

Atelier ABProd - Space for conviviality and work for a carpentry and metalwork workshop

by Clément AQUILINA / 2023-05-22 13:07:47 / France / 238 / FR



Extension + refurbishment

Primary energy need :

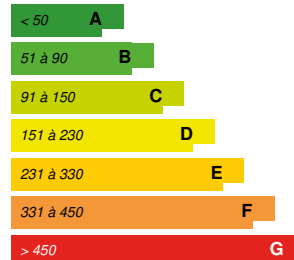
49 kWhep/m².an

(Calculation method : Other)

ENERGY CONSUMPTION

Economical building

Building



Energy-intensive building

Building Type : Other building

Construction Year : 2022

Delivery year : 2023

Address 1 - street : 9 avenue de la métallurgie 93210 SAINT-DENIS, France

Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 66 m² SHON

Construction/refurbishment cost : 15 000 €

Cost/m2 : 227.27 €/m²

General information

On the site of the former AB Production film sets in Saint-Denis (93), the golden age of television is over and gives way to new practices. The LAO wood/metal architecture and manufacturing cooperative is based there.

A separate project in the heart of the craftsmen-architects of LAO, it is a **place of conviviality in addition to being a place of work, and its architecture seeks to reflect this.**

Self-built, the volume houses upstairs a kitchen / dining room / meeting room for plenary sessions. On the ground floor is the heated workshop, free of dust, intended for the application of varnishes, glues and patinas, as well as for screen printing.

The volume offers two rooms of 33m² each, with a generous ceiling height. Downstairs the space is free, the door is wide, everything is at the service of the craftsmen for the handling of long elements. Upstairs in the living space, the ceiling is transcended by a series of skylights. Daylight glides over the wood-clad walls, and the evening lighting is supported by the shades of poplar and TeboPin plywood.

The tailor-made layout fulfills a search for balance between the utilitarianism of a workspace, the appeasement of a relaxation area and, finally, the atmosphere of conviviality and meetings (sometimes festive) with collaborators, customers, partners and, from time to time, friends.

This building was designed and built by making the most of reuse: 55% of reused materials (by mass) from the nearby Ile-de-France region, i.e. a saving of 9T CO² equivalent.

See more details about this project

<https://www.lao-scop.com/projets/atelier-abprod-lao>

https://drive.google.com/open?id=10LCfBrv37Hqp15neRJmMHpCK3Ab_b4Jf&authuser=clement%40initiativesconstruites.com&usp=drive_fs

Photo credit

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Stakeholders

Contractor

Name : LAO SCOP

Contact : info[a]lao-scop.com

<http://www.lao-scop.com>

Construction Manager

Name : LAO SCOP

Contact : mobilier[a]lao-scop.com

<http://www.lao-scop.com>

Stakeholders

Function : Designer

Ludique Architecture

archi[a]lao-scop.com

<http://www.lao-scop.com>

Project management and internal participation in the construction site via the association ICI

Function : Construction company

LAO SCOP

mobilier[a]lao-scop.com

<http://www.lao-scop.com>

Builder and manufacturer. Carpenters, cabinetmakers and boilermakers. Punctual training in carpentry and wood frame.

Type of market

Not applicable

Other type of market

Private market

Allocation of works contracts

Build and sell construction

Energy

Energy consumption

Primary energy need : 49,00 kWh/m².an

Calculation method : Other

Renewables & systems

Systems

Heating system :

- Individual electric boiler
- Electric radiator

Hot water system :

- Individual electric boiler

Cooling system :

- No cooling system

Ventilation system :

- humidity sensitive Air Handling Unit (hygro A)

Renewable systems :

- No renewable energy systems

Environment

Urban environment

In an industrial zone dedicated to cinema trades, the interior building is not directly affected by integration into the district.

Indirectly, the building is integrated by using several materials from the dumpsters of the film sets. As a polluting actor with a high production of waste linked to decorations, we use their scraps and surpluses daily and they regularly call on us before sending them for recovery.

Costs

Construction and exploitation costs

Total cost of the building : 15 000 €

Circular Economy

Circular economy strategy

Phase in which reuse has been integrated : Sketch study

Type of circular economy strategy implemented :

- Maximization of the number of impacted batches
- Maximization of quantities on targeted products
- Maximization of the carbon gain
- Maximization of the mass of waste avoided

Type of circular economy strategy implemented :

Internal strategy: self-training, skills development re-use in terms of implementation, gleaning, storage and design

Integration of reuse into the written contract documents : Reuse in base

Validation protocol for reused materials : No

Deposit validation form : No

Reuse : same function or different function

Batches concerned by reuse :

- Structural works
- Structural framework
- Facades
- Locksmithing-Metalwork
- Indoor joineries
- Outdoor joineries
- Floorings

- o Partitions
- o Suspended ceilings
- o Plumbing

For each batch : Reused Materials / Products / Equipments :

- o Half of the wooden frame comes from the deconstruction of an ephemeral pavilion at the Palace of Versailles (145 linear meters of section 0.049 x 0.18m) - 710kg
- o All of the exterior cladding is reused. The sipo uprights and the base in exotic wood veneered doors come from the renovation of the UNESCO Paris building, a building designed by Jean Prouvé and Bernard Zehruss. Surprising detail: the doors are filled with sand, which can be a bulletproof device.
 - 8 sipo veneered doors sand filling (8 doors 2.150 x 0.82 x 0.042m) - 760kg
 - Sipo uprights (130 linear meters of section 0.052 x 0.063m) - 276kg
 - Melamine panels (50 ² variable thicknesses) - 172kg
 - Mirrors (5m²) 168kg
- o The 10 glazed openings, aluminum double glazing, are recovered from a demolition in Paris XII (10 openings dimensions 2,680 x 1.22m) - 976kg
- o The floor coverings come from film sets near the workshop in Saint-Denis (26m² of linoleum and 4m² of cement tiles) - 216kg
- o Steel industrial staircase from a demolition near a warehouse in Saint-Denis - 186kg
- o The entire layout is also reused or second-hand (ground floor benches, ground floor wall units, sofa, shelves, valchromat table top, 60x60 tube table base, 10 chairs, oven appliances + fridge) - 830kg

The total reaches 4.4 tonnes of material saved from the dumpster, and therefore as much material that did not need to be produced.

Reused materials rate :

- o Implementation according to DTU for wooden frame, adapted to the dimensions of the reused sections.
- o Installation of exterior joinery outside DTU: waterproofing already provided indoors.
- o Original facade designed and produced outside DTU - significant degree of adaptation due to the nature of the materials (doors filled with sand).

Logistics

Rehabilitation and reconditioning operations (if project concerned by a cleaning/demolition stage) : No

Storage of materials from external supply :

- o On site, on a dedicated area in a covered location

Insurance

Consultation of the technical controller : No

Environmental assessment

Impacts avoided : water, waste, CO2 :

Categories	CO2 avoided (kg)	Water consumption avoided (m3)	Waste avoided (kg)
framework	400	6.4	3464
Lightings	72.4	0.7	137
facades	495	1424	436
Sanitation facilities	125	1.2	93
Exterior carpentry	3664	46	2235
Interior joinery	1910	1261	
Furniture	1426	648	1820
floor coverings	317.5	11	191
Locksmithing - metalwork	557	4	274
TOTAL	8966	880	6793

The reuse operation saved the equivalent of 71,727 kilometers traveled by a small car, or 82 Paris-Nice journeys, 5,869 rectangular bathtubs filled with water and 14 years of household waste for a Frenchman.

More details on the avoided impacts :

Materials	Categories	Quantities	units	CO2	Water	Waste
				Functional avoided (kg)	consumption avoided (kg)	avoided (kg)
Wood frame	framework	145	ml	400	6.4	3464
Aluminum exterior carpentry	Exterior carpentry	33	m ²	3292	42	2089.5
Exterior door - wood / aluminum	Interior joinery	8	U	1910	22	1261
Interior door - wood	Interior joinery	8	U	0	0	0
Wood siding	facades	m ²		495	142	436

Mirror	Furniture	5m ²	71	0.2	53
Metal railings	Locksmithing - metalwork	6ml	557	4	274
Closures and solar protections in PVC (blinds, hinged and sliding shutters, curtains)	Exterior carpentry	14m ²	372	4	146
PVC floors	floor coverings	25.3m ²	247	11	157
Terracotta tiles / tomettes	floor coverings	4.1m ²	70	0.3	34
Workplan	Furniture	3U	52	0.1	46
Bookcase / wooden shelf	1U	42	0.1	37	
Metal cabinet	Furniture	4U	630	13	1141
Lighting - LED Strip	Lightings	4U	72	0.7	137
Chairs	Furniture	10U	234	631	98
RIE technical equipment - Dishwasher	Furniture	1U	133	1.3	215
Technical equipment of RIE - Refrigerator	Furniture	1U	264	3	230
Wash basin	Sanitation facilities	2U	125	1.2	93

Economic assessment

Total cost of reuse : 1 000 €

Reuse quantified in the companies' offers? : No

Purchasing process for reused materials :

- Purchase by the contracting authority from a reuse platform
- Purchase by the company from a reuse platform
- Others

Purchasing process for reused materials :

- Direct via the Plaine Commune associative and SSE networks;
- Via the REAVIE, MOBIUS, MUTO, La Réserve des Arts reuse platforms;
- Via general second-hand networks.

More details on the economic balance :

Assessment of material construction costs at 227€/m² (materials without labour) thanks to reuse against an equivalence of approximately 800€/m² (materials without labour) for an equivalent new construction in terms of quality of materials.

New business model and financial balance :

Economic model based on reuse: the possibility of a long design + gleaming time allows a rapid EXE + construction phase (not dependent on delivery times, the materials for reuse are already on site)

Communication

Communication on the process : Yes

If so, please specify :

Publication of a press kit, publication on our Instagram page gathering 2,500 followers.

Project visit : Yes

Social economy

Social economy and professional integration :

The LAO cooperative is an integral part of the ESS, in accordance with its horizontal functioning and its social commitment. Internal self-construction was an opportunity to self-train employees and a significant time of conviviality around the unifying act of building.

Circular design

Responsible consumption :

Reuse was integrated from the ESQ phase and a few months of monitoring allowed us to gather the materials. The entire layout is also reused or second-hand.

Functionality economy :

The temporary occupation of the site involved the design of a completely removable building with a view to moving.

The employees (current users) have all been involved in the construction of the building: this involvement ensures respect for the work and fights against premature degradation.

Eco-design :

Building designed to:

- Maximize reuse;
- Serve the uses of the company as closely as possible (Assistance to project management);
- Be fully removable for moving.

Sustainable supply :

The new materials purchased are all biosourced. Wood wool insulation (CF) and French timber from sustainably managed forests (PEFC).

Recycling :

Design so as not to produce waste: adaptive layouts and use of scraps from the workshop.

Additional information (PDF documents)

Websites

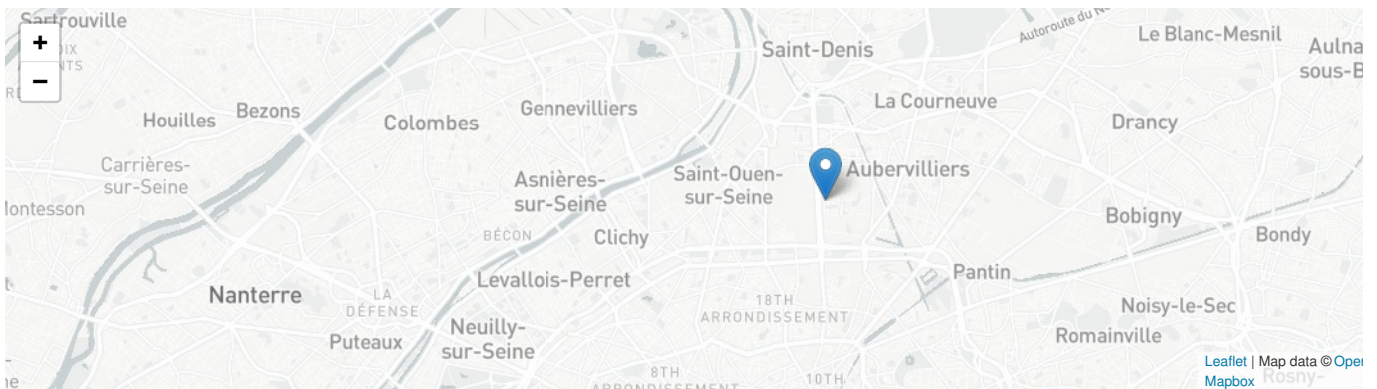
<https://www.lao-scop.com/projets/atelier-abprod-lao>

Contest

Reasons for participating in the competition(s)

This building was designed and built with maximum reuse in mind. It includes 55% of reused materials from the nearby Ile-de-France region, i.e. a total of 4.4 tonnes of materials saved from the dumpster, and therefore as many materials that did not need to be produced.

Self-built by the craftsmen of LAO SCOP, designed by its architects, this place of work and conviviality is intended to be an example of our approach: an eco-construction process with particular care given to users.



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