

Title: Protecting and enjoying Tagus River Valley Landscape through greenway planning and design

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1. Introduction

This paper aims to show the significance of the greenway concept has a successful planning and design tool, through three examples located in the Tagus River Valley, in the middle Portugal.

The use of greenway concept can be identified in Portugal throughout the 20th century as a planning and design tool. Several examples, such as the 'Improvement Plans for Lisbon' by Ressano Garcia (1901), the *continuum naturale* concept (1980, Cabral; Andresen, 2001), the Green Plan for Lisbon (Telles et al, 1998), deal with the subjects of implementing vegetation corridors, pedestrian networks and landscape quality. These examples establish Portuguese planning and design tradition within the international greenway movement first identified by Fabos (1991). The growing success of the greenway concept can be related to its effectiveness in achieving its aims to foster landscape conservation, protect heritage and provide opportunities for public recreation.

The examples of greenways were selected to show the applicability of this concept on the planning and design levels, considering the characteristics of Portugal's cultural landscape, and recognition by other professions and politicians dealing with planning. The significance of the greenway as a planning and design strategy also coincides, with the current objectives of political and planning authorities at regional and municipal level. Greenway planning and design is now undoubtedly a subject of growing significance in Portugal.

2. Greenways along Tagus River Valley

The three greenways examples chosen are located in the central region of Portugal, Northwest of Lisbon, along the valley of the Tagus River: the Greenway of Alpiarça Royal Canal, the Urban Greenway of Alenquer River (a tributary of Tagus river) and the Greenway of Valada Dike.

The flat and fertile Tagus valley has evolved towards a significant cultural landscape. Through the drainage and irrigation improvements first introduced by Romans, and further expanded by the Muslims and the Portuguese Kings, Tagus River Valley become presently one of the most valuable farmland in Portugal, embracing a rich and diversified heritage making it a cultural landscape worth of protection and enjoyment. The importance of this cultural landscape is corroborated by its recent application (2001) for classification as a UNESCO World Heritage Landscape (Castel-Branco, 2002).

The thesis that the most valuable landscape resources – areas of ecological and natural significance, cultural and historic values, and recreational opportunities – tend to co-occur in common spatial distribution patterns in the landscape has been the main supporting thesis of greenway planning (Lewis, 1964; Fabos, 1991; Dawson, 1995; Ribeiro, 1998). The approaches used to plan and design these three examples were structured upon landscape analysis and assessment procedures. These procedures together with design approaches, were very much effective to convey the significance of greenway concept to decision makers and create consensus between different professional backgrounds via the common goal to conserve and improve landscape quality.

2.1. The Greenway of Alpiarça Royal Canal

The Greenway of Alpiarça Canal represents a trans-municipal project, the initiative of two municipalities – Alpiarça and Almeirim – with the support of the Association of the Tagus Valley Municipalities and coordination of the CEDRU planning office. This association is responsible for allocating governmental funds for environment improvement and establishing links between central and local political powers. The aim was to improve the environmental and landscape quality of a drainage canal built about 200 years ago (Simões et al, 2000). The canal is about 30 Km long and runs along the agriculture areas of the fertile Tagus flood plain and links three villages and several places significant for nature conservation, recreation and culture.

The proposed greenway was delineated along its banks, suggesting the development recreation facilities, linking already existing recreational, cultural and tourism sites, and actions to rehabilitate natural ecosystems. This greenway is currently under construction works.



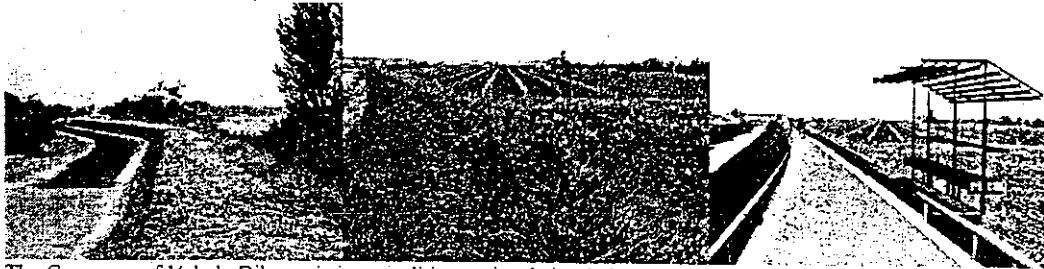
The Greenway of Alpiarça Royal Canal: existing condition: visual simulation: construction works

2.2. The Greenway of Valada Dike

Greenway concept is currently being adopted by other municipalities of the Association of Municipalities of the Tagus Valley, under the support of National Planning Authorities. The objective is to rehabilitate other canals and infrastructures across the valley, along the riverbanks and expand recreation opportunities into a connected network.

The Greenway of Valada Dike is one of the most recent examples as a trans-municipal project, the initiative of two municipalities – Santarém and Cartaxo. Valada Dike was constructed about four centuries ago to prevent Tagus floods, and has been continuously improved. The dike has an extend of about 19km along Tagus banks, crossing farm land, wetlands, and linking fishing points, river beaches and historic villages. Being an infrastructure that is built above the flatness of the valley, it enables outstanding views towards the surrounding landscape.

The proposal includes the improvement of the top platform including the construction of a paved trail, establishment and recuperation of natural ecosystems, and enabling pedestrian and car connection to surrounding areas.



The Greenway of Valada Dike: existing conditions: visual simulation

2.3. The Urban Greenway of Alenquer River

The Urban River Greenway of Alenquer was a means of improving and rehabilitating the banks of the Alenquer River which traverses the village. Such a project was developed upon the suggestion of regional planning authorities after the analysis of other greenways projects. The village of Alenquer is the center of a municipality 36 km north of the Lisbon Metropolitan Area. The river -- the source of huge floods -- crosses the downtown area of this historical village. An analysis of the village and river corridor's opportunities and the hydraulic proposal to canal the river, guided a strategy to implement a 5 km long urban greenway (Barroso et al, 2001). This strategy was able to reconcile the objectives of the National Authority for Water Resources, local politicians and planning authorities for the Tagus Valley region. The plan was developed under the coordination of the planning office of CEDRU (Barroso et al, 2001).

The greenway includes the rehabilitation of historic buildings and improving neighboring public spaces, creating a new sports' zone, improving a traditional fairground as well as generally improving the streets and public spaces along riverbank. These objectives are now further developed through landscape design projects towards construction. Once again, the greenway concept revealed itself as a planning and design tool capable of achieving consensus among different professions dealing with planning and design.



The Urban Greenway of Alenquer River: existing conditions: visual simulation

3. Conclusion

The comparative analysis of the three examples highlighted main issues related to the use of the greenway concept as a design and planning tool in Portugal. The first deals with the applicability of landscape assessment methods for the identification of valuable resources in the landscape towards planning and design of greenways. In all case studies, the method implies an awareness of valuable resources existing in the landscape which determines its quality and which provide opportunities for development and leisure. The use of parametric landscape assessment methods enabled the identification of these resources in a more reliable and objective way. It made it possible to convey the existence of these resources to different planning and design team members.

The delineation of a greenway as a strategy to conserve and improve landscape quality, either within a planning or design approach, was achieved through processes that include both the analysis of resources distribution patterns as well as design creativity. Greenway planning and design can be seen as a strategy that is

supported by rational and objective approaches of landscape planning, recognizing the importance of creativity and human decision and hence a concept that attempts to address post-modern criticism.

Finally, these examples were successful in convincing and conveying the main objectives to different political and official planning agencies involved. As concerns political power, these examples demonstrate that by implementing greenways it is not only possible to improve landscape quality but also to create new leisure opportunities. Politicians believe this affects peoples' quality of life and will therefore bring back their support. Official planning agencies also embraced these greenways cases since these projects enabled the allocation of more funds by reconciling different fields and planning objectives. Successful results and rates of execution of different planning objectives have in some ways assured that planning agencies continue allocate future funds to similar projects thus strengthening the role of greenways in Portugal.

All of these examples have shown to a certain degree the acceptance of the greenway concept as a planning and design tool beyond landscape architecture having been embraced by other professions dealing with planning and design, as well as by politicians and governmental planning authorities. Therefore, the greenway concept has become a tool not only for protecting resources and connecting places but also a mean of improving communication between different professions dealing with planning and design, thus contributing to a better global landscape.

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