The Louvre Post Office

by La Poste Immobilier / 2022-03-22 00:00:00 / France / 2021 / FR

Primary energy need :

89.97 kWhep/m².an

(Calculation method : RT 2012)

ENERGY CONSUMPTION

Economical building — *Building*

- *< 50* A
- *51 à 90* B
- *91 à 150* C
- *151 à 230* D
- *231 à 330* E
- *331 à 450* F
- *> 450* G

Energy-intensive building

Building

Building Type : Other building
Construction Year : 1888
Delivery year : 2022
Address 1 - street : 50 rue du louvre 75001 PARIS, France
Climate zone : [CsC] Interior Mediterranean - Mild & dry summer.

Net Floor Area : 30 900 m² SHON RT
Construction/refurbishment cost : 150 000 000 €
Cost/m2 : 4854.37 €/m²

Certifications :

Proposed by :

General information

> La Poste du Louvre, a completely renovated site, is the symbol of a human and digital Post Office, citizen and conqueror, committed to all.

— Philippe Wahl Chairman and CEO of La Poste Group

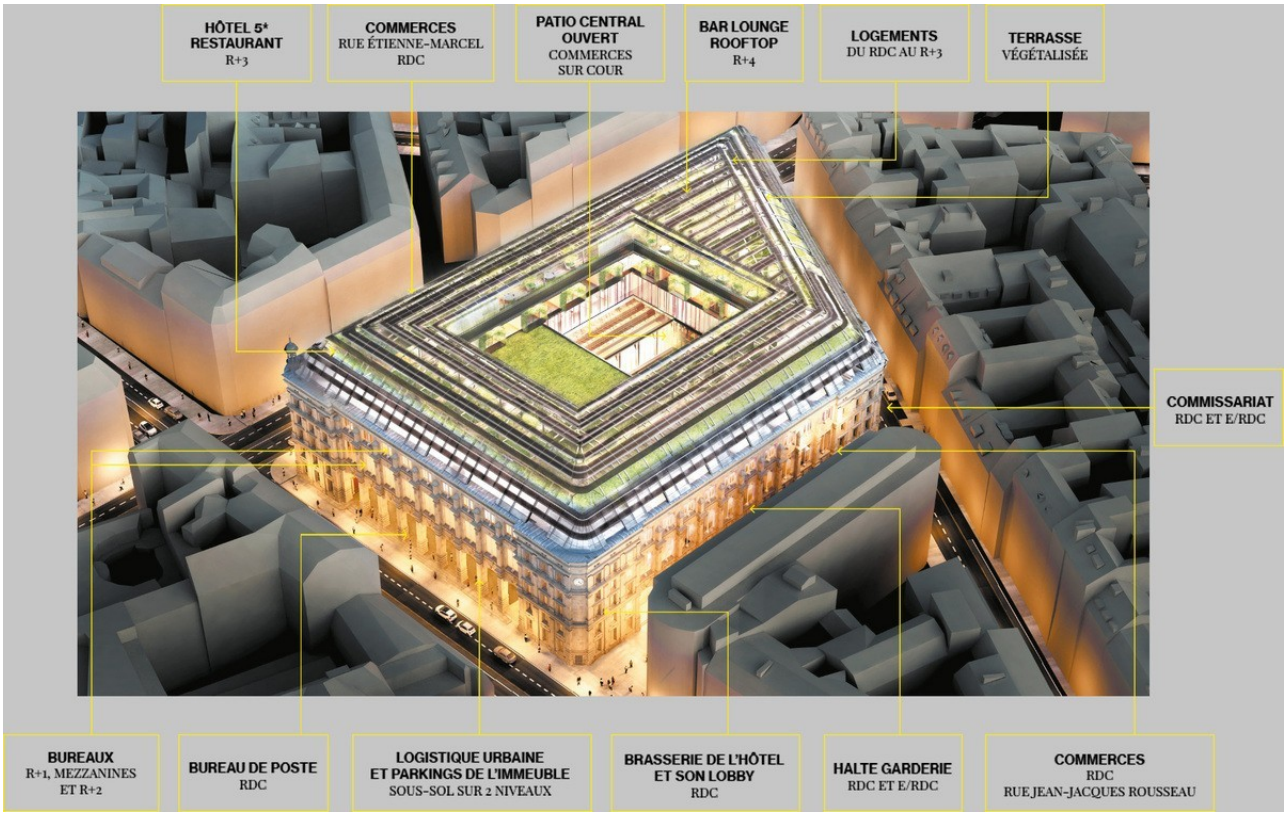
This transformation project consists of **the renovation of a key institution** in the centre of Paris, the Louvre Post Office. In addition to its emblematic appearance, particular attention has been paid to several key sustainable building issues:

- Renovating to improve the energy performance of this old building, while preserving the heritage footprint of the site
- Greening the building in a very mineral urban environment
- Retain the flexibility of the original building's uses
- Encouraging a local urban logistics

Taking these elements into account reflects the desire to design a building that is both sustainable and modern. It is i**n line with the ambitious sustainable development policy of La Poste Group**, which wants to make its contribution by improving the energy performance of the buildings it owns and by promoting soft mobility within its activities (see the case study of the urban logistics zone in Toulouse on this topic). Poste Immo, the group's subsidiary in charge of its real estate assets, is implementing this strategy as a project manager. This includes the energy renovation of the group's buildings, such as the Poste du Louvre. This project is the result of **several years of collaboration between the various departments of Poste Immo** to optimise the sustainability of the building, while meeting the needs of the various users who visit, work in or simply pass through it every day.

A mixed-use building

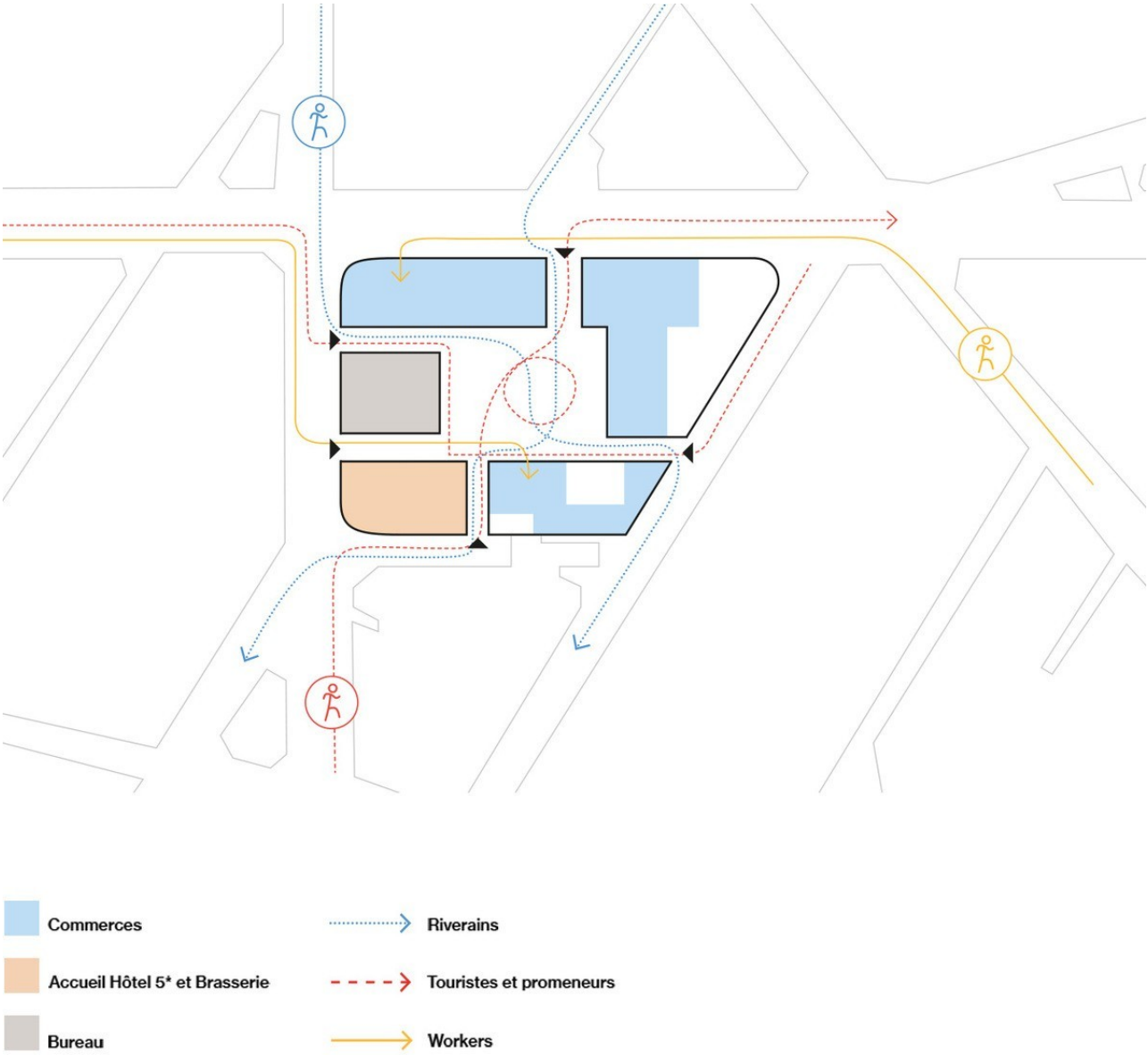
La Poste du Louvre brings together a variety of activities in a single building in order **to offer a place of life and services accessible to all** : the post office, shops, a nursery, a police station, a coworking space, housing, a hotel, a panoramic terrace and an urban logistics hub.



This mix of uses is at the heart of the renovation project, as the architect Dominique Perrault points out:

> “The biggest challenge is the mix, the proximity and the diversity of uses. There are 11 different uses that fit into the same block. It's a very large building, which is more reminiscent of the morphology of southern Manhattan, i.e. large stone and metal blocks, than of Haussmannian urbanism.”

Pleasant spaces of exchange embellish the site **to encourage interactions between users**: a lively central patio of 1400m², a rooftop with a planted terrace and a lounge bar, a place of passage for residents, tourists and walkers that offers activities such as cultural or artistic events...



In addition to encouraging interaction and social cohesion, designing mixed-use buildings is part of **a sustainable approach to reducing transport-related emissions**. In addition, many areas of the building, such as the office spaces, are modular and **can therefore change use in the future**.

Improved energy performance

Several actions taken during the project have improved the energy performance of the building.

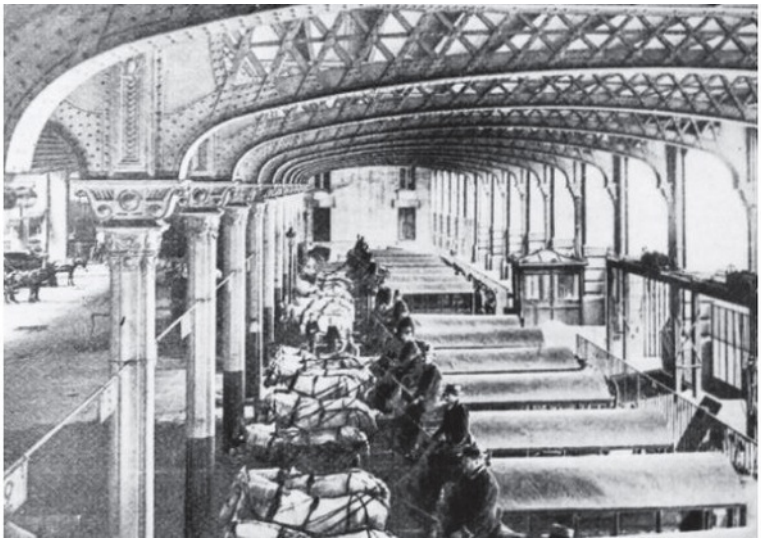
The project managers have taken the decision **to preserve the stone façade of the original building in order to ensure thermal inertia**. In addition, a high performance insulation from the inside, with continuity of the floor wall, was undertaken.

In terms of energy systems, **a pergola for the production of renewable energy** was built on the roof of the building, which allows the energy and hot water needs of the spaces to be partially met. Photovoltaic panels contribute, for example, to the power supply of the 59 parking spaces equipped with charging stations. The rest of the energy consumption is provided by **the connection of the heating and cooling systems to the urban networks**.

Finally, **the bioclimatic design of the building limits energy requirements**. The building has been designed in height, with an interior patio that favours natural light. The glazing is adapted to the function of the premises and their orientation, as well as to the typology of the facade. For example, the windows on the stone façades have been set back to be partially protected from the sun. The most exposed facades are protected by external metal mesh panels, and the sawtooth Shed windows by external blinds. Finally, the green roof limits overheating and the pergola shades the roof terrace.

A renovation with heritage value

The Louvre Post Office was **the largest mail distribution centre in France and a landmark of the industrial architecture of the Third Republic**. The building dates from 1887 and was designed by the architect Julien Gaudet under the name of the Ministry of Post and Telegraphs.



— Photo credits: Forum

At the end of this renovation project, **the steel structure (frameworks, capitals, porticos and vaults) was saved and restored to enhance this industrial heritage**. Additionally, the elements of the original building which already carried the promises of an ecological building were preserved: the promotion of natural ventilation, the large glass roof for the luminosity and comfort of the users, and the stone façade for thermal inertia.

The enhancement of this heritage has enabled the project to be **awarded the Geste d'Or in November 2021 in the Built Heritage category**.

A hub for urban logistics

As part of the local logistics approach adopted by La Poste group, 1,000m² of the building's basement is dedicated to urban logistics. This hub is operated by Colissimo and thus **enables carbon-free deliveries to be made in the district**. Right in the centre of the capital, this platform meets a need to improve air quality and the comfort of city dwellers.

Moreover, as these activities were previously located on the ground floor of the building, their relocation to the basement has freed up space for other uses. This action is part of a more global strategy to increase the density of large French cities in order to stop the growing artificialization of land.

A green building

From an environmental point of view, a process of greening the roof terraces was also taken into account in the renovation strategy for this heritage site. Thus, thanks to a green roof space with planters (43.35% of the roof surface) and numerous green balconies and terraces, 23% of the surface of the plot is now green. This aspect has been implemented to promote the natural cooling of the building and its environment, in a very mineral area that is prey to urban heat islands. It also contributes to the comfort of the building's users.

The garden on the terrace was planted with non-invasive and non-allergenic species that require little watering. The landscape architect worked with the ecologist who studied the challenges and opportunities of the site to optimise the planting.

—

Photo credits: Philippe Blayo

See more details about this project

https://www.lapostedulouvre.fr/

Photo credit

Video La Poste du Louvre seen from the sky: Elise Robaglia
Photos of the old building: Forum
Photos of the interior of the renovated building and the terrace: Philippe Blayo
Photos of the exterior of the building: Florent Michel

Stakeholders

Contractor

Name : SCI Tertiaire Mixte Poste Immo
Contact : Nicolas Fournel - Chef de projet

Construction Manager

Name : Dominique Perrault Architecture
Contact : Mme Caterina Gatti - Cheffe de projet
https://www.perraultarchitecture.com/fr/homepage/

Stakeholders

Function : Assistance to the Contracting Authority

ARTELIA

Mme Fanny Duret - Cheffe de projet

AMO follow DD certification

Function : Assistance to the Contracting Authority

SETEC

Technique Project management assistance

Function : Assistance to the Contracting Authority

JLL

Product Project management assistance

Function : Construction Manager

Après la pluie

Mme Anne-Sophie Verriest - paysagiste

Landscape project management

Function : Construction Manager

Lagneau

Heritage project management

Function : Construction Manager

Edeis

Mme Amanda Jonhson (cheffe de projet certifications) et Mr Stéphane Cazin (chef de projet)

Technical and environmental engineering office project management

---

Function : Construction Manager

CALQ

Mme Clara Benarroch (conductrice travaux)

Execution Project management

Function : Construction Manager

Cabinet Lamoureux

Mr Alexandre Krieger - acousticien

Acoustic project management

Function : Construction Manager

RPO

Economist project management

Function : Company

Bouygues Bâtiments

General Enterprise

Function : Others

Socotec

Technical controller

Function : Others

Qualiconsult

CSPS

Function : Assistance to the Contracting Authority

Grahal

Patrimonial expert

Function : Thermal consultancy agency

Terrell

Covered Court engineering office

Function : Manufacturer

Rockwool

https://www.rockwool.com/fr/

Energy

Energy consumption

Primary energy need : 89,97 kWhep/m^2.an

Primary energy need for standard building : 162,01 kWhep/m^2.an

Calculation method : RT 2012

Envelope performance

Envelope U-Value : 0,78 $W.m^{-2}.K^{-1}$

More information :
The stone facade favours thermal inertia.
Insulation from the outside on the roof through the green terrace.
Insulation from the inside for walls and floors.

Renewables & systems

Systems

Heating system :
- Urban network

Hot water system :
- Urban network
- Solar Thermal

Cooling system :
- Urban network

Ventilation system :
- Natural ventilation

Renewable systems :
- Solar photovoltaic

Other information on HVAC :
Heat production thanks to the urban network: Power 1900 kW
Production of DHW thanks to a solar DHW installation (400 m² of panels on the terrace) associated with the urban network as a backup.
Cold production thanks to the urban network: Power: 2500 kW
Photovoltaic solar system (1200 m² of panels on the terrace according to the architect's plans)

1200m2 of photovoltaic panels on the terrace
+ 400m2 of panels on the terrace for the production of DHW

Environment

Urban environment

La Poste du Louvre is located in the heart of downtown Paris, in the 1st arrondissement. It is a district imbued with the symbolic architecture of the capital which is intended to be protected and preserved. Several of the most emblematic Parisian monuments are also nearby.

It is also a very mineral environment, swarming, with a lot of passage, between residents, tourists and professionals. Plots in this area are therefore in high demand for various activities.

The area is well served by public transport and cycle paths have been developed.

The urban environment tends to favor mixed-use operations, densification, soft mobility and revegetation; while respecting the architectural

constraints.

Products

Product

Après la pluie

https://www.alp-paysagistes.fr/

Product category :

Costs

Construction and exploitation costs

Total cost of the building : 150 000 000 €

Circular Economy

Reuse : same function or different function

For each batch : Reused Materials / Products / Equipments :

Several materials were reused:

- Cloakroom lockers from the existing post office were used during construction
- The marble of the existing post office was reused
- Cellular beams were reused as temporary bracing

Contest

Date Export : 20230316154610