



VISIONARCH

# Kew Gardens – Temperate House

Modernisation of the world's largest Victorian glasshouse –  
glazing restoration of this iconic Grade I listed building.

## Client

Royal Botanic  
Gardens, Kew

## Location

Twickenham TW9

## Architect

Ramboll Consultants

## Contractor

ISG Construction

## Surveyor

Ramboll Consultants

## Products

1. Glazing Replacement
2. Automatic Opening Ventilation System connected to the weather station for temperature and humidity control

## Sector

Leisure

## Project value

£2.2m

## Client brief

The massive 5-year renovation project saw the restoration and replacement of the 1970s patent glazing sections in this iconic Grade I listed building. The modernisation of the world's largest Victorian glasshouse included the removal and replacement of the glazing rafters and 15,000 panes of glass, restoring it back to the iconic landmark it once was and ensuring its prominence for the future of plant science.

Home to 1,500 species of plants from Africa, Australia, New Zealand, the Americas, Asia and the Pacific Islands, Temperate House ensures the conservation of an internationally important collection of 10,000 individual plants, consisting of some of the rarest and most threatened temperate plants in the world.

## Our scope

The restrictions when working on a Grade I listed building meant that prior to the removal and cleaning of the 1970s glazing members each element had to be tagged with a barcode and logged into the model for its reinstatement to be in the exact position from which it was removed. These glazing members were removed, steam cleaned and replaced.

Each and every one of the 15,000 glass panes had to be templated using tracing paper so the shape of the replacement pane matched exactly with the one removed: again a barcode tagging system was used.

Due to erosion some of the glazing members were no longer suitable for use so new dies were cast and extrusions drawn to exactly match the original members.

We designed, supplied and installed a new opening window operating system with a wind, rain and temperature sensor to ensure the temperate climate of the building and its Royal Botanic Gardens.

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## Get in touch

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## Key challenges

1. There were a number of rare trees which could not be temporarily relocated during the works restricting access.
2. Due to the temporary tented structure, working conditions were challenging in the hot summer months.
3. Producing an acceptable programme due to reliance on other trades.

## The result

Works were completed to comply with Grade I listed regulations and the re-invigorated glazed and vented system now offers the public a natural and light experience of the beautiful botanic gardens in the most biodiverse place on earth.



**“During their time on this project Vision Arch were found to be very competent, reliable and continued to excel in their day-to-day activities. Their operatives demonstrated high levels of professionalism, experience, dedication and commitment to quality.**

**“I have no hesitation in recommending Vision Arch as a specialist cladding contractor that can deliver within tight deadlines and add a great value to any project.”**

Bart Zgorzak, Senior Construction Manager – ISG Construction

## What we did

**100%**

Compliance with Grade I regulations

**100%**

Protection of the botanic gardens

**100%**

Health & Safety during the installation