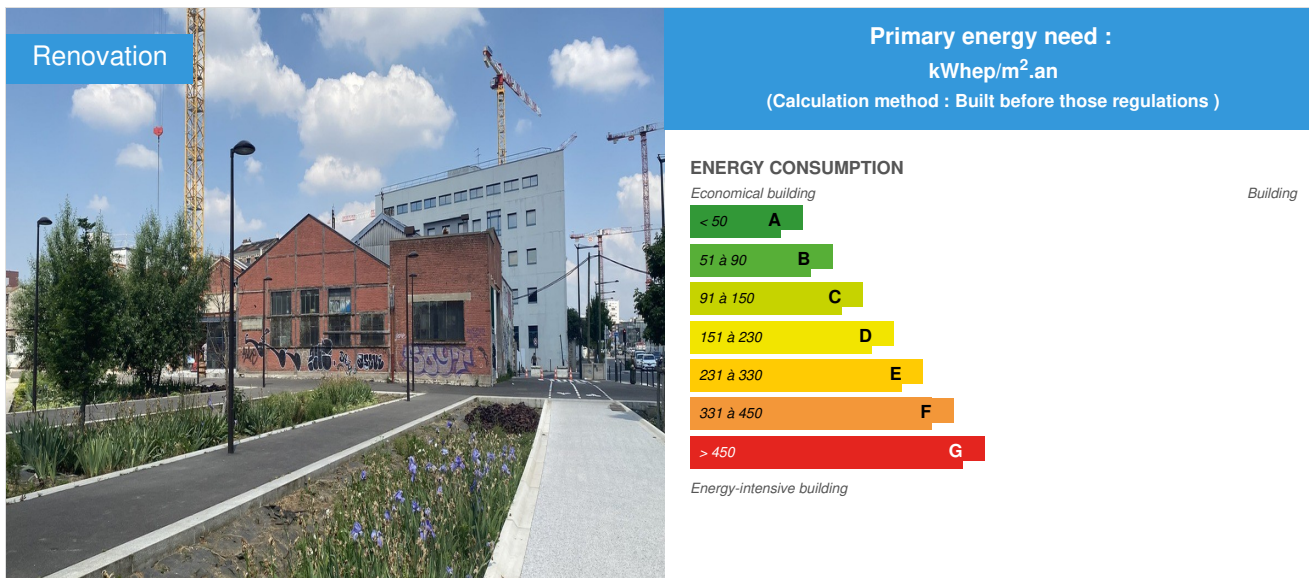


The Maximum building

by Manon LECONTE / © 2021-06-14 00:00:00 / France / © 3127 / FR



Building Type : Factories
Construction Year : 1843
Delivery year : 2019
Address 1 - street : 49 boulevard du colonel fabien 94200 IVRY-SUR-SEINE, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 1 200 m²
Construction/refurbishment cost : 350 000 €
Cost/m2 : 291.67 €/m²

General information

The former Girard Sudron covered market now houses the design and manufacturing workshops of Maximum designers, in Ivry-sur-Seine (94). In order to provide the Maximum company with a setting that matches its values and allows to broaden its field of expertise, the rehabilitation was carried out as soon as possible on the basis of reused elements.

Maximum produces mass-produced furniture from waste regularly generated by French industries. Maximum designs based on the waste they identify with their partners and initiates them into a new production cycle. To establish itself, Maximum needed a place to design, produce, sell and live. Naturally, the renovation project for the former Girard Sudron covered market is experimenting with the reuse of materials on an architectural scale, drawing generously from construction and industrial dumpsters.

Maximum's activity began in a precarious leasehold in Ivry-sur-Seine. Now demolished for the benefit of the ZAC Ivry-Confluence, the municipality and the developer Sadev94 have offered Maximum to buy this space in order to perpetuate its activity. For the works, ADEME supported Maximum up to 350,000 euros in order to create a laboratory for experimentation with reuse on an architectural scale. This aid was therefore the means and the primary constraint for carrying out the work.

At the origin of the project, the Construire agency made it possible to initiate the project. Its founder Loïc Julienne suggested that Maximum makes the architect Manon Leconte available on site permanently to support them. The low budget allocated to the works did not make it possible to insulate and heat the 1,200 m² of the space. It was first necessary to consolidate the existing structures, create the networks, then came the construction of autonomous interior volumes.

After a first phase of sketching and distribution of uses and spaces, the cleaning work began and the project was refined throughout the work depending on the materials identified. For each material, it was necessary to constantly visit the sites, locate, dismantle, think about the packaging, the transport and its new

implementation. It is therefore quite a job of permanent monitoring!

For deposits, Maximum was supported by the developer of ZAC Sadev94, as well as the BTP Cycle Up and Réavie resource centers. For the site, companies had to be made aware of the issues of reuse. Maximum also carried out part of the work themselves when they feared a drop in profitability and hired in-house craftsmen: carpenter or even locksmith.

It is both an in-situ reuse operation on the scale of the ZAC Ivry-Confluence and ex-situ via the demolition sites of Greater Paris. The project also allowed experimentation and the diversion of use of certain construction materials, but also of elements discarded by French industries.

Sustainable development approach of the project owner

The objective of the Halle Sudron rehabilitation project was to be functional as soon as possible, from reuse, in order to create a place for the company that reflects its activity.

Maximum manufactures furniture in series, from industrial waste: scraps, surpluses or manufacturing defects. Each piece of furniture produced contributes to reducing the amount of waste in circulation! The furniture is designed and manufactured in partnership with various manufacturers who provide the raw materials. The waste generated on a recurring basis by manufacturers is listed and enables new production to be supplied. Maximum creates a circular economy dynamic based on waste and initiates a new production cycle. The process is then reversed: in a conventional production, the manufacture is made according to a drawing. Maximum draws according to the shapes already made.

The renovation of the building is testing the application of this approach on an architectural scale. It is about showing that other ways of building are possible. This renovation aims to be the showcase for the launch of their new activity towards architecture and tailor-made interior design and to explore the difficulties of this new activity.

Architectural description

This rehabilitation is an experiment with matter and space, bringing together both industrial waste and waste from surrounding demolitions. The renovation project was first of all the consolidation of the existing structures made up of wood and metal frames, then the creation of heated spaces (offices, refectory, kitchen and bathrooms) taking place in the original unheated volumes, accommodating the workshops of manufacturing, handling and free development spaces.

Many bay windows are made with glass from double-glazed windows, supported by metal structures from demolitions less than 500m away! Other materials come from construction sites in Greater Paris: doors from the old printing works of the newspaper Le Monde, reinforced glass panels from the former Centrale Supélec school in Chatenay-Malabry, equipment from the former head office of PSA Citroen. This was made possible thanks to partnerships with Réavie, Cycle Up and La Réserve des Arts de Pantin.

We also gleaned materials discarded by our industrial partners: Pouchard and CQFT for metal, Bultex, Gimier and Simire for wood, or Signature for aluminum cladding panels.

See more details about this project

https://www.instagram.com/maximum_officiel/

<https://www.maximum.paris/>

Photo credit

Maximum

Stakeholders

Contractor

Name : MAXIMUM

Contact : Armand Bernoud

<https://www.maximum.paris/>

Construction Manager

Name : MAXIMUM

Contact : Manon Leconte

<https://www.maximum.paris/>

Stakeholders

Function : Company

Réavie

Mohamed Hamaoui

<http://asso-reavie.fr/>

Supply of materials and re-use equipment

Function : Company

Cycle Up

Coline Blason

<https://www.cycle-up.fr/>

Supply of materials and re-use equipment

Function : Environmental consultancy

ADEME

<https://www.ademe.fr/>

funder

Function : Designer

CONSTRUIRE

Loïc Julienne

<http://www.construire.cc>

Contracting method

Other methods

Energy

Energy consumption

Calculation method : Built before those regulations

Real final energy consumption

Final Energy : 25,00 kWh/m².an

More information

The majority of our energy consumption is dedicated to our fleet of machines necessary for the production of furniture. The total consumption of the premises is 30,000 kWh. Year (year 2020).

Renewables & systems

Systems

Heating system :

- Wood boiler

Hot water system :

- Individual electric boiler

Cooling system :

- No cooling system

Ventilation system :

- Natural ventilation

Renewable systems :

- Wood boiler
- Energy recovery from waste

Environment

Urban environment

Land plot area : 1 300,00 m²

The project is located at the heart of the ZAC Ivry Confluence in Ivry-sur-Seine (94). The Maximum workshops, formerly the Halles Girard Sudron, are one of the last remarkable entities preserved in the development, witness of Ivry's industrial past. The district in full transformation and the proximity with the local actors, allowed us to draw deposits on the surrounding demolition sites.

Formerly agricultural, the city industrialized during the 19th century thanks to its proximity to intramural Paris, the Seine and the railway. Many factories have therefore been established: glassworks, distillery, tiles, rubber or even warehouses. In the context of the dense metropolis, Ivry like the whole of South East Paris, is renewing its neighborhoods through a ZAC procedure. The city is moving towards a more residential economy, once limited by flooding. It is the transition from a rather horizontal developing district made up of industries, to a vertical district made up of offices and housing, responding to a desire for densification.

Considered as a historic bastion of the French Communist Party, Ivry nevertheless wanted to maintain an economic activity of productive industries within the ZAC. As a result, the municipality and the developer Sadev94 sought a place to perpetuate Maximum's activity. ZACs are an opportunity for in situ reuse. Many buildings are demolished in favor of new ones to be built. Selective deconstruction is the alternative to demolition. Glass, metal, wood, tiles, insulation or equipment are all resources upgraded and integrated into the project.

Products

Product

Reuse of construction and industrial waste (furniture and fittings)

Maximum architecture

manon[a]maximum.paris

<http://maximum.paris> / <http://maximumarchitecture.fr>

Product category : Management / Contracting

Costs

Construction and exploitation costs

Subsidies : 350 000 €

Circular Economy

Reuse : same function or different function

Batches concerned by reuse :

- Structural framework
- Roofing
- Facades
- Locksmithing-Metalwork
- Indoor joineries
- Outdoor joineries
- Floorings
- Partitions
- Isulation
- Electricity
- Plumbing
- Landscaping

For each batch : Reused Materials / Products / Equipments :

Frame trusses are made from offcuts of box spring slats from our industrial partner Bultex.

Cover 170 tiles were recovered from the demolition of the ZAC Ivry Confluence.

Façades Reinforced glass panels of the *reglit* type were recovered from a site in Chatenay Malabry, aluminum cladding was produced from offcuts from motorway panels from our partner Signature.

Locksmith-Metallery the metal profiles used are part of stocks downgraded or dismantled on sites: IPN, angles, tees, glazing beads etc.

Exterior / interior joinery , double-glazed glass, doors, metal frames and joinery are from demolition of the ZAC Ivry Confluence.

Floor / wall covering of 5x5cm terracotta tiles (175 m2 from the cleaning of the Cité du cinéma, via the Réserve des Arts de Pantin), zelliges (50m2 from a scenography via the Réserve des Arts), parquet (Réavie), oak falls (O'bobois).

Partitions of CP 30mm plywood panels (Simire partner), fundermax type doors (Chatenay Malabry demolition site), stained out-of-date paint (Couleurs du Val de Marne).

Insulation of rock wool type insulation panels with Kraft (Chatenay Malabry).

Electricity cable trays, rails and spotlights, lighting, bowl lamp, oven and hob, hood, compressor, VMC (Réavie and Cycle Up: demolition site of the Ecole Centrale Supélec in Chatenay Malabry and demolition of the old headquarters of PSA Citroen Avenue de la Grande Armée in Paris).

Plumbing ceramic stamps, basins and fittings, hot water tank, stainless steel sink, fridge, water heater, dishwasher, double sink (PSA Citroen and Centrale Supélec).

Outdoor facilities 35 m2 terrazzo terrace made with marble falls (marble from the Seine).

Other stair railings, guardrails (PSA Citroen via Cycle Up).

Reused materials rate :

tiles: 12 m2

reglit type reinforced glass panels: 60 m2

aluminum panels: 23 m2

metal profiles: 200 ml

double glazing: 76.8 m2

doors: 200 U

terracotta tiles: 175 m2

zellige: 50 m2

other tiling: 20 m2

parquet: 50 m2

oak cladding: 135 m2

CP partition: 37 ml (height 4m)

rock wool insulation with Kraft: 650 m2

cable tray: 500 ml

marble falls: 35 m2

basins: 6 U

taps: 6 U

RIE equipment: 11 U

luminaires: 38 U

rails for spotlights: 30 U

spots: 26 U

Field of use and material origin :

Reuse / Change of use

By removing **double glazing** from their frame, we reused them to make large windows. The structure is consisted of **IPNs** arranged vertically, originally used horizontally to support the floors of a neighboring factory.

Box spring slats were used to make trusses, the structure of our refectory. Falls of **highway panels** allowed the realization of an exterior cladding and the **falls of coopers** allowed the realization of an interior wood cladding.

The old **blue doors** of the sanitary facilities of the former Centrale Supélec school in Chatenay Malabry have enabled us to cover our offices and our sanitary facilities.

The **plywood transport boxes from** our partner *Simire* have been recalibrated to make the partitions and interior finishes of one of our offices.

Environmental assessment

Impacts avoided : water, waste, CO2 :

The waste avoided on our site and on other sites was not subject to a specific calculation of quantities. However, the carbon footprint, material savings and the extension of the life cycle of materials seem obvious.

On this project, the reuse of materials * made it possible to avoid:

- The emission of 39 tonnes eqCO2
- The use of 21,384 m3 of water
- The production of 45 tonnes of waste

* the calculation includes the aluminum panels, 3 RIE equipment, the stainless steel sink, the wooden cladding, the tiles, the doors, the parquet, the rock wool insulation, the tiling, the basins, the taps, the paths of cable and spots.

Contest

Reasons for participating in the competition(s)

La rénovation a été faite dès que possible à partir d'éléments réemployés. Le projet s'est affiné tout au long du chantier, en fonction des matériaux glanés. La fabrication des espaces s'est faite en fonction des gisements identifiés, grâce à la présence permanente sur le chantier. C'est à la fois une opération de réemploi in situ à l'échelle de la ZAC Ivry-Confluence et ex-situ via les chantiers de démolitions du Grand Paris. Le projet a également permis l'expérimentation et le détournement d'usage de certains matériaux issus du BTP mais aussi d'éléments mis en rebuts par les industries françaises. Par ailleurs, dans une logique d'économie de moyens et de matériaux, nous avons fait le choix de ne pas isoler l'ensemble des 1200 m2 mais de cibler les espaces fermés et chauffés à l'intérieur des halles et de regrouper les réseaux à créer. C'est un lieu d'expérimentation de la matière et de l'espace.

Building candidate in the category



Prix du public

