

EcoTechnoHub: UpCycling of an Obsolete Water Treatment Plant

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EcoTechnoHub is our proposal of a 3rd life for the Obsolete Water Treatment Plant in Miraflores de la Sierra (Madrid, Spain). Situated on an existing sheep route, it served as an infrastructure for the village of Miraflores, until a new plant was built downstream, when the site started its 2nd life as a nursery, and diverse private and public associations and communities have been using it since then for ecological education purposes (NGOs as ADEA, private Corporations, schools, neighbors). For its 3rd life, the site enhances its biodiversity and relates to the new Natural Park to which it belongs. As its new effective landmark, the Hub would benefit from the Park's visitor flow.

Tank Full of Light: By emptying the bacterial filter bed tank, unveiling and enabling the new usable spaces for local and global communities, the intervention would enhance and expand its activity. The underground tank would still be used as a cistern to store rain water for nursery's irrigation. Since 2/3 of its volume is subterranean, a new underground level and access is provided, enhancing its flexibility of usage and allowing a dual management of the spaces: ground level could relate to the nursery's daylight activities, and the lower level could be scheduled for other night activities such as exhibits and other events environmentally focused.

Shelter: Covered, although sunlit as an open-air space, the tank's new bright interior

features only an umbrella-like roof, a tensile structure with a ventilated double fabric membrane (featuring an image of a protected flower (Silene family). It is an open-air Hall, where visitors can receive information about the New Natural Park and organize routes or promote collective events. The umbrella light-structure seizes an existing concrete infrastructure as its foundation and ballast, integrating within itself also organic matter (climbers) and non-organic composite materials, in order to condition this open-air, sunlit-covered public space for ecological education. The self-sufficient structure integrates Infrastructure, Landscape & Architecture, and performs sustainably, consuming as much energy as it generates, being the social and environmental surpluses its most important benefits.

Ecosystem: Ecological rehabilitation of this unused space not only saves energy and resources, but also reduces carbon footprint by extending its lifecycle and using efficient renewable energies, with a minimum maintenance (wind, solar and geothermal).

Avoiding demolition is an exemplary act of economy of means. In spite of being a public protected domain, financial support for the intervention might come out of a private-public initiative, seizing a new type of legal ecological compensation related to the laying of aerial power lines, over the sheep tracks. Public maintenance and management of the

Hub is guaranteed, even if activities are held by private or local entities.

Conceiving Architecture as the support for living organic matter (climbers and the nursery) promotes biodiversity and enhances the site's ecosystem –just as it happened when transhumanism was more popular- integrating human and non-human communities: neighbors and visitors, the sheep-track, the nursery or the Natural Park, promoting an ecological culture.

