

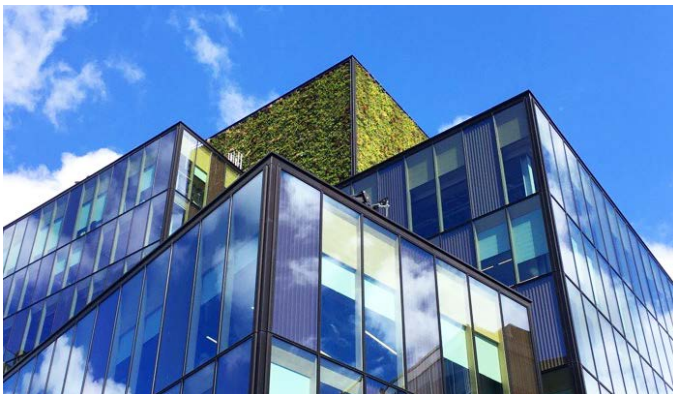
TJX Europe HQ, Watford

Watford, United Kingdom

Project Case Study

Client: McMullen Facades Ltd

Installed: 2020



Project Details

TJX Europe, which operates retailer TK Maxx, created its £93m European headquarters on Clarendon Road in Watford, and will provide office spaces for 3,000 employees.

The principal challenge on this project was addressing architect Sheppard Robson's brief for living wall panels that accentuated the checker board aesthetic across three elevations.

Sheppard Robson envisaged rainscreen cladding façades comprising rectangles made up of light green and dark green living wall panels to form matrices that blend harmoniously with the windows, divided by fenestrations of steel.

Sustainability was at the heart of the development and the architects were looking for ways that the living walls would contribute to the target BREEAM 'Excellent' rating.

The living walls had to be installed almost a year ahead of project completion because of construction site sequencing restraints. This presented a challenge because they had to be maintained and the plants kept healthy during a phase when services such as water were not yet in place.

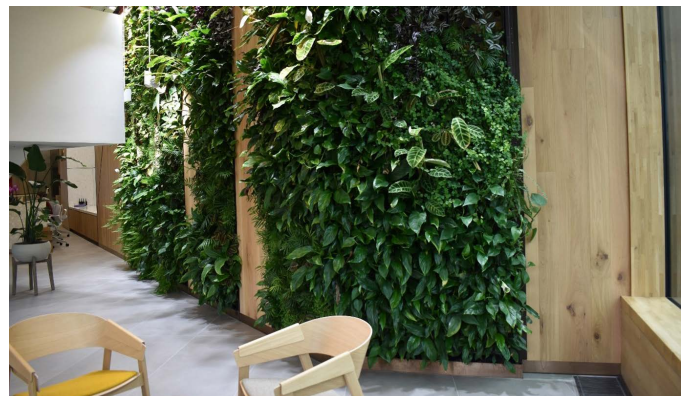
Biotope had to identify a method of keeping the plants watered while construction work continued. This would require a high performance water retentive substrate and detailed maintenance scheduling.

The main contractor for the project was ISG and Biotope was sub contracted by McMullen Façades.

TJX Europe's landmark new headquarters in the centre of Watford demonstrates how Biotope's living walls can transform urban landscapes and create an architectural feature to stunning effect. Standing at 12 storeys high, it is one of the tallest buildings in Watford and features over 620 square metres of living wall, positioned internally and externally both at ground level and with multiple elevations, including a seventh-floor roof terrace. The living wall was installed nearly a year ahead of the project handover and will contribute to the target BREEAM 'Excellent' rating.

Highlights

- ◆ Striking 12 storey office development with over 620 square metres of living wall
- ◆ Unique checker board effect created by two-tone planting
- ◆ 37,000 plants comprising 38 different species
- ◆ Living walls contributes to target BREEAM 'Excellent' rating





Our Approach

Biotecture proposed its BioPanel system for four of the external and internal living walls on the TJX Europe development. This robust fire-rated hydroponic living wall system is made from 100% recycled material and uses Grodan as the growing medium which supports healthier plants for longer, whilst using a thinner substrate thickness. This minimised weight loadings and helped meet façade space constraints.

Grodan is dimensionally stable, so won't degrade over time like some other substrates, whilst holding up to 80% moisture before the material begins to drain. It is chemically inert so allows for just the right amount of natural nutrients to be supplied to the plants at all times and is a perfect water sponge while retaining air pockets to give ultimate resilience between watering.

The living wall on the seventh floor was created using Biotecture's floorstanding, modular PlantBox system, which avoided the need for a heavy structural frame to support a wall hung system. Only restraint fixings were required as the modular, freestanding PlantBox system transfers the load directly to the building structure.

A total of 624m² of Biotecture living wall was specified, comprising 37,000 plants made up of 38 different plant species.

Biotecture designed two matrices to Sheppard Robson's specification with light and dark green foliage, taking into account the different elevations and light levels.

The juxtaposition of colours, textures and materials add to the visual interest to the façade, creating an engaging element to the overall aesthetic that has already established the new TJX Europe headquarters as the 'gateway' to Watford.

The architects were guided by Biotecture's horticultural knowledge to maximise BREEAM points. Since completion, the living walls have encouraged greater biodiversity into this urban setting, with birds spotted within the foliage of the seventh floor soon after installation and observation of valuable pollinators on the other external living walls.

Working closely with both Sheppard Robson and McMullen Facades, Biotecture was able to install the green walls nearly a year ahead of project completion. Biotecture is maintaining the living walls throughout the remaining phases of the development, having deployed permanent irrigation units and installed temporary water feeds.

As part of its turnkey approach, Biotecture confirmed flow rates and pressure requirements, which allowed the irrigation unit to perform as required over three seasons before project handover.

"It was a pleasure working with Biotecture on the TJX Watford project. From start to finish, Biotecture assisted and inputted throughout the journey to achieve a stunning result. The green wall installation commenced on time as planned (on the hottest day of the year), with plants from their nursery delivered direct to site and vertically transported to final position, overseen by McMullen Facades in terms of base preparation and logistics. I look forward to working alongside Biotecture again on the next project."

– Sean Halvey | Senior Construction Manager, ISG

