Komorebi

Design and construction of a complex of mixed-use office and retail buildings.

CLIENT

Epamarne Bart | Patriarche

TEAM

Patriarche (Architecture, Interior architecture, MEP Engineering, EBQ, Cost, BIM, Landscape, Signage, Graphic design) Walter | Patriarche (Operations, Services and Venue management) Partners : Equilibrium, Tugec Ingenierie, Alpes Acoustique

KEYPOINTS

Flexibility and reversibility. Cosy offices. Large terraces. High ceilings.

SUSTAINABILITY

BREEAM Excellent. RE2020. WFF and posts in wood structure. Double skin. Natural ventilation. Cool island. Komorebi is a complex of six mixed-use buildings divided into three bodies, with business activities on the first floor and services on the upper floors.

Located in the ZAC de la Haute Maison development zone in Champs-sur-Marne, it meets the developer's objective of developing 13,700m² of service-sector space and 2,500m² of business premises, including a 220m² restaurant and a 400m² brasserie (including a production and tasting area).

This project is the result of an architectural competition between three Patriarche agencies organized by Bart | Patriarche.

Komorebi won the competition with a proposal for timberframed buildings that give pride of place to the landscape. Komorebi's design was conceived to promote quality of use and user comfort throughout. Komorebi's flexible, bright and welcoming office space can be divided into lots.

Typology Offices, Workshops and Restaurant

GFA **16 500 m**² Construction cost **30 M€**

Location Champs-sur-Marne, France Status Delivery 2025

Project delivery Private project management Internal competition



Quality of use

The Komorebi's design has been conceived to promote quality of use and user comfort at all times.

These qualities are expressed by:

- The multiplicity of terraces and outdoor spaces.
- Generously glazed floor plates offer views into the distance.Access to natural light verified by a FLJ study. Generous
- frame height allows light to penetrate deep into the plateau.The soft, warm presence of recurring wood, which remains
- bare on the underside of ceilings in offices and under terraces.

• High ceilings of 3.20 m in the office area. The HVAC principle we propose is to distribute all the technology in a plenum that is restricted to the heart of the plateau.

Komorebi is a Japanese word composed of 3 key elements, this combination leads to the following translation of komorebi: "to the sunlight shining through the trees".







Urban intentions

Located in the ZAC de la Haute Maison in Champs-sur-Marne, the proposed body is very long. The RER line forms a physical barrier between the ZAC and the Bois de Grâce.

To meet this challenge, we proposed a layout of 3 double bodies perpendicular to the boulevard, to increase transparency towards the Bois de Grâce.

This location also enables us to meet our objectives in terms of floor space by offering the possibility of adding 800m² by adding an extra floor to one of the buildings.

Environmental quality, flexibility and reversibility



The project has been conceived and designed in the spirit of microdivisibility: "The office floors are divisible into lots ranging from 170 m² to 500 m², with the possibility of linking 2 levels directly to each other".

All facades are built on a 1.35m module. The principle of fluid ventilation is also based on double frames (2.70m). It is therefore possible to create classically closed offices on a 1.35m pitch.

The highly gridded structural and HVAC principle, the 3.20m wooden floor eights, and the equally gridded facade laisse à penser that the building can be easily adapted to new uses over time.

Wooden structure

From the R+1 upwards, the structure is made of wood. It consists of a post-and-beam structure with a 5.40m grid (4 x 1.35m modules). This post-and-beam structure allows the creation of a completely free and flexible layout.

Bracing is provided by diagonal braces in the 5.40m grid makes it possible to develop a technically and economically efficient timber structure with controlled timber beam heights (32cm on the facade and 50cm in the heart of the plateau). It allows the use of CLT floors up to 20cm thick.

We know that the structure is one of the biggest contributors to a building's carbon footprint. The fact that most of the structure is made of wood (posts, beams, facade walls and floors) means that we can be optimistic about the operation's carbon footprint.

Work on all building materials, and in particular on the use of bio-sourced insulation, will help meet carbon targets. The structure of the first floor and parking lot is made of concrete.





Double skin

Visual and thermal comfort is partly ensured by the passive and dynamic protection of the double skin. The general principle is to take advantage of solar gain in winter (raised BSO) and protect against solar flux in summer (BSO lowered). The control of these BSOs is left up to the users, but can be forced by the BMS, notably to lower the BSOs and prevent the building from overheating in summer.



Natural ventilation

Each plot is organized in the same way: the office areas set against the facades form a C shape around an offaxis central core.

This "C" has openings on 4 orientations: north, south, east and west. Our proposed plots are J 8m wide, but relatively short in length. The prevailing winds are from the southwest.

All these features contribute to the efficiency of natural ventilation for summer and mid-season cooling.

Architectural competition - in house!

Bart, Patriarche's project management entity specializing in innovative promotion, was chosen as the winner for the development of a mixed-use block. In order to offer the developer - Epamarne - a choice in architecture, it was agreed that 3 teams would work together.

In order to propose different responses, we approached 3 agencies, each influenced by their own culture and way of doing things in the city. The Paris, London and Le Bourget-du-Lac agencies each responded with highly inspiring and varied projects, in terms of spatial organization, environmental quality and facades.

To judge the performance of the 3 teams, the Bart | Patriarche teams drew up a comparative table of the 3 projects, defining 5 families of evaluation criteria:

- ground plan / compliance with urban constraints
- usage functionalities by product type
- compliance with technical requirements
- environmental performance
- economic performance





Project analysis

To help us meet the evaluation criteria, Bart | Patriarche called on **the engineering pole** :

The **QEB teams** drew up a comparative analysis of the 3 projects in terms of bioclimatic aspects and low-carbon design (Epamarne had high expectations of wood construction).

The **economists** developed a summary table of data to be completed by the 3 teams, in order to provide a costing table for the 3 projects. These data also included the elements required to enable the **VRD division** to evaluate the works, and the **Fluid BET teams** to evaluate the technical packages.

It should be noted that the 3 teams worked independently with the same technical teams.

The three-way vote included the city of Champs-sur-Marne, Epamarne and Bart | Patriarche. The team from the Paris agency won the competition with its Komorebi project.







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