



# Antwerp-Simons

51 apartments, Hélicoptère Fundamental School and childcare facility  
Construction and renovation, all in passive standard



2004: wasteland surrounds the dilapidated Héliport school buildings.



2015: due to its redefined volumes and urban precision, it has all come back to life.

## an urban challenge

Set up in a rapidly changing densely populated neighbourhood, the Antwerp-Simons project intelligently develops into a complex program while harmoniously integrating into the existing context.

In effect, this project offers a fundamental school of 490 students, 51 apartments of various sizes, a building for the ONE, and a childcare facility. This heterogeneous program is integrated into both new constructions and an existing building.

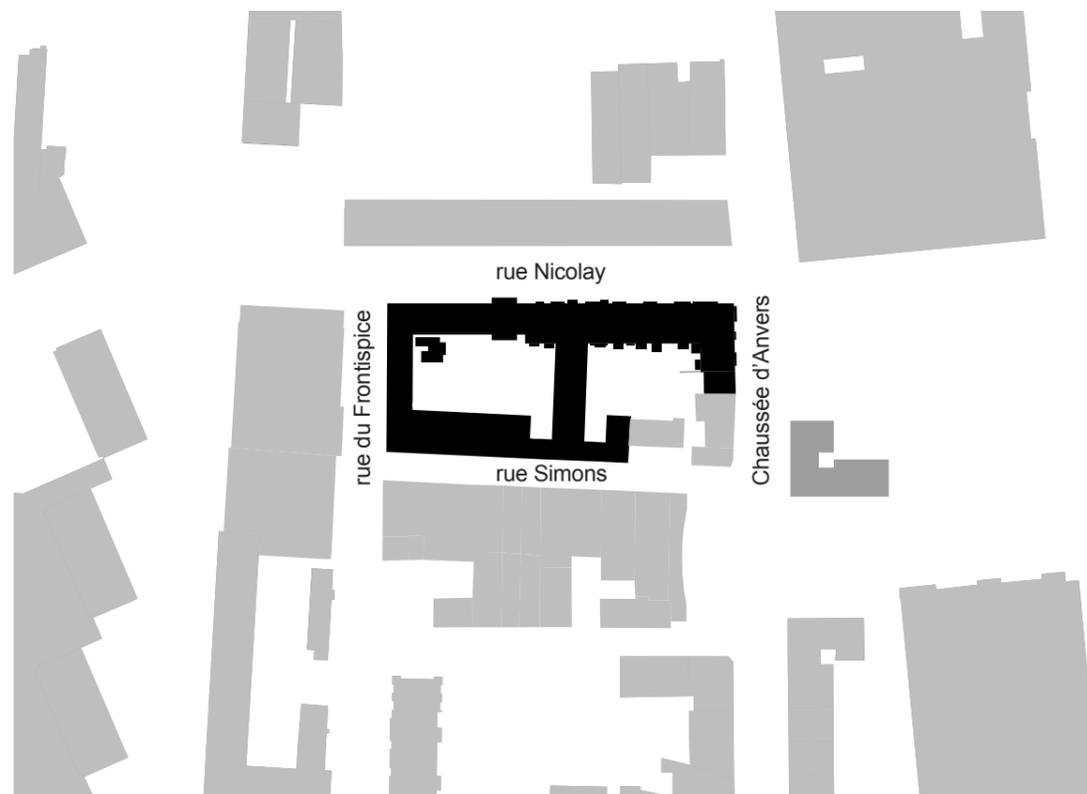
In addition to the substantial program, the challenge of this project is to reintroduce urban coherence into this neighbourhood mainly made up of on one hand closed islands, and on the other new frontal constructions and bordered by high-rise buildings built on open islands. Offices or social housing, the environment lacks public services and the visibility of these is not enough to enliven the public area.

### specifying the clarity

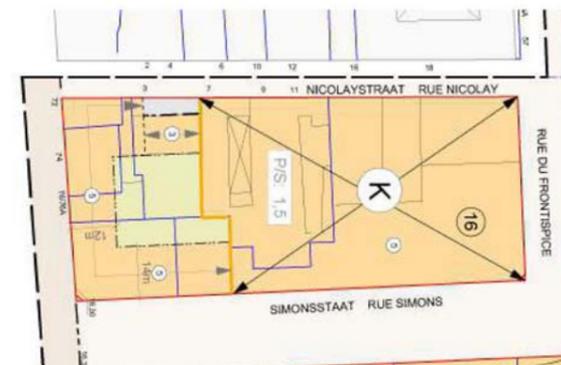
Strictly limited in the volumes by a PPAS (special land use plan), the project extends over a plot of land located between the rue Simons, Chaussée d'Anvers, rue Nicolay and rue du Frontispice.

While the existing situation was a plot of derelict wasteland and an island open to weak urban structure, the construction of new volumes has enabled a frontage restoring its character to the neighbouring roads. Just like the layout, by enclosing the island, gives the urban structure greater clarity, the handling of various features in a same coherent whole enables, in turn, a harmonious integration of the programmatic complexity to the neighbourhood.

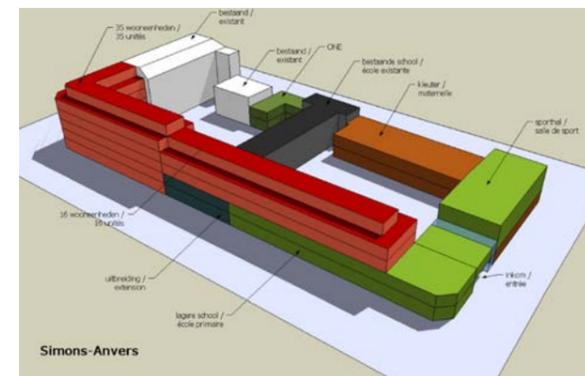
Ingenuously, the project escapes from the strict programmatic canvas by offering a clear architectural clarity of the volumes, dividing up on one hand the spirit of the school part and on the other the apartments.

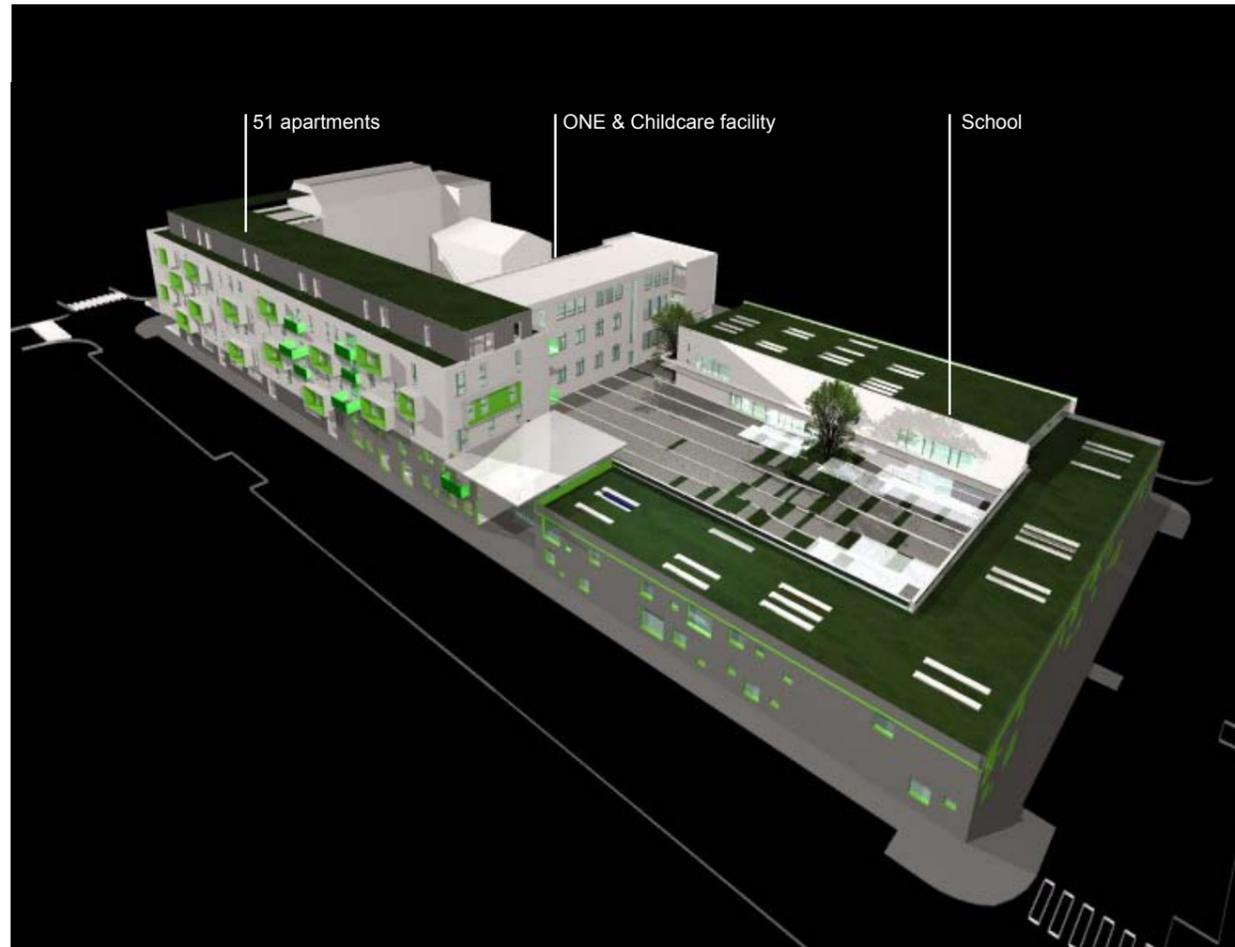
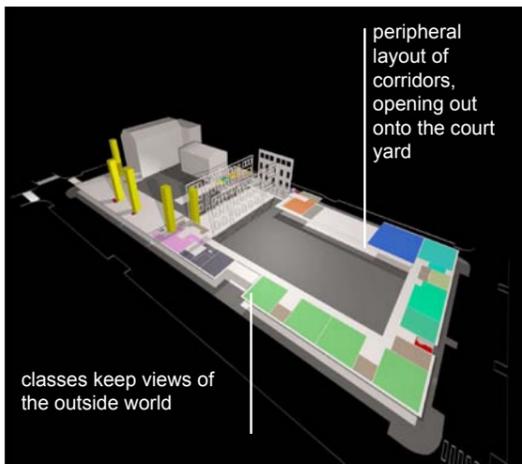
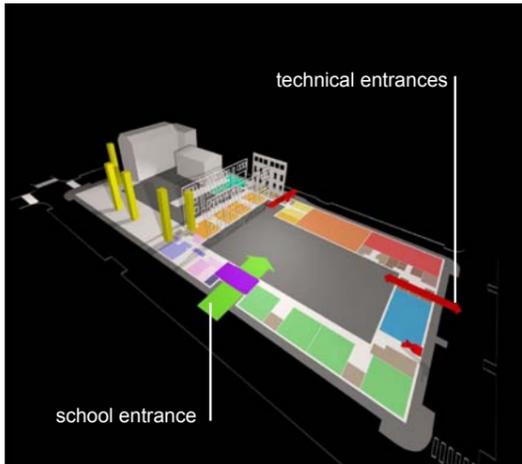
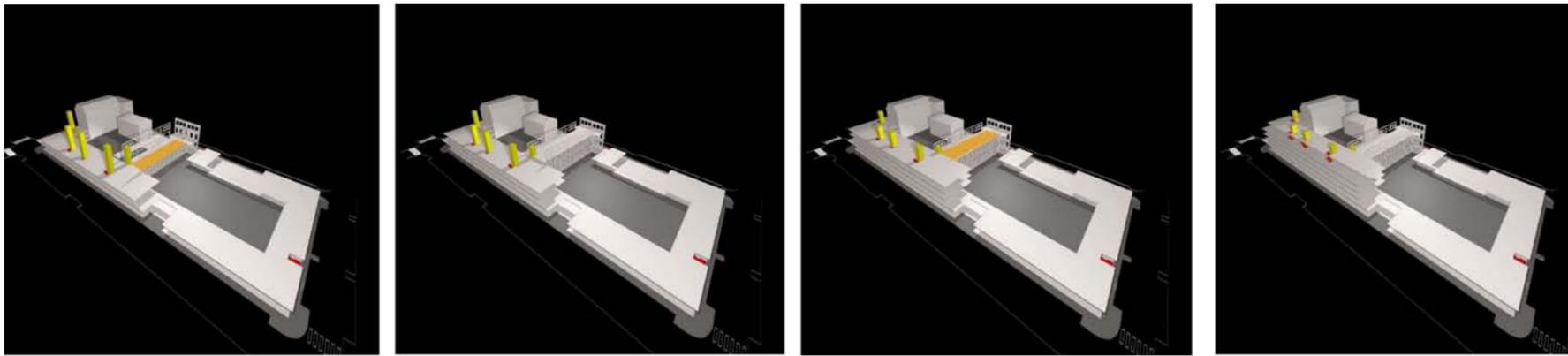


an urban clarity clarified by the project



a PPAS (special land use plan) with restrictive plans





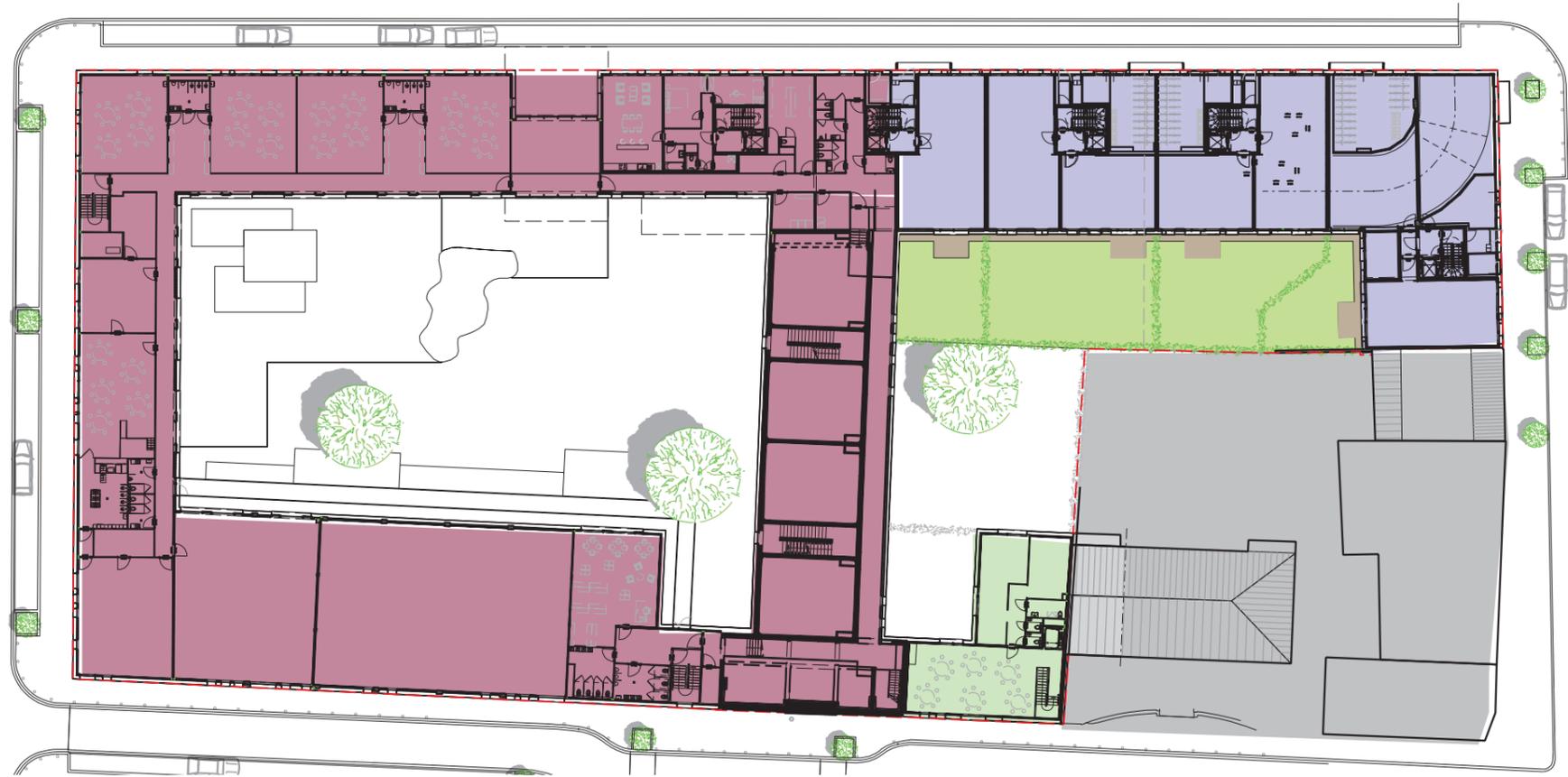
## programmatic and architectural wealth

The different models and variations of openings, thought up from programming requirements and the PPAS (special land use plan) stipulations, enable us to carry out a closed island while creating clear air, visually open from the public area. This part of the town has a uniform whole but also preserving the expression of the different features, a project integrated into the urban landscape without making it run of the mill.

This desire to take place intelligently in an urban environment is translated by careful attention to its material components, the architectural language varies as well according to its destined use.

Open, clad with variable and recreational panels, the school part encircles the playground. The building and learning spaces form a filter between the playground, heart of the project, and the neighbouring public area. In effect the large windows of any height enliven the walk around the playground, leading to classes and different rooms whose street frontages, more opaque, provide glances of the outside world. Apart from the educational character of these openings, this part has openings up to the height of the tiniest children's gaze. These layout details finally end up adapting the building to children's scale, making it recreational and educational.

Mixing mass and projections, flow of the windows with the most common dimensions, the volume of apartments undeniably part of it all, but gives off a more selective character, almost intimate. To maintain the dynamics of it all, the mass is punctuated by projections in the form of boxes or balconies irregularly balanced.



School Apartments ONE and a childcare facility

## programmatic and architectural wealth

Located in a very mixed social environment with major cultural wealth, the project respects and defends this diversity by bringing various programs together and fulfilling several of the neighbourhood's requirements.

### School

Open since September, the Hélicopter school has 490 students in a new building complementing the old one, rue Nicolay, retained and renovated: a new façade separated from the previous one enables the building to be isolated and create movement.

In addition, all the departments are gathered in a single facility which facilitates their use by students and identification of this equipment by a wider public. The gym, two dining halls and playground will also be able to be used regularly in the evenings and weekends or for special events. These areas create new meeting places for the neighbourhood.

### Apartments

In the same spirit of openness to the neighbourhood's diversity, to offer the widest possible accessibility, these apartments provide a wide diversity. The 51 apartments go from studios to 4-bedroom dwellings, two being adapted for people with reduced mobility. The control of construction costs thus enables offering quality apartments at relatively low rents and very low utility bills as they are passive.

The 51 apartments are made up of:

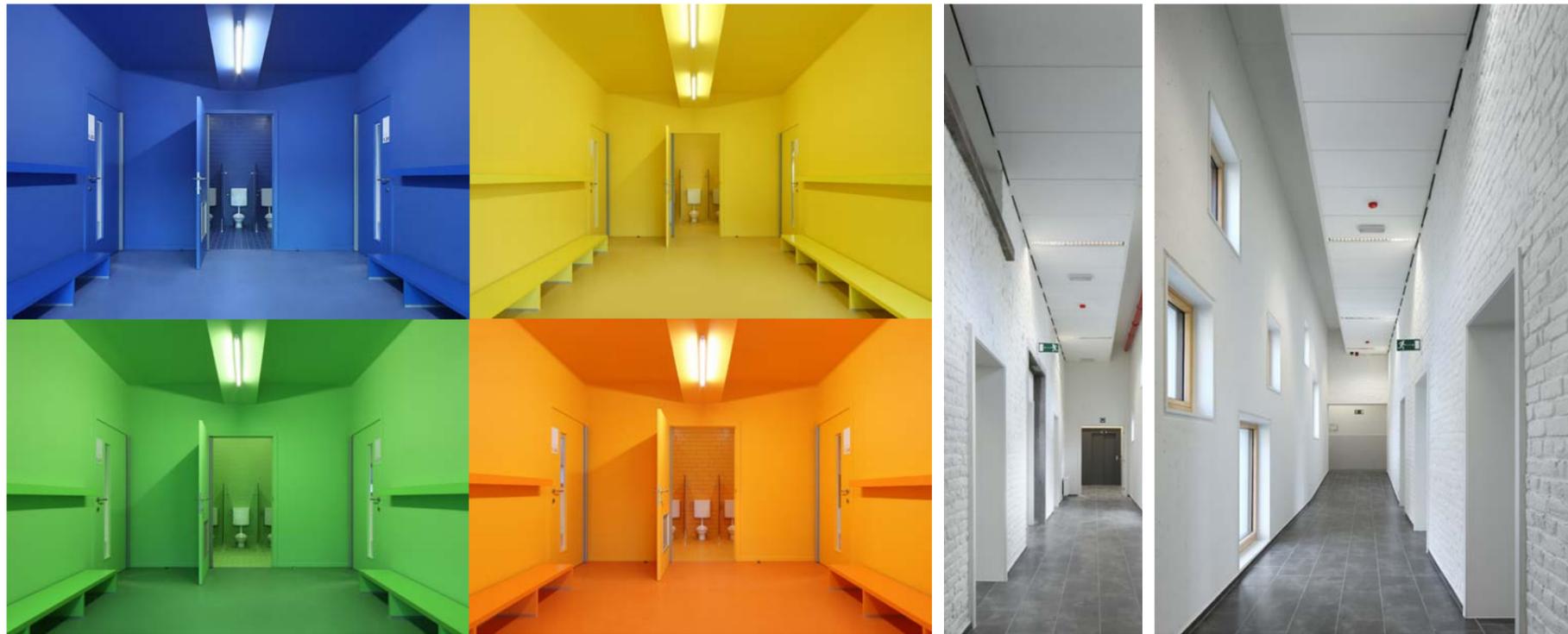
- 3 studios
- 4 x 1 bedroom apartments
- 30 x 2 bedroom apartments
- 11 x 3 bedroom apartments
- 3 x 4 bedroom apartments

### ONE and a childcare facility

The building also houses rooms for ONE (Birth and Childhood Office) consultations, as well as an area for childcare destined for young children.



Large windows open onto the playground and square passages frame views towards the outside. From most open to most framed, the building is a filter surrounding the courtyard.



a polychrome set enables the cloakrooms of each section to be identified

a new façade wraps the existing building creating a circulation

## the environment as a living space

Together with the organisation of it all, the quality of the areas takes priority: functionality, architectural quality, light, acoustics. For the most part the apartments are double exposed and they all have an outside area (garden balcony, terrace).

This attention to quality and comfort of use is also found in the school, treated as a walking area for classes, dining halls, gym etc.

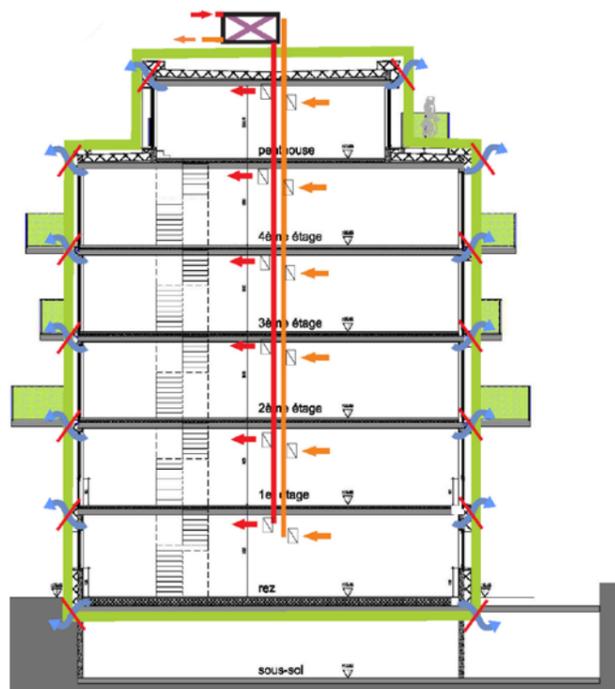
The entire project is passive, even the existing school building that is renovated.

The building endeavours to preserve the prime resources in a sustainable approach (water, air, energy). Part of the roof is vegetated (approximately 900 m<sup>2</sup>), the rest being used for solar heating panels. Green areas, everywhere that the project allowed, roofs, the school yard and common spaces, preserve the site's biodiversity. Rainwater is collected and used for supplying the apartments' toilets and those of the primary school.

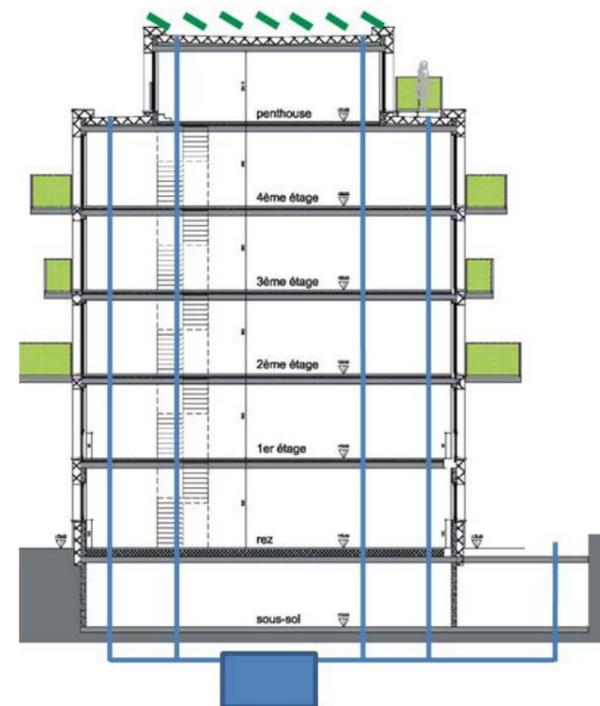
However, the physical environment is first and foremost the quality of the air we breathe, which determines the choice of materials used for which the energy cost for production (grey energy) is low like the energy consumption of the building itself. This quality intervenes first for the user at building level due to the air quality controlled by the use of the most healthy materials possible (more than 50% of materials are classed below 3 according to the Nibe standard) and controlled ventilation.

This physical quality directly conditions the inhabitants' quality of life. The school's technical plant is controlled via a BMS (Building Management System), enabling its operation to be optimised. Installing meters and a monitoring system enables consumption to be precisely monitored.

Lastly, representative of a sustainable approach both social and economic and also environmental, this project is doubly applauded for its energy performances and its overall design as one of 19 Batex for A2M and as one of three pilot projects for passive design by the Brussels region (Pass-reg.eu).



Insulation, airtightness and ventilation of the building



Completed by solar panels and collection of rainwater.



Plan - second floor



Façade - inside of island - longitudinal section A

















