

# Restoration of the “Jardin d’hiver” Greenhouse at the Royal Palace in Brussels

Château Royal, Laeken (BE)

Complete mission of stability, special techniques, and electrical

Owner  
Régie des Bâtiments - Brussels  
Region

Architects  
Ma2 projects sprl - Chatillon  
architectes

Cost of the works  
€ 16,5 M excl. vat of wick  
€ 6,8 M for the structure

Studies  
2019 - 2024

Execution  
2025 - ...



The “Jardin d’hiver” greenhouse is part of a network of greenhouses built between 1874 and 1905 by the architect Alphonse Balat during the reign of Leopold II. This circular greenhouse, constructed from steel and cast iron, measures 63 metres in diameter and 26 metres in height, with a total floor area of 3,480 square metres (including the greenhouse itself and the connecting wings); it is the first of its kind to be built and the most imposing. The size of this greenhouse has made it possible to plant tall palm trees, most of which date back to the time of King Leopold II.

The project involves the complete restoration of the greenhouse, comprising:

- the design of scaffolding and access routes,
- replacing the glazing laths with the original model,
- the removal of old, contaminated paint,
- the restoration and treatment of the structure by metalisation,
- the replacement of the anchors at the base of the structure.

Test boreholes were drilled to analyse these anchors in the stone and brick foundation blocks. The condition of the anchors was assessed using core sampling and an endoscope camera. We were able to verify the accuracy of the archive drawings and the condition of the anchors. We checked the anchors’ capacity to withstand the required loads. Their state of corrosion warrants their replacement.

The main problem affecting the structure is corrosion caused by water infiltration, but above all by condensation. We have investigated the most suitable restoration techniques to ensure the structure’s long-term durability.

