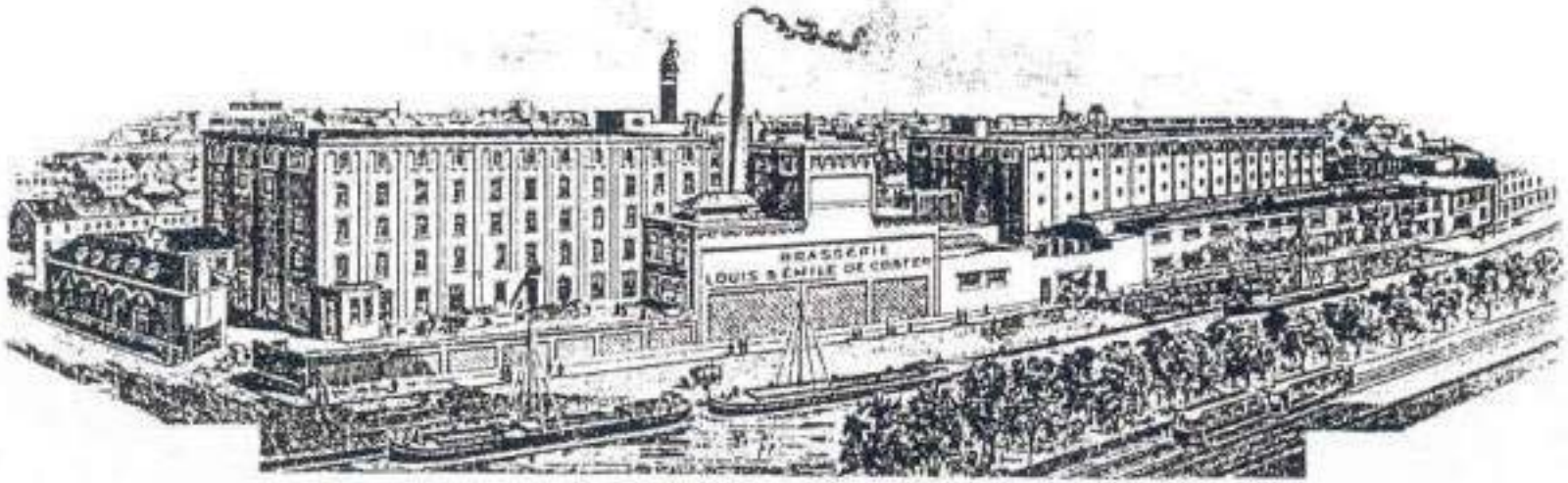

Belle-vue 2.0



GUEUZE ET SPECIALE

LAMBIC FERMENTATION HAUTE

LOUIS & EMILE DE COSTER

BRASSERIE LE "CORNET DE POSTE"
BROUWERIJ "DE POST HOORN"
TEL: 21.27.62 - 21.59.63

BRUSSEL
HENEGOUWENKAAI, 33 TOT 65
HAND. REG BRUSSEL 2580

BRUXELLES
QUAI DU HANIAUT 33 A 65
REG. DU COMM. BRUX. 2580

architect and building physics
A2M

program
14 logements, 150 rooms hotel,
& 1 art museum

location
Molenbeek, Brussels,
Belgium

client
Nelson Canal, Hamilton Canal

certification
passive certified (housing block)
very low energy (hotel renovation)
BATEX Award 2009

construction company
Democo

technical engineers
CreaTec

structural engineers
Stubeco

surface area
21 170ft² + 87 140 ft² + 12 690 ft²
= 121 000 ft²

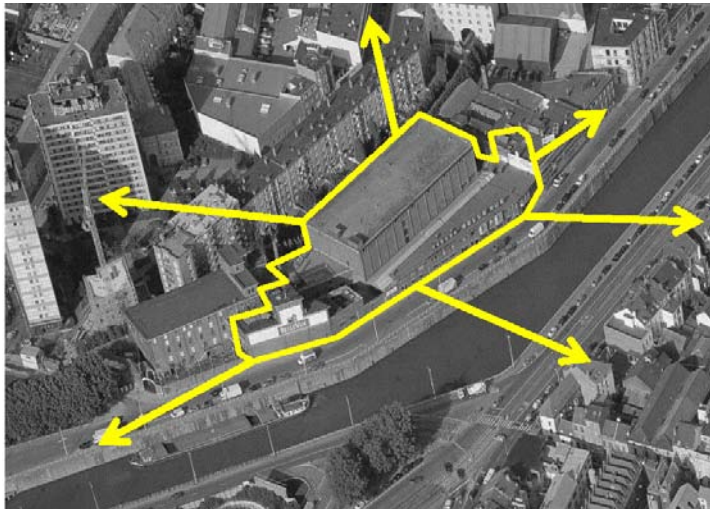
execution time (design+construction)
2010-2013
(construction = 18 months)

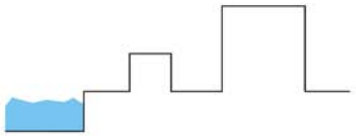
1 History

The building of the Belle-Vue brewery is one of the best known reminders of the industrial past of Brussels. This remarkable specimen of heritage buildings dates from 1916. The brewery known as the “Cornet de Poste” [Post Cornet] was built by the brothers Louis and Emile de Coster against the canal for practical reasons: to brew beer where the grain arrived, i.e. in the immediate vicinity of the waterway. It was the great age of “gueuze beer” beer in Brussels. The brewery, which loomed large on the Brussels horizon, was subsequently taken over by De Boeck in 1966, and then under the name of Belle-Vue by Vanden Stock in 1969. In its heyday in 1980, Belle-Vue employed some 500 people. In 1990, Belle-Vue acquired a stake in Interbrew (Inbev Belgium). The activities would be moved to Leuven in 2005.

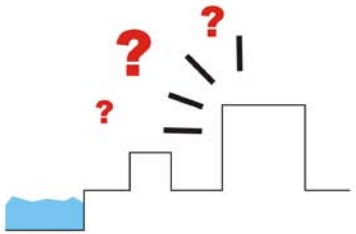
In 2009, a group of private investors (Nelson Canal) and the Municipality of Molenbeek acquired the site with an ambitious purpose sprung from the shared determination to use this building to new ends and secure a future for it embedded in the renewal of this district of Brussels. The aim was to deploy an innovative project that combined urban renewal, the showcasing of industrial and historical heritage, energy performance (“very low energy” and “exemplary building”), integration into society and the world of work, and the promotion of tourism for one of the oldest prospects of Brussels: the canal.

The project combines hotel accommodation, housing and spare-time activities. A 150-room, “very low energy” hotel was constructed in the main building (the former warehouse). The German Meininger hotel group introduced its hotel concept for young people and young families on the premises.

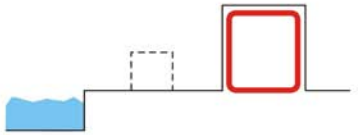




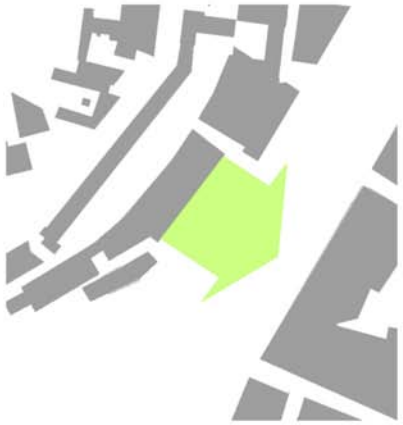
existing situation

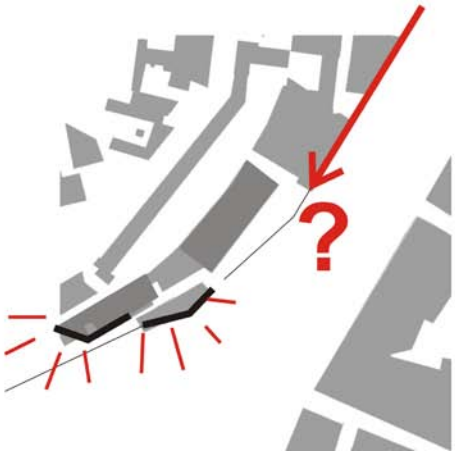


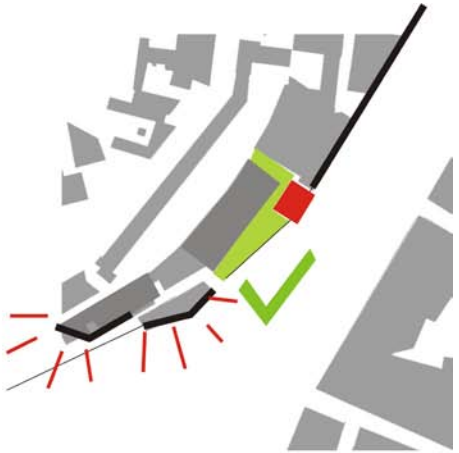
visibility ? public space ?

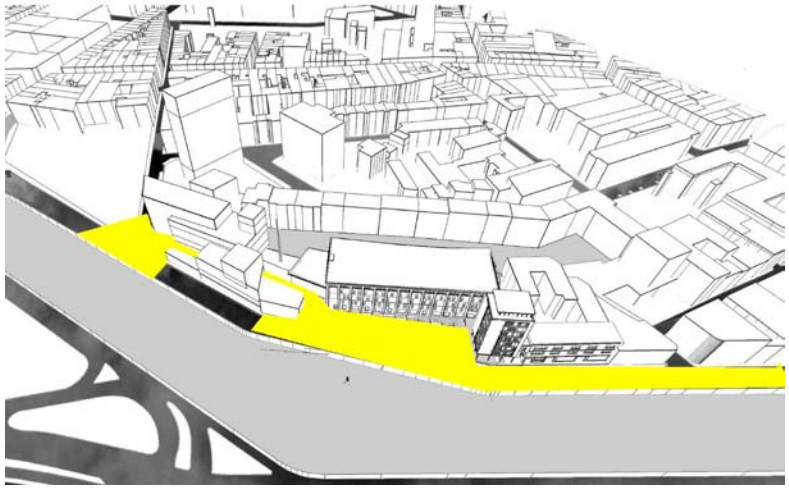


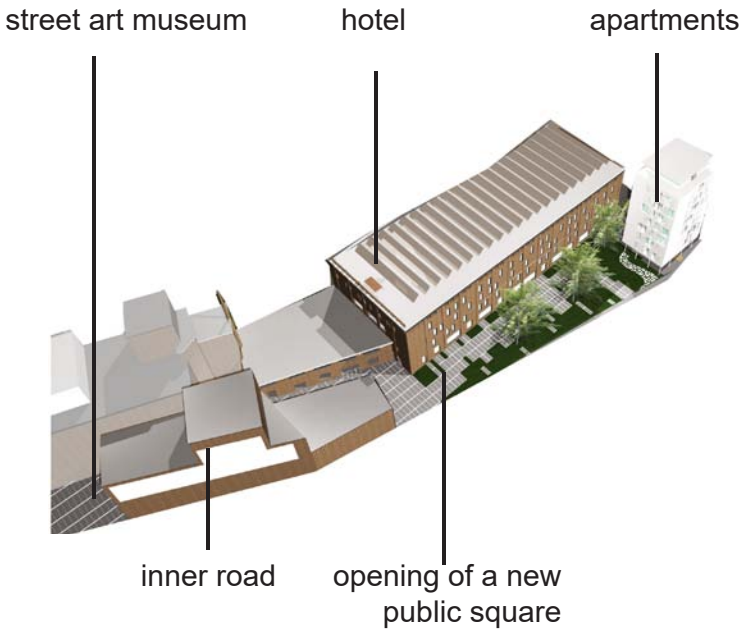
visual openings











2 transformation

The two buildings which straddle the facade of the main body, coupled with the adjacent buildings, generate an interior space facing the canal. Largely open and accessible however, the project accentuates this game between interiority bordering the building and the accessibility to the public space. The area in front of the building opens up this interior whilst also providing a more intimate space bordering the main road. It also puts into perspective the main warehouse of the Bellevue site by connecting it to the canal.

Similarly, the street between the main body and the front building, inherited from the previous industrial use of the site, plays on this re-articulation of the vacuum through a new dynamic by linking the Bellevue project to the one currently developed by the Brussels Commune. Based on the heritage of the site, the project ensures an interiority proper to the heart of the building block, while also making the most of this insulated situation near the canal and the opening up to the public space.


before ...
Image © 2016 DigitalGlobe


... after

before ...

... after

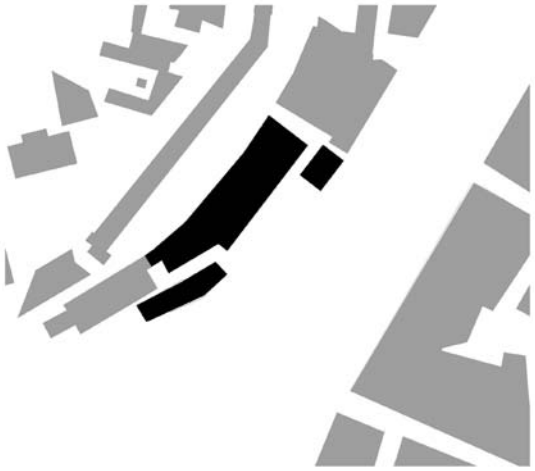
Nothing had really changed....

before ...

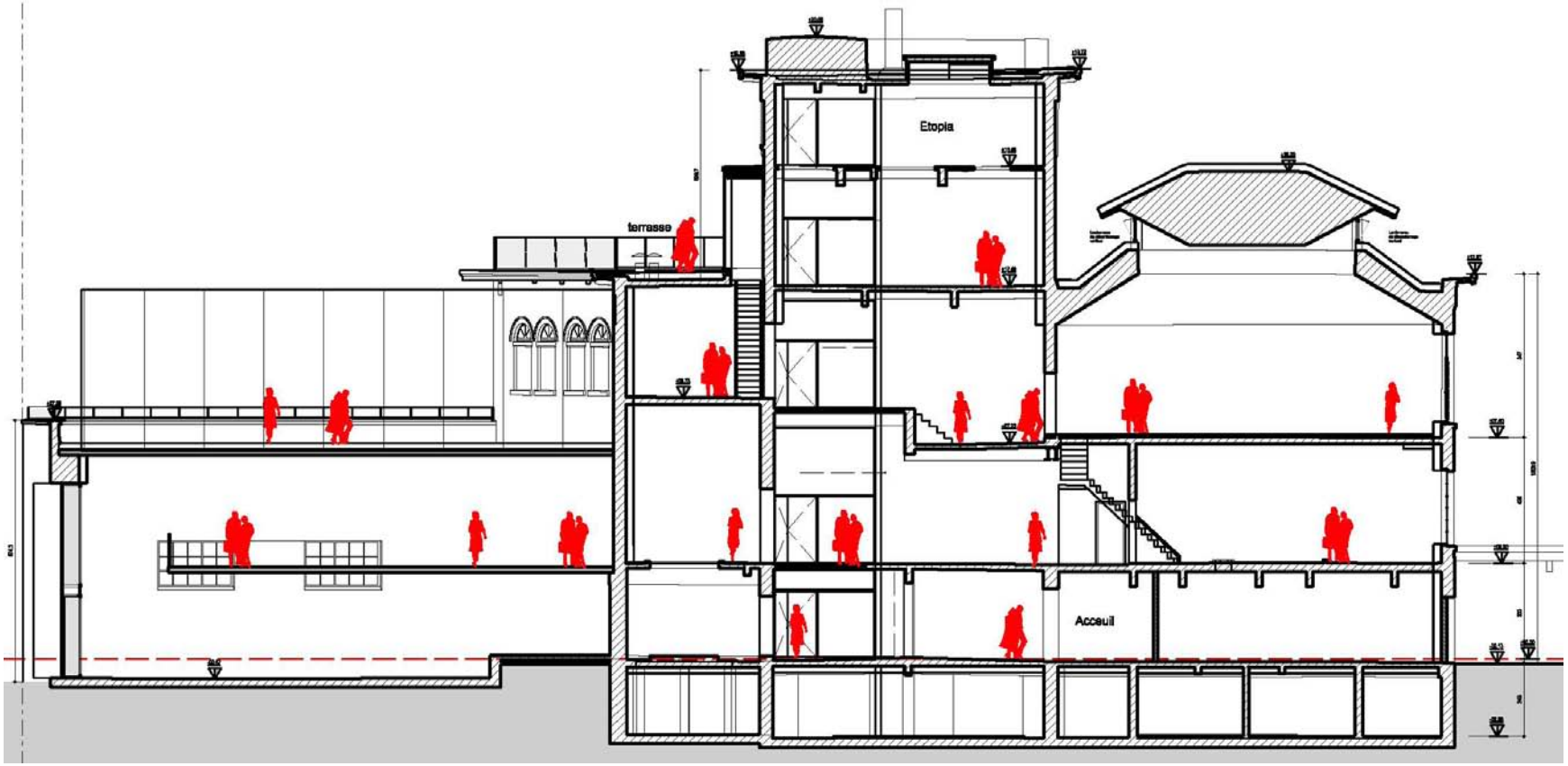

MEININGER HOTEL
A VENDRE : 2 PENTHOUSES + PARK
... after

before ...

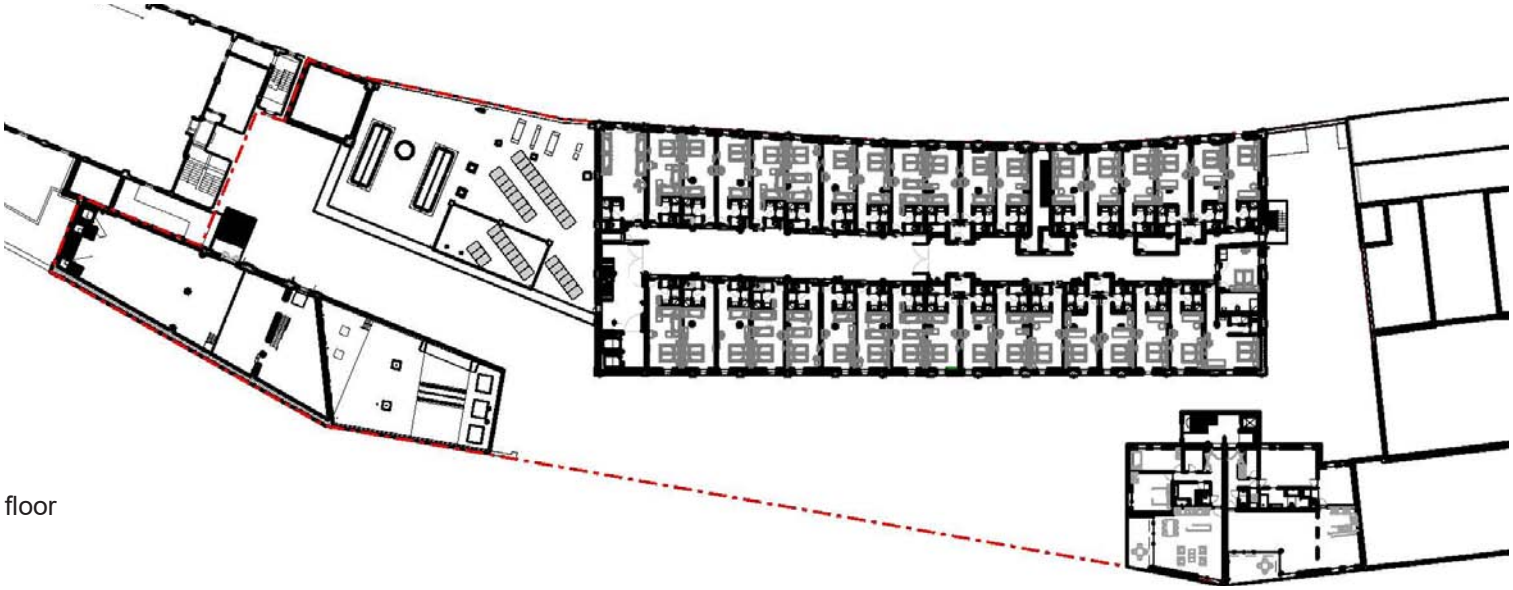

... after
Nearly nothing had really changed....



site plan



section



floor

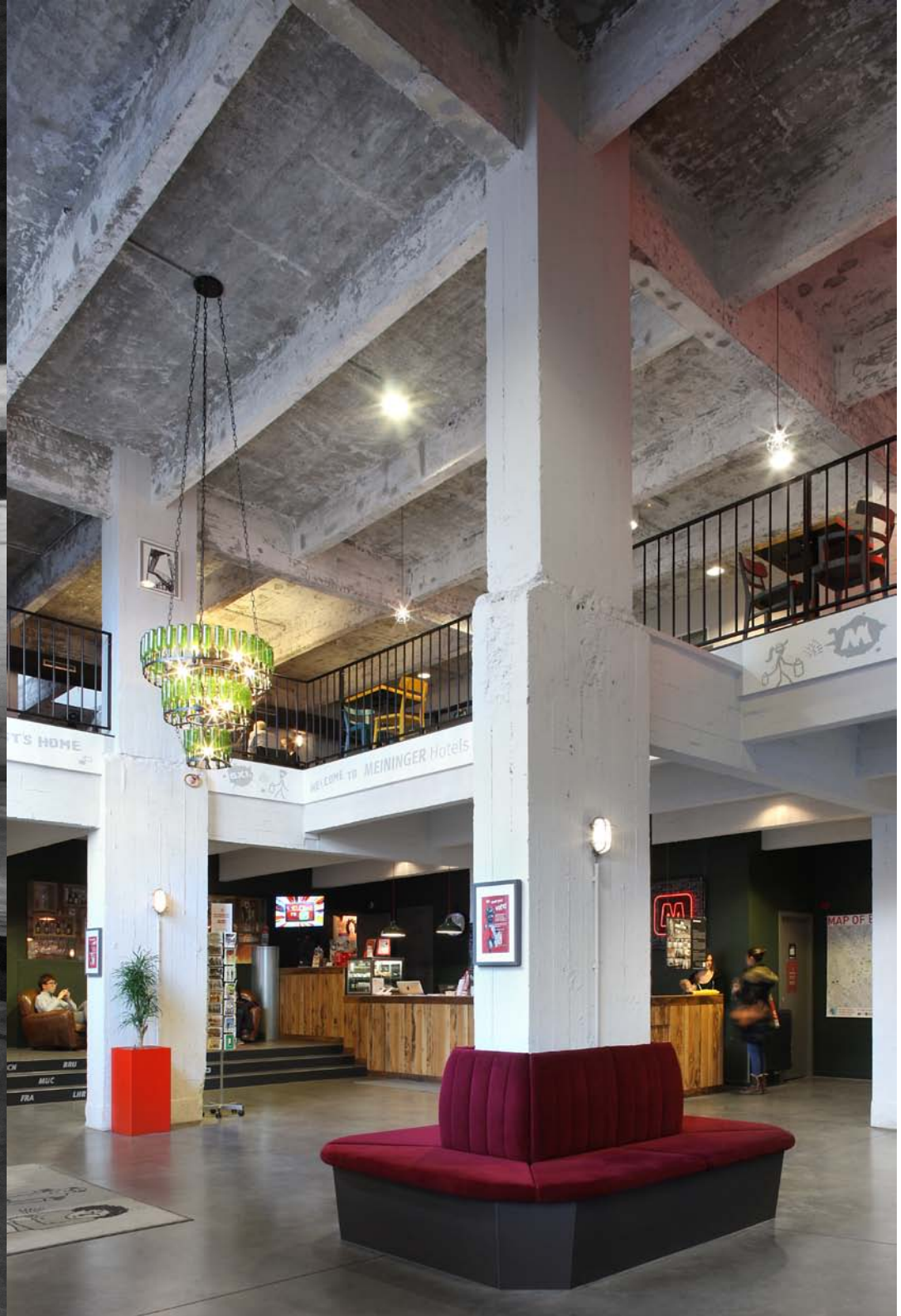
3 equity

This work between preserving the intimacy of the project and its opening up onto the public space has a particular relevance in the development of Molenbeek. This set-up allows public facilities to be situated in a building block bordered with houses, to participate in the life of the neighborhood. The implantation of the white housing block with the rest of the surroundings delimits a significant point in the building front along the canal.

The hotel itself employs social workers and allows budget travellors to find accomodation in the centre of the city in very comfortable conditions. Its influence permeates beyond its sole location. Indeed, the hotel itself works with other local shops and service providers and through it's internal spatial arrangement and external public space offering, forms an integral part of the neighborhood atmosphere.

ground floor


before ...

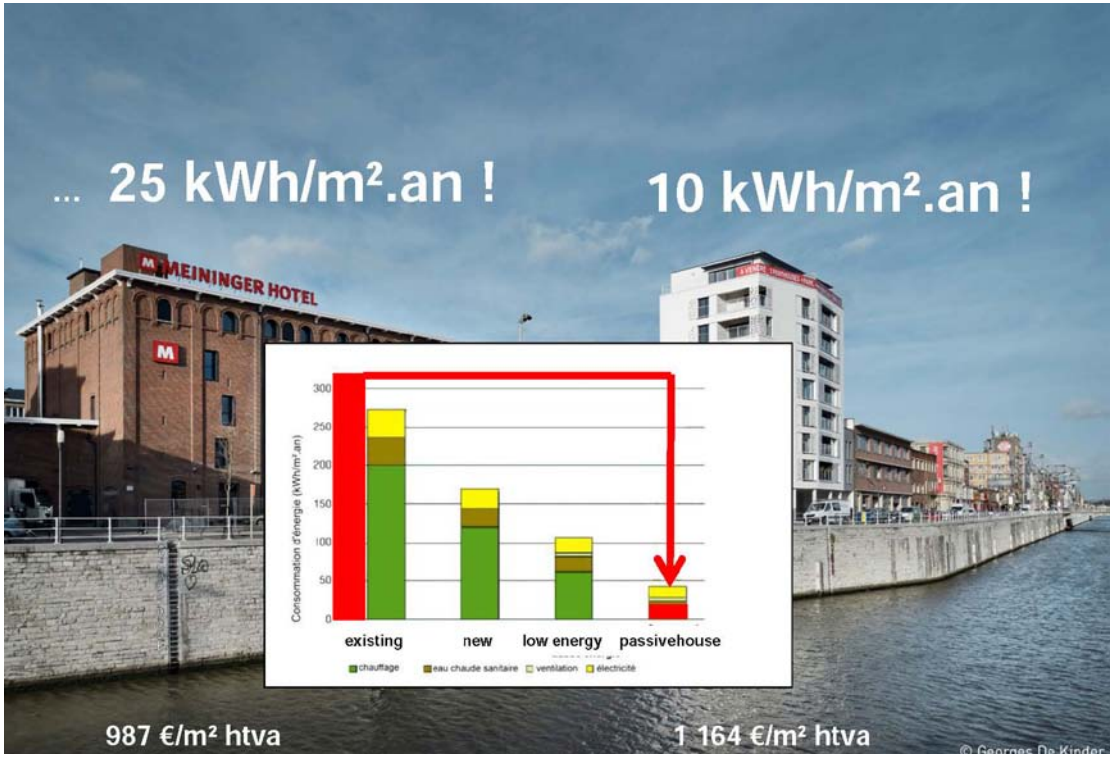

WELCOME TO MEININGER Hotels


... after

4 Sustainability

The project is a “very low energy” standard renovation, as such it will consume about 50% less than a new building, and about 90% less than the existing building. To achieve this, we use “passive” strategies. Due to high thermal isolation users have a regular temperature for all surfaces and the high level air-tightness (0.4 v / h) means that no drafts are felt, even when close to the window. Next, through a high performance heat recovery ventilation system combined with a passive cooling system (adiabatic), all rooms have 100% fresh air, fresh and at the right temperature without further need to cool/ heat it and anyway, we can always open the windows ! Finally, the use of environmentally friendly materials and finishes containing no formaldehyde emissions help ensure healthy indoor air.

The project won the 2009 call for Exemplary Buildings organized by the Brussels Region. This label is the BatEx. To win such an award the project has to be of high energetic performance, use materials with low environmental impact, have a high architectural value and demonstrate a simplicity in implemented solutions such that they are easily reproduced and affordable. The BatEx projects are representative of the sustainable development policy of the Brussels Region. They are the subject of regular visits and serve as reference for the market.



before ...

... in construction

Exemplary building

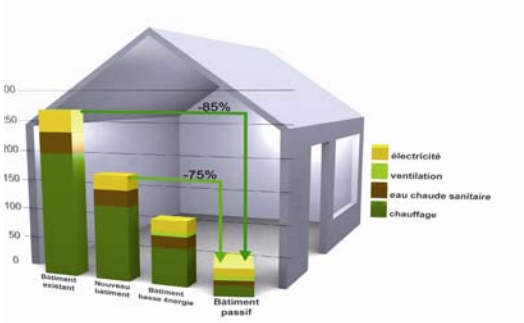
The project is a “very low energy” renovation, i.e. it consumes about 50% less energy than a new building, and about 90% less than the existing building, through the use of “passive” strategies: “substantial thermal insulation (ca. 20 cm), very high level air tightness (0.4 vol/h), and efficient ventilation with heat recovery.

The project is a winner of the exemplary project call by the Brussels Region that confers the “BatEx” label [French acronym for “exemplary building”]. In other words, the project is highly energy efficient, uses materials with low environmental impact, and has high architectural value, whilst the solutions deployed are simple, reproducible and affordable. BatEx projects are indicative of the Brussels Region’s sustainable development policy. They are visited regularly and serve as a reference for the market.

From 1916 to 2013

From 300 kWh/m²/year to 29 kWh/m²/year in heating needs

From 520 tonnes CO2 emissions/year to 115 tonnes CO2 emissions/year



Thermal insulation

A conventional building is insulated with ca. 7 cm of insulating material. Here, 20 cm of cellulose-based insulation is installed from the inside.

Comfort : In a standard building, there is a temperature imbalance between the interior walls and the façade due to insufficient insulation. Thanks to an insulation of the façade equivalent to that of a “passive house,” the temperature at the Belle-Vue is balanced for all the walls.

Air tightness

It is important to secure the air tightness of the facades, i.e. to caulk properly the connections between the frames and the walls so as to avoid air leakage or infiltration of air that is too hot or too cold.

This means that 40% of the interior volume is renewed by leaks in one hour. The average existing building is not air tight, and air is renewed at a rate of 7.8 vol/h. Such buildings are real sieves.

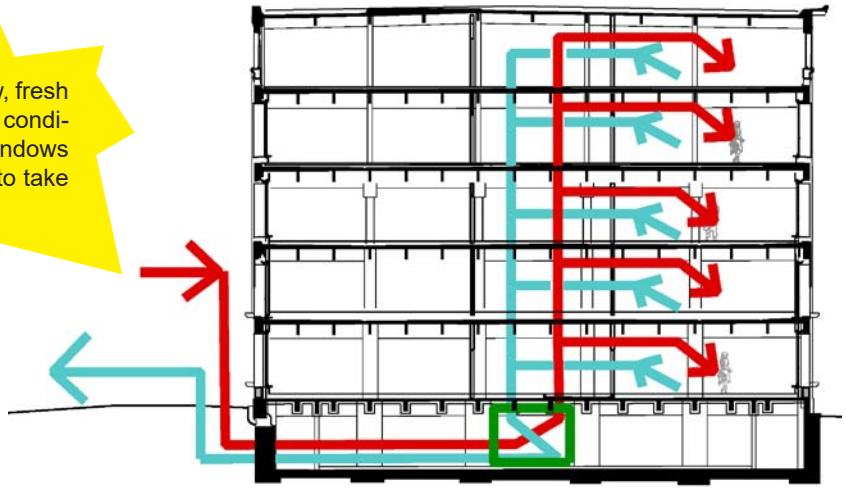
Comfort : Conventional buildings have draughts because connections are not sealed properly.

In case of the Belle-Vue, the air tightness level is as efficient as that of “passive houses,” so is no draught, even when standing against the window.

Ventilation

All the rooms are constantly ventilated with fresh air thanks to a mechanical ventilation system. Conversely, once air is pulsed in the room, it is then recovered through the bathroom then sent to an exchanger were 75% of the heat is recovered. This makes it possible to preheat air that comes into the building naturally, i.e. the air is not conditioned!

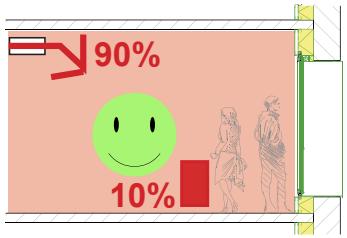
Comfort : All the rooms get 100% new, fresh air at the right temperature, without being conditioned. There is no need to open the windows to get fresh air, but they can be opened to take in the view.



Heating

Thanks to the ventilation system, heating is provided by **air** naturally and free of charge. The remaining 10% is provided by an extra **radiator** in each room.

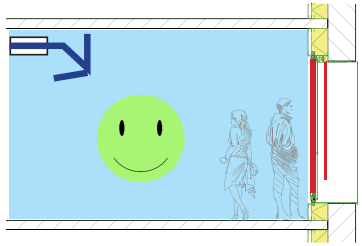
Heating savings thus exceed €120,000 per year whilst avoiding emissions of over 415 tonnes per year.



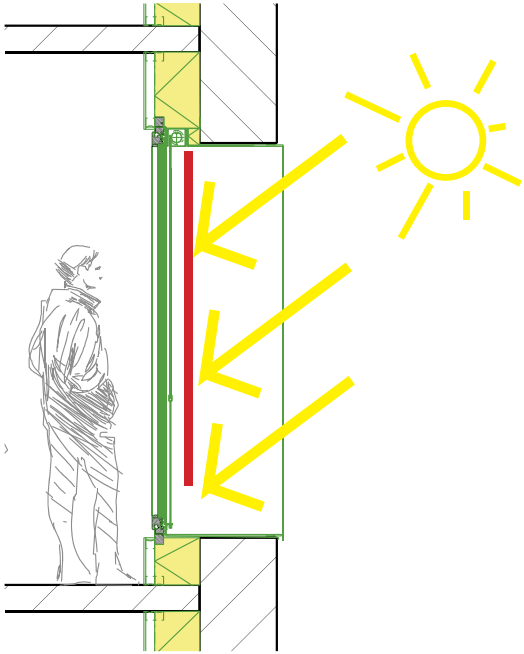
Exterior blinds

To avoid overheating in the rooms during the summer, an intelligent management system checks the temperature of the rooms and lowers the external blinds if there is too much sun. The aim is to limit external inputs.

These blinds can nonetheless be raised if so wished using a **switch** located next to each window.



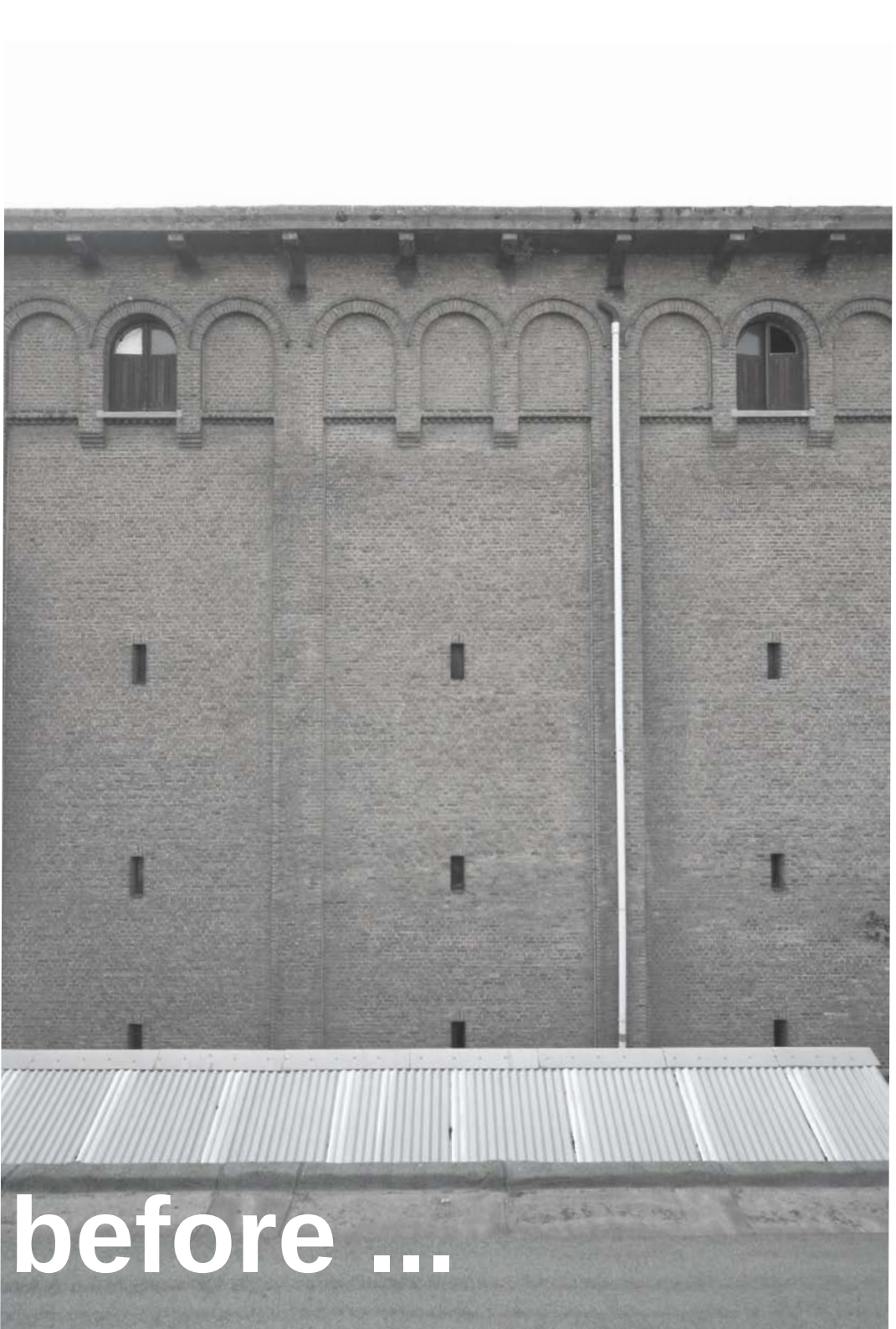
Comfort : During intense heat in the summer, the interior temperature is kept cool if the windows are not opened and if the automatically lowered blinds are left down.

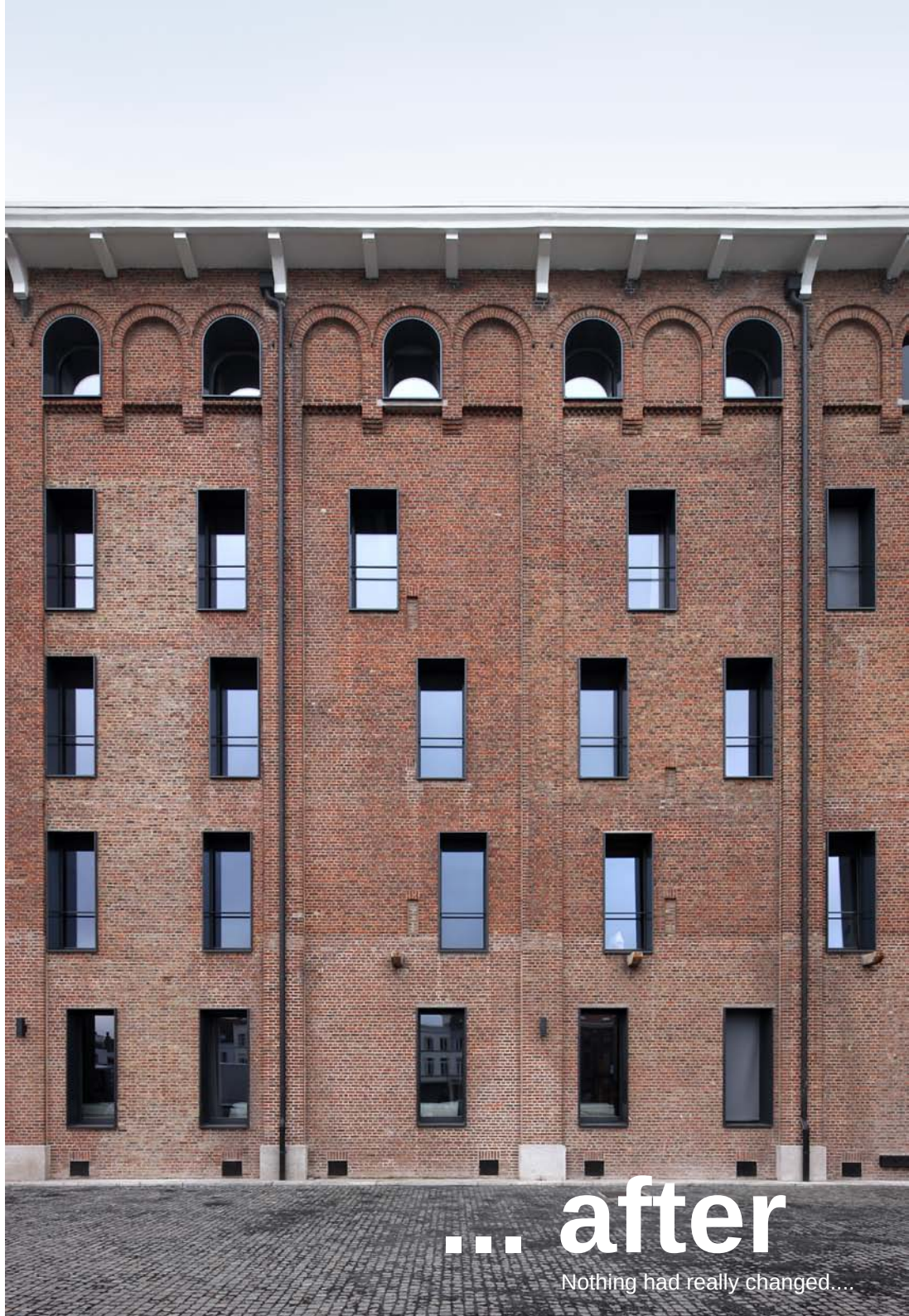


Cooling

In summer, the naturally cooled air is pulsed into the rooms. The air is cooled by water vapour pulsed in the central ventilation system – a process that is known as “adiabatic” cooling.

It is one of the “passive cooling strategies” used in “passive buildings,” and not air conditioning.


before ...


... after
Nothing had really changed....

museum

before ...

... after

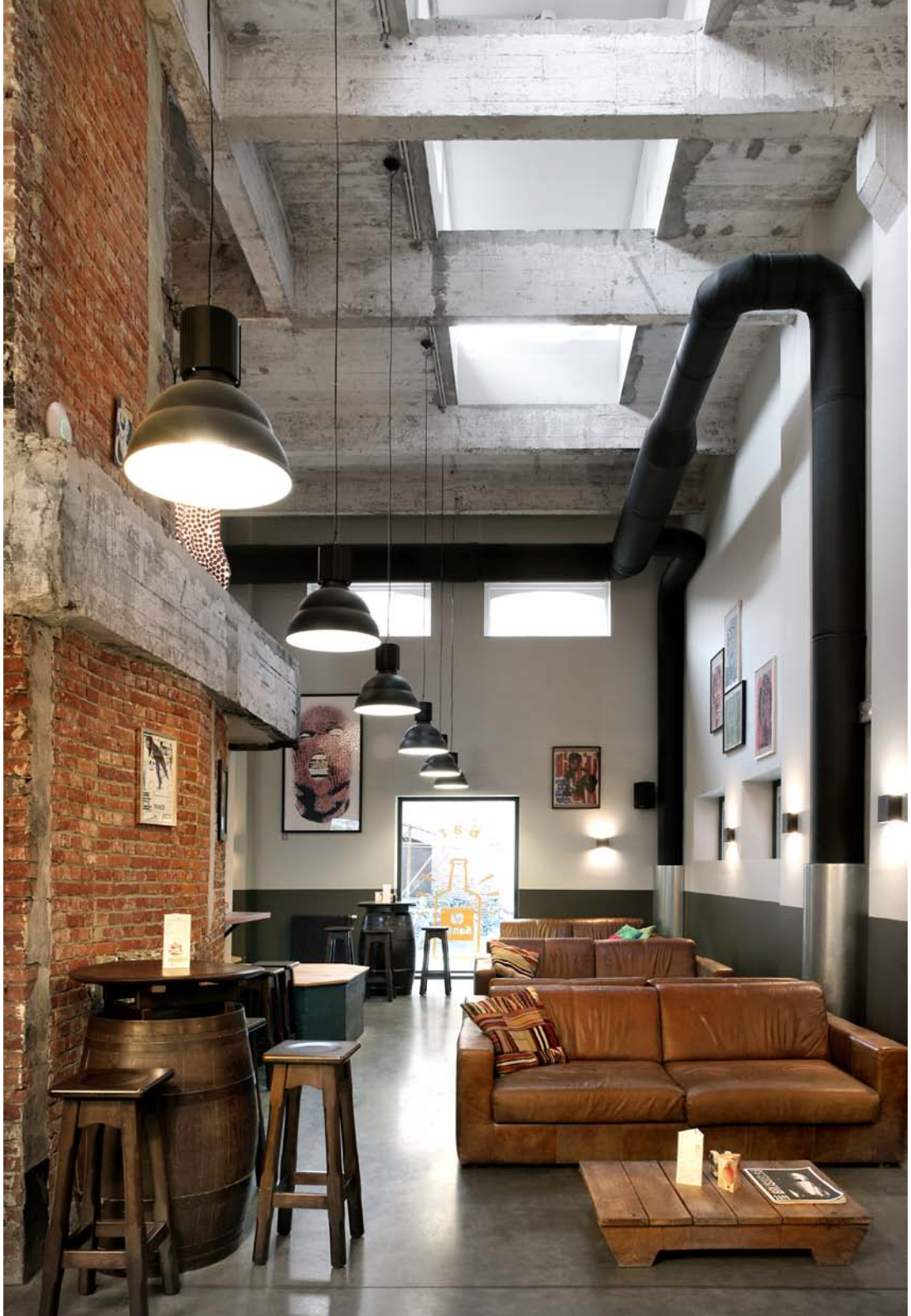
5 regeneration

The size and multifunctional program of the project associated with the conversion nature of an industrial site and its urban restructuring of the area is very complex.

Important work was carried out so as to integrate the hotel functions in the central warehouse and reassign specific areas for meeting spaces and lobby areas. The entire project (hotel, museum and accommodation) plays with different levels of façade openings making major functions identifiable from the street. These random openings in the warehouse emphasize its linearity while the regular openings found in the tower housing the apartments mark its residential function. This regularity is built into the whole by the more detailed perforations in the sunscreens, the pattern being a variation on oriental latticework.

While integrating various uses, the project ensures an ease of use and optimal comfort to everyone. The readability of each function and accessibility to the buildings is the first requirement. Beyond the ergonomic design of the spaces, interior comfort is ensured by the building's high energy performance.

The building of the Belle-Vue brewery is one of the best known reminders of the industrial past of Brussels. A group of private investors (Nelson Canal) and the Municipality of Molenbeek acquired the site with an ambitious purpose sprung from the shared determination to use this building to new ends and secure a future for it embedded in the renewal of this district. The project combines hotel accommodation, housing and spare-time activities. Now finished, the success is absolute, as attested by more than 90% occupancy of the hotel and 40.000 visitors since the opening of the Mima in April 2016.




hostel

housing


MEININGER HOTEL


A VENDRE : 2 PENTHOUSES + PARK.
EXTRA VEDETT BLOND