and “the historical period of principal interest extends forward from the beginning of the Industrial Revolution in the second half of the eighteenth century up to and including the present day, while also examining its earlier pre-industrial and proto-industrial roots” [40].

In this sense it is mandatory to recognize that landscape and architectural heritage are a capital of unique spiritual, cultural, social and economic value [8]. Each generation places a different interpretation on the past and derives new inspiration from it, contributing to the creation of a capital built up over the centuries; the destruction of any part of it leaves us poorer, since nothing new that we create will substitute that loss [18]. The cultural heritage is not renewable, because it cannot be rebuilt once it has been destroyed [46].

Given that, it is important to refer that landscape has tended to change incrementally, with occasional major interventions that have been more frequently resultant of economic or technical factors than political ones – note for example the case of the Algarve’s region, where the change from an economy based agriculture and industrial activities to an economy based in the tourism has changed the landscape completely, posing serious problems on its management and safeguard –The *Arraial Ferreira Neto* (figures 3 and 4) is an example of a conversion of a cultural landscape associated to fishing activities in which the spirit of the place was not totally maintained, once the new use (a five star hotel) introduced considerable changes in the original structure of the building. Nonetheless, this space is located in the Natural Reserve of Ria

Formosa (a protected landscape), reason why the impacts of this intervention were noticed not only in the former industrial landscape but also in the natural one).



Figures 3 and 4 – Before and after images of the *Arraial Ferreira Neto* a post-industrial landscape located in the Natural Reserve of Ria Formosa, Tavira.

Nowadays it is common to hear such phrases as “landscape architecture must be sensitive to its surroundings” or “it is essential to develop a sustainable sensitive approach”. The problem is that many times, technicians or local authorities do not really understand what these phrases mean, allowing the use of some design techniques and strategies that modify the spirit of the place (figure 5).



Figure 5 – Boca do Rio Hotel Resort is a good example of this policy, representing the conversion of a former industrial building into a hotel located right in the margin of the Arade River, where the chimney was the only element that lasts from the former structure. Used by permission of Luis Loures © 2008, all rights reserved.

In this sense, before starting to develop a reclamation or rehabilitation project for a post-industrial landscape it is important to find the answer for two different questions: ‘why’ and ‘how’ to reclaim and protect the industrial landscape?

The answer to the ‘why’ is often very clear. Industrial landscapes describe an important part of the history of a place, thus, constituting a testimony of cultural, social and economic conception and evolution which documents and interprets considerable values for urban heritage. Furthermore, the analysis and recovery of these landscapes constitute an opportunity that tends to be lost in time, considering the growing urban pressure that, especially in pleasant and valuable landscapes, had several times led to the disappearance of various industrial infrastructures, some with high heritage value and significant relevance.

The answer to the ‘how’ is relatively more complex, once, even if there are several possible answers to this question; each one includes generally several restrictions enabled by the search for profit maximization by private and public sectors. Although it is recognized that the economic and social dimensions of the rehabilitation process cannot be dissociated from the environmental and cultural dimensions, and that the cultural heritage has become a key factor in improving people’s surroundings, addressing issues of social cohesion and encouraging economic development, little has been done in order to rehabilitate the industrial buildings and its surrounding landscapes which were often the catalysis to the creation of the urban settlement; and in addition to that design professionals tend to highlight ‘how’ to manage cultural landscapes (redevelopment proposals, analysis, cultural landscape reports, heritage management plans, etc.) but not ‘why’ should we be concerned with historic sites and places or ‘what’ are the expectations and ‘which’ are the objectives we seek to accomplish by working with them.

“Now” that the post-industrial landscape is [more than ever] considered an asset and as a catalyst for urban redevelopment by being a relevant element of the *genetic code* of the city, according to which rebuilding from degradation should be performed [6], the answers to these questions should be formulated in order to maximize the benefits that may arise from its (re)development.

Fortunately, the changes introduced in the last years and the creation of normative documents related with the need to protect and rehabilitate the post-industrial heritage contributed to improve design’s quality during the past years (Figure 6 and 7).



Figure 6 – Old post-industrial building located in the city of Tavira, Algarve, which will be converted into a residential area in the next year. Used by permission of Luis Loures © 2007, all rights reserved.



Figure 7 – 3D representation of the design proposal to the post-industrial building presented in figure 6. Used by permission of It-studios © 2007, all rights reserved.

4 The post-industrial landscape of the left margin to the Arade River

The post-industrial landscape to the left margin of the Arade River is located in the municipality of Lagoa, Algarve, which is characterized by the presence of Mediterranean landscapes. The relevance of the Arade River and its surroundings in the local, regional and national context is attested by numerous archaeological evidences found submerged and around it [32]. In the beginning of the twentieth century the implantation of an industrial center in the river margins promoted a

significant development of the area, which was enhanced during the First World War.

The whole process was one of great dynamism which would completely transform the existing landscape. At this time almost two thirds of the population worked on industry [36]. Nonetheless, during the late sixties the industrial activity collapsed and numerous industrial structures left abandoned. This post-industrial landscape represents nowadays an historic and cultural environment, in the sense of being a “system” which can tell the history of how people have interacted with the landscape that they inherited, during a period of massive socio-economic change as it was the industrial era.

Figure 8 represents a panoramic view of the left margin to the Arade River, in which each number is located right above a visible chimney from a former industrial building associated with the fish transformation industry. The unity evidenced by this landscape is notorious, as well as the impact that un-thoughtful de-characterizing interventions might have in it. For this reason any design solution developed for this landscape should take into consideration the fact that:

1- This landscape has to be analysed as a whole and that there must be analysis of [at least] five principles: (1) the sources of raw materials; (2) the manufacturing facilities; (3) the power sources; (4) the services related with the industrial complex, and (5) the transport network; (adapted from Palmer and Neaverson, 1991);

2- To achieve the expected aims the leading idea has to be clear and precisely defined;

3- Cultural landscapes are related with recognized patterns of activity in place and time. “They are manifestations of human activity in space (...) the essence of what gives character to and defines place.” [20], and;

4- These landscapes should be analysed using a holistic approach [10], which include the ecological reality, as the physical and biologic part of the ecosystems; the historic-cultural reality, as the element that connects people with their place and history and enhances the possibilities of creative practice, and the socio-economic reality, as the factor that contributes to enhance community’s life quality.



Figure 8 – Panoramic view of the post-industrial landscape of the left margin to the Arade River.

In addition, the design solutions proposed to this landscape should follow these design principles:

- make explicit provision for public participation to ensure that the community can play a role in shaping the (re-)development proposals;
- ensure that development responds both to site and context, reinforcing the sense of place and local distinctiveness;
- promote adaptability and diversity through development that can respond to changing social, technological and economic conditions;
- promote the continuity of multifunctional spaces associated with industrial buildings and street frontages, encouraging the utilization of reclaimed spaces and promoting accessibility and local permeability;
- reuse previously developed sites or unused buildings and ensure compact development that enhances accessibility, affordability conviviality;

- promote legibility through redevelopment that provides recognisable ways, intersections and landmarks to help people find their way around and through relevant vistas, well massed with a clear hierarchy of building scale and spaces.

- ensure that design creates places that have variety and choice through a mixture of different uses, functions and activities;

- ensure that all redevelopment of industrial buildings and spaces is of a human scale, well detailed and landscaped;

- locates development to protect environmental quality by avoiding areas of ecological and cultural value; ensuring that new development enhances biodiversity and reduces pollution whenever possible.

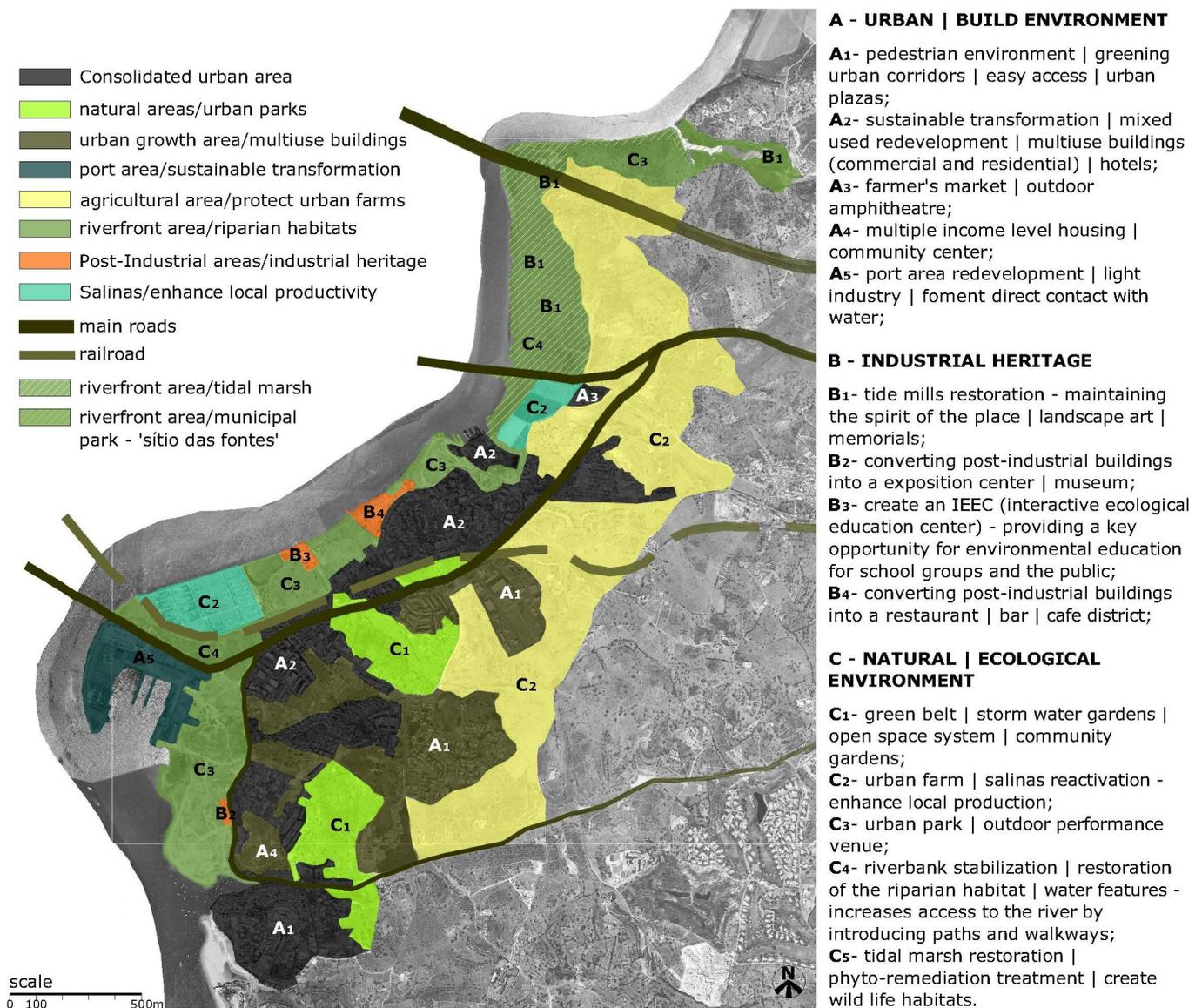


Figure 9 – Planning recommendations for the post-industrial landscape of the left margin to the Arade River.

Figure 9 represents a planning possibility which results from the application of a normative theory based on the aforementioned principles, reason why, several other planning options may be proposed. However, the main objectives of this study are to present a set of values and principles that should be used in order to reclaim this cultural landscape and to develop a specific plan where those values and principles are applicable.

The design analysis and the search for public consensus [33] related with the redevelopment plan of this landscape, consists, at this point, a possible option for further research.

5 Discussion and Conclusions

"(...) the longer I look at landscapes and seek to understand them, the more convinced I am that their beauty is not simply an aspect but their very essence and that, that beauty derives from the human presence. (...) The beauty that we see in the vernacular landscape is the image of our common humanity (...)". This quotation by Jackson (1984), specifies perfectly the reason why certain industrial landscapes have an intrinsic value, that should be protected and highlighted in a similar manner as other cultural elements, and considered part of our heritage.

The essential notion behind the need to protect the industrial heritage is that those landmarks are not only connected with history, which is narratological, they are also connected with memory, which according to Moore and Whelan (2007) is larger, or something more, than history. So in order to maintain the uniqueness of a place, its memory must be protected, maintaining the "*genius loci*" and the characteristics that bring the past into the present [28].

In this sense, it is essential to continue studying the city as an evolutionary 'object', by looking at culture and heritage, without forgetting that the values and the history of the city do not end in the eighteenth century [15], they continue right to the twenty first century. And, as Dolores Hayden (2000) has written: "cultural landscapes [including industrial ones] tell us who we are, far more effectively than most architecture or exhibits in museums ever can". For this reason, the recovery of post-industrial landscapes should be seen as part of larger, ongoing processes of architectural preservation and urban design, once, it is not confined to the most symbolic factories. It includes, also, all the additional elements and structures associated with the industrial activity [17]. It is imperious that politicians, developers, stakeholders

and planning professionals understand that the maintenance of the urban layout is one of the most important features for the cultural identity of a city, and that the industrial landscape is an important part of it. A place is only a fragment of a cultural space, which was given consciously or subconsciously certain meanings during the course of its creation.

In this way, industrial preservation and reclamation becomes more than the celebration of the past, as important as that is; it becomes part of reconstructing the future. Thus, industrial preservation that connects people, place, and history fosters a sense of place and the power for community renewal. As Stan Allen (1999) said we should realise that "working with and not against the site, something new is produced by registering the complexity of the given".

As it was shown the last decades of the twentieth century have been characterised by the protracted decline of industry and industrial landscapes coupled with an explosion of information technology. The progeny of the Industrial Revolution appear in the city as tangible and intangible, social and cultural heritage [34] represented by numerous industrial buildings which are disappearing from our built environment.

Regarding the presented case study we may conclude that industrial history has left deep marks on the Arade valley which frequently provides an explanation for the current situation and points out references for understanding its complexity. The most obvious and urgent problem is certainly the inspection and recording of the state of industrial heritage in this landscape, where external assistance and involvement and the establishment of a formal programme could probably facilitate major progress.

Furthermore, given the priceless historical and traditional heritage of the Arade valley and its surrounding landscapes, historical and cultural aspects may become a driving force in the development of the settlements enabling the creation of a cultural centre with a very positive image that will attract investors as well as tourists. Nevertheless, caution is called for in this sphere, once great care will have to be taken to ensure that the tourism that is developed is "sustainable", both respecting landscape, environment, and heritage and producing fair benefits for the population.

Industrial reclamation proposals should therefore be a part of an overall urban project - a local development strategy - which requires a broad, integrated approach comprising all urban policy areas and promoting the reconciliation of heritage conservation with social progress and sustainable economic development.

Finally, the development of an increasingly multicultural urban society, emphasises the need of rising the “cultural dimension” of the city, where the rehabilitation of the industrial patrimony appears to be an essential contribution to the creation of a shared local identity and hence to the cohesion of the urban society. For this reason post-industrial landscapes should be viewed as a resource and its recovery as an opportunity to develop new multi-functional landscapes.

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