

## Coimbra Botanical Garden Tropical Greenhouses

The Tropical Greenhouses and the new on-site Science Corner are located in the high town or Alta de Coimbra. They belong to the University's Botanical Garden built in 1772 by the Marquis de Pombal. The Tropical Greenhouses, completed in 1859, are one of the first examples of iron architecture in Portugal, their reference being the Kew Gardens greenhouses in England. The intervention on the greenhouses involved restoring and recuperating the existing structures and implementing suitable technical solutions for the growth of the plants and for the use of the space, namely for receiving visits. These conditions implied new shading and ventilation means, to guarantee the appropriate hygrometric and moisture levels and access to and within the building. One of the measures with greatest impact in the rehabilitation of the greenhouses was recovering the original interior/exterior relation and reinstating the transparency of the glass on the vertical surfaces and the roof by removing the whitewashing that had added opacity and weight to the glazes surfaces. To replace the previous system of temperature and light control achieved through whitewashing, new laminated transparent glass was applied, with interior shading screens. This measure serves to correct the deficient thermal regulation, solar protection and security of the space, leading to a radical alteration in the image of the greenhouses, which now present a distinct configuration depending on the seasons.

The central wing corresponds to a singular moment in the visit to the greenhouses, given its very high ceiling and the existence of a gallery along the upper level. To reinforce its exceptional character, the flowerbeds were removed and replaced with a large pond in which to grow *Victoria amazonica*, a species of giant water-lily from the Amazon River basin. The pond is lined in black-painted steel plates to emphasise the mirrored surface of the water.

As with the new Victoria Pond, the on-site Science Corner was built from scratch next to the greenhouses to receive infrastructures and a new programme. Harking back to the traditional cool houses, this building has a garden roof with a wood and stone structure and wood slatted shutters.